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BOOK OF PROCEEDINGS

Edited by:
Clara Pracana
Michael Wang

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Edited by:

Prof. Clara Pracana
Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal
&
Prof. Michael Wang
Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom

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FOREWORD

Dear Participants,

We are delighted to welcome you to the International Psychological Applications Conference and Trends (InPACT) 2017, taking place in Budapest, Hungary, from 29 of April to 1 of May, 2017.

Modern psychology offers a large range of scientific fields where it can be applied. The goal of understanding individuals and groups (mental functions and behavioral standpoints), from this academic and practical scientific discipline, aims ultimately to benefit society.

This International Conference seeks to provide some answers and explore the several areas within the Psychology field, new developments in studies and proposals for future scientific projects. The goal is to offer a worldwide connection between psychologists, researchers and lecturers, from a wide range of academic fields, interested in exploring and giving their contribution in psychological issues.

The conference is a forum that connects and brings together academics, scholars, practitioners and others interested in a field that is fertile in new perspectives, ideas and knowledge. There is an extensive variety of contributors and presenters, which can supplement the view of the human essence and behavior, showing the impact of their different personal, academic and cultural experiences. This is, certainly, one of the reasons there are nationalities and cultures represented, inspiring multi-disciplinary collaborative links, fomenting intellectual encounter and development.

InPACT 2017 received 243 submissions, from 35 different countries from all over the world, reviewed by a double-blind process. Submissions were prepared to take form of Oral Presentations, Posters, Virtual Presentations and Workshops. It was accepted for presentation in the conference 128 submissions (29% acceptance rate).

The conference also includes:
- Two keynote presentations by Prof. Dr. Leslie G. Walker (Professor of Cancer Rehabilitation at the University of Hull, United Kingdom) and by Prof. Dr. Howard S. Schwartz (Professor of Organizational Behavior in the School of Business Administration, Oakland University, USA);
- Two Special Talks one by Prof. Dr. Michael Wang (Professor of Clinical Psychology, University of Leicester, United Kingdom), and the other by Dr. António Alvim (Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal);
We would like to express our gratitude to all our invitees.

This volume is composed by the papers of the International Psychological Applications Conference and Trends (InPACT 2017), organized by the World Institute for Advanced Research and Science (W.I.A.R.S.). The Conference addresses different categories inside Applied Psychology area and papers fit broadly into one of the named themes and sub-themes. The conference program includes six main broad-ranging categories that cover diversified interest areas:

- **CLINICAL PSYCHOLOGY**: Emotions and related psychological processes; Assessment; Psychotherapy and counseling; Addictive behaviors; Eating disorders; Personality disorders; Quality of life and mental health; Communication within relationships; Services of mental health; and Psychopathology.

- **EDUCATIONAL PSYCHOLOGY**: Language and cognitive processes; School environment and childhood disorders; Parenting and parenting related processes; Learning and technology; Psychology in schools; Intelligence and creativity; Motivation in classroom; Perspectives on teaching; Assessment and evaluation; and Individual differences in learning.

- **SOCIAL PSYCHOLOGY**: Cross-cultural dimensions of mental disorders; Employment issues and training; Organizational psychology; Psychology in politics and international issues; Social factors in adolescence and its development; Social anxiety and self-esteem; Immigration and social policy;

Self-efficacy and identity development; Parenting and social support; Addiction and stigmatization; and Psychological and social impact of virtual networks.

- **LEGAL PSYCHOLOGY**: Violence and trauma; Mass-media and aggression; Intra-familial violence; Juvenile delinquency; Aggressive behavior in childhood; Internet offending; Working with crime perpetrators; Forensic psychology; Violent risk assessment; and Law enforcement and stress.

- **COGNITIVE AND EXPERIMENTAL PSYCHOLOGY**: Perception, memory and attention; Decision making and problem-solving; Concept formation, reasoning and judgment; Language processing; Learning skills and education; Cognitive Neuroscience; Computer analogies and information processing (Artificial Intelligence and computer simulations); Social and cultural factors in the cognitive approach; Experimental methods, research and statistics; and Biopsychology.

- **PSYCHOANALYSIS AND PSYCHOANALYTICAL PSYCHOTHERAPY**: Psychoanalysis and psychology; The unconscious; The Oedipus complex; Psychoanalysis of children; Pathological mourning; Addictive personalities; Borderline organizations; Narcissistic personalities; Anxiety and phobias; Psychosis; Neuropsychoanalysis.

This volume contains the papers and results of the different researches conducted by authors who focused on what they are passionate about: to study and develop research in areas related to Psychology and its applications. It includes an extensive variety of contributors and presenters that are hereby sharing with us their different personal, academic and cultural experiences.

We would like to express thanks to all the authors and participants, the members of the academic scientific committee, and of course, to the organizing and administration team for making and putting this conference together.

Looking forward to continuing our collaboration in the future,

Prof. Clara Pracana
Full and Training member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal
Conference and Program Co-Chair

Prof. Michael Wang
Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom
Conference and Program Co-Chair

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KEYNOTE LECTURES

THE APPLICATION OF PSYCHOLOGY TO UNDERSTANDING AND TREATING CANCER: ACHIEVEMENTS AND PROSPECTS

Emeritus Professor Leslie G. Walker
MA (Hons), PhD, DipClinPsychol, CClinPsychol, CBiol, CSci, FSB, FBPsS
Professor of Cancer Rehabilitation at the University of Hull (United Kingdom)

Abstract

Cancer is a leading cause of mortality and morbidity worldwide. In 2012, an estimated 8.2 million deaths were due to cancer. In the USA, the lifetime risk of developing any type of cancer is currently 42% for men and 38% in women, and the risk of dying from cancer is 23% for men and 19% for women. Fortunately, cancer survival is improving and has doubled in the last 40 years in the UK, although there are wide variations in survival across cancer types and countries.

Although interest in psychosocial aspects of cancer goes back at least as far as Galen the revered Greek physician, it was not until the early 1980s that there was a burgeoning of interest in this field. A simple PubMed literature search using the terms "psychology and cancer" shows that whereas only 319 articles were published during the year 1980, this had risen to 1,502 during the year 2000, and as many as 4,606 during the year 2015, with a cumulative overall total of 62,655 publications up to the end of 2015.

Psychologists have made useful contributions in a number of areas. These include an understanding of behavioural and other psychological aspects that contribute to the onset and progression of cancer; an appreciation of psychosocial factors influencing the uptake of cancer screening and its psychosocial sequelae; how best to provide information to patients (including how and when to communicate 'bad news'); psychological interventions to ameliorate cancer treatment side effects (chemotherapy, radiotherapy and surgery); how to prevent and manage cancer-related psychosocial morbidity, and psychosocial and complimentary interventions to optimise quality of life before, during and after cancer treatment. These contributions will be reviewed, with particular reference to our own clinical and research studies (see www.lgwalker.com).

Undoubtedly, significant progress has been made in the last 35 years. The application of the methods and findings of psychology in particular, and the social sciences more generally, have led to major advances in understanding various aspects of cancer and improving the quality of life of patients and their families. However, a great deal remains to be done in terms of applying the knowledge already gained, particularly in terms of preventing distress; improving quality of life before, during and after treatment; supporting the cancer workforce, and integrating psychosocial science conceptually and organisationally with other aspects of cancer.

Biography

Leslie G. Walker is Emeritus Professor of Cancer Rehabilitation at the University of Hull, Kingston upon Hull, United Kingdom. Since retiring from the NHS in 2009, he continues to carry out research and give invited lectures. Until November 2009, in addition to holding the Foundation Chair of Cancer Rehabilitation, he was the Clinical Lead for the Division of Cancer in the Postgraduate Medical Institute, University of Hull. He was also Director of the Institute of Rehabilitation, and a member of the Faculty of the Hull York Medical School (HYMS).

In 1999, he founded a unique Oncology Health Service and he directed the service until 2009 when he retired from the NHS. Each year, more than 2,500 people with cancer access the Service for the first time, and each week some 375 people with cancer and their relatives attend the custom built, fully integrated Oncology Health Centre. The service has won a number of awards, and the approach is known internationally as the "Hull model". Current research includes psychosocial aspects of Li Fraumeni syndrome; the effects on quality of life of vaccination with human telomerase reverse transcriptase (hTERT) peptides, and psychosocial aspects of cancer screening. Previous research has focussed on the psychoneuroimmunology of breast, brain and colorectal cancers; relaxation, hypnotherapy and guided

imagery to alleviate the side effects of various cancer treatments; the evaluation of different models of providing psychosocial care, and the development and evaluation of psychological and complementary interventions for people with cancer. Over the years, he has received funding from a wide range of sources, including the Medical Research Council, the Wellcome Trust, Cancer Research UK, the HTA Programme, and the NHS R&D Programme (Cancer).

Professor Walker currently serves on a number of committees, including the The National Institute of Health Research Evaluation, Trials and Studies Coordinating Centre College of Experts; the Tenovus Research Committee; the Clinical Reference Group of Breast Cancer Care, and the Clinical Experts Reference Group of Breakthrough Breast Cancer.

He is a former Co-Chair of the Nominating Committee of the International Psychosocial Oncology Society, and he has served two terms of Office as Chairman of the British Psychosocial Oncology Society. He was Chairman of the Research Committee of Breast Cancer Care and was also a Member of the Population and Behavioural Sciences Committee of Cancer Research UK; the Council of the British Society of Experimental and Clinical Hypnosis; the Research Committee of the National Cancer Survivorship Initiative (Department of Health); the National Cancer Research Institute Complementary Therapies Clinical Studies Development Group; and three Medical Research Council Multicentre Trial Steering Committees.

He is a Fellow of the British Psychological Society, an Honorary Life Member of the British Association for Clinical and Academic Hypnosis, and a former Fellow of the Royal Statistical Society, the Society of Biology and the Royal Society of Medicine.

Further information, including publications and contact details, can be obtained from http://www.lgwalker.com .

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THE CHILDREN OF POLITICAL CORRECTNESS

Emeritus Professor Howard S. Schwartz, PhD
Professor of Organizational Behavior in the School of Business Administration, Oakland University (USA)

Abstract

Within the past year or so, political correctness, thought by many to have disappeared from the American university setting, is said to have returned in a new form. The old PC was characterized by pressures to eliminate speech seen as objectionable on moral grounds. The new form, it is said, is marked by a drive to suppress speech seen as dangerous, in the sense that it threatens the safety and security of those whom it reminds of previous traumas having to do with racism, sexism, homophobia, and the like. Those who express these fears, sometimes mockingly referred to as "precious snowflakes", demand to be protected from these "microaggressions" by the use of "trigger warnings" when they may be subjected to ideas that that they may find disturbing. They demand that "safe spaces" be established for them where they may recover from their "post traumatic stress disorder," and they have no compunctions about damaging the livelihoods and reputations of those who do not support their program.

A question has arisen as to where these precious snowflakes have come from. The most common answer is that they are the children of "helicopter parents" who have obsessively protected them from all threat, and so rendered them overly vulnerable. My claim will be, to the contrary, that they are not the children of helicopter parents but of political correctness itself, which never disappeared but simply became a feature of social structure. They grew up with the idea that the myths of oppression fostered by PC represent the real world, which is corrupt. They have developed a sense of themselves as "pristine selves", who are entitled to be touched by nothing but love; the world, if not corrupted, would be their mother. They believe that this would be their condition if the love had not been stolen by the villains established by PC: the white heterosexual males who represent the patriarch, the father, who is responsible for its corruption.

In my presentation I will develop this theory of the precious snowflakes, beginning with an analysis of videos taken at a recent confrontation at Yale University. Then I will explore what it would mean for our society to be recast in accordance with the domination of this psychology.

Biography

Howard S. Schwartz is a professor emeritus at Oakland University. He studied philosophy at Antioch College, the University of Pittsburgh, and UCSD. His PhD is in organizational behavior from Cornell University. Schwartz's scholarly work concerns the psychodynamics of political correctness. He has published three books on the subject, the latest of which is Political Correction and the Destruction of Social Order: Chronicling the Rise of the Pristine Self. It was released in October by Palgrave Macmillan. He currently lives in New York City with his wife Ann.

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SPECIAL TALKS

A MODEL OF CONSCIOUSNESS

Prof. Dr. Michael Wang
Emeritus Professor of Clinical Psychology, University of Leicester (United Kingdom)

Abstract

I have spent the last 25 years collaborating with anaesthetists attempting to address the problem of accidental awareness during general anaesthesia and investigating intra-operative cognitive processing. I have also conducted some anaesthetic research on myself and have also required major surgery under general anaesthesia in recent years (and have presented much of this at previous InPACT conferences). Despite an enormous body of research knowledge of the neuropharmacology of anaesthesia, and impressive levels of practical skill and competence, it is generally accepted that anaesthetists have little idea what they are doing when they render a patient unconscious. It is common for anaesthetists to exclaim in exasperation "But we have no model of consciousness!" After all this time, I think I have gained some insights from my research and experience in the operating theatre, and have the temerity to imagine I might be able to propose a crude model that might have some utility. I will outline the model and the evidence I draw on which has led to this proposal.

Biography

Prof. Michael Wang, BSc(Hons), MSc(Clin.Psy), PhD, C. Psychol., FBPsS, is Emeritus Professor of Clinical Psychology in the Clinical Psychology Unit, Centre for Medicine, University of Leicester, and former Director of the National Health Service-funded Doctoral Postgraduate Clinical Psychology Training Course (2005-2014). He is a former Chair of the Division of Clinical Psychology of the British Psychological Society. Prof. Wang is also a full practitioner member of the BPS Division of Neuropsychology and a member of the BPS Division of Health Psychology.

He has worked as a clinical psychologist for more than 35 years. Prior to his appointment in Leicester he was Director of the 6-year, integrated Doctoral Clinical Psychology Training Course at the University of Hull. Throughout his academic career he has maintained an Honorary Consultant role in the NHS, treating patients with anxiety disorders, depression and obsessional compulsive disorder. He has more than 20 years' experience of examining patients with traumatic brain injury for the UK courts.

He obtained his three degrees from the University of Manchester: following graduating with a BSc in Psychology in 1978 he began his professional postgraduate training in Clinical Psychology in the Faculty of Medicine. Subsequently he completed a research PhD in 1990 which investigated learning and memory in alcoholics.

Over recent years Prof Wang has gained an international reputation for his research on cognitive and memory function during general anaesthesia. In 2004 he organized the 6th International Symposium on Memory and Awareness in Anaesthesia and Intensive Care (in Hull) – the foremost international forum for clinical research in this particular field. He has held appointments on a number of prominent committees in the British Psychological Society including the professional accrediting body for clinical psychology training, and a committee that is in the process of determining national standards for competence in the use of neuropsychological tests. He has served as an expert advisor on a NICE (UK) Committee in relation to the monitoring of depth of anaesthesia and also as an expert member of the Royal College of Anaesthesia's National Audit Project 5 (a national audit of anaesthetic awareness reports). In 1999 he was made Fellow of the British Psychological Society and is also a Fellow of the Royal Society of Medicine.

In 2015 he was awarded the Humphry Davy Medal by the Royal College of Anaesthetists for his contribution to the understanding of accidental awareness during general anaesthesia.

Prof. Wang has published more than 60 papers in peer-reviewed journals, and numerous book chapters. He has been an invited speaker at international conferences on more than 30 occasions. In collaboration with colleagues he has won more than £1.2 million in research funding. He has supervised more than 40 doctoral research projects over the past 25 years. He has been a regular contributor and session chair at recent InPACT conferences, and recently joined the conference team as a co-organiser.

ANALYZING DREAMS OR DREAMING ANALYSIS: THE PERSPECTIVE ABOUT DREAMS AND DREAMING FROM THE ANALYTIC FIELD THEORY

Dr. António Alvim
Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy (Portugal)

Abstract

Dreams are one of the most important mental phenomena tackled by psychoanalytic investigation and clinic practice, since Freud's publication of "The Interpretation of Dreams" in 1900, where they have earned the epithet of a royal road to the unconscious; from a popular point of view, dreams have also earned an iconic status – maybe only second to sexuality, but also mingled with it -, to which Freud's functional description of dreams as a realization of forbidden desires, may have contributed. However, and if the analyst doesn't see himself as an active part of the dreaming process, this iconic status may endanger the psychoanalytic process, saturating it as a quest to unveil the patient's unconscious, where the analyst assumes a translator or decodifier function, losing its main role as an enzyme to the transformative processes that the patient's (proto)emotional experiences must undergo if mental growth is to be achieved, and mental pain to be made more thinkable and tolerable. From a psychoanalytic field perspective, rooted on Bion's conceptions about mental functioning and development, dreams become not only a privileged way to reach the unconscious, but the proper way for its expansion: dreams and dreaming are taken not as an icon but as the fundamental method for mental transformation. As such, psychoanalysis becomes not only interested in analyzing dreams, but mostly in dreaming the analytic experience, fostering material for thoughts and the capacity to think them.

Keywords: *Dreams (and dreaming), Transformation (of emotional experience), Mental growth, Psychoanalytic Process, Psychoanalytic Field.*

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GCRIS



ORAL PRESENTATIONS

GCRIS

IMPAIRMENT IN CHILDHOOD OBSESSIVE-COMPULSIVE DISORDER: THE MEDIATIONAL ROLE OF INTERNALIZING AND EXTERNALIZING SYMPTOMS

Omar Rahman & Eric Storch
University of South Florida (USA)

Abstract

Introduction
Obsessive-compulsive disorder (OCD) is an anxiety disorder that typically has a chronic and severe course in both children and adults. Up to 90% of youth have impairment in at least one area of living (social, academic, and family functioning) and over 50% endorsed impairment in all three areas (Piacentini et al. 2003)
OCD symptoms cause direct functional impairment in children and adolescents. Obsessions can lead to difficulty concentrating on schoolwork, may negatively affect an individual's social interactions, and may lead to avoidance behaviors. Compulsions often take up a significant portion of an individual's time, leading to lateness or missed engagements.
Additionally, children and adolescents with OCD have high rates of internalizing and externalizing comorbid disorders, such as depression and disruptive behavior. It is likely that some of the functional impairment related to OCD in youth may be due to the indirect effects of OCD, mediated through internalizing and externalizing symptoms. The present study investigated whether internalizing and externalizing symptoms mediate the relationship between OCD severity and impairment.
Method
Participants
Participants were 108 children and adolescent patients at a university outpatient specialty clinic (n = 108) which specializes in OCD treatment. They were recruited for the study from the standard patient population. All had a principal diagnosis of OCD.
Procedure
All participants completed the human subjects informed consent processes approved by the institutional review board. The measures were completed by parents and children in the clinic at their pre-treatment evaluation. The Children's Yale-Brown Obsessive Compulsive Scale (Scahill et al., 1997) was used to assess OCD symptom severity. The parent and child versions of the Child Obsessive Compulsive Impact Scale (Piacentini et al., 2003) was used to assess OCD-related impairment in specific areas, such as school, social activities, and home/family. The Child Behavior Checklist (Achenbach, 1991) 32-item Internalizing scale and the 33-item Externalizing scale were used to assess internalizing and externalizing symptoms.
Results
Sobel tests were used to assess mediation. The relationship between OCD symptom severity and impairment was partially mediated by child internalizing and externalizing symptoms. This was the case for both parent and child-rated impairment. The percent mediation ranged from 29.7 to 37.4. We also found that parents reported greater impairment compared to children, similar to Piacentini et al. (2003).
Discussion
These findings suggest that internalizing and externalizing symptoms play an important role in impairment for pediatric OCD patients. This, along with future longitudinal research, may help to improve treatment strategies for children who present to treatment for OCD with co-occurring internalizing and externalizing symptoms.

Keywords: *OCD, impairment, internalizing, externalizing.*

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QUALITY OF LIFE IN PATIENTS WITH PRIMARY AND METASTATIC BONE TUMORS

Olga Shchelkova & Ekaterina Usmanova
Saint-Petersburg State University, Saint-Petersburg (Russia)

Abstract

Introduction: Actually quality of life research in medicine and clinical psychology is progressing worldwide. Studies of QoL in patients with bone tumor aims at research QoL in children and adolescents with bone sarcoma. There are also studies aimed at comparative analysis of QoL in patients with bone tumor underwent limb sparing surgery and amputation. While issue of QoL in adults with bone tumor focused on psychological factors of QoL is not discussed.
The aim of the study was to reveal the basic aspects and personality factors of QoL in patients with bone tumor and compare QoL in patients with primary bone tumor and bone metastases.
Results: According the goal of the basic aspects of QoL research general group (n=120) was split into four groups depending on diagnosis: osteosarcoma (n=41), giant cell tumor (n=31), chondrosarcoma (n=30) and bone metastases (n=18). The study revealed that objective physical status in patients with primary bone tumor significantly better than objective physical status in patients with bone metastases. And objective physical status in patients with different forms of primary bone tumor is the same. Patients with bone metastases assess their health significantly worse than other patients. Patients with bone metastases have the most intensity pain among all patients: patients with bone metastases characterize their pain as more widespread and have more functional restrictions due to bone incision. Moreover the study revealed personality significant influence on QoL related to bone tumors. Such characteristics in structure of personality as high degree of self-consciousness, personal resources, cooperation and disposition to positive revaluation in difficult situation correspond to higher QoL. Otherwise low personal resources and slight problem solving behaviour, low degree of self-consciousness and high social dependence correspond to decrease of QoL in patients with bone tumors.
Conclusion: Patients with bone metastases have lower quality of life compared with patients with primary bone tumor on parameters of physical functioning, possibility of daily activities, social functioning and general health, and besides pain intensity, that corresponds to objective physical status in patients of this group. Furthermore the results revealed differences in QoL parameters associated with personality characteristics in patients with bone tumors.

Keywords: *Quality of life, psychological factors, bone tumor.*

1. Introduction

Actually quality of life research in medicine and clinical psychology is progressing worldwide (Sirota & Yaroslavskaya, 2011). Quality of life (QoL) is a complex system construct that includes a series of interconnected aspects, including safety of physical functions and the extent of physical suffering; psychological status, which includes the feeling of independence and satisfaction of life at a given moment; possibility of professional activity; quality of social contacts and other aspects. Thus, all basic aspects of personal functioning — physical, psychological (spiritual), social — in the system (integrating and interacting) are presented in the quality of life concept (Wasserman et al., 2011; WHOQOL Group…, 1996).

Studies of QoL in patients with bone tumor aims at research QoL in children and adolescents with bone sarcoma (van Riel et al., 2004; Eiser & Grimer, 1999). There are also studies aimed at comparative analysis of QoL in patients with bone tumor underwent limb sparing surgery and amputation (Mason et al, 2013; Robert et al., 2010; Eiser et al., 2001; Johansen et al., 1998). While issue of QoL in adults with bone tumor focused on psychological factors of QoL is not discussed.

The aim of the study was to reveal the basic aspects and personality factors of QoL in patients with primary bone tumor and bone metastases.

2. Design

Study participants since 2012 till 2015 (N=120) were in patients with primary and metastatic bone tumors of N.N. Blokhin Russian Cancer Research Center.

According the research goals general group was split into four groups depending on diagnosis. The first one (A) included 41 patients diagnosed with osteosarcoma, average age at 27 ± 2. There were 25 (61%) males and 16 (31%) females in this group. The second group (B) included 31 patients with giant cell tumor average age at 36 ± 3. There were 13 (42%) males and 18 (58%) females. The third group (C) included 30 patients diagnosed with chondrosarcoma average age at 45 ± 3. Males prevailed in this group; they were 24 (80%) patients. Females were 6 (20%) patients. The fourth group (D) included 18 patients with bone metastases (primary diagnosis is adenocarcinoma). There were 14 (78%) males and 4 (22%) females. The average age is 55 ± 2. All patients had surgical or complex treatment.

3. Methods

The methods were:

1. SF- 36 Health Status Survey (Ware et al., 1993; Wasserman et al., 2011)
2. Quality of Life Questionnaire - Core 30 of European Organization for Research and Treatment Cancer (Aaronson et al., 1993; Fayers et al., 1995); Specific module BM-22 (bone metastasis) designed for HRQoL evaluation in patients with malignant bone tumor (Nenarokomov, 2012)
3. Personal questionnaire «Big V» (Wasserman et al., 2011)
4. The Ways of Coping Questionnaire (WOSQ) (Wasserman et al., 2011)
5. Purpose-in-Life Test (PIL) (Wasserman et al., 2011)

Statistical significance of distinctions between groups was calculated with t-criterion Student test. And Multifactorial dispersing analysis of data revealing personality impact on quality of life in four clinical groups of patients was done.

4. Discussion

The assessment of general health status in patients with bone tumor on Karnovsky scale and ECOG is given in table 1 (Karnofsky & Burchenal, 1949)

Table 1. General health status in patients with bone tumor (objective physical status).

Karnovsky index/ ECOG scale	Osteosarcoma n=41 A	Giant cell tumor n=31 B	Chondrosarcoma n= 30 C	Metastases n =18 D
	M ± m	M ± m	M ± m	M ± m
Karnovsky index	80 ± 1,79	78,89 ± 2,2	80,5± 2,15	71,18±2,63
ECOG scale	1,23 ± 0,1	1,41 ± 0,1	1,4 ± 0,12	2,12±0,12

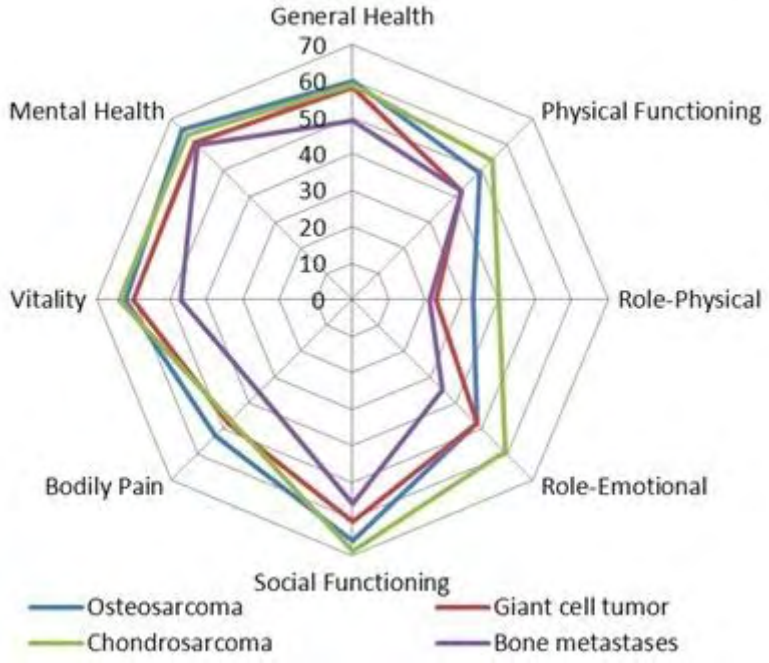
The results presented in table 1 show, that objective physical status in patients with primary bone tumor significantly better than objective physical status in patients with bone metastases. And objective physical status in patients with different forms of primary bone tumor is the same.

According the results of SF-36 patients with bone metastases assess significantly lower their general health and treatment prospects, than patients with osteosarcoma. Patients with chondrosarcoma have lower influence of their physical state on daily activities, than patients with giant cell tumor and bone metastases.

Besides patients with bone metastases are more restricted in daily activity and social functioning due to worsening emotional state, than patients with chondrosarcoma. Patients with bone metastases have more restricted activity caused pain intensity and have lower vitality than other patients.

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Figure 1. Health related quality of life indices in patients with bone tumor (SF-36).



QLQ C-30 data are consistent and complimentary with the results of studying health related quality of life researched using SF-36. QLQ C-30 questionnaire was designed as method for quality of life assessment especially in patients with malignant tumor. Using QLQ C-30 differences in the patient assessment of general health were revealed. Patients with bone metastases assess their health significantly worse than other patients. Besides patients with osteosarcoma evaluate their general health higher than patients with giant cell tumor.

Patients with chondrosarcoma have higher physical functioning and less restricted in daily activities than patients with bone metastases, and these data are also consistent with the results of studying health related quality of life researched using SF-36. Social functioning in patients with chondrosarcoma is higher than in patients with bone metastases. Besides according QLQ C-30 data patients with chondrosarcoma have higher social functioning than patients with giant cell tumor. Patients with bone metastases have the most intensity pain among all patients.

Figure 2. Health related quality of life indices in patients with bone tumor (QLQ C-30). Functional scales.

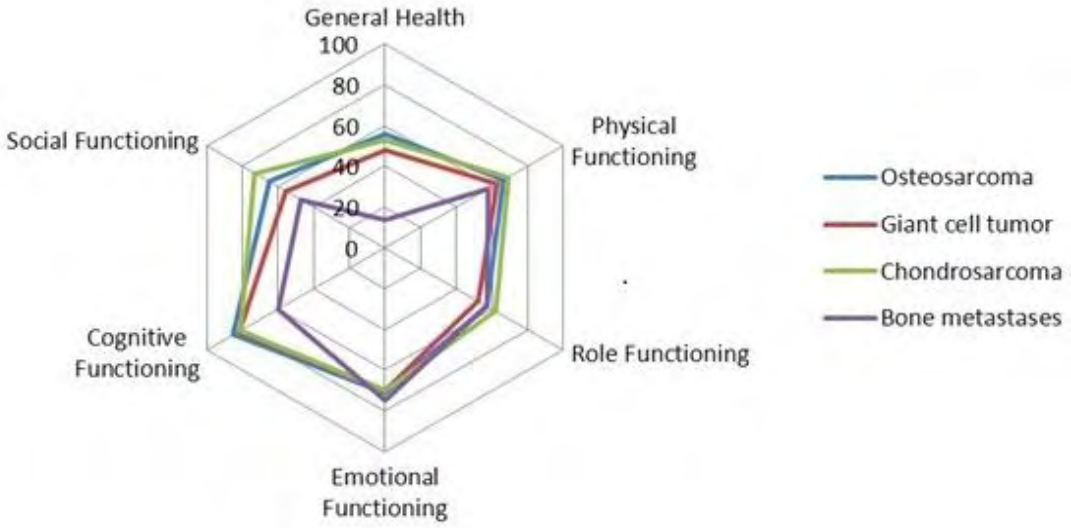
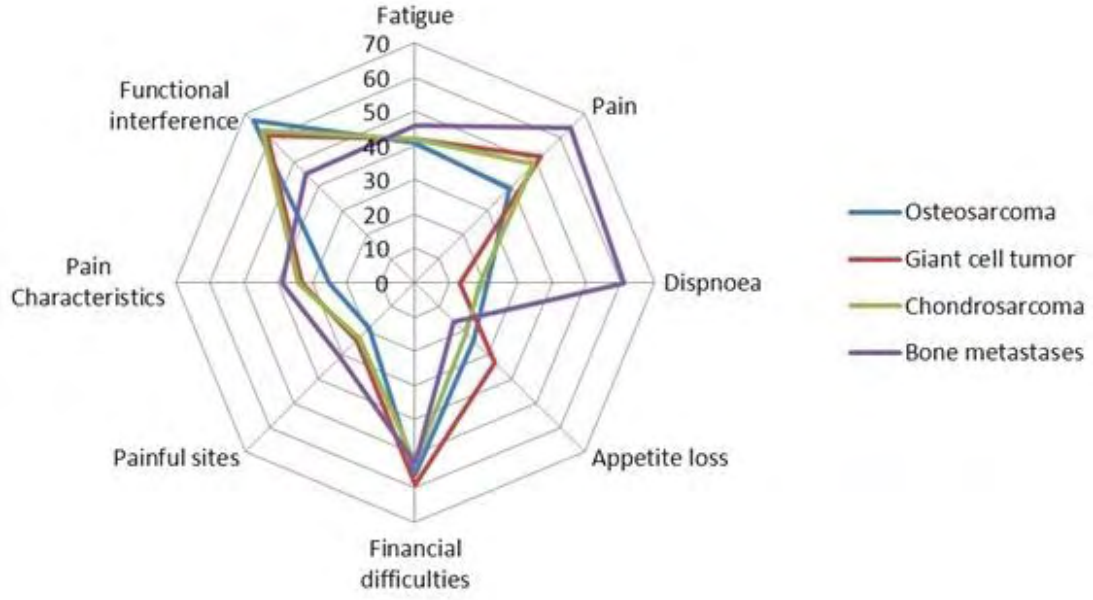


Figure 3. Health related quality of life indices in patients with bone tumor (QLQ C-30 and BM 22). Symptom scales.



According BM 22 data, quality of life in patients with bone metastases is lower than quality of life in patients with primary bone tumors on the scale "Pain Sites" : patients with bone metastases characterize their pain as more widespread than other patients. Besides patients with bone metastases have more intensity pain than patients with osteosarcoma. Despite this, patients with bone metastases have more functional restrictions due to bone incision, than other patients.

Moreover the study revealed personality significant influence on QoL related to bone tumor. Factorial analysis of indices of questionnaires «Big V», «Coping strategies» and «Meaning of life orientations» was conducted. Consequently these factors were used for further analysis. In the next stage as a result of cluster analysis personality profiles in patients were revealed. The profiles include psychological characteristics the factors have. Next stage dispersion analysis was done with the purpose of study influence the personality profiles on QoL.

Patients of cluster "Person aimed at adjustment" have the highest quality of life compared with other patients. And patients of cluster "Person aimed at adjustment" have the lowest quality of life among patients with bone tumor.

Cluster "Person aimed at adjustment" differs significantly from cluster "Addicted person" on the factor "Consciousness". Consequently, the factor of consciousness has the most important value in the issue of influence psychological characteristics on quality of life in patients with bone tumor. Patients with high level of consciousness and the meaning of life have the highest quality of life among patients with bone tumor.

So Such characteristics in structure of personality as high degree of self-consciousness, personal resources, cooperation and disposition to positive revaluation in difficult situation correspond to higher QoL. Otherwise low personal resources and slight problem solving behaviour, low degree of self-consciousness and high social dependence correspond to decrease of QoL in patients with bone tumor.

5. Conclusion

Patients with bone metastases have lower quality of life compared with patients with primary bone tumor on parameters of physical functioning, possibility of daily activities, social functioning and general health, and besides pain intensity, that corresponds to objective physical status in patients of this group. Furthermore the results revealed differences in QoL parameters associated with personality characteristics in patients with bone tumors.

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SCHOOL-BASED SEXUAL ABUSE PREVENTION: INCREASING KNOWLEDGE IN CHILDREN, TEACHERS AND PARENTS

Chrysanthi Nega, Tinia Apergi, & Eva Syngelaki
Psychology Department, The American College of Greece-Deree College & ELIZA-Society for the Prevention of Cruelty to Children (Greece)

Abstract

Due to the worrying prevalence rates and serious consequences of child sexual abuse, many school-based preventive programs have been developed in recent years. In Greece one out of six females and one out of four males become victims of sexual abuse before the age of 18 years but schools do not offer abuse prevention programs. This study presents a three-folded prevention program addressing all significant parties involved, children, teachers and parents. A sample of 467 primary school students, 1-3 grades, took part in the Safe Touches program, a classroom based curriculum, and outcomes were assessed by the Children Knowledge of Abuse Questionnaire-RIII. Children in second and third grade attained significantly greater increases on the inappropriate touch knowledge from pre- to post-test than children in first grade. For teachers (n=75) and parents (n=110) a 2-hours training workshop was delivered. Concepts covered in the workshops were recognition of signs and symptoms, psychological consequences, legislation and reporting procedures. Teachers reported an increase in the awareness of signs and symptoms, as well as an increase of the knowledge of reporting procedures. Parents showed an increase in the perceptions and indications of child sexual abuse, as well as in their attitudes towards school child sexual abuse prevention education. Overall, the program targeted children, teachers and parents in primary prevention and proved effective in enhancing children's knowledge and prevention skills, as well as building awareness in parents and teachers. Future research should focus on the adaptation of the appropriate touches concept, behavior change as an outcome measure, and expansion of the program on younger ages.

Keywords*: CSA prevention intervention, education, children, teachers, parents.*

1. Introduction

In recent years child sexual abuse (CSA) rates in Greece have been rapidly increasing with almost 1 out of 5 children being victims of at least one incident of sexual abuse during their childhood years (Petroulaki, Tsirigoti, Zarokosta, Nikolaidis, 2013). However, awareness of Greek public in matters of sexual abuse is fragmented. Furthermore, because of the wider economic crisis in Greece, there is a lack of appropriate services and the available resources have been dramatically reduced. Despite the progress made so far at an international level, Greece is lagging significantly in initiatives to prevent CSA. There is a lack of primary prevention programs regarding CSA in Greek primary schools and there is no national registry for reporting and recording sexual abuse cases, making any intervention and prevention efforts difficult to materialize. The present study arose from the need to implement and evaluate a primary prevention program for children ages 6-9, build awareness and provide a more comprehensive primary prevention program, where all key stakeholders were included, that is children, teachers and parents.

Primary prevention includes school-based sexual abuse prevention programs. The school is an area that offers the conditions favoring the development of skills and abilities to prevent sexual violence. School settings have been proven effective at teaching safety concepts and increasing sexual abuse disclosures in children. An additional advantage of school-based programs is the promotion of awareness among teachers and parents as well as the increase in their sense of self-efficacy. Teachers, as key members of the school community, can play an important role in the prevention and treatment of the phenomenon of CSA. Also as a training institution, school can help open a dialogue between parents and children (Zwi et al., 2007).

One of the school-based programs which has proven effective in teaching safety tools in children as young as kindergarten level is the 'Safe Touches' curriculum (Pulido et al., 2015), designed and implemented by the New York Society for the Prevention of Cruelty to Children (NYSPCC) with excellent results. Based on its effectiveness data and the population it addresses it was chosen to be implemented and evaluated in Greece. The purpose of the current study was threefold; implement a school based sexual education program in children from 6-9 years in a Greek population and education system, the psychoeducation of parents, and teachers.

2. Methods

2.1. Participants

Four hundred sixty-seven elementary school-aged children from three grade levels (first N=159, second N=149 third N=149) participated in the study. The sample consisted of 235 boys and 232 girls. The children were attending a private elementary school serving a largely middle-class population in a southern suburb of Athens. Only students with parental consent participated in the study. Students with diagnosed physical, emotional and / or cognitive difficulties were allowed to participate in the intervention, but the obtained measurements were not included in the data analysis.

Seventy nine teachers of the participating school attended a teachers workshop. The sample consisted of teachers from all grades of the school (first through sixth grade) and completed knowledge questionnaire before and after the workshop.

All parents of children were invited to a parent education workshop held in the school after the completion of the prevention intervention of their children. A total of 110 parents attended the meeting and completed knowledge and attitudes questionnaires before and immediately after the workshop. The mean age of parents was 42.6 years (*S.D.*=5.33), 23.6% were fathers and 76.4% were mothers.

2.2. Measures

Children: The effectiveness of the child prevention intervention was evaluated using the Greek version of Children Knowledge for Abuse Questionnaire (CKAQ-RIII; Tutty 1995, 2003). It is a reliable and valid tool that measures the level of children's knowledge on the concepts of sexual abuse and prevention skills. The CKAQ consists of 33 questions with response choices of "true", "false" or "do not know". One point was assigned for a correct answer whereas no points were assigned for either incorrect or *I do not know* response. Higher scores reflect greater level of knowledge of the concept of sexual abuse. The questionnaire comprises of two subscales of Inappropriate and Appropriate Touch. Inappropriate Touch subscale (24 items) covers the major elements that most CSA programs are focused on, namely recognition of different touches, situations, strangers, and acquisition of self-protective skills. In CKAQ-RIII a 9-item subscale of Appropriate Touch was developed where identification of more complicated situations was introduced, like seeing a child's private parts in the context of a doctor's appointment, or in the case of the child to ask for help when lost. Psychometric properties exist only for the ITS which revealed strong internal consistency (α=.87) and test-rest reliability (α=.88). The translation and cultural adaptation of the questionnaire was conducted in accordance to the international standards of the World Health Organization (WHO/Research Tools http://www.who.int/substance_abuse/research_tools/translation/en/).

Teachers: Teacher training workshop was delivered to all teachers of the participating school. The training workshop included training concepts on child abuse and prevention, a description of the program and guidelines on how to handle possible disclosures by students.

To assess teachers' knowledge about child sexual abuse, a 20 item true-false questionnaire was administered (Goldman, 2007). Teachers completed the knowledge questionnaire before and after the training workshop.

Parents: Parent training workshops were delivered to parents of participating students in grades 1-3 of the school. Parents' presentation was developed based on the original NYSPCC material addressing concepts of child sexual abuse, appropriate sexual development and talking to children about abuse.

The questionnaires distributed to parents included general demographics, CSA prevention knowledge, CSA attitudes, parent-child communication practices, and CSA indications.

Parents' prevention knowledge about child sexual abuse was assessed with the CSA Myth Scale (Collings, 1997). The scale consisted of 10 items with a 3-point Likert-type format of "agree", "disagree" and "unsure" response options. Parents' attitudes towards CSA prevention education were measured using a 5 items scale where response choices were either "agree" or "disagree" (Chen & Chen, 2005).

Finally, a 5 items CSA indications was used to assess parents' ability to recognize symptoms of sexual abuse to children.

The aforementioned tools were administered to parents twice, before and after the training workshop, to evaluate changes in the scores of the assessment scales.

All scales distributed to parents and teachers were translated in Greek language and translated back to English to ensure consistency in meaning.

2.3. Intervention

Safe Touches is a school-based sexual abuse prevention program implemented in grades K-3. Safe Touches curriculum has been designed and delivered by the New York Society for the Prevention of Cruelty to Children (NYSPCC) since 2007 with excellent results (Pulido, Dauber, Tully, Hamilton, Smith, & Freeman, 2015). Safe Touches curriculum has been adapted and translated to the Greek population and education system.

A 50-minute in class interactive workshop was delivered to children in grades 1-3 with puppets employing role-play scenarios to assist children in learning and practicing concepts of body safety. At the end of the workshop, children were also provided with an age-appropriate activity book that included exercises and revision of the material presented in class. Children were given the handbook to take home and work on it with their families.

The main concepts covered in the workshop included the parts of the body that are considered private, the difference between safe and not-safe touches, what to do if they feel not safe and confused, and who to tell if they receive a not safe touch.

The workshops were delivered by a trained mental health professional in collaboration with and the support of graduate students in counselling psychology.

Students grades 1-3 completed the Greek version of CKAQ before the intervention (pre-test) and one week later (post-test), immediately after the intervention. The administration of the questionnaire was delivered orally either individually or in pairs of students and lasted approximately 15-20 minutes.

2.4. Ethical Issues

The study was granted ethical approval by the Institutional Review Board of the American College of Greece. Informed consent was provided from school management, teachers and parents.

If during the delivery of the intervention prevention a possible incident of abuse or neglect was disclosed, a standard protocol was initiated where a minimal facts interview with the child was conducted and the school principal was informed, following the Protocol Implementation Guide of Investigation, Diagnosis and Management of Child Abuse/Neglect for Professionals (http://www.0-18.gr/downloads/protokollo-eyretirio-kakopoiisis/Guide%20to%20Protocol%20use_ICH_6.2015.pdf)

3. Results

Children: The internal consistency of the two subscales revealed strong Cronbach's α for the ITS (*N*=467), ranging from .77 (post-testing) to .82 (pre-testing). However, the internal consistency on the 9-items of the ATS showed a rather weak Cronbach's α, with .49 to .63 for post and pre-testing, respectively.

A 2 x 2 x 3 mixed ANOVA was conducted to investigate the effects of gender (male vs. female), grade level (1st vs. 2nd vs. 3rd) and intervention effectiveness (pre vs. post-test), the latter being the within participants variable, on the total CKAQ scores. Analyses revealed a significant effect of grade level on the total CKAQ scores, $F(2,427)=46.05$, $p=.000$, $\eta^2 = .17$, with third graders exhibiting greater knowledge levels of sexual abuse concepts (*M*=23.61, *S.D.*=4.61) than second (*M*=23.61, *S.D.*=4.61) and first graders (*M*=23.61, *S.D.*=4.61). There was also a significant effect of intervention effectiveness $F(1,427)=27.10$, $p=.000$, $\eta^2 = .06$, showing benefits in knowledge as evident by differences in scores before (*M*=20.56, *S.D.*=4.68) and after the intervention (*M*=21.64, *S.D.*=5.62). A significant interaction between intervention effectiveness and grade level, [$F(2,427)=10.53$, $p=.000$, $\eta^2 = .047$], indicated that only the second and third grade students were affected by the intervention and showed increases in the CSA knowledge and prevention skills. However, knowledge scores remained the same before and after the intervention for first graders. The effect of gender and the remaining interactions failed to reach the level of significance and thus are not reported in detail.

In the separate analysis of the two subscales, Inappropriate Touches and Appropriate Touches, there were some discrepancies in the knowledge gains of children. Specifically, following a similar pattern as the CKAQ total score, Inappropriate Touches knowledge increased as evident by the differences in the scores before and after the intervention. On the other hand, Appropriate Touches scores

failed to show knowledge gains before and after the intervention. These findings are consistent with previous research (Pulido et al., 2015).

Teachers: Overall, teachers displayed an increase in knowledge as indicated by the difference in scores of the assessment scale delivered before (M=11.41, $S.D.$=2.95) and after (M=16.08, $S.D.$=2.63) the training workshop, $t(72)=12.4$, $p=.000$, $d=1.67$.

Parents: Overall, parents exhibited significant knowledge gains indicated by the differences in scores before (M=28.9, $S.D.$=1.14) and after (M=29.48, $S.D.$=1.58) the workshop, $t(102)=3.27$, $p=.001$, $d=0.40$. Moreover, positive attitudes towards CSA school-based prevention programs were significantly increased following the training workshop, with post attitudes scores being higher (M=4.62, $S.D.$=1.06) than pre workshop scores (M=4.19, $S.D.$=1.3), $t(109)=2.72$, $p=.007$, $d=0.36$. On the other hand, parents' ability to recognize that a child has been sexually abused did not improve before and after the workshop shown by the scores obtained in the Indications of CSA questionnaire ($p>.05$).

4. Conclusions

Although the research methodology differs from the original employed by NYSPCC for the delivery of Safe Touches, the overall trends of the data remain comparable and in the same direction. Specifically, Pulido et al.'s (2015) study design employed intervention and control groups of children, whereas all student participants of present study took part in the prevention intervention curriculum and outcomes measure was assessed before and after the delivery of the program. Children exposed to the prevention program increased their knowledge and ability to distinguish between a safe and not safe touch which should place them in a position to react promptly and proactively to possible inappropriate conduct by adults and prevent their victimization (Pulido et al., 2015). Similarly, both parents and teachers after a 2-hour training workshop increased their awareness, knowledge and attitudes on CSA concepts. These findings expand on previous research (Chen & Chen, 2005; Goldman, 2007) by not only measuring awareness, but also examining the effectiveness of a short-term informative training in parents and teachers. Additionally, the results of the prevention program supported the existing research literature that emphasizes the necessity of integration of such programs in health education programs in elementary schools. The current study provides a comprehensive approach in preventing sexual abuse in a school setting, involving individuals that can promote awareness and subsequently enhance intervention efforts. Future research should focus on the delivery of the Safe Touches program to a representative national sample, longer term retention and behavioral intentions as an outcome measure for children, and longer knowledge gains and attitudes changes as an outcome measure for parents and teachers.

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PREDICTORS OF BINGE EATING SYMPTOMATOLOGY

Jennifer McKenzie & Lynne M. Harris
School of Psychological Sciences, Australian College of Applied Psychology (Australia)

Abstract

Binge Eating Disorder (BED) is characterised by the consumption of large amounts of food in a relatively short period of time without compensatory behaviour, such as purging or compulsive exercise. Much of what is known about BED comes from studies of overweight or obese treatment seeking individuals, although about 50% of those with BED are in the non-obese weight range. This study examined predictors of binge eating symptomatology in a non-treatment seeking general population sample who were in the normal weight range (n=223) or in the overweight / obese range (n=179). Participants completed an online questionnaire comprising self-report measures of physical and psychological health, demographics and height and weight. Hierarchical regression analysis indicated that the significant predictors of binge eating symptomatology for those in the normal weight range were age, self esteem, weight concerns, and dietary restraint, accounting for 71% of variance in the severity of BE symptomatology. For those in the overweight or obese BMI range, weight concerns, and depression were the only significant predictors, accounting for 67% of variance in the severity of BE symptomatology. The findings have implications for treatment of individuals with BE symptomatology.

Keywords: *Binge eating, body mass index, self esteem, restraint.*

1. Introduction

Binge Eating Disorder (BED) is characterized by recurrent episodic binge eating (BE), defined as eating in a discrete period of time an amount of food that is excessive compared to what most people would eat under similar circumstances and that is associated with feelings of distress and loss of control (Diagnostic and Statistical Manual for Mental Disorders fifth edition [DSM-5], American Psychiatric Association [APA], 2013). Understanding the factors that contribute to the etiology and maintenance of BED is important for developing effective treatments for this disabling condition.

Fairburn (2008) argued that overvaluation of shape and weight are transdiagnostic characteristics of eating disorders and the diagnostic criteria for Anorexia Nervosa (AN) and Bulimia Nervosa (BN) include these symptoms. However, although there is evidence that overvaluation of body shape and weight is characteristic of BED (Mond, 2013; Wilson, 2011) these are not included in the diagnostic criteria for BED (APA, 2013) although overvaluation of shape and weight have been found to be significantly higher in individuals with BED compared to those without eating disorder pathology (Masheb & Grilo, 2000; Striegel-Moore et al., 2001).

A number of theories have been advanced to explain the etiology and maintenance of BE. The dietary restraint model suggests that BE is a response to overvalued views concerning the importance of slimness that drive excessive dietary restraint which in turn makes the individual vulnerable to later disinhibition and overeating (Polivy & Herman, 1985). Dieting is therefore a risk factor for the development of BE symptomatology, and higher scores on measures of dietary restraint are associated with onset of BED, consistent with the dietary restraint model (Stice et al., 2002). However, it has also been reported that up to 65% of those with BED do not have a history of dieting (Dingemans & van Furth, 2012). Thus, dietary restraint does not appear to account for all presentations of BED.

The emotion regulation theory of eating disorders posits that eating disorders characterized by BE, such as AN (binge-purge subtype) and BN are associated with greater difficulty regulating emotional arousal than those without BE, such as AN (restricting type; McCurdy, 2010). Similarly, Svaldi et al. (2012) found that those with AN, BN, and BED had higher levels of emotional intensity, lower levels of acceptance of emotion and emotional awareness, and more dysfunctional emotional regulation strategies compared to a sample without eating disorders. In a study involving obese participants with BED, Gianini et al. (2013) found a significant relationship between problems with emotional regulation and emotional

overeating and general eating pathology after controlling for negative effect. Gianni et al. argued that problems with emotional regulation might contribute to the maintenance of emotional overeating and eating behaviour (Gianini et al., 2013).

While several studies found no relationship between BMI and BE symptomatology Mason and Lewis (2014) examined the interaction between depressive symptoms, eating styles and BMI in predicting BE symptomatology in a large student sample and found that, while BMI was not correlated with BE symptomatology in the overall sample, the combination of high BMI, depression, and emotional or external eating was associated with greater BE symptomatology. For those with higher BMI and lower maladaptive eating style, depressive symptoms were less predictive in determining BE symptomatology.

Carrard, Crepin, et al. (2012) conducted a study examining a proposed dual-pathway model, whereby problems with dietary restraint and/or negative affect may trigger BE behaviour. The BED subtypes, impulsivity and reinforcement sensitivity were examined in females with both threshold and sub-threshold BED. The findings supported the dual pathway model, identifying dietary restraint and dietary restraint/negative affect subtypes, where the dietary restraint/negative affect subtype had more severe eating disorder symptoms and higher levels of anxiety and impulsivity (Carrard, Crepin, et al., 2012). There were no differences in BMI between the subgroups, with the average BMI of participants in the obese range and only 23% of the sample having a BMI in the normal range.

Although obesity is not a consistent feature of BED, many studies have focused on primarily or exclusively female treatment seeking obese samples, limiting the generalisability of findings to the broader population with BE symptomatology, who may be normal weight, non-treatment seeking and male (Reagan & Hersch, 2005). Few studies to date have examined the full BMI spectrum of individuals with BE symptomatology to examine possible weight variations within BE. Thus, The current study sought to examine the predictors of BE symptomatology separately among community samples in the normal weight BMI range and in the overweight / obese BMI range.

2. Method

2.1. Design and Procedure

The study was approved by the institutional Human Research Ethics Committee and employed a cross-sectional correlational design. Prospective participants followed a link to information about the study and a further link to an online questionnaire presented using Qualtrics software. Participants were informed that consent was indicated by completion and submission of the online questionnaire.

2.2. Participants

Participants were 18 years and over and were recruited from first year undergraduate psychology students (29.5%) and from the general community (70.5%). Of 840 surveys commenced, 454 were submitted, a completion rate of 54%. Of the 454 completed surveys 27 were excluded due to multiple data entry errors (n= 9), age below 18 years (n=1), survey completion time less than 10 minutes (n=12) or presence of outliers (n=5). The final sample (N=427; 87.8% female) had a mean age of 30.46 years (SD=10.16; range: 18 – 70 years). The majority (79%) had some post-secondary education. Participants were divided into two groups based on BMI: Normal (BMI 18.50 - 24.99; n=223), Overweight or Obese (BMI >25.00; n=179; Department of Health, 2013).

2.3. Measures

Background Questions. Participants completed questions concerning age, sex, education level, diagnosed physical and mental illnesses, and psychological treatment history.

Binge-Eating Scale (BES; Gormally et al., 1982). The 16-item BES includes questions about behavioural and cognitive aspects of BE. Total scores on the BES range from 0 to 46. The BES has been reported to have good test-retest reliability and in the current sample Cronbach α was .95.

Eating Disorders Examination Questionnaire (EDE-Q) (Fairburn & Beglin, 1994). The EDE-Q gives a global score and subscale scores for Restraint, Eating Concern, Weight Concern and Shape Concern. The EDE-Q has good reliability and in the current sample, Cronbach *α's* were .67 for the EDE-Q Global scale and .65, .69, .71 and .56 for the EDE-Q Restraint, EDE-Q Eating Concern, EDE-Q Shape Concern and EDE-Q Weight Concern subscales.

Depression, Anxiety & Stress Scale-21 (DASS-21) (Lovibond & Lovibond, 1995). The DASS-21 is a 21-item questionnaire to assess depression, anxiety and stress over the past week. The DASS-21 has high internal consistency and in the current sample, Cronbach *α's* were .94 for the Depression subscale, .89 for the Anxiety subscale, .91 for the Stress subscale and.96 for the DASS-21 Total Score.

Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985). The SWLS is a 5-item measure of subjective well-being measured on a 7-point Likert scale so that total scores range from 5 to 35 with higher scores suggesting greater satisfaction with life. The SWLS has high internal consistency and temporal reliability (Diener et al., 1985) . In the current sample, Cronbach α =.93

Rosenberg Self Esteem Scale (RSES) (Rosenberg, 1965). The RSES is a 10-item measure of self-esteem with scores ranging from 0 to 30 and higher scores reflecting greater self-esteem. Test-retest reliability is high (Rosenberg, 1965), and in the current sample Cronbach α =.94.

Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004). **T**he DERS is a 36-item measure with a total score and subscales of non-acceptance of emotional responses, difficulties engaging in goal directed behaviour, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. Total scores range from 36 to 180 with higher scores suggesting problems with emotional regulation. The DERS has good test-retest reliability (Gratz & Roemer, 2004) and in the current sample, Cronbach α =.88 for the total DERS.

Body Mass Index (BMI). BMI was calculated based on self-reported height in centimetres and weight in kilograms using the formula BMI = kg/m2 (Department of Health, 2013).

3. Results

Hierarchical regression was used to examine predictors of BES Total in the two samples based on BMI. Prior to this analysis univariate and multivariate outliers were identified and removed and multicollinearity of predictors was evaluated and was < .70 in all cases. Hierarchical regression is robust to violations of the assumptions of skewness and kurtosis with the sample sizes used here (Tabachnick & Fidell, 2013). Tables 1 and 2 present the results of hierarchical regression analyses predicting BES Total from age (Step 1), SWLS and RSES (Step 2), DERS and DASS-21 Depression (Step 3), and EDE-Q Restraint and EDE-Q Weight Concern (Step 4) separately for those in the normal BMI range (Table 1) and those in the overweight and obese BMI range (Table 2). It is apparent that the seven variables account for a similar proportion of the variability in each sample (71% for those in the normal BMI range and 67% for those in the overweight and obese BMI range). It is also apparent that the significant predictors are somewhat different for the two samples. For those in the normal BMI range, at Step 4 the significant predictors of BES Total were age, RSES, EDE-Q Restraint and EDE-Q Weight Concern (see Table 1). For those in the overweight and obese BMI range, at Step 4 the significant predictors of BES Total were DASS-21 Depression and EDE-Q Weight Concern (see Table 2).

Table 1. Hierarchical Regression Model predicting BE Total – Normal BMI range (N=223).

Predictors	*R*	Adjusted R^2	R^2 Change	*B*	SE	*β*	*t*
Step 1	0.41	0.17	0.17*				
Age				-.550	.082	-.412	-6.72*
Step 2	0.74	0.58	0.42*				
Age				-.19	.06	-.14	-2.97*
SWLS				-.14	.10	-.09	-1.36
RSES				-1.09	.11	-.64	-9.55*
Step 3	0.78	0.59	0.01*				
Age				-.14	.07	-.11	-2.21*
SWLS				-.00	.12	-.00	-.04
RSES				-.92	.13	-.54	-7.02*
DERS				.04	.04	.07	1.17
DASS-21 Depression				.34	.19	.16	1.78
Step 4	0.85	0.71	0.12*				
Age				-.12	.06	-.09	-2.26*
SWLS				.05	.10	.03	.52
RSES				-.61	.12	-.36	-5.29*
DERS				.02	.03	.03	.53
DASS-21 Depression				.20	.16	.10	1.25
EDE-Q Restraint				-.77	.33	-.09	-2.33*
EDE-Q Weight Concern				3.44	.36	.44	9.43*

* p<0.05; BES Total: Binge Eating Scale Total; BMI: Body Mass Index; EDE-Q: Eating Disorder Examination-Questionnaire; DASS-21: 21 item Depression, Anxiety and Stress Scale; SWLS: Satisfaction with Life Scale; RSES: Rosenberg Self-Esteem Scale; DERS: Difficulties in Emotional Regulation Scale

Table 2. Hierarchical Regression Model predicting BE Total – Overweight or Obese BMI range (N=179).

Predictors	*R*	Adjusted R^2	R^2 Change	*B*	SE	*β*	*t*
Step 1	0.23	0.05	0.06*				
Age				-.27	.09	-.23	-3.12*
Step 2	0.71	0.49	0.44*				
Age				-.07	.07	-.06	-1.02
SWLS				-.20	.11	-.13	-1.76
RSES				-1.09	.14	-.59	-7.87*
Step 3	0.74	0.54	0.05*				
Age				-.04	.06	-.03	-.65
SWLS				-.13	.11	-.08	-1.16
RSES				-.69	.17	-.38	-4.20*
DERS				.13	.05	.20	2.78*
DASS-21 Depression				.37	.19	.17	1.93
Step 4	0.83	0.67	0.10*				
Age				-.07	.05	-.06	-1.29
SWLS				-.17	.09	-.11	-1.87
RSES				-.18	.15	-.10	-1.20
DERS				.08	.04	.12	1.97
DASS-21 Depression				.35	.16	.16	2.17*
EDE-Q Restraint				.52	.41	.06	1.27
EDE-Q Weight Concern				4.20	.50	.49	8.49*

* $p<0.05$; BES Total: Binge Eating Scale Total; BMI: Body Mass Index; EDE-Q: Eating Disorder Examination-Questionnaire; DASS-21: 21 item Depression, Anxiety and Stress Scale; SWLS: Satisfaction with Life Scale; RSES: Rosenberg Self-Esteem Scale; DERS: Difficulties in Emotional Regulation Scale

4. Discussion

This study sought to examine predictors of BE symptomatology in a general population sample divided into groups based on BMI. The regression analyses showed that predictors of BE symptomatology varied with BMI, where age, self esteem, restraint and weight concerns were significant predictors for those in the normal BMI range, while for those in the overweight and obese BMI range depressive symptoms and weight concerns were the only significant predictors. This is consistent with Mason and Lewis' (2014) findings that for those with higher BMI, depressive symptoms were important predictors of BE symptoms. Importantly, emotional regulation was not independently associated with BE symptomatology in either group.

The current findings suggest that dietary restraint and negative affect were both related to BE symptoms in this large, general population sample, but the relationship varied depending on BMI. For those in the normal BMI range, individuals may binge in an effort to counteract the effects of caloric deprivation. However, for those in the overweight/obese range depressive symptoms, but not restraint, predicted BE, somewhat consistent with the findings of earlier work (Dingemans & van Furth, 2012).

Whilst not a key diagnostic marker for BED in terms of DSM-5 criteria, overvaluation of weight was a significant predictor of BE symptom severity in both BMI samples, consistent with the transdiagnostic model of eating disorders (Fairburn, 2008).

Limitations of the current study must be recognised. Whilst this study gathered information from a large community sample, all data was self-report and there was no objective assessment of BMI. As the survey was anonymous, it is expected that respondents would respond honestly, however replication incorporating objective and externally validated measures is warranted.

The findings of the present study have implications for psychological interventions for BED and suggest that interventions may need to be differentiated by BMI range, suggesting that body image interventions may be most important for those in the normal BMI range while mood management may be important for those in the overweight / obese BMI range.

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HAVING HIGH STANDARDS FOR OTHERS CONTRIBUTES TO LIFE SATISFACTION BEYOND A WELL-BALANCED PERSONALITY

Samantha A. Fowler, Leanne L. Davis, Lilly E. Both, & Lisa A. Best
Department of Psychology, University of New Brunswick
100 Tucker Park Road, Saint John, NB E2L 4L5 (Canada)

Abstract

Although perfectionism has been associated with life satisfaction in several studies, researchers have failed to account for the influence of personality on life satisfaction. Previous research has indicated that personality is associated with both life satisfaction and perfectionism. Therefore, in the present study, the hypothesis that specific perfectionism dimensions contribute to the prediction of life satisfaction beyond the influence of personality was tested. An online sample of participants completed questionnaires assessing perfectionism, personality, and life satisfaction. Correlational analyses revealed that several perfectionism dimensions (Concern Over Mistakes; Need for Approval; Parental Pressure; and, Rumination) were negatively correlated with life satisfaction and the dimension of Organization was positively correlated. Regarding personality, perfectionism dimensions were most consistently correlated with Neuroticism, Introversion, and Conscientiousness. A hierarchical regression analysis was conducted to determine if perfectionism contributed unique variance in the prediction of life satisfaction, beyond that of personality. Age and gender were entered in the first step of the analysis, to control for their effects. The personality factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness were entered in the second step. Finally, the eight perfectionism dimensions were added in the third step. Overall, low Neuroticism as well as high Extraversion, Conscientiousness, and High Standards for Others significantly predicted life satisfaction. These results suggest that perfectionism contributes unique variance in the prediction of life satisfaction beyond the influence of personality. Given the association between High Standards for Others and life satisfaction, future research should explore the mediating role of interpersonal relationships.

Keywords: *Perfectionism, Personality, Life Satisfaction.*

1. Introduction

Traditionally, perfectionism has been measured using two scales: The Frost Multidimensional Perfectionism Scale (F-MPS; Frost, Marten, Lahart, & Rosenblate, 1990) and the Hewitt and Flett Multidimensional Perfectionism Scale (HF-MPS; Hewitt & Flett, 1991). In order to achieve a comprehensive understanding of perfectionism, these two scales are often administered concurrently, and the subscales have been combined to produce two higher order factors: maladaptive perfectionism (i.e., concern over mistakes, doubts about actions, parental criticism, and socially prescribed perfectionism); and adaptive perfectionism (i.e., personal standards, organization, and self-oriented perfectionism; Cox, Enns, & Clara, 2002). Research has identified a direct relation between adaptive perfectionism and life satisfaction and an inverse relation between maladaptive perfectionism and life satisfaction (Chang, Watkins, & Banks, 2004; Gnilka, Ashby, & Noble, 2013; Wang, Yuen, & Slaney, 2009). However, a recent meta-analysis of longitudinal studies identified both adaptive and maladaptive perfectionism dimensions as risk factors for depression, even after controlling for the effects of neuroticism (Smith et al., 2016). Thus, because both adaptive and maladaptive perfectionism contributed to depression, the notion that there are distinctions between the two perfectionism dimensions has been called into question. Furthermore, this meta-analysis highlighted the importance of examining personality factors when researching well-being, because personality may operate as a third variable, explaining apparent relations between well-being and its predictors (Smith et al., 2016).

In several studies, personality has been related to the subscales of the HF-MPS (Dunkley, Blankstein, & Berg, 2012; Hill, McIntire, & Bacharah, 1997; Stoeber, Otto, & Dalbert, 2009), and the F-MPS (Dunkley et al., 2012; Stumpf & Parker, 2000). However, due to conceptual overlap between the

scales, using both simultaneously is redundant. Therefore, Hill and colleagues (2004) developed the Perfectionism Inventory (PI). This scale combines items from the aforementioned scales, other relevant scales, and related constructs of rumination and planfulness to produce an eight-dimensional scale assessing: Concern Over Mistakes; High Standards for Others; Need for Approval; Organization; Parental Pressure; Planfulness; Rumination; and, Striving for Excellence. These items have also been related to specific Five Factor Model personality factors (Costa & McCrae, 1992). Specifically, Cruce, Pashak, Handal, Munz, and Gfeller (2012) found that the majority of these dimensions were positively correlated with Neuroticism. Further, Conscientiousness was positively related to Striving for Excellence; Planfulness, Organization, and, High Standards for Others. Openness was negatively correlated with Concern Over Mistakes and Agreeableness was negatively related to High Standards for Others, Concern Over Mistakes, Parental Pressure, and Rumination and positively correlated with Planfulness. Finally, Extraversion was negatively related to Concern Over Mistakes, Need for Approval, and Rumination. These associations between perfectionism dimensions and personality factors suggest that both personality factors and perfectionism dimensions may contribute uniquely in models predicting life satisfaction.

Personality is a robust and reliable predictor of life satisfaction. (Hayes & Joseph, 2003; Steel, Schmidt, & Shultz, 2008). Low levels of Neuroticism (i.e., emotionally stability) and high levels of Extraversion consistently emerge as the strongest predictors (Schimmack, Diener, & Oishi, 2002; Schimmack, Oishi, Furr, Funder, 2004; Steel et al., 2008), although high levels of Conscientiousness have also been implicated (Hayes & Joseph, 2003; Steel et al., 2008). Correlations among life satisfaction, Agreeableness, and Openness have been identified; however, these factors contribute little unique variance when accounting for the other personality factors (Steel et al., 2008).

1.1. Purpose of the Present Study

Given the complex associations among these variables, it is important to consider the influence of personality when examining the relation between perfectionism and life satisfaction. Therefore, the purpose of this study was twofold: (1) to identify the direction of the relations between the perfectionism dimensions and life satisfaction; and, (2) to determine if perfectionism adds unique variance in the prediction of life satisfaction, beyond that of personality.

2. Method

2.1. Participants

Participants were recruited from online sources to complete a questionnaire study in exchange for the chance to win a $50 Amazon gift card. The final sample consisted of 448 adults between the ages of 19 and 65 (*M* age = 28.77; 75% female).

2.2. Measures

Demographics. Participants completed a demographics questionnaire assessing age and gender.

Perfectionism Inventory (PI; Hill et al., 2004). The PI measures eight dimensions of perfectionism. In doing so, this measure provides a more comprehensive measure of perfectionism while reducing redundancy, and increasing predictive power (Hill et al., 2004). The scale has been found to have excellent psychometric properties (Cruce et al., 2012; Hill et al., 2004). In our study, the Cronbach α for each subscale was: Concern Over Mistakes (α = .91); High Standards for Others (α = .87); Need for Approval (α = .89); Organization (α = .89); Planfulness (α = .94); Rumination (α = .88); and, Striving for Excellence (α = .87).

Big Five Inventory (BFI; John & Srivastava, 1999). This inventory was used to assess the five factors of personality. Participants were presented with the prompt "*I see myself as someone who…*" and a list of descriptions and asked to rate their level of agreement. This scale was found to have adequate psychometric properties in the present study: Neuroticism (α = .86); Extraversion (α = .87); Openness (α = .71); Agreeableness (α = .78); and, Conscientiousness (α = .73).

Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, Griffin, 1985). The SWLS was used to measure participants' cognitive evaluations of their current life conditions. Participants were asked to indicate their level of agreement with each of the five statements (e.g., "*I am satisfied with my life*") on a seven-point Likert scale to produce a total score. In the present study, the reliability of this scale was found to be excellent (α = .91). This SWLS is a common and widely used measure of life satisfaction (Pavot & Diener, 2008).

2.3. Procedure

Participants were recruited online through social media and relevant discussion boards. Interested individuals were directed to Qualtrics, an online survey platform, to complete questionnaires assessing demographics, perfectionism, personality, and life satisfaction. Following completion of the study, participants were instructed to email the primary researchers if they were interested in being entered into a draw for a $50 Amazon gift card and if they wished to receive the results of the study. All measures and procedures were approved by the University of New Brunswick's Research Ethics Board prior to the commencement of the study.

3. Results

3.1. Correlations

Correlations among the perfectionism dimensions, personality, and life satisfaction are presented in Table 1. The perfectionism dimensions of Concern Over Mistakes, Need for Approval, Parental Pressure, and Rumination were negatively correlated with life satisfaction, whereas Organization was positively correlated. These dimensions were also related to personality; the most consistent correlations were with Neuroticism, Extraversion, and Conscientiousness. Finally, all of the personality factors were related to life satisfaction. Specifically, lower levels of Neuroticism and higher levels of Extraversion, Openness, Agreeableness, and Conscientiousness were associated with higher life satisfaction.

Table 1. Correlations among Perfectionism Dimensions, Personality, and Life Satisfaction.

	LS	CM	HS	NA	ORG	PP	P	RUM	SE
LS	1	-.36***	.08	-.35***	.10*	-.10*	.05	- .37***	-.08
N	-.45***	.60***	.09	.62***	-.07	.22***	.18***	.63***	.29***
E	.39***	-.32***	.12*	-.38***	.14**	-.05	-.18***	-.29***	-.03
O	.10*	-.07	.07	-.12*	-.03	.08	.01	-.04	.07
A	.21***	-.16***	-.36***	-.03	.07	-.07	-.01	-.15**	-.08
C	.30***	-.12*	.18***	-.18***	.58***	.08	.29***	-.07	.34***

Note: LS = Life Satisfaction, CM = Concern Over Mistakes, HS = High Standards for Others, NA = Need for Approval, ORG = Organization, PP = Parental Pressure, P = Planfulness, RUM = Rumination, SE = Striving for Excellence, N = Neuroticism, E = Extraverion, O = Openness, A = Agreeableness, and C = Conscientiousness.

3.2. Hierarchical Regression Analysis

A hierarchical regression analysis was conducted to determine if perfectionism contributed unique variance in the prediction of life satisfaction, beyond the influence of personality. In the model, age and gender were entered in the first step, to control for their effects. The personality factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness were entered in the second step. Finally, the eight perfectionism dimensions were entered in the third step. We inspected the data for the presence of multicollinearity and all tolerance and Variance Inflation Factor (VIF) scores were within acceptable levels. The resulting model was statistically significant, predicting 35% of the variance in life satisfaction ($F_{[15, 400]} = 14.1$, *multiple* $R = .59$, *adjusted* $R^2 = .32$, $p < .001$). In the first step, age and gender were not significant ($F_{[2, 413]} = .20$, $p > .05$). Block 2 personality variables was statistically significant, (R^2 *change* $= .31$, $F_{INC[5, 408]} = 36.7$, $p < .001$). Low Neuroticism ($\beta = -.36$, $t = -7.32$, $p < .001$), high Extraversion ($\beta = .22$, $t = 4.76$, $p < .001$), and high Conscientiousness ($\beta = .13$, $t = 2.95$, $p = .003$) were the unique predictors at this step. When the perfectionism dimensions were added in the third step, there was a significant change in the model (R^2 *change* $= .04$, $F_{INC[8, 400]} = 2.64$, $p = .008$). The perfectionism dimension of High Standards for Others contributed to this change ($\beta = .17$, $t = 3.38$, $p = .001$), positively predicting life satisfaction. These results suggest that approximately a third of the variance in life satisfaction scores are accounted for by being emotionally stable, outgoing, organized, and holding others to high standards.

4. Discussion

This study replicated and extended the literature on life satisfaction. Specifically, consistent with the findings of Hayes and Joseph (2003), we found that personality factors accounted for 31% of the variance in life satisfaction. Likewise, the identification of emotional stability, extraversion, and conscientiousness as unique predictors of life satisfaction is congruent with a model of a well-balanced individual (Costa & McCrae, 1992). For example, emotional stability, extraversion, and conscientiousness contribute to a wealth of positive intra- and interpersonal outcomes (Ozer & Benet-Martinez, 2006).

This study also sought to determine whether perfectionism contributes to life satisfaction; we found statistically significant zero order correlations between perfectionism and personality that were comparable to those obtained by Cruce and colleagues (2012). Furthermore, the perfectionism dimension of High Standards for Others was found to uniquely contribute to life satisfaction. According to Hill and coworkers (2004), this dimension assesses the tendency to hold others to one's own perfectionistic ideals. These individuals tend to surround themselves with like-minded people who also maintain high standards which contributes to less frustrated expectations and more positive interactions thereby increasing satisfaction with life.

These results suggest that perfectionism does have some adaptive components, which is consistent with the theoretical framework proposed by Cox and colleagues (2002) as well as the results of several studies that identified a positive relation between adaptive perfectionism dimensions and life satisfaction (Chang et al., 2004; Gnilka et al., 2013; Hasnain & Fatima, 2012; Öngen, 2009; Wang et al., 2009). However, this finding stands in contrast to the results of Smith and coworkers (2016) who identified maladaptive and adaptive perfectionism dimensions as vulnerability factors for depression. It is possible that the discrepancy between these findings could be attributable to the methodology of the studies. The current study was cross-sectional, whereas conclusions drawn by Smith and coworkers were based on the results of a meta-analysis of longitudinal studies. It is possible that having high standards for others is beneficial over the short term, but that consistently demanding too much of others may jeopardize relationships and promote alienation from others.

4.1. Limitations and Directions for Future Research

The cross-sectional nature of this study is a limitation. Moreover, this study was comprised of mostly females; therefore, caution should be exercised when generalizing these results to males. Future research should investigate the relations among perfectionism, personality, and life satisfaction utilizing a longitudinal design. Within this design, the mediating role of interpersonal relationships should be considered to determine the effect of perfectionism on relationships and the resulting impact on life satisfaction.

5. Conclusion

Perfectionism appears to have some adaptive components which contribute to life satisfaction, beyond the influence of personality.

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PREDICTORS OF OVERALL LIFE SATISFACTION IN MALES AND FEMALES: THE IMPORTANCE OF BODY APPRECIATION

Leanne L. Davis, Samantha A. Fowler, Lisa A. Best, & Lilly E. Both
Department of Psychology, University of New Brunswick
100 Tucker Park Road, Saint John, NB E2L 4L5 (Canada)

Abstract

Recent research indicates that body image is strongly linked to general life satisfaction in both males and females; satisfaction is negatively associated with body dissatisfaction and positively associated with body appreciation. Further, the moderate relation between personality and life satisfaction is well-documented. Therefore, our purpose was to investigate if body dissatisfaction and appreciation contribute to the prediction of life satisfaction over and above the influence of personality. In this study, an online sample completed questionnaires assessing life satisfaction (Life Satisfaction Questionnaire-11), personality (Big Five Inventory), body dissatisfaction (Body Image Ideals Questionnaire), and body appreciation (Body Appreciation Scale-2). Separate regression analyses were conducted to determine predictors of life satisfaction in males and females. Age and body mass index (BMI) were entered in Step 1, personality factors (Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness) were entered in Step 2, and Body Dissatisfaction and Body Appreciation were entered in Step 3. Both models were statistically significant, predicting 56.8% (males) and 52.7% (females) of the variance in life satisfaction. For males, life satisfaction was predicted by lower Neuroticism as well as higher Extraversion and Body Appreciation. On the other hand, lower BMI, Neuroticism, and Openness, as well as higher Extraversion, Agreeableness and Body Appreciation predicted life satisfaction in females. Overall, results suggest that men and women who are sociable, emotionally stable and accepting of their bodies have higher life satisfaction. We would suggest that a shift in focus from negative to positive body image perceptions may prove beneficial to both clinicians and researchers.

Keywords: *Body Appreciation, Body Dissatisfaction, Personality, Life Satisfaction.*

1. Introduction

Body image has been conceptualized as a complex, multidimensional construct (Cash & Smolak, 2011); however, research has traditionally focused on body dissatisfaction with is the negative evaluative dimension of body image (Giovanneli, Cash, Henson, & Engle, 2008). Although these studies are of great significance, it is also important to recognize characteristics, correlates, and potential consequences of positive body image (Tylka & Wood-Barcalow, 2015). A negative focus may not only limit the opportunity for a holistic understanding of body image, but could also hinder attempts to diversify perspectives and inform prevention and treatment efforts (Tylka, 2011).

Body dissatisfaction is the negative body self-evaluation (Stice & Shaw, 2002), which typically involves a perceived discrepancy between a person's evaluation of their current body and their ideal body for one or more physical attributes (e.g., shape, weight, muscularity, facial features; Cash & Szymanski, 1995; Grogan, 2008). It is important to note that positive body image is not merely the absence of body dissatisfaction, in spite of the fact that the two are strongly inversely related (Tiggemann & McCourt, 2013). Body appreciation, a key component of positive body image, refers to gratitude toward one's own body (i.e., acceptance, love, and respect for the body), and focuses less on physical appearance (Tylka & Wood-Barcalow, 2015) and more on body functionality, strengths, and health (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010).

Life satisfaction, the cognitive component of subjective well-being (Diener, Oishi, & Lucas, 2003), has significant implications for mental and physical health (Fergusson et al., 2015; Pavot & Diener, 2008). For instance, life satisfaction has been positively associated with self-esteem (Kang, Shaver, Sue, Min, & Jing, 2003), positive affect (Palmer, Donaldson, & Stough, 2002), optimism (Steger, Frazier, Oishi, & Kaler, 2006), and health-promoting behaviours (Grant, Wardle, & Steptoe, 2009),

whereas it has been inversely associated with depression (Schimmack, Oishi, Furr, & Funder, 2004), negative affect (Chang, Watkins, & Banks, 2004), pessimism, perceived stress and suicidal ideation (Chang & Sanna, 2001). The correlates and predictors of life satisfaction are an important area of research which merit further investigation.

Studying associations between both negative (i.e., body dissatisfaction) and positive (i.e., body appreciation) components of body image and well-being (i.e., life satisfaction) could contribute to a more comprehensive understanding of the relations between them, which; in turn, could inform prevention and treatment efforts. However, given that personality has been found to account for a moderate proportion of the variance in life satisfaction, it is important to account for the role of personality factors when specific associations between these factors are examined (Steel, Schmidt, & Shultz, 2008).

1.1. Correlates of Life Satisfaction

Numerous studies have investigated relations between body dissatisfaction and well-being; however, rather confining definitions of well-being, usually focusing on self-esteem, are typically used (Swami, Tran, Stieger, & Voracek, 2015). Aside from constrictive definitions, research investigating well-being outcomes in relation to components of positive body image is lacking. Several recent studies have documented an inverse relation between body dissatisfaction and overall life satisfaction (Frederick, Sandhu, Morse, & Swami, 2016; Gongora, 2014), and a positive association between body appreciation and life satisfaction (Tylka & Kroon Van Diest, 2013). Overall, research suggests that higher levels of subjective well-being are associated with lower body dissatisfaction and higher body appreciation.

Studies using the commonly accepted Five-Factor model of personality that includes Neuroticism, Agreeableness, Extraversion, Openness to Experience, and Conscientiousness, have indicated that personality can significantly influence the level of subjective well-being (Diener et al., 2003). For instance, Neuroticism and Extraversion are the strongest predictors of life satisfaction (Schimmack et al., 2004; Steel et al., 2008). Given the consistency of these findings, numerous scholars have proposed that the combination of increased sociability and emotional stability yield the principle links between personality and well-being (i.e., Diener et al., 2003).

Further, individual differences in personality are associated with components of body image. Specifically, higher Neuroticism and lower Extraversion have been associated with negative body image (Frederick et al., 2016; Swami, Hadji-Michael, & Furnham, 2008; Swami, Salem, Furnham, & Tovee, 2008). Conversely, body appreciation has been negatively associated with Neuroticism and positively associated with Extraversion (Benford & Swami, 2014; Swami, Hadji-Michael et al., 2008).

1.2. Purpose of the Current Study

The extent to which positive and negative components of body image are important predictors of overall life satisfaction, when controlling for personality factors, has not been explored. Thus, this study addressed this gap in the literature. Further, in the current study, we will extend the results of MacNeill, Best, and Davis (2016) by examining specific gender differences in the prediction of life satisfaction.

2. Method

2.1. Participants

In total, 112 males (M_{age} = 27.66 years, *SD* = 9.36), and 336 females (M_{age} = 29.17 years, *SD* = 10.77) participated. In this sample, the average body mass index (BMI = kg/m^2) was 26.74 (*SD* = 6.56) indicating a sample that was slightly overweight (i.e., BMI > 25). In total, one male and 33 females reported that they have been previously diagnosed with an eating disorder.

2.2. Materials

Participants completed the Life Satisfaction Questionnaire-11 (LISAT-11; Fugl-Meyer, Melin, & Fugl-Meyer, 2002); the Big Five Inventory (BFI; John & Srivastava,1999); the Body-Image Ideals Questionnaire (BIQ; Cash, 2004); the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015); and, a brief demographics form to collect information regarding height, weight, and illness history. All measures had acceptable to excellent levels of reliability (α = .71 to α = .96).

2.3. Procedure

Data were collected via an online survey, designed using the Qualtrics system. This format allowed us to attain a wider demographic, and maximize the response rate. After providing informed consent, questionnaire measures were completed. With the exception of the demographics questionnaire (always presented first), the order of the questionnaires was randomized to prevent order effects.

3. Results

Separate *t*-tests were used to examine gender differences in body dissatisfaction, body appreciation, and life satisfaction. Levene's test for homogeneity of variances indicated equal variances (*p*s = .22 to .74). Table 1 presents the descriptive statistics. Females scored significantly higher on body dissatisfaction; however, no gender differences were observed for life satisfaction nor body appreciation.

Table 1. Descriptive Statistics for Males and Females for Body Image Variables and Life Satisfaction.

	Males (N = 108)	Females (N = 334)	*t*-test (*p* value)
Body Dissatisfaction	1.66 (SD = 1.21)	2.05 (SD =1.43)	2.56 (p = .011)
Body Appreciation	3.43 (SD = .83)	3.29 (SD =.91)	-1.45 (p = .15)
Life Satisfaction	4.07 (SD = .90)	4.15 (SD = .89)	.84 (p = .40)

Results from the correlational analyses are presented in Tables 2 (males) and 3 (females). Life satisfaction was significantly associated with positive and negative body image as well as several personality factors for both males and females. Interestingly, the relation between body dissatisfaction and body appreciation was identical for males and females (r = -.64, p < .001). As expected, specific personality factors were significantly associated with components of body image.

Table 2. Pearson's Correlations (r) for Body Image Variables, Life Satisfaction, and Personality Factors in Males.

Variable	LISAT	BD	BA	N	E	O	A	C
LISAT	-	-.57***	.65***	-.48***	.53***	.20*	.04	.43***
BD		-	-.64***	.58**	-.27**	-.07	-.12	-.46***
BA			-	-.46***	.39***	.26**	-.02	.36***
N				-	-.40***	.06	-.16	-.44***
E					-	.24**	-.02	.36***
O						-	.00	.05
A							-	.22*
C								-

Note: N = 98, LISAT = Life Satisfaction, BD = Body Dissatisfaction, BA = Body Appreciation, N = Neuroticism, E = Extraversion, O = Openness to Experience, A = Agreeableness, C = Conscientiousness
****p* < .001; ***p* < .01; **p* <.05*

Table 3. Pearson's Correlations (r) for Body Image Variables, Life Satisfaction, and Personality Factors in Females.

Variable	LISAT	BD	BA	N	E	O	A	C
LISAT	-	-.48***	.63***	-.55***	.37***	.02	.30***	.23***
BD		-	-.64***	.40***	-.25***	-.11*	-.05	-.14*
BA			-	-.51***	.33***	.22***	.21***	.18**
N				-	-.37***	-.16**	-.32***	-.30***
E					-	.20***	.15**	.23***
O						-	.12*	.10*
A							-	.20***
C								-

Note: N = 302, LISAT = Life Satisfaction, BD = Body Dissatisfaction, BA = Body Appreciation, N = Neuroticism, E = Extraversion, O = Openness to Experience, A = Agreeableness, C = Conscientiousness
****p* < .001; ***p* < .01; **p* <.05*

3.1. Factors Associated with Life Satisfaction

One of the primary goals of this study was to determine whether body appreciation and/or body dissatisfaction significantly predict life satisfaction. To examine this issue, two hierarchical regressions (separately for males and females) were conducted with life satisfaction as the criterion variable. In all regressions, age and BMI were entered in the first block, personality variables were entered in the second block, and body dissatisfaction and appreciation were entered in the third block.

The overall model for males was statistically significant, explaining 56.8% of the variability in life satisfaction ($F_{[9, 88]}$ = 12.85, *multiple R* = .75, *adjusted* R^2 = .52, p = .0001). In the first step, age and BMI were not significant ($F_{[2, 95]}$ = .82, p > .05). The addition of personality factors in the second block produced a statistically significant change in the model (R^2 *change* = .40, $F_{INC[5, 90]}$ = 12.46, p = .0001). Low Neuroticism (β = -.29, t = -2.99, p < .01) and high Extraversion (β = .33, t = 3.50, p = .001) were unique predictors at this step. When body image variables were added in the third step, they produced a statistically significant change in the model (R^2 *change* = .15, $F_{INC[2, 88]}$ = 15.14, p = .0001). Body appreciation contributed to this change, positively predicting life satisfaction (β = .38, t = 3.59, p = .001).

The overall model was also statistically significant for females, predicting 52.7% of the variability ($F_{[9, 292]}$ = 36.08, *multiple R* = .73, *adjusted* R^2 = .51, p = .0001). In the first step, the model was

statistically significant (R^2 *change* = .06, $F_{INC[2, 299]}$ = 10.28, p = .0001), with BMI negatively predicting life satisfaction (β = -.26, t = -4.50, p = .0001). The addition of personality factors in the second block produced a statistically significant change in the model (R^2 *change* = .35, $F_{INC[5, 294]}$ = 35.18, p = .0001). Low Neuroticism (β = -.44, t = -8.34, p = .0001) and Openness (β = -.11, t = -2.39, p < .05), and high Extraversion (β = .21, t = 4.29, p = .0001) and Agreeableness (β = .12, t = 2.54, p < .05) were unique predictors at this step. The third step was statistically significant (R^2 *change* = .11, $F_{INC[2, 292]}$ = 34.51, p = .0001), with body appreciation (β = .38, t = 6.29, p = .0001) uniquely predicting life satisfaction.

4. Discussion

Utilizing data collected from an online sample, relations between body image and life satisfaction were investigated. Overall, results demonstrated that men's and women's body appreciation is a significant predictor of their life satisfaction over and above the influence of age, BMI, and personality factors. This result is consistent with findings indicating that body appreciation predicts positive well-being outcomes in males and females (e.g., Tylka & Kroon Van Diest, 2013). Further, it is in line with previous research demonstrating that an individual's body image perceptions can influence subjective well-being (Donaghue, 2009; Swami et al. 2015). Although body dissatisfaction did not emerge as a statistically significant predictor of life satisfaction in our regression model, there was a strong trend, p's < .10, towards added predictability, suggesting that further research may be warranted. A study by Swami and colleagues (2015) also reported that body appreciation, but not body dissatisfaction, positively predicted well-being (i.e., subjective happiness) after controlling for the effects of age and BMI.

5. Limitations of the Current Study

A limitation of the current study was that the sample contained a low number of male participants in comparison to female participants. Although this gender distribution is common in psychological research, the power of the results would be strengthened if a higher proportion of male participants were included. In addition, our predictor variables were selected because they are commonly associated with life satisfaction. In spite of the fact that each of our regression models led to statistically significant R^2 values, there was a large proportion of unaccounted variability in life satisfaction.

6. Conclusions

Traditionally, there has been a narrow focus on negative, rather than positive, aspects of body image. Our research suggests that body appreciation represents an important aspect of body image that significantly predicts subjective well-being in males and females. Although it is important to attend to body dissatisfaction, a greater focus on the relations between body appreciation as well as other components of positive body image and their relation to well-being could be beneficial to researchers and clinicians alike (e.g., prevention of body image concerns, uncovering protective factors; Swami et al., 2015).

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DIRECT AND INDIRECT EFFECTS OF INTERPERSONAL COMPETENCE ON YOUNG ADULTS' MENTAL HEALTH THROUGH RELATIONSHIP STATUS

Chris Segrin[1], Katarzyna Adamczyk[2], Corey A. Pavlich[1], & Małgorzata Osowiecka[3]
[1]*Department of Communication, University of Arizona (USA)*
[2]*Adam Mickiewicz University in Poznan (Poland)*
[3]*University of Social Sciences and Humanities in Warsaw (Poland)*

Abstract

This study examined the indirect effects of interpersonal competence on positive mental health measured in terms of emotional, psychological and social well-being, and depression through relationship status (single *vs.* in a relationship). Three hundred and eighty five US participants (253 female and 125 male) aged years 18-39 old (*M* = 21.64, *SD* = 2.76) completed the Interpersonal Competence Questionnaire – Revised (ICQ-R; Buhrmester, Furman, Wittenberg, & Reis, 1988), The Mental Health Continuum Short Form (MHC-SF; Keyes, 2009), and The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The relationship between interpersonal competence and mental health was mediated by partner status, indirect effect B = -.04, 95% c.i. = -.15 - -.02 (estimated with bias corrected bootstrapping, based on 5000 bootstrap samples).The relationship between interpersonal competence and depression was mediated by partner status, indirect effect B = .03, 95% c.i. = .01 - .07 (estimated with bias corrected bootstrapping, based on 5000 bootstrap samples). In light of the obtained results it appears that one reason why people who have lower interpersonal competence are at risk of having poor mental health (i.e., high scores on CES-D and low scores on positive mental health) is because they are less likely to be in a romantic relationship. From the perspective of attachment theory, it could be indicated that the lack of an attachment figure puts people at risk of downgraded mental health.

Keywords: *Relationship status, positive mental health, depression, interpersonal competence, young adults.*

1. Introduction

The formation of intimacy and dating relationships has high importance in young adulthood (e.g. Beisert, 1991). Moreover, the successful realization of developmental tasks in young adulthood, especially in the domain of close relationships, requires a range of interpersonal skills (Brzezińska, 2008; Steca, Caprara, Tramontano, Vecchio, & Roth, 2009). In turn, interpersonal competence is associated with greater life satisfaction, environmental mastery, self-efficacy in social situations, hope, happiness, and quality of life (Segrin, Hanzal, Donnerstein, Taylor, & Domschke, 2007; Segrin & Taylor, 2007).

Regarding that formation of intimate relationships is one of the developmental tasks in young adulthood which its achievement requires several interpersonal competence in the current study we were interested in investigation the direct and indirect effects of interpersonal competence on young adults' mental health through relationship status. We hypothesized that the link interpersonal competence- mental health measured in terms of emotional, psychological and social well-being, and depressive symptoms may be mediate by the relationship status in such a way that higher interpersonal competence will be related to partnered status which will be related to higher emotional, psychological and social well-being, and lower level depressive symptoms.

2. Methods

2.1. Participants and Procedure

The study was conducted on a US sample of 385 individuals (253 female and 125 male, and 7 who did not indicate their sex) aged years 18-39 old *(M* = 21.64, *SD* = 2.76). The participants were all university students who completed an online survey, with measures described below, in exchange for course credit. One hundred eight-two (47.3%) reported being in a romantic relationship at the time of the assessment, while 197 participants (51.2%) were not, and 6 (1.2%) did not indicate their relationship status.

2.2. Measures

Emotional, psychological and social well-being. To measure emotional, psychological and social well-being, the Mental Health Continuum – Short Form (MHC – SF; Keyes, 2009) was used. The MHC-SF consists of 14 items measuring emotional, psychological and social well-being. The internal consistency reliability of this scale was $\alpha = .93$.

Depression. To measure mental health illness, the Center for Epidemiological Studies Depression Scale (Radloff, 1977) was used. The scale consists of 20 statements that measure the frequency of depressive symptoms experienced in the past week. Participants report the frequency of 20 depressive symptoms over the past week using a four-point scale from 0 (rarely, or not at all) to 3 (most of the time or all the time). The internal consistency reliability of this scale was $\alpha = .89$.

Interpersonal Competence. To measure interpersonal competence the Interpersonal Competence Questionnaire – Revised (ICQ-R; Buhrmester, Furman, Wittenberg, & Reis, 1988). The ICQ-R is a measure of interpersonal competences in specific social situations, mainly direct, informal and intimate relationships. It consists of 40 items rated on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This questionnaire is comprised by the five following subscales: Initiating relationships, Asserting influence, Self-disclosure, Providing emotional support, and Conflict resolution. However, for purposes of this study, the 40 items of the ICQ-R were summed to form a composite index of interpersonal competence. The internal consistency reliability of this scale was $\alpha = .90$.

Relationship status. Relationship status was assessed with the following item: "Are you currently in a close romantic relationship (including marriage)?" with response options of "Yes" or "No".

3. Results

The association between interpersonal competence and mental health, measured in terms of emotional, psychological and social well-being, and depressive symptoms, was predicted to be mediated by relationship status. Specifically, higher levels of interpersonal competence will be related to partnered status which would in turn be positively associated with greater mental health and lower level depressive symptoms. This prediction was tested in the SPSS 24 using the PROCESS module (Hayes, 2013). The PROCESS module is path analysis utility that allows for estimation of indirect effects through a mediating variable. The 95% confidence interval around the indirect effect was estimated with a bias corrected bootstrapping procedure based on 5000 bootstrap samples.

For the first analysis, interpersonal competence was treated as the independent variable, mental health as the dependent variable, and relationship status as the mediating variable. The results showed that interpersonal competence was significantly associated with higher mental health (direct effect $\beta = .36$, $p < .001$). The analysis further revealed that the relationship between interpersonal competence and mental health was mediated by partner status, indirect effect B = -.04, 95% c.i. = -.15 - -.02.

For the second analysis, interpersonal competence was treated as the independent variable, with depressive symptoms as the dependent variable, and relationship status as the mediating variable. Once again, there was a significant association between interpersonal competence and lower depressive symptoms ($\beta = -.27$, $p < .001$). The relationship between interpersonal competence and depression was mediated by partner status, indirect effect B = .03, 95% c.i. = .01 - .07.

4. Discussion

The major aim of the current investigation was to test the mediation model in which we postulated the mediating role of relationship status in the linkage between interpersonal competence - mental health. The performed analysis have fully supported the assumed hypothesis

demonstrating that relationship status mediated the association between interpersonal competence and emotional, psychological and social well-being, and depressive symptoms.

In light of the obtained results it appears that one reason why people who have lower interpersonal competence are at risk of having poor mental health (i.e., high scores on CES-D and low scores on positive mental health) is because they are less likely to be in a romantic relationship. From the perspective of attachment theory, it could be indicated that the lack of an attachment figure puts people at risk of downgraded mental health.

While the current study provides insight into the links between satisfaction with relationship status and well-being in young adulthood, it is not without limitations. First and foremost, the current study is of correlational design and any casual relationships between the variables cannot be established. Second, all participant data were from never married heterosexual and childless young adults, predominantly students residing in large cities. In future studies, thus, it would be useful to include larger non-student samples, and to compare young adults with individuals in middle and late adulthood with different relationship histories.

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AN INVESTIGATION OF THE PREDICTIVE ROLE OF SATISFACTION WITH RELATIONSHIP STATUS FOR YOUNG ADULTS' MENTAL HEALTH

Katarzyna Adamczyk[1] & Małgorzata Osowiecka[2]
[1]*Institute of Psychology, Adam Mickiewicz University in Poznan (Poland)*
[2]*University of Social Sciences and Humanities in Warsaw (Poland)*

Abstract

Numerous papers provided strong evidence for the existence of the linkage between marital status and mental health demonstrating that married people reported the best health when compared to never-married and formerly married people (e.g. Wadsworth, 2016). At the same time, a recent study by Lehmann and colleagues (2015) suggested that satisfaction with relationship status may be a more important determinant of well-being than marital status per se. The aim of the current study ran on a sample of 277 Polish participants aged 20-40 (M = 23.97, SD = 4.48) was therefore to test whether satisfaction with relationship status is a stronger predictor for mental health (emotional, social and psychological well-being, and depression) than relationship status. The performed hierarchical regression analyses systematically showed that satisfaction with relationship status was the only significant predictor of emotional well-being (β = .29, p = .000), psychological well-being (β =.23, p = .002), and depression (β = -.28, p = .000) than relationship status. With respect to social well-being, the analyses demonstrated that neither satisfaction with relationship status (β = .08, p = .266) nor relationship status were predictive of social well-being, (β = .04, p = .639). In line with Lehmann and colleagues' (2015) study, being satisfied with one's current relationship status (single *vs*. partnered) appears to be a more important factor in explaining well-being (i.e., emotional and psychological well-being, and depression) than relationship status alone.

Keywords: *Satisfaction with relationship status, relationship status, positive mental health, depression.*

1. Introduction

Numerous publications in the field of research devoted to happiness and life satisfaction have provided strong and consistent evidence for the existence of the linkage between marital status and subjective well-being (e.g. Wadsworth, 2016). At the same time, In addition, as a recent study by Lehmann and colleagues (2015) revealed, marital status may be a less important determinant of well-being than actual satisfaction with relationship status. A study by Lehmann and colleagues (2015) is the only study to report on satisfaction with relationship status. Lehmann and her colleagues (2015) found in their two studies that individuals in marital and non-marital relationships reported a higher level of satisfaction with relationship status than single individuals. Furthermore, the authors found that higher education and higher satisfaction with relationship status were associated with increased life satisfaction, and after controlling for sociodemographic variables and marital status, satisfaction with relationship status was the only significant predictor of life satisfaction. With respect to psychological distress Lehmann and colleagues (2015) found that perceived lack of social support and satisfaction with relationship status were significant predictors of psychological distress, with higher satisfaction with relationship status related to lower distress.

2. The Current Study

The major aim of the current study was to determine whether satisfaction with relationship status is a stronger predictor for mental health (emotional, social and psychological well-being, and depression) than relationship status per se. In accordance with findings obtained in study by Lehmann and colleagues (2015), it was expected that:

H1. Satisfaction with relationship status will be a better predictor than relationship status alone of young adults' mental health measured in terms of life satisfaction, emotional, psychological and social well-being and depression.

2.1. Participants and Procedure

Participants ranged in age from 20 to 40 (M = *M* = 23.97, *SD* = 4.48). The sample was 70% female (n = 194) and 30% male (n = 83). In this sample, 166 participants (60%) reported being in a romantic relationship at the time of the examination, whereas 111 participants (40%) reported being single. In this sample, 70% individuals reported being a student, whereas 30% participants were nonstudents with higher education.

2.2. Measures

Relationship status. Relationship status was assessed with the following items: "Are you in a serious relationship at the moment?"(Options "Yes" or "No").

Life satisfaction. To asses one's individual satisfaction with life, the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). (Polish adaptation – Juczyński, 2009) was presented to participants.

Satisfaction with relationship status. To measure satisfaction with relationship status, the following item from the Satisfaction with Relationship Status Scale (ReSta; Lehmann et al., 2015) was used: "In general, how satisfied are you with your current status?" Participants are asked to rate the level of agreement with the above-mentioned item on a four-point scale: Not at all (0), A little (1), To quite some extent (2), To a great extent (3).

Mental health - emotional, psychological and social well-being. To measure emotional, psychological and social well-being, the Mental Health Continuum – Short Form (MHC – SF; Keyes, 2009) (Polish adaptation – Karaś, Cieciuch, & Keyes, 2014) was used. The MHC-SF consists of 14 items measuring emotional, psychological and social well-being.

Mental health illness. To measure mental health illness, the Center for Epidemiological Studies Depression Scale (Radloff, 1977) (Polish adaptation – Kaniasty, 2003) was used. The scale consists of 20 statements that measure the frequency of depressive symptoms experienced in the past week. Participants report the frequency of 20 depressive symptoms over the past week using a four-point scale from 0 (rarely, or not at all) to 3 (most of the time or all the time).

3. Results

Following Lehmann and colleagues' (2015) study, a 3-step hierarchical regression analysis predicting life satisfaction, emotional, psychological and social well-being and depression from gender, age, and education at T1 (Step 1), relationship status at T1 (Step 2), and satisfaction with relationship status at T1 (Step 3) was performed.

The performed hierarchical regression analysis systematically showed that satisfaction with relationship status was the only significant predictor of emotional well-being (β = .29, p = .000), psychological well-being (β =.23, p = .002), and depression (β = -.28, p = .000) than relationship status. With respect to social well-being, the analyses demonstrated that neither satisfaction with relationship status (β = .08, p = .266) nor relationship status were predictive of social well-being, (β = .04, p = .639).

4. Discussion

The major findings of the current study supported the H1 and revealed the predictive role of satisfaction with relationship status beyond relationship status alone for young adults' life satisfaction, emotional and psychological well-being and depressive symptoms. At the same time, in light of the obtained results it appears that satisfaction with relationship status is not related to social well-being.

As it has been elaborated, the linkage between marital status, relationship status, life satisfaction and mental health is well established in literature. However, a recent study by Lehmann and colleagues (2015) demonstrated that satisfaction with relationship status may have a greater explanatory value than marital status alone in predicting life satisfaction and psychological distress. Therefore, satisfaction with relationship status can be considered as a meaningful factor contributing to our understanding of psychosocial determinants of well-being.

While the current study provides insight into the links between satisfaction with relationship status and well-being in young adulthood, it is not without limitations. First and foremost, the current study is of correlational design and any casual relationships between the variables cannot be established. Second, all participant data were from never married heterosexual and childless young adults, predominantly students residing in large cities. In future studies, thus, it would be useful to include larger non-student samples, and to compare young adults with individuals in middle and late adulthood with different relationship histories

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STANDARDIZING YOGA: ASSESSING COMPONENTS WITHIN YOGA AS COMPLEMENTARY AND ALTERNATIVE MEDICINE FOR U.S. MILITARY VETERANS

Jacob N. Hyde, Psy.D.[1]& Jeni Hunniecutt, M.A.[2]
[1]Graduate School of Professional Psychology, University of Denver (USA)
[2]Department of Communications Studies, University of Denver (USA)

Abstract

Within the last 15 years there has been a significant increase in the rate of cognitive injury, physical disability, chronic pain, and psychiatric illness among U.S. Military Service members and Veterans (McGeary, McGeary, Moreno, & Gatchel, 2016). Research that identifies evidence-based behavioral treatments for co-morbid physical and psychiatric conditions among U.S. Military populations is expansive, however, given the increase and growing complexity of these conditions, the identification and exploration of Complementary and Alternative Medicine (CAM) treatments is urgently needed (Park, Finkelstein-Fox, Barnes, Mazure & Hoff, 2016) to restore functioning and decrease symptoms in these populations. Research examining the effects of yoga and meditation practices with U.S. Military populations has uncovered several benefits, to include reducing Post Traumatic Stress Disorder symptomology (Jindani, Turner, & Khalsa, 2015; Johnston, Minami, Greenwalk, Reinhardt, & Khalsa, 2015) and improving overall mental health and quality of life (Stoller, Greuel, Cimini, Fowler, & Koomar, 2011; Fiore, Nelson, & Tosti, 2014). Though research depicts that yoga and meditation practices have multiple benefits, lack of consistency across yoga intervention programs is proving to create challenges in the interpretation and application of findings as well as study replication. As there are multiple styles, definitions, and practices of yoga, there is a need for future research to identify which elements of yoga address physiological and psychological symptoms while also exploring which components are beneficial in the treatment of said symptoms (Jindani, Turner, & Khalsa, 2015). The current study employs a six-week yoga treatment protocol, divided into three components intended to address the physical, cognitive, and behavioral domains of participants. This study has presented multiple challenges during its inception as a psychologist partnered with a communication studies scholar, both of whom are U.S. Military Veterans to design, implement, and measure a yoga protocol that is replicatable, efficacious, and empirical. Considerations for multi-disciplinary program creation, complementary treatment measurement, and the benefits of multi-disciplinary and interprofessional work are described.

Keywords: *Yoga, Veteran, CAM, US Military, multi-disciplinary.*

1. Introduction

Within the last 15 years, there has been a significant increase in the rate of cognitive and physical disabilities, chronic pain, and psychiatric illnesses among U.S. Military Service members and Veterans (McGeary, McGeary, Moreno, & Gatchel, 2016; Substance Abuse and Mental Health Services Administration, 2012). Such ailments are exemplified by the high rate of suicides among this population, which is currently higher than it has ever been throughout U.S. history (Reger, Smolenski, Skopp, Metzger-Abamukang, Kang, Bullman, & Gahm, 2015; Bryan, Jennings, Jobes, & Bradley, 2012). Research that identifies evidence-based behavioral treatments for co-morbid physical and psychiatric conditions among U.S. Military populations is expansive, however given the increase as well as the complexity of conditions within this population, the identification and exploration of complementary and alternative treatments is urgently needed. U.S. Military Veterans who have deployed to Iraq, Afghanistan, and the surrounding areas (OIF/OEF/OND) since 9/11/2001 have shown multiple negative physical and behavioral health outcomes after combat deployment. This population experiences many barriers to adequate and comprehensive behavioral health treatment. Multiple treatment protocols exist (Sharpless & Barber, 2011) but are rarely used with high fidelity, treatment adherence is not good (DeViva, 2014), and treatment completion is rare within this population (Aakre, Himelhoch, & Slade, 2014). With these issues, one may assume some reticence within this population to take part in particular treatments. One potential alternative to modify these trends may be to combine multiple types of interventions together as

part of overall treatment. The ongoing study described by the researchers seeks to answer calls for the exploration of Complementary and Alternative Medicine (CAM) treatments within the U.S. Military population (Park, Finkelstein-Fox, Barnes, Mazure, & Hoff, 2016; Strauss, Coeytaux, McDuffie, Nagi, & Williams, 2011), and utilize multi-disciplinary approaches to treatment that are sorely needed (Reid & Wagner, 2014).

1.1. Mind-body practices as treatment within U.S. Military populations

Research regarding the application of mind-body practices such a yoga, meditation, and breathing exercises with U.S. Military populations, though limited in methodological scope, is promising. The practice of yoga with U.S. Military service members and Veterans has been efficacious in its ability to decrease overall Posttraumatic Stress Disorder (PTSD) symptomatology (Jindani, Turner, & Khalsa, 2015; Johnston, Minami, Greenwalk, Reinhardt, & Khalsa, 2015), reduce symptoms and symptom management on alcohol and drug abuse behaviors in women Veterans with PTSD (Reddy, Dick, Gerber, & Mitchell, 2014), reduce state and trait anxiety for deployed military personnel with symptoms of combat stress (Stoller, Greuel, Cimini, Fowler, & Koomar, 2011), improve overall mental health and quality of life (Stoller, Greuel, Cimini, Fowler, & Koomar, 2011; Groessl, Weingart, Aschbacher, Pada, & Baxi, 2008; Fiore, Nelson, & Tosti, 2014), improve chronic pain and depression symptoms as well as increase levels of energy (Groessl, Weingart, Aschbacher, Pada, & Baxi, 2008; Groessl, Weingart, Johnson, & Baxi, 2012), improve PTSD hyperarousal symptoms and overall sleep quality as well as daytime dysfunction related to sleep (Staples, Hamilton, & Uddo, 2013), and improve spiritual well-being, acceptance, and social functioning (Fiore, Nelson, & Tosti, 2014).

1.2. Standardizing yoga for meaningful study

As noted throughout much of the literature regarding this subject, the absence of a coherent, standardized yoga program specifically tailored to this population is inhibiting the work being done in this domain (Patwardhan, 2016; Jindani, Turner, & Khalsa, 2015). Though most yoga styles are seemingly equally effective, given that yoga by its very nature includes physical postures (asana), breath work (pranayama), and meditation (Cramer, Lauche, Langhorst, & Dobos, 2016), a standardized yoga treatment should be developed for the purposes of clarification and repetition in research and treatment settings. So long as each yoga class within a yoga treatment program includes all three components (asana, pranayama, and meditation practice), the style of yoga utilized is less important (Cramer et al., 2016). As Patwardhan (2016) explained, such a program should include a yoga typology that addresses the behavioral, physical, and mental domains and additionally, "should provide a logical blueprint and a robust skeletal framework for yoga research" (p. 3).

1.3. Multi-disciplinary approaches to program creation

Recent shifts within behavioral health include the creation and dissemination of programs and interventions that utilize health professionals of varying types to work collaboratively to treat multiple symptoms and diagnosis within patients. These multi-disciplinary and interprofessional approaches have been mandated in the Veterans Health Administration (Zeiss & Karlin, 2008) which is the largest health care system that provides physical and behavioral health care to U.S. Military Veterans. Formalized education on benefits of these approaches is useful but likely not enough to produce a cultural shift in healthcare (Kearney, Post, Pomerantz, & Zeiss, 2014). Approaches that are proactive and collaborative are essential in the treatment of this population (Reid & Wagner, 2014) and are likely to prove more efficacious than traditional monotherapies prescribed by one provider..

1.4. Current Study

The ongoing study attempts to begin to determine and describe the usefulness of adding a mind-body practice such as yoga to clinical programming within a behavioral health clinic in order to provide patients with complementary options for treatment that are not exclusive to certain types of diagnosis. The objective of this complementary intervention is to increase patients' overall functioning, well-being, and quality of life irrespective of symptom constellation or diagnosis. In the ongoing study, the researchers hypothesize that participants will report decreased levels of functional disability, decreased mental health symptoms, and increased levels of self-efficacy and functioning within social and occupational contexts after yoga program intervention.

2. Design

This ongoing study was designed with 3 aims for the patient being 1) increased overall functioning in social and occupational domains, 2) increased quality of life in social and occupational

domains, and 3) decreased reports of particular symptoms that cross multiple diagnostic boundaries. With these aims, the researchers designed a 6-week, 12-session yoga program divided into three segments with six distinct time points of measurement. The 6-week intervention utilizes physical postures in the first segment (physical), physical postures and meditation practice in the second segment (cognitive), and physical postures, meditation, and structured breath exercises in the third segment (behavioral). The study takes place in a university-run behavioral health clinic that specifically treats U.S. Military Service members, Veterans, and their families with OIF/OEF/OND patients who agree to take part in the yoga intervention along with behavioral health treatment as usual.

2.1. Measurement

Overall functioning within social and occupational domains is measured through the World Health Organization Disability Assessment Schedule 2.0 (World Health Organization, 2010) in order to measure levels of functional disability. Further, some of the novel qualitative questions created by the researchers prompt participants to reflect on their individual identity and experiences as a U. S. Military Veteran, day-to-day activities, relational interactions, and perceptions surrounding military to civilian transition. Increased quality of life in social and occupational domains is measured through a portion of the qualitative queries created by the researchers; queries focus on perception of everyday life and relationships with others. Reports of symptoms that cross some diagnostic boundaries and would be relevant to multiple disorders are measured using tools that query symptoms that are common to multiple disorders within behavioral health. Measures utilized are the DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure (Clarke, & Kuhl, 2014) which inquires about problems that may be bothering someone but that do not seem to be indicative of a particular diagnosis. The Patient Health Questionnaire - 9 (Kroenke, Spitzer, & Williams, 2001) is used to query symptoms indicative of depression. The Generalized Anxiety Disorder - 7-Item (Spitzer, Kroenke, Williams, & Lowe, 2006) is used to query symptoms typically related to anxiety.

The researchers have determined that attempting to approach this type of study with a multi-disciplinary focus on functioning, rather than symptoms, requires a schedule of measurement that utilizes repeated measures that are sensitive to acute and frequent change in common symptoms. The standardized measures utilized in this study are relatively sensitive to change and are typically used with weekly or bi-weekly frequency. The researchers utilize measurement on a weekly basis throughout the yoga program with the aim to compare change within two-week segments against change in subsequent two-week segments of the program.

3. Discussion

The researchers created a study which attempts to meet the call for additional research within CAM, meet the need for additional treatment options within the OIF/OEF/OND population, and builds upon the call for multi-disciplinary work in behavioral health. Given the multi-disciplinary nature of this study, challenges were present throughout the design, implementation, and outcome measurement decisions. The ultimate objectives of the study were 1) to provide complementary treatment and allow for the clinic's patient population to voluntarily take part in multiple interventions, and 2) measure outcomes of this complementary intervention in a meaningful way that may inform future ways of designing treatment protocols.

Typical outcome measurement utilization is most efficacious from the clinical perspective when this measurement occurs throughout a course of treatment. Often measurement is relegated to the frequency, intensity, and duration of particular individual symptoms or whole symptom constellations. Within this type of study, some symptomatic measurement may be useful, but given the variety of presenting complaints across patients, and screening criteria for participation not including any particular diagnosis type, traditional symptom tracking likely provides less utility than other measurement. We chose to utilize measurement tools which ask questions that cross many diagnostic domains and could be generalized into overall well-being and functioning in order to maximize the benefit and utility of outcome measurement. Taking this approach to quantitative measurement should allow us to examine, track, and provide on-going communication to patients about changes in their functioning while undergoing such an intervention. We chose to utilize qualitative measurement in our study design in order to examine various aspects of functioning and quality of life that may not be readily measured through quantitative approaches; questions about a patient's outlook on life, typical day's activities, relationships inside and outside of the military, as well as expectations for treatment utilization all combine to provide the researchers with a more complete picture of a patient and their functioning.

Multi-disciplinary approaches to treatment have benefit and usefulness to the patient; these approaches allow for different types of health professionals to work in tandem to provide more

comprehensive and holistic care. Multi-disciplinary and interprofessional approaches to clinical treatment that combine disciplines that do not traditionally overlap may also provide benefit especially in designing portions of treatment protocols for certain disorders. The paradigm differences between some traditional disciplines can be quite stark, but with effort these differences may be overcome to collaboratively approach problems like quality of life and functioning which have benefit to society in general. In this particular case, a relatively simple yoga study design and implementation was undertaken by the current researchers but met with many challenges in arriving at agreement for design and measurement. One author (JNH) is a Clinical Psychologist specializing in Behavioral Medicine who is also a OIF/OEF/OND Veteran. The other author (JH) is a Ph.D. candidate in the field of communications studies who is both a yoga instructor and U.S. Military Veteran. With some similarities in background and interest, the researchers began in earnest to create a useable and measurable program to impact members of the U.S. Military and Veteran population but quickly came to an impasse at the intersection of two different academic and clinical paradigms. Only through negotiation, structured conversation, and a focus on the program consumer were both researchers able to collaboratively create a program that is usable, measurable, and replicatable.

4. Limitations

Our study is small in scale and because of this, generalizability remains limited. We also acknowledge that our research design includes only one active treatment group rather than any control group or comparison group; our within-group design may provide for some interesting results as we try and determine particular aspects of yoga that are beneficial, but this approach limits generalizability as well. Further, there seems to be a limitation in established, standardized, and usable outcome measures that specifically target functioning, well-being, and quality of life that provide for truly meaningful results when using these with patients, therefore we utilized previously available measures not specifically targeted to this group.

5. Conclusion

Multi-disciplinary and interprofessional collaboration is useful, needed, and has value for both trainees and established professionals as well as the ultimate consumer of services. There is currently a dearth of programs to treat the behavioral health of U.S. Military Service members and Veterans that is efficacious, easily implemented, and has good treatment follow-thru and completion. There has been a call for complementary approaches that provide additional benefits to established programs in order to increase overall clinical outcomes. Most programs focus on patient symptomology and while we agree that that symptoms and symptom change is important in the overall clinical picture, we submit that overall functioning and quality of life are currently under-investigated and do not have enough focus in the clinical realm to permit usable and comprehensive assessment and treatment. Careful attention must be paid to the way measurement is utilized and the usefulness of both quantitative and qualitative measurement must be weighed out against time demands and ultimate benefit for the patient. In our opinion, utilizing complementary interventions like yoga or other mind-body programs provides freedom of choice in treatment and adds promising benefits when combined with established treatment protocols. We do not advocate for a one size fits all treatment, a magic pill, or otherwise. We submit that the patient care puzzle has many pieces, and through appropriate measurement and application of multiple interventions, we may see better effect in patient outcomes including symptom reduction, increased functioning, and greater quality of life.

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THE EFFECTS OF CONCUSSION: PERCEPTIONS AND AWARENESS OF SUFFERERS

Cecile Proctor & Lisa A. Best
Department of Psychology, University of New Brunswick
100 Tucker Park Road, Saint John, NB E2L 4L5 (Canada)

Abstract

Concussion is a mild traumatic brain injury (mTBI) defined by a change in mental status (i.e., consciousness) resulting from mechanical trauma to the brain. Approximately 144,000 Canadians suffer a concussion each year, with an average age of first occurrence of 10 years. Although most people recover from concussion, long term physical and psychological effects can occur; depression, anxiety, and cognitive deficits are commonly reported. Thus, our purpose was to examine people's understanding of the impact of concussion on normal life activities and overall quality of life. Further, we examined the impact of different levels of concussion on a set of psychological variables. In this online study, 191 participants were recruited from social media sites and concussion-related discussion boards. The sample (M_{age} = 39.94 years) included 67 participants indicated having one concussion, 84 reported multiple concussions, and 40 had no prior concussions. Psychological questionnaires including Satisfaction with Life (SWL), Loneliness, Depression, Social Isolation, Leisure Satisfaction, and Personality were distributed. Results indicated that participants who reported at least one concussion had a lower SWL score and a depression score indicating a moderate level of depression. Comparatively, participants with no history of concussion had the lowest depression scores and high average SWL scores. Perceptions of concussion symptoms, severity and advice that was given from medical professionals was inconsistent suggesting that concussion education that covers the potential for long-term psychological consequences is necessary for both laypersons and professionals.

Keywords: *Concussion, Mild Traumatic Brain Injury (mTBI), Satisfaction with Life (SWL), Depression, Loneliness.*

1. Introduction

The majority of healthy adults who sustain a concussion report that they fully recovered between six and 12 months after injury, with many reporting a full recovery within the first month. In spite of this, there is a subset of individuals who continue to report cognitive impairments six months post-concussion, with some reporting impairments one year post concussion (Losoi et. al, 2016). In the best case scenario, prescriptions for physical and mental rest is based on an assessment of the individual symptoms as well as the individual's history of concussion (McAbee, 2014). Although much recent research indicates long-term psychiatric side effects associated with sports-related concussions (Emery et. al, 2016; Mrazik, Brooks, Jubinville, Meeuwisse, & Emery, 2016; Yang, Peek-Asa, Covassin, & Torner, 2015), it is also clear that immediate physical and cognitive rest can decrease the total recovery time (Taubman, Rosen, McHugh, Grady, & Elci, 2016). Immediate return to work or play, even if rest subsequently occurs, may prolong the recovery process and the research is mixed on the recommended suggestions for the length of cognitive rest post-concussion (Buckley, Munkasy, & Clouse, 2015; Taubman, McHugh, Rosen, & Elci, 2016; Thoma et al., 2015).

1.1. Post-Concussion Psychiatric Symptoms

Concussion history has been linked to depressive symptoms (Finkbeiner, Max, Longman, & Debert, 2016; Broshek, DeMarco & Freeman, 2015) and those who reported pre-concussion depressive symptoms were more likely to present with both heightened anxiety and depression post-concussion. Further, because concussed patients do not report these psychiatric symptoms during their initial assessment for concussions, their effects cannot be being fully considered during an assessment. Although they did not take into account the number of concussions or the time since the last concussion,

Chrisman & Richardson (2014) found that, in adolescence, a history of concussion has been linked to later depressive symptoms. Thus, it is possible that sustaining more than one concussion will increase risk for later psychiatric symptoms and that these risks will change over time. More research is needed to determine the extent of the psychological impact of concussion past the acute recovery phase (Emery et. al, 2016).

1.2. Misperception of Concussion

In spite of the recent media coverage surrounding concussion, few studies have assessed the general knowledge of concussions. For example, a study conducted in the United Kingdom found that the severity of sustaining a concussions was underestimated by the general population (Weber & Edwards, 2012). Further, individuals with a history of concussion were more confident in their answers, even when they supported erroneous views suggesting that their past experience was giving them a false sense of security about their knowledge of concussions (Weber & Edwards, 2012). Additionally, a significant number of surveyed players from the Canadian Minor Hockey League did not even know what a concussion was, how it was treated, and 25% did not know if a player should discontinue play if symptoms of a concussion were present (Cusimano, Chipman, Volpe, & Donnelly, 2009).

Parents, coaches, and teachers are often not well informed on the proper protocols for assessment, rest, and recovery (Haran, Bressan, Oakley, Davis, Anderson, & Babl, 2016). In addition, pressure from coaches, teammates, parents, and fans can cause young people to underreport their symptoms (Kroshus, Garnett, Hawrilenko, Baugh, & Calzo, 2015). The pressure to perform coupled with the fact that a high percentage of young people who suffer a concussion are not assessed by a qualified person, can lead to an immediate return to play. This puts players at risk for sustaining multiple, concurrent concussions that may have a longer lasting cognitive and physical impact. To add to these problems, players are more likely to underreport psychiatric symptoms which can lead to misdiagnosis and a premature return to cognitive and physical activities (Meier, Brummel, Singh, Nerio, Polanski, & Bellgowan, 2015). The impact of these invisible injuries can be largely ignored in favour of returning to work or play.

1.3. Purpose of the Current Study

The purpose of the current study was to examine perceptions about concussion symptoms and recovery in both those who have sustained a concussion and those who have not. Understanding of the impact of concussion on normal life activities and overall quality of life is a vital to making informed decisions about personal care. Furthermore, we examined depression, loneliness, fear of social isolation, personality, and life satisfaction in those who have had one, multiple, and no concussions. Time since the last sustained concussion was also considered when interpreting the results. Together, these factors will help investigate common knowledge about concussions and assess how concussions may impact overall satisfaction with life, depressive symptoms, and loneliness.

2. Method

2.1. Participants

In total, 191 participants (M_{age} = 39.94 years) completed the questionnaire package (62.8% from Canada, 29.3% from the United States, and 6.3% from other parts of the world). Participants indicated having one concussion (*N*=67), multiple concussions (*N*=84), or having no history of concussion (*N*=40) and completed questionnaires about their concussion awareness and experiences based on these responses. Participants were all over the age of 18 and completed the questionnaires independently.

2.2. Materials

After giving informed consent, participants completed a demographic questionnaire followed by a questionnaire package that differed based on their reported history of concussion. Questions assessing general knowledge about concussions were included. Psychological scales included the Social and Emotional Loneliness Scale For Adults-Short Version (SELSA-S; DiTommaso, Brennan, & Best, 2004); the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2014); the Fear of Social Isolation Scale (FSI; Matthes, Hayes, & Shen 2009); the Leisure Satisfaction Scale (Coyle, Lesnik-Emas & Kinney 1994); the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrew, & Swann, 2003) and, The Satisfaction with Life Scale (SWLS; Diener, 1985).

2.3. Procedure

All data was collected via an online survey, designed using the Qualtrics system. Both those who have sustained previous concussions and those who had not were invited to participate. Information about the study was shared on general social media sites and in groups that appeal to those who have sustained concussion. After reading general information about the research project and answering brief demographic questions, participants indicated whether they had sustained one, multiple, or no previous concussions; these answers determined which questionnaires would be presented next. All participants were informed that participation was voluntary and that they could discontinue at any point during the questionnaire. With the exception of the demographics questionnaire (which was always presented first), the order of the measures appeared was randomized. Participants were not offered any incentive for their time.

3. Results

The time since last concussion (*M*=4.93, *SD*=6.40) was very variable, ranging from one day to 24 years and number of symptoms experienced from none to 28 (*M*=20.52, *SD*=8.86). Descriptive statistics were calculated for all relevant variables and are presented in Table 1. The Table illustrates the wide range of psychological consequences associated with concussion. It is particularly interesting to note that individuals who had not suffered from a concussion had higher Extraversion and Conscientiousness. Individuals who suffered from concussion were also significantly more likely to report higher levels of loneliness and depression as well as lower leisure satisfaction and general satisfaction with life. It is particularly interesting to note that those participants who reported that they sustained a concussion in the past two years had the lowest life satisfaction, suggesting problems that began with an injury and are long lasting.

Table 1. Average Scores on Variables of Interest.

	No Prior Concussion (N = 40)	Prior Concussion (N = 84)	t-test (*p* value)
Overall Satisfaction with Life	**24.50 (SD = 7.16)**	**17.58 (SD = 8.23)**	**-4.83 (*p*=.0001)**
Personality			
Extraversion	**8.98 (SD = 3.07)**	**7.25 (SD = 2.98)**	**-3.11 (*p*=.002)**
Emotional Stability	8.37 (SD = 2.77)	7.55 (SD = 3.02)	-1.55 (*p*=.123)
Agreeableness	10.48 (SD = 1.96)	10.20 (SD = 2.04)	-0.76 (*p*=.444)
Openness	9.51 (SD = 2.37)	9.52 (SD = 2.52)	-0.82(*p*=.412)
Conscientiousness	**10.89 (SD = 2.40)**	**9.32 (SD = 2.83)**	**-3.17 (*p*=002)**
Fear of Isolation	16.28 (SD = 4.10)	16.81 (SD = 4.19)	0.73 (*p*=.468)
Loneliness			
Social	**12.95 (SD =5.91)**	**16.50 (SD = 7.43)**	**2.76 (*p*=.006)**
Family	**11.87 (SD = 7.15)**	**14.59 (SD = 8.04)**	**1.91 (*p*=.057)**
Romantic	**12.83 (SD = 9.49)**	**17.31 (SD = 8.69)**	**2.73 (*p*=.007)**
Depression	**7.92 (SD = 6.94)**	**11.73 (SD = 7.11)**	**2.94 (*p*=.004)**
Leisure Satisfaction	**17.08 (SD = 4.97)**	**14.75 (SD = 4.89)**	**-2.93 (*p*=.004)**

3.1. Self-Reported Knowledge and Medical Advice Received

In terms of their knowledge about concussion, most respondents (80%) agreed that a concussion is always a brain injury, and over 90% knew that you do not need to lose consciousness to have a concussion. The majority of participants who reported having multiple concussions reported they would go to a doctor (82%) if they sustained a concussion, however, 63.1 % of those same individuals said they had only sought medical attention for some, and not all, of the concussions they had sustained in the past. Over half of the whole sample (50.8%) thought they were at the same risk for concussion regardless of their prior concussion history. Approximately 50% of the sample was aware that physical (47.1%) and mental (49.2%) rest would shorten recovery time.

Participants who sustained a previous concussion, reported being told to change work or school schedule (43%), avoid mentally (56.7%) or physically (64%) demanding activities, get lots of sleep at night and take it easy during the day (70%), avoid alcohol and drugs (40.7%) and non-prescribed medicines (18%), driving a car, riding a bike or operating machinery (48%), use pain medication as needed (56.7%). Fifty-four percent of those who sought medical advice did so in an emergency room setting. There was not a difference in reported advice between those who had sustained one concussion or multiple concussion.

4. Discussion

Overall, our results indicated that general awareness of concussion symptoms and recommended treatment varies widely. In this sample, the inconsistencies in knowledge about post-concussion care were not dependent upon individual history of concussion. Further, the reported medical advice also varied, suggesting that patients receive mixed advice from healthcare professionals. Overall, these results support previous research (Haran et al., 2016; Weber & Edwards, 2012) suggesting that general knowledge of symptoms and the importance of post-concussion rest is lacking, even among those who are involved in activities that put them at a higher risk for injury (Cusimano et al., 2008). In our sample, those who had sustained multiple concussions were less likely to seek medical attention after their first concussion. This mirrors findings from the United Kingdom indicating those who had previously sustained concussions were more confident about their knowledge, in spite of the fact that the reported knowledge was sometimes erroneous. Thus, if individuals are not aware that multiple concussions have further risks or that psychological symptoms may be related to their injury and linger beyond physical ailments, they may be less likely to seek medical advice.

4.1. Long Term Psychological Consequences

The results of this study indicated that those who have sustained a concussion score lower on extroversion and consciousness. These results replicate Leonhardt, Schmukle, and Exner (2016) who used a longitudinal design with a matched control group and Norup & Mortensen (2015) whose sample included individuals with severe brain injury. Higher extraversion and conscientiousness are suggestive of an individual who is sociable, outgoing, has self-discipline, and is achievement oriented. Lower scores on these traits could exacerbate other psychological outcomes, specifically subjective quality of life.

In this sample, people who had suffered multiple concussions reported lower SWL and higher levels of depression and loneliness than those with no history of concussion. Further, in this sample, the average time since the last concussion was almost 5 years, suggesting these psychological outcomes are not only significant but are long lasting. As Finkbeiner and colleagues (2016) reported, not only is depression related to concussion history but an individual's history of depression prior to an injury may put them at a higher risk not only for an increase of these psychiatric symptoms but of heightened anxiety as well. This is viscous cycle for those who are already suffering with depression before sustaining a concussion.

With the wide range of new and relevant research on concussion (Emery et. al, 2016;), Finkbeiner, et al., 2016; Haran, et al., 2016; Kroshus, et al., 2015; Meier, et al., 2015), the expectation is that knowledge of the consequences of not only one concussion but the increased risk of sustaining multiple concussions should be commonplace. These results indicate that further education is needed not only for those who are at a high risk for concussion but also for medical professionals who are likely to be the first line of contact for an individual after injury.

5. Conclusions

Our results indicate that although people have some general knowledge about concussions the information that they have is often inconsistent and incorrect. Proper dissemination of relevant research results to both the general public and medical professionals should be prioritized.

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MEASURING ALEXITHYMIA VIA TRAIT APPROACH-I: A ALEXITHYMIA SCALE ITEM SELECTION AND FORMATION OF FACTOR STRUCTURE

Arkun Tatar[1], Gaye Saltukoğlu[2], Seda Alioğlu[2], Sümeyye Çimen[2], Hülya Güven[2], & Çağla Ebru Ay[2]

[1]*Department of Psychology, The University of Texas at Austin/Research Scholar, TX (USA)*
[2]*Department of Psychology, FSM Waqf University (Turkey)*

Abstract

It is not clear in the literature whether available instruments are sufficient to measure alexithymia because of its theoretical structure and it has also been reported that plenty of measuring instruments are needed to measure this construct. It is also known that all of the instruments have different kinds of error sources. The only instrument in Turkish is the two forms, old and new, of the Toronto Alexithymia Scale. So, the purpose of this study was to develop a new scale to measure alexithymia, selecting items and constructing the factor structure. An item pool of 100 items were prepared and administered to 628 women and to 489 men, a total of 1117 people ranging in age from 19 to 82 years (mean = 35.05). The data were analyzed by Explanatory Factor Analysis, Confirmatory Factor Analysis and Item Response Theory and 28 items were selected. The new form of 28 items was administered to 415 university students, 271 women and 144 men, ranging in age from 18 to 30 (mean = 21.44). The results of Explanatory Factor Analysis revealed a five factor construct of "Solving and Expressing Affective Experiences", "External Locused Cognitive Style", "Tendency to Somatosize Affections", "Imaginary Life and Visualization", "Acting Impulsively" and also a two factor construct representing "Affective" and "Cognitive" components of the construct. All of these components of the construct showed good model fit and high internal consistency. New form was tested in terms of internal consistency, test-retest reliability, and concurrent validity using Toronto Alexithymia Scale as criteria, discriminative validity using Five Factor Personality Inventory Short Form. The results showed that the new scale met the basic psychometric requirements. Results have been discussed in line with related studies.

Keywords: *Alexithymia, Alexithymia Scale, Affective, Cognitive.*

1. Introduction

Alexithymia was introduced conceptually in 1970 (Nemiah, 1977; Nemiah & Sifneos, 1970; Sifneos, 1973) and defined as alienation to one's own feelings, to have difficulty in describing, identifying and expressing feelings or a decrease in the capacity and potential to identify and verbalize emotions due to deficits or limitations in the cognitive processing (Franz et al., 2008; Parker, Keefer, Taylor, & Bagby, 2008; Sifneos, 1996). Two components of alexithymia are defined, one of them is affective component characterized by reduced emotional awareness and the other is cognitive component characterized by operational thinking style (Bermond et al., 2007; Moormann et al., 2008; Zackheim, 2007). After the construct of alexithymia is introduced, various studies have been carried out to show the deficiency in people, negative impact on inter-personel relations and its association with physical and mental health problems (Grynberg, Luminet, Corneille, Grèzes, & Berthoz, 2010; Lumley, Neely, & Burger, 2007; Taylor & Bagby, 2004).

The efforts to measure alexithymia seem to begin with the Beth Israel Hospital Questionnaire which is rated by a clinician/observer (Sifneos, 1973). Other tests rated by observers are the Alexithymia-Provoked Response Questionnaire (Krystal, Giller, & Cicchetti, 1986), the Karolinska Psychodynamic Profile based on psychoanalytic theory that composes one of the sub-dimensions of alexithymia (Weinryb, Gustavsson, Åsberg, & Rössel, 1992; Weinryb & Rössel, 1991; Weinryb, Rössel, & Åsberg, 1991a, 1991b), the California Q-set Alexithymia Prototype (Haviland, 1998; Haviland & Reise, 1996) and the Observer Alexithymia Scale which is the revised form of the former scale (Haviland, Warren, & Riggs, 2000; Haviland, Warren, Riggs, & Gallacher, 2001; Haviland, Warren, Riggs, & Nitch, 2002), and the Toronto Structured Interview for Alexithymia (Bagby, Taylor, Parker,

& Dickens, 2006). As for projective forms, one of them is the Objectively Scored Archetypal Test (Bagby, Taylor, & Atkinson, 1988; Bagby, Taylor, & Ryan, 1986; Taylor & Bagby, 1988). Another one is the Rorschach Alexithymia Scale which is developed to predict scores of the Toronto Alexithymia Scale Revised Form Three, using marker variables from the Rorschach system (Porcelli & Meyer, 2002; Porcelli & Mihura, 2010). As to the self-report forms, these are, the MMPI Alexithymia Scale, whose items were selected from the MMPI (Kleiger & Kinsman, 1980), the Schalling-Sifneos Personality Scale (Apfel & Sifneos, 1979), the Amsterdam Alexithymia Scale (Bermond, Vorst, Vingerhoets, & Gerritsen, 1999), and the Bermond-Vorst Alexithymia Test which is the revised form of the former scale (Vorst & Bermond, 2001), the psychological Treatment Inventory-Alexithymia Scale (Gori, Giannini, Palmieri, Salvini, & Schuldberg, 2012). The Toronto Alexithymia Scale (TAS) has been found to have good psychometric qualities and to be the most widely used self-report scale (Taylor, Bagby, Kushner, Benoit, & Atkinson, 2014). First form of the TAS was developed as a 26-item and four sub-dimensions' self-report scale (Taylor et al., 1988; Taylor & Bagby, 1988; Taylor, Ryan, & Bagby, 1985). In first revision of the scale items have been reduced to 23 and sub-dimensions to two (Taylor, Bagby, & Parker, 1992). The second revision and the third form of the scale have been reorganized to have 20 items and three facets (Bagby, Parker, & Taylor, 1994).

Alexithymia as a multidimensional construct, it is questionable whether a single measurement or a measuring instrument will be sufficient to measure this construct, thus, it is reported that much more instruments are needed. Moreover, existing measuring instruments have different error sources (Lundh, Johnsson, Sundqvist, & Olsson, 2002). Measuring instruments in Turkish are the two forms of the TAS, 26 item first form (Dereboy, 1990) and 20 item third form (Güleç et al., 2009). Accordingly, with the aim of developing a new measuring instrument for alexithymia, the procedures of item selection, creation of its factor structure and developing a new form were carried out and the new form was tested for internal consistence, test re-test reliability, criterion-related validity and disciriminant validity.

2. Methods

2.1. Creation of Item Pool

First of all, considering the components of the construct and items in the similar scales 110 items were written. Then number of items were reduced to 100, after scrutinized and corrections were made these items were used in the first administration of the scale. Ratings were made using 5-point Likert scale ranging always (1) to never (5).

2.2. Participants

Participants in the First Administration (A1): In the first administration participants consisted of 628 women (56.2%) and 489 men (43.8%), a total of 1117 people between the ages of 19 to 82 years. Students were not included in this administration. Participants in the Second Administration (A2): Participants consisted of 271 women (65.3%), 144 men (34.7%), a total of 415 undergraduate and post graduate students from different faculties and universities between the ages of 18 to 30 years. Out of these participants 117 students between the ages of 18 to 25 participated in discriminant validity study, 50 students between the ages of 20 to 27 participated in criterion-related validity study and 48 students between the ages of 20 to 25 years participated in test re-test study.

2.3. Procedure

The participants were determined using the convenience sampling method and voluntarily accepting to take part in the study. The prepared forms were administered individually and answered by the way of self-report. In the first administration (A1) pool items and socio-demographic questions were completed. The second administration (A2) was made with the revised form of 28 items using 5- point Likert scale. The Toronto Alexithymia Scale (TAS-20) (Güleç et al., 2009) was used to determine criterion-related validity, the Five Factor Personality Inventory (5FPI) (Tatar, 2016) was used for discriminant validity in this administration. Furthermore, 15 days after the second administration test re-test study was made.

2.4. Results

2.4.1. Item Selection Procedure. Item selection process, Explanatory Factor Analysis (EFA) and assessment of parameters by Item Response Theory (IRT) were carried out in an interweaved manner in this study. First, the items were examined with EFA and emerging factors were named according to item contents. Every factor was examined in its own right and the item loadings below 0.30 or items that were located in more than one factor with similar loadings to each other were excluded. Then the items in

a factor were examined by item analysis. First, the items that raised the reliability in case of removal, then, the items that showed item-total score correlations below 0.30 were removed. As well, the items in every factor and in the whole scale were separately examined by IRT. At the last stage the number of items selected was reduced to 28.

2.4.2. Validity Study. All possible EFA solutions, from a single factor to seven factors were examined in the A1 item selection process. Results showed that the most appropriate solution that coincides with the theoretical construct was the five factor construct. It was observed that the data was suitable for factor analysis and the five factor construct explained 44.42% of the total variance. Out of the factors located in the five factor solution, two or three of them came together and preserved exactly in the two factor solution. Considering the factor content, the five factor solution of the construct was named as follows; "Solving and Expressing Emotional Experiences (SEEE)", "Externally Oriented Cognitive Style (EOCS)", "Tendency to Somatosize Emotions (TSE)" emphasizing cognitive processes instead of expressing feelings, "Imaginary Life and Imagination (ILI)" and "Acting Impulsively (AI)". In two factor solutions when SEEE and AI factors are combined, they create "Emotional Component (EC)" of the construct; when EOCS, ILI and TSE are combined they create "Cognitive Component (CC)" of the construct. When the factor items of EC and CC are examined separately by EFA sub dimensions are differentiated as in the case when they have taken together. Two factor construct explained 27.65% of the total variance. Thus, the construct, in accordance with literature, has two stages with EC and CC components in the first level and the second level with five factors are underneath this upper construct. It was seen that the data obtained in A2 was satisfactory for factor analysis, factor loadings for both two and five factor solutions obtained in A1 were kept exactly, except for small differences. While five factor solutions explained 47.44% of the total variance, two factor solutions explained 30.37% of the total variance.

All of the factor solutions obtained by EFA analysis were examined also by CFA for A1 and A2 data. The most appropriate fit values were obtained for second level five factor construct under the EC and CC first level construct.

The comparison of the total scores of TAS-20 and the A Alexithymia Scale showed a correlation coefficient of 0.70. When the A Alexithymia Scale was compared with 5FPI, the correlation coefficients of SEEE factor with E; EOCS factor with A, C and ES; and AI factor with A and ES were over 0.30. The correlation coefficient between 5FPI and ES ranged between 0.14 and 0.37; and it was between 0.12 and -0.40 for CC. As for the correlation coefficients between the total score of alexithymia and personality inventory factors ranged between -0.29 and -0.35.

2.4.3. Reliability Study. Results showed that in A1 internal consistency coefficient for five factor was between 0.59 and 0.83, for EC and CC were 0.83 and 0.69 respectively, for the whole scale it was 0.81. In A2 internal consistency coefficients were as follows; between 0.62 and 0.84 for five factor, 0.83 and 0.70 for EC and CC respectively and 0.82 for the whole scale.

In test retest reliability study, Pearson correlation coefficients for the factors of five factor solution were between 0.64 and 0.86, for two factor solution these were 0.85 for EC and 0.84 for CC and 0.87 for the whole scale.

3. Discussion

Different models and approaches have been suggested to evaluate alexithymia in literature (Gori, Giannini, Palmieri, Salvini, & Schuldberg, 2012; Haviland, Warren, & Riggs, 2000; Lumley, Neely, & Burger, 2007; Vorst & Bermond, 2001). Due to being multi-dimensional and associated with many variables, this construct has difficulties in measurement (Cameron, Ogrodniczuk, & Hadjipavlou, 2014). It is also reported that new measuring instruments are needed because existing measuring instruments contain different kinds of error sources (Lundh, Johnsson, Sundqvist, & Olsson, 2002). Also, increasing number of studies emphasize that alexithymia is a personality trait (Helmes, McNeill, Holden, & Jackson, 2008). Besides, alternative instruments in Turkish are quite few and the development of existing ones ((TAS-26 (Taylor & Bagby, 1988), TAS-20 (Bagby, Parker, & Taylor, 1994)) are relatively old.

Alexithymia has been reported to be characterized by weak imaginary life, weak empathy level, impulsivity and a tendency to somatosize feelings, difficulty in decoding emotional messages, expressing emotions and emotional experiences, externally oriented cognitive style, avoidance of conflict, being cold and independent, being disturbed by emotional changes in close relations (Cameron et al., 2014; Grynberg, Luminet, Corneille, Grèzes, & Berthoz, 2010; Meganck, Vanheule, Inslegers, & Desmet, 2009; Vanheule, Desmet, Meganck, & Bogaerts, 2007). EFA results revealed that the factors of the construct

were solving and expressing emotional experiences, externally oriented cognitive style, tendency to somatosize emotions, imaginary life and imagination and acting impulsively. Measuring instruments differ from each other whether they fulfill the technical requirements or not, as being easily accessible, easy-to-use and understandable, and having strong psychometric properties. Although, it is clear that the scale developed in this study should be supported with other validity findings, it is shown that the scale carries basic psychometric properties and can be used in studies on the subject. When the "A Alexithymia Scale" developed is evaluated in terms of presented results, it appears that it can be considered as an alternative to the existing scales and be used in the studies on the subject. The scale seems to be more advantageous for reasons such as having a higher percentage of variance explanation than similar scales, showing higher reliability coefficients, and having multi-dimensional structure, and cognitive component as well as emotional component. It is believed that the use of this scale will be of practical benefit that it will give more powerful/reliable results and provide more detailed information.

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HUMOR AND SELF-REGULATION DEPLETION

Monika Hricová
Department of Psychology, Faculty of Arts, Pavol Jozef Šafárik University in Košice (Slovak Republic)

Abstract

Based on theoretical knowledge from Baumeister within the power model of self-regulation, it was proved that activities requiring level of self-regulation by energy depletion, reduces the power of self-regulation in the next self-regulatory activity. The aim of our paper was to experimentally verify that humor can restore energy to power sources, increasing the power of self-regulation in the next self-regulatory activity. The research was conducted by experiment which was realized in four groups (n = 88). The first group (n = 22) had the task of carrying out only a self-regulatory activity (unsolvable anagrams) with goal to measure time. The second group (n = 22) underwent primary self-regulation depletion activity (focusing attention on the chocolate) and then solved anagrams, at which the time was measured again. The third group (n = 22) completed the primary depletion activity with chocolate, then watched humorous videos and also solved anagrams. The fourth group (n = 22) completed only humorous video and subsequently measured time in solving anagrams. Results confirmed that humor can restore energy to power sources. Participants in group three (self-regulation depletion and humor) had significant higher persistence on anagrams compare to those who focusing attention on the chocolate without humor ($p < .001$). The results also suggested that persistence on unsolvable anagrams was significant worse in second group (chocolate + anagrams) compared to first group (anagrams) ($p < .001$).

Keywords: *Ego depletion, self-regulation, humor.*

1. Introduction

Self-regulation is frequently studied in relation to the processes of selection, goal pursuit and behavioural change. For example, Hoyle (2010) defined self-regulation as a set of intra-individual processes through which an individual maintains the pursuit of his/her goals. According to Baumeister, as well as a number of other researchers, self-regulation can be defined as a complex ability of human beings to exercise control over their internal states, processes and behavior. Self-regulation manifests itself as an ability of an individual to change his/her behavior, modify it and adjust it to certain requirements (Baumeister, Vohs, Tice, 2007). This corresponds with the distinction between the two basic motivational systems: activating and inhibiting (Carver, White, 1984). The process of self-regulation incorporates both conscious and unconscious processes. It also corresponds with the concept of self-regulation defined as a complex ability of an individual to inhibit impulses or spontaneous intentions. (Baumeister, Vohs, Tice, 2007). Self-regulation is the process that enables organisms to override or stop urges, emotions and moods, thoughts or behaviors in order to reach a long-term goal (Muraven, 2012). Having control over oneself, or exercising self-regulation, is effortful.

Self-regulation represent effortful process and variable characteristic therefore has a limited capacity. Successful self-regulation depends on the availability of the energy. That is, after exerting self-regulation, subsequent attempts at self-regulation suffer. After an act of self-regulation, the resource is temporarily reduced and depleted, leaving individual in a stage of ego-depletion or self-regulation depletion (for a research review see Baumeister 2003). Exerting self-regulation may deplete a conceptual resource called ego strength or self-regulation strength. Ego-depletion represents self-regulation failure. Baumeister, and Heatherton, Tice (1994) point out that depletion leads to poorer control over other behaviors of consequence as well. The failure of self-regulation has important social consequences, it affect smoking behavior, dieting patterns or sexual behavior.

Therefore, in recent years the literature (Muraven, Shmueli, Burkley, 2006) concerns on methods by which self-regulatory capacity may be delayed, conserved or restored. There are several methods by which self-regulatory capacity may be restored. But many are not empirically verified. One method is to use positive emotions or humor. Tice et al. (2007) demonstrated that positive mood can eliminate the

onset of mental/ ego depletion when interspersed between two consecutive self-regulation tasks. Positive and negative mood states are associated with many mental and physical health benefits (Egan, Klarcson, Hirt, 2015). Martin (2007) noted that positive affect can reduce stress by taking a more positive perspective of one's situation. In contrast humor has important adaptive function and allows one to recover faster from minor daily stresses (Gruner, 1997; Abel, 2002). For instance, Lockwood and Yoshimura (2014) found that humor could be used as an effective tool to physical recovery processes.

The literature has explored the relation between positive mood/ humor and stress or health, but only some studies specifically tested ways to improve self-regulation strength (Muraven, Shmueli, Burkley, 2006). The findings that humor facilitates recovery from stressful or illness situations suggest that exposure to humor should have positive consequences on self-regulation persistence. Therefore the present research explored the empirical relation between humor and self-regulation persistence. We examined whether watching humorous video caused self-regulation resources after ego-depletion task.

2. Methods

2.1. Participants

88 undergraduates (44 males and 44 females) participated in study. The age of the participants ranged from 18 to 22 (mean 20.56, standard deviation 14.09). The respondents were adult volunteers participated for partial course credit.

2.2. Procedure

The procedure consist of four conditions.

The first condition consisted of engaging participants in the simple self-control task based on persistence unsolvable anagrams. Anagrams consisted of nine difficult words, the letters of which had been rearranged and one letter removed, thus rendering them insolvable. Anagram solution time was measured in seconds.

A second condition was one in which participants engaged in an ego-depletion task based on focusing attention on the chocolate in time ten minutes. Following this, participants were administered the unsolvable anagrams test.

A third condition consisted of engaging participants in the ego-depletion task based on chocolate thinking. Then watched humorous videos from You-Tube. Following this, participants were administered the unsolvable anagrams test.

A forth condition consisted of the act of watching humorous video and simple self-control task based on the unsolvable anagrams test.

3. Results

The mean persistence on unsolvable anagrams task among groups is described in table 1. The mean persistence in group which solved only anagrams (condition one) was M = 1116.87 seconds. The highest mean persistence on unsolvable anagrams was by participants, who watched humorous video without ego-depletion task (M = 1202.5). In contrast the lowest persistence on unsolvable anagrams was in condition two, where participants solved anagrams after a depleting without humour video (M = 815.14).

Table 1. Persistence on unsolvable anagrams in seconds.

Condition	n	M (SD)	Minimum	Maximum
Anagrams	22	1116.86 (382,33)	615	1650
Chocolate + anagrams	22	815.14 (204.51)	473	1136
Chocolate + humour + anagrams	22	1134.91 (426.93)	686	1760
Humour + anagrams	22	1202.5 (282.07)	863	1967

A One-Way Analysis of Variance was performed to explore if differences across groups were significant. The results suggested that differences existed across groups $F(3) = 6.086$ $p < .001$. Participants who engaged in humour video after ego-depleting chocolate demonstrated significant greater performance on the unsolvable anagrams task than those who engaged in an exhausting ego-depletion task without humour ($p < .001$). However, there was no significant difference in persistence on anagrams between group who watched humorous video after ego-depletion and group who solved only anagrams ($p < .062$). Also the persistence on anagrams in group who watched video only was very similar to mean persistence in condition one ($p < .125$). In contrast, the group who only watched humour video had significant higher persistence on unsolvable anagrams compared to participants who were ego-depleted before anagrams

test (p< .001). But participants in condition four (humour) had no significant higher persistence on anagrams compare to those who were ego-depleted before humour video (p> .001). The results also suggested that persistence on unsolvable anagrams was significant worse in second condition (chocolate +anagrams) compared to first condition (anagrams) (p< .007).

4. Discussion

Self-regulation is an important key to successful human functioning, but it depends on the expenditure of a limited resource and so when that resource has been depleted by recent use, people are less effective at self-regulating. The resulting low-energy state of ego depletion can increase proneness to a variety of maladaptive behaviors. Therefore anything that might restore or conserve self-regulation energy would have practical importance.

The results confirmed that chocolate thinking led to a depletion of self-regulation resources and can therefore be used as ego-depletion task. The exposure to humor video significantly increased individuals' task persistence after depletion. Individuals who watched a short humorous video demonstrated significantly more persistence on unsolvable anagram test compare to those who engaged in an exhausting ego-depletion task without humor. Humor replenished strength among participants fatigued by previous self-regulation behavior. Muraven, Shmueli, Burkley (2006) shoved similar findings, the positive mood resulted in improvement in self-regulation. Our results also demonstrated that humor can conserve energy to power sources. The persistence on unsolvable anagrams was significant better after watching humor video compare to group which solved only anagrams. Plester (2007) notes that individuals react to humor in different ways.

Of course, the present study shows some limitations. After the humor video participants needed to share their experiences with examiner, that can extend the time of interaction. The subsequent time as a short interview with the examiner was not recorded. Tyler, Burns (2008) found depletion regeneration after ten minute break. Despite this, the present research pointed out that the humor led to the restoration and improvement self-regulation resources.

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GCRIS

GOAL DYSREGULATION IN DEPRESSION

Joanne M. Dickson[1] & Nicholas J. Moberly[2]
[1]*Department of Psychology, Edith Cowan University (Australia)*
[2]*Mood Disorders Centre, University of Exeter (United Kingdom)*

Abstract

Goal motivation is fundamental to human experience and well-being. Despite the development of prominent theoretical models of goal motivation and its importance in daily life, research has rarely examined goal dysregulation processes in clinical depression. This research presents data from two studies that aimed to investigate aspects of goal regulation in clinically depressed adults, relative to never depressed adults. In both studies, depressed participants were recruited from Improving Access to Psychological Therapy clinics in the north of England and control participants were recruited from the same region. In Studies 1 and 2, participants generated personally important approach goals (e.g., *improve my marathon time*) and avoidance goals (e.g., *avoid getting upset over little things*). In Study 1, participants generated explanations why they would and would not achieve these goals. Goals and causal explanations were subsequently coded as either specific or general. In Study 2, participants completed self-report measures of goal attainment, and the ease of disengagement from unattainable goals and re-engagement with new goals. Results, in Study 1, found that compared to controls, depressed individuals did not generate significantly fewer goals or causal explanations for, or against, goal achievement and valued their goals similarly. Compared to controls, however, depressed individuals generated less specific goals, less specific explanations for approach (but not avoidance) goal achievement, and less specific explanations for goal non-attainment. In Study 2, both groups (depressed and never depressed) reported a similar number of goals and valued their personal goals similarly. However, depressed participants reported fewer approach goals (but not more avoidance goals), rated their approach goal (rewarding) outcomes as less likely to happen and avoidance goal (threatening) outcomes as more likely to happen. Depressed individuals also reported greater ease of disengagement from unattainable goals and more difficulty re-engaging with new goals than controls. Overall, the results suggest that motivational deficits in depression may stem partly from a reduction in the specificity of personal goal representations, and related pessimistic cognitions that hinder goal-directed behaviour. Our findings extend current knowledge of the psychopathology of depression from a goal regulation perspective and may inform the development of more effective goal-based treatments for depression.

Keywords: *Depression, goal motivation, goal specificity, goal expectancy, goal disengagement and re-engagement.*

1. Introduction

Dysfunctions in approach (reward focus) and avoidance (threat focus) motivational processes (Carver & Scheier, 1998; Gray, 1982) and prospective cognitions are thought to underpin emotional vulnerability and sensitivity (e.g., Dickson, Moberly, Hannon, & Bates; Roepke & Seligman B). Personal goals are fundamental to human motivation and represent future-oriented sustained activity toward desired outcomes or away from undesired outcomes. Several studies have shown that goal striving is typically associated with subjective well-being and positive psychological adaptations in life (e.g., Sheldon, Kasser, Smith & Share, 2002). Emerging research indicates that dysregulated goal striving and associated prospective goal cognitions are implicated in affective disorders (Dickson, Moberly & Kinderman, 2011).

Fowles (1994) applied Gray's (1982) early motivation model comprising a behaviour activation system (BAS-approach) and behaviour inhibition system (BIS-avoidance) to a range of psychopathologies. Theoretically, Fowles (1994) hypothesised that depression is characterised by low approach and high avoidance motivational sensitivity. Studies conducted by Dickson and colleagues, using non-clinical adolescent samples support the view that dysphoria (mild depression) is characterised

by impaired approach goal motivation (e.g., Dickson & MacLeod, 2004a, 2004b, 2006) whereas the findings concerning avoidance goal motivation have been mixed (e.g., Dickson & MacLeod, 2004b). Further, these studies have found associated pessimistic prospective goal cognitions characterise dypshoria. For example, research by Dickson and MacLeod (2006) found that, relative to controls, dysphoric adolescents generated a combination of more avoidance goals and fewer approach goals and listed more reasons to explain goal non-achievement and fewer reasons to explain goal achievement, and considered avoidance goal outcomes as more likely to occur and approach goal outcomes as less likely to occur. Research using non-clinical young adult samples has characterised depression by reduced enjoyment of approach goal pursuit (Winch, Moberly, & Dickson, 2015), reduced coherence in personal goal systems and a negative preoccupation with conflicting goals (Dickson & Moberly, 2010).

Despite the development of prominent motivational theories and the relevance of goal motivation in daily life, research has rarely investigated approach and avoidance goal motivation and accompanying prospective goal cognitions in clinical depression. Here, we present two recent studies conducted in this area and draw together the findings and implications of this research (Dickson & Moberly, 2013; Dickson, Moberly, O'Dea & Field, 2016).

2. Design

Cross-sectional, group comparison designs (depressed vs. never-depressed) were used in Study 1 and Study 2 to investigate approach and avoidance goal fluency and goal-related cognitions.

3. Objectives

We aimed to examine whether clinically depressed individuals are characterized by distinct goal regulation profiles, relative to never-depressed individuals (controls), in two separate studies.

In Study 1, we first investigated group differences (depressed vs. never-depressed) on approach and avoidance goal generation and goal importance. Overgeneralization is a well-established feature of depression in memory research. Here we investigated whether this same phenomenon extends to the imagination of future goal events and whether depressed individuals are also prone to providing less specific explanations for, and against, goal attainment, compared to never-depressed individuals.

In Study 2, we aimed to investigate approach and avoidance goal fluency, goal importance, goal expectancies and goal adjustment in depressed individuals, relative to never-depressed individuals.

4. Methods

In Study 1 and Study 2, depressed participants were recruited from Improving Access to Psychological Therapy (IAPT) clinics in the north of England. Never-depressed individuals were recruited from Primary Care Teams and community in the same region. Study 1 comprised 21 depressed participants and 24 never-depressed participants. Study 2 recruited a larger sample, comprising 42 depressed participants and 51never-depressed participants. Depressed participants met the DSM-IV criteria for depression as the most interfering condition, as assessed by (i) a clinical psychologist and (ii) PHQ-9 (Kroenke, Spitzer & Williams, 2001) scores in the symptomatic range on depression (≤ 9). Never-depressed participants reported (i) never having had a depressive disorder or other psychological disorder and (ii) scored in the asymptomatic range on the PHQ-9 measure. There was no significant difference in the proportion of men and women in the depressed and never-depressed groups, nor did the groups differ on age in either study.

4.1. Measures

An abbreviated form of the FAS Task (Lezak, 1976) was used to assess written fluency and to familiarize participants with the Goal Task procedure. An established Goal Task (Dickson & MacLeod, 2004, 2006) was administered in Study 1 and Study 2. Depressed and never-depressed individuals generated personally important goals using two separate measures to assess approach and avoidance goal fluency independently, and goals were rated on subjective importance.

In Study 1, the Causal Explanation Task (Dickson & MacLeod, 2006) was used to assess participants' self-generated idiographic reasons to explain goal attainment and non-attainment. Personal goals and goal casual explanations were coded for specificity using a dichotomous coding scheme to categorise both goals and causal explanations as either general or specific. A goal was described as specific if it stated an explicit aim or target feature and included at least one specific aspect such as time, place or people (e.g., *to complete an annual work report this evening*). A goal was coded as general if it

referred to a global, abstract or vague aspiration (e.g., *to be happy*) rather than a specific target feature. These coding criteria were modified slightly to code participants' causal explanations such as, *because I set time aside to complete the task* (specific reason to explain goal attainment) versus *because I try* (general reason to explain goal attainment).

As in Study 1, all participants completed the idiographic Goal Task (Dickson & MacLeod, 2004a, 2006) and associated goal importance self-report. In Study 2, participants completed a Goal Expectancy self-report to assess the perceived likelihood of goal attainment (Dickson, Moberly, Kinderman, 2011). The Goal Adjustment Scale (Wrosch, Scheier, Miller, Schulz, & Carver, 2003) was used to assess the ease of disengagement from unattainable goals and re-engagement with new goals.

5. Findings & Discussion

Study 1 results found that, relative to controls, depressed individuals did not generate fewer goals or causal explanations for, or against, goal achievement than did never-depressed individuals, nor did they subjectively value their goals less. As can be seen in Table 1, however, depressed participants generated significantly less specific goals than controls. And, as shown in Table 2, depressed participants generated significantly less specific explanations for approach goal achievement (but not for avoidance goal attainment) and less specific explanations for goal non-achievement.

Table 1. Mean (SD) Number and Proportion of Specific Approach and Avoidance Goals by Group.

Group	*Approach*		*Avoidance*	
	Specific	*General*	*Specific*	*General*
Depressed	*0.52 (0.75)*	*5.90 (2.88)*	*0.43 (0.68)*	*4.81 (2.36)*
Controls	*1.58 (1.41)*	*4.42 (2.38)*	*1.21 (1.02)*	*3.25(2.19)*

Table 2. Mean (SD) Number and Proportion of Specific Pro and Con Reasons for Each Approach and Avoidance Goal.

Group	*Approach*		*Avoidance*	
	Specific	*General*	*Specific*	*General*
Pro reasons				
Depressed	*0.98 (0.80)*	*3.31 (1.43)*	*1.45 (1.13)*	*2.50 (1.45)*
Control	*2.17 (0.92)*	*2.21 (1.41)*	*2.13 (1.06)*	*2.23 (1.62)*
Con reasons				
Depressed	*1.17 (0.64)*	*3.05 (2.13)*	*1.05 (0.74)*	*3.07 (1.75)*
Control	*1.58 (1.02)*	*1.85 (1.55)*	*1.69 (1.03)*	*1.73 (1.14)*

Study 2 examined idiographic approach and avoidance goal generation, goal expectancy and goal adjustment in clinical depression. Results are presented in Table 3.

Table 3. Means and standard deviations (SD) for number, importance and expectancy of approach and avoidance goals, and goal disengagement and re-engagement after unattainable goals, in the depressed and control groups.

Group	*Number*		*Importance*		*Expectancy*		*Diseng*	*Reeng*
	App	*Avd*	*App*	*Avd*	*App*	*Avd*		
Depressed	*5.21 (2.34)*	*4.93 (1.99)*	*7.68 (1.30)*	*7.70 (1.12)*	*6.24 (1.37)*	*5.49 (2.00)*	*11.07 (3.20)*	*17.40 (4.73)*
Control	*7.18 (2.72)*	*4.24 (2.12)*	*7.38 (0.89)*	*7.62 (1.62)*	*7.32 (1.08)*	*3.63 (1.93)*	*8.94 (2.57)*	*21.57 (3.93)*

Note. App = approach goal, Avd = avoidance goal, Diseng = tendency to disengage from unattainable goals, Reeng = tendency to reengage with alternative goals when goals are thwarted.

Compared to controls, depressed participants did not generate fewer goals overall, nor did they valued their goals less. In contrast to Study 1, however, the depressed group generated fewer approach goals than the never-depressed group. Study 2 found that depressed individuals reported approach goal (reward) outcomes as less likely and avoidance goal (threat) outcomes as more likely to happen, and reported greater ease in disengaging from unattainable goals and greater difficulty in re-engaging in new goals than controls.

Although past non-clinical studies have characterised dysphoria (mild depression) by impaired approach goal motivation, the few clinical studies conducted in this area have not shown this same deficit in clinical depression (Dickson, Moberly & Kinderman, 2011, Dickson & Moberly, 2013, Sherratt & MacLeod, 2013). Study 2 is the first to detect an approach goal impairment in clinical depression. In contrast to the earlier clinical studies in this area, however, Study 2 was more adequately powered to detect a medium-sized effect. Impaired motivation to pursue approach goals is likely to limit opportunities to experience rewarding and positive outcomes that, in turn, limit opportunities for motivational re-inforcement to sustain goal pursuit. Neither Study 1 nor Study 2 found that depression was characterised by an increased focus on avoidance goal pursuit. Larger group differences on approach goals compared to avoidance goals, in Study 2, may indicate the salience of depressed mood versus anxious mood, in accord with the hypothesised relation between depression and the BAS. Across the two studies, a constellation of marked prospective goal-related cognitions characterised depressed individuals, relative to controls. In Study 1, depressed individuals had greater difficulty defining specific goals and specific causal explanations for, and against, goal attainment. Difficulty in construing specific concrete goals in the service of abstract goals renders goal pursuit far more challenging, as the person has fewer mental cues to assist in goal pursuit. Inflexible pursuit of abstract goals may underlie depression and undermine effective goal regulation. The prospective cognitions reported in Study 2 suggest that effective goal pursuit is impeded in depression as is the formation of a coherent sense of self. Speculatively, the propensity of depressed individuals, relative to controls, to more readily disengage from non-attainable goals may be attributable to a heightened sensitivity to goal failure, thus increasing goal disengagement when difficulties are encountered. This pattern of results was further exacerbated by the reported difficulty in being able to engage in new goals, which at its worst represents a personal goal void. Lower goal expectancies are apt to diminish goal commitment and effort and pessimistic goal forecasts may also explain why depressed individuals more readily disengage from goal pursuit.

Overall, the findings clearly indicate that reduced specificity, pessimistic goal expectations and difficulties in goal adjustment are implicated in the psychopathology of depression. In accord with motivational theory, the findings based on Study 2 provide some preliminary evidence that impaired approach goal pursuit is a feature of clinical depression. The research suggests that interventions that specifically target goal pursuit show promise in tackling depression. Our findings have potential clinical relevance for consideration particularly in relation to therapeutic goal-based treatments such as Cognitive Behaviour Therapy.

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BURNOUT, STRESS AND COMPASSION FATIGUE AMONG HELPING PROFESSIONALS

Miroslava Köverová & Beáta Ráczová
Department of Psychology, Pavol Jozef Šafárik University in Košice (Slovakia)

Abstract

The study presents the results of the first part of the broader study investigating the resources of, and the prevention possibilities of, the negative consequences of helping. The aim was to explore the level of burnout, perceived stress and compassion fatigue among helping professionals with regard to the length of practice. It was hypothesized that less experienced helpers would indicate lower levels of burnout, perceived stress, and compassion fatigue than more experienced helpers. Research participants were 748 workers of helping professions in Slovakia. The respondents completed the Slovak adaptation of Maslach burnout inventory (MBI), Perceived stress scale (PSS) and Professional quality of life scale (PROQoL) - Compassion fatigue subscale. The assumptions were confirmed. The results showed the incidence of the higher levels of burnout, perceived stress and compassion fatigue among helping professionals with the longer work experience. These results suggest that the length of practice plays an important role in experiencing negative consequences of helping, and thus influences the quality of work life of helping professionals. The findings form a basis for the further preparation of the prevention programs with the main focus on the workers with the longer work experience.

Keywords: *Burnout, stress, compassion fatigue, helping professionals, length of work experience.*

1. Introduction

Helping professions are considered to be demanding and risky (Hegney et al., 2014; Maslach, Schaufeli, & Leiter, 2001; Volpe et al., 2014). The present study focuses on the negative effects of helping that helping professionals deal with most often: burnout, stress and compassion fatigue (Barnett & Cooper, 2009; Figley, 2002; Stamm, 2010). Burnout represents a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, Jackson, & Leiter, 1996). Burnout is connected with high workload and prolonged exposure to high levels of stress at work (Cam, Deniz, & Kurnaz, 2014; Köverová, 2016; Maslach, Schaufeli, & Leiter, 2001; Stamm, 2010; Volpe et al., 2014). Helping professionals deal with specific sources of work stress and burnout (Tilley & Chambers, 2003). Perceived stress is defined as experienced levels of stress, i.e. the degree to which situations in one's (work) life are appraised as stressful (Cohen, Kamarck, & Mermelstein, 1983).

Similar symptoms of burnout and stress are reflected in the concept of compassion fatigue, which consists of secondary traumatic stress and burnout (Cunningham, 2003; Figley, 1995; Figley, 2002; Mann, 2004; Stamm, 1999; Stamm, 2005; Stamm, 2010). However, there are some differences in the conceptualization of the two elements of compassion fatigue in comparison to the concept of burnout by Maslach, Jackson and Leiter (1996) and to the definition of perceived stress by Cohen, Kamarck and Mermelstein (1983). A key component of compassion fatigue is secondary traumatic stress, referring to the indirect (vicarious) traumatization of the helper as a result of his/her exposure to trauma of his/her clients or patients (Figley, 2002; Stamm, 2010). Burnout as a second part of compassion fatigue refers mainly to the symptoms of emotional exhaustion and fatigue (Figley, 1995; Figley, 2002; Stamm, 2010). By using these similar concepts of burnout and stress, we tried to capture a wider range of symptoms of the negative consequences of helping.

Important aspects of helping professions (e.g. health and social workers, teachers, therapists, psychologists, psychiatrists) are helper´s daily and direct contact with his/her clients and providing physical, psychological and social care. Tilley and Chambers (2003) also refer to other potential stressors in helping work, including problems of clients/patients and caring for their emotional needs, professional self-doubts, difficulties with time management, heavy workload, conflicts, or personal stresses. These characteristics of helping professions can be a source of the negative consequences of helping and thus

can lead to higher incidence of burnout, stress and compassion fatigue among helpers (Adams, Boscarino, & Figley, 2006; Stamm, 2010; Tilley & Chambers, 2003).

The results of some research studies also show that higher age and longer work experience are connected with higher levels of burnout and stress among helping professionals (Hricová, Nezkusilová, & Mesárošová, in press; Śliwiński et al., 2014; Tuvesson, Eklund, & Wann-Hansson, 2011). However, Edwards et al. (2006) found that younger mental health nurses experienced higher levels of burnout for depersonalization subscale. Hayter (2000) reports no relationship between burnout (emotional exhaustion, depersonalization, reduced personal accomplishment), age and length of time in practice among clinical nurses.

Research on relationships between the length of work experience and negative consequences of helping in Slovakia is scarce. Therefore, the purpose of the present research was to explore the level of burnout, perceived stress and compassion fatigue among helping professionals with different length of work experience. It was hypothesized that less experienced helpers would indicate lower levels of burnout, perceived stress, and compassion fatigue than more experienced helpers.

2. Method

2.1. Participants and procedure

Presented research findings are part of the Slovak national research project investigating the resources and the prevention possibilities of the negative consequences of helping. The project is focused on helping professionals working in institutions providing social care in Slovakia (i.e. social workers, psychologists, health professionals, educators). Up to date, 748 helping professionals in Slovakia participated. The participation was voluntary and anonymous.

Among participants, 88.4% were female, 10.8% were male, and .8% did not report their gender. The age of participants ranged from 20 to 65 (M = 44.07; SD = 10.34). The length of work experience in helping professions ranged from 1 to 44 years (M = 13.1; SD = 10.49); eight participants did not report the length of their work experience.

2.2. Measures

Helping professionals completed the following questionnaires:

Maslach burnout inventory (MBI; Maslach, Jackson, & Leiter, 1996), Slovak translation. The instrument consists of 22 items measuring the level of burnout syndrome, i.e. the level of emotional exhaustion (e.g. *"I feel emotionally drained from my work."*, depersonalization (e.g. *"I don´t really care what happens to some recipients.",* and reduced personal accomplishment (reverse coded, e.g. *"I feel I´m positively influencing other people´s lives through my work."*). Respondents indicate the frequency of experiencing work-related feelings using a 7-point scale (0 = never; 6 = every day). Internal consistency estimates (Cronbach alpha) for emotional exhaustion, depersonalization and personal accomplishment were .90, .79 and .71, respectively (Maslach, Jackson, & Leiter, 1996). In our research, Cronbach alpha estimates were .878 for emotional exhaustion, .601 for depersonalization and .768 for personal accomplishment.

Perceived stress scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). Slovak translation of this 10-item measure was used to assess the level of perceived stress among helping professionals. Respondents are asked to indicate the frequency of their feelings and thoughts during the last month on a 5-point scale (1 = never; 5 = very often); e.g. *"In the last month, how often have you felt nervous and "stressed"?".* A higher score indicates a higher level of perceived stress. Cronbach alpha estimates of the instrument were acceptable (Cohen, Kamarck, & Mermelstein, 1983). In this research, reliability (Cronbach alpha) of the perceived stress scale was .79.

Professional quality of life scale (Proqol; Stamm, 2010; Slovak adaptation Köverová, 2016). The professional quality of life scale consists of 30 items measuring the level of the positive effects of helping (compassion satisfaction - 10 items, e.g. *"I get satisfaction from being able to help people."*), and the level of the negative effects of helping (compassion fatigue consisting of burnout - 10 items; e.g. *"I feel trapped by my job as a helper."*; and secondary traumatic stress - 10 items, e.g. *"I think that I might have been affected by the traumatic stress of those I help."*). The answers are rated on a 5-point scale (1 = never; 5 = always). Higher scores indicate higher levels of compassion satisfaction and compassion fatigue (burnout and secondary traumatic stress). For the purposes of this study, only compassion fatigue subscales were used in the analyses. Stamm (2005) reported adequate internal consistency estimates (Cronbach alpha) for burnout (.90) and secondary traumatic stress (.87). Cronbach alpha estimates of compassion fatigue, burnout and secondary traumatic stress in the Slovak adaptation of the instrument were .785, .556, and .754, respectively (Köverová, 2016).

2.3. Statistical analyses

One-way ANOVA was used to measure the differences in the level of burnout, stress and compassion fatigue among four groups of helping professionals according to the length of their helping experience (*group 1* = 0-3 years of experience, n = 155; *group 2* = 3-9.9 years of experience, n = 186; *group 3* = 10-19.9 years of experience, n = 194; *group 4* = 20 and more years of experience, n = 205).

3. Results

Analysis of variance (Table 1) showed statistically significant differences in overall MBI scores and exhaustion scores among the four groups ($F_{(3,728)}$ = 2.798, p = .039 for overall MBI score; $F_{(3,728)}$ = 7.098, p < .001 for exhaustion). Scheffe post-hoc test indicated that the mean overall MBI score for Group 1 (M = 1.496, SD = .729) was significantly different from Group 3 (M = 1.729, SD = .799, p = .05). The mean exhaustion score for Group 1 (M = 1.725, SD = 1.079) was significantly different from Group 3 (M = 2.242, SD = 1.229, p = .001) and Group 4 (M = 2.254, SD = 1.259, p = .001). No significant differences in the levels of depersonalization and personal accomplishment were found among the four groups.

Statistically significant differences for the four groups were also found in PSS scores ($F_{(3,730)}$ = 3.865, p = .009) (Table 1). Scheffe post-hoc test revealed that the mean score for Group 1 (M = 2.481, SD = .519) was significantly different from Group 3 (M = 2.632, SD = .482, p = .043) and Group 4 (M = 2.637, SD = .451, p = .029).

Table 1. Differences in burnout (MBI), stress (PSS) and compassion fatigue (Proqol) among helping professionals with different length of work experience.

Group (n)	1 (n = 155)		2 (n = 186)		3 (n = 194)		4 (n = 205)		ANOVA	
	M	SD	M	SD	M	SD	M	SD	F	P
MBI_total	1.495	.729	1.626	.762	1.729	.799	1.676	.792	2.798	.039*
MBI_exh	1.725	1.079	2.055	1.199	2.242	1.229	2.254	1.259	7.098	.000*
MBI_dep	.844	.961	.852	.848	.867	.899	.838	.874	.039	.990
MBI_pc	4.355	.992	4.371	.975	4.310	.950	4.450	.933	.730	.534
PSS	2.481	.512	2.561	.502	2.632	.482	2.637	.451	3.865	.009*
Proqol_B	2.198	.412	2.382	.438	2.405	.461	2.457	.493	10.270	.000*
Proqol_STS	2.053	.455	2.208	.524	2.276	.525	2.356	.488	11.402	.000*

MBI_exh = exhaustion; MBI_dep = depersonalization; MBI_pc = personal accomplishment
Proqol_B = burnout; Proqol_STS = secondary traumatic stress

One-way ANOVA (Table 1) also showed significant differences among the four groups in compassion fatigue subscales ($F_{(3,731)}$ = 10.270, p < .001 for burnout; $F_{(3,731)}$ = 11.402, p < .001 for secondary traumatic stress). Scheffe post-hoc test indicated that the mean burnout score for Group 1 (M = 2.199, SD = .412) was statistically significantly different from Group 2 (M = 2.382, SD = .437, p = .004), Group 3 (M = 2.405, SD = .461, p = .001), and Group 4 (M = 2.457, SD = .493, p < .001). The mean secondary traumatic stress score for Group 1 (M = 2.051, SD = .455) was significantly different from Group 2 (M = 2.208, SD = .524, p = .044), Group 3 (M = 2.276, SD = .525, p = .001), and Group 4 (M = 2.356, SD = .488, p < .001). Difference in the mean level of secondary traumatic stress between Group 2 and Group 4 was also statistically significant (p = .04).

4. Discussion and conclusion

Presented research findings are the part of the Slovak national research project investigating the resources of, and the prevention possibilities of, the negative consequences of helping. The aim of the research study was to explore the level of burnout, perceived stress and compassion fatigue (burnout and secondary traumatic stress) among helping professionals in Slovakia with regard to the length of practice. We found that helping professionals with longer work experience (10 and more years) indicated higher levels of burnout, perceived stress and compassion fatigue than less experienced helpers (0-3 years of helping practice).

These results are consistent with previous foreign research studies which supported the role of age and length of practice in experiencing negative effects of helping (Śliwiński et al., 2014; Tuvesson, Eklund, & Wann-Hansson, 2011). Our research is the first to address this issue among helping professionals in Slovakia and brings evidence that the length of work practice is an important factor for experiencing burnout, stress and compassion fatigue also among the Slovak helpers.

These results also suggest that the length of helping experience can reduce the quality of work life among more experienced helping professionals. It is thus possible to assume that helpers with 10 and more years of work experience are at higher risk of developing burnout, stress and compassion fatigue in comparison with their colleagues at the beginning of their career (0-3 years of experience with professional helping). Therefore, our findings form a basis for the further preparation of the evidence-based prevention and intervention programs for the specific groups of helping professionals in Slovakia with regard to the length of their work experience. The prevention programs for helpers at the beginning of their career (0-3 years of experience) should be aimed at the prevention of burnout, stress and compassion fatigue. The intervention programs for helping professionals with longer work experience (10 and more years) should help them decrease the levels of negative effects of helping, and thus improve their professional quality of life, helping skills and competence. Further research is also required to test the effectiveness of the prevention and intervention programs for helping professionals in Slovakia.

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EFFICACY OF MINDFULNESS BASED COGNITIVE THERAPY ON CHILDREN WITH ANXIETY

Rima Shetty
Assistant Professor, Dept. of Clinical Psychology, Manipal University (India)

Abstract

Background: Anxiety disorders and the related symptoms are very common among school children with very little data available about the epidemiology and effective interventions. In India very few studies have evaluated the effectiveness of mindfulness based interventions on children especially among children with anxiety. Hence the present study examined the efficacy of mindfulness based cognitive therapy (MBCT-C).
Method: After having screened for anxiety 52 (25 boys and 27 girls) children were randomly allotted to either MBCT-C group or group therapy. Measures of anxiety were obtained using Spence children's anxiety scale (SCAS) wherein both parent and child versions were used. A related deficit commonly found among children with anxiety, emotion regulation was measured using emotion regulation questionnaire – child and adolescent (ERQ-CA). The three scales were administered before and after children had undergone 12 weeks of respective interventions.
Results: The findings of the study provide support for MBCT-C as an effective intervention for children with anxiety. In the present study MBCT-C was found to be more effective than group therapy for improving anxiety among children. The study also provided support for MBCT-C in improving emotion regulation wherein it was found to be as effective as group therapy which included components of cognitive therapy in improving emotion regulation among children.
Conclusion: Present study provides support for MBCT-C as an effective intervention for children with anxiety.

Keywords: *Mindfulness, anxiety, emotion regulation.*

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BULLYING IN SCHOOLS IN INDIA: EFFECTIVENESS OF ANTI-BULLYING SQUADS

Dr. Samir Parikh & Ms. Kamna Chhibber
Department of Mental Health and Behavioural Sciences, Fortis Healthcare (India)

Abstract

Objective: Bullying is a rising problem in schools in India which is seen to have significant negative social, emotional and psychological consequences for students. The current research has been conducted to determine the extent of the problem of bullying. An attempt has been made to utilize the concepts of social psychology in order to devise an effective strategy to combat the problem of bullying in schools in India.
Methodology: A quantitative analysis of various aspects relating to bullying was conducted by gathering information from both students and teachers across 20 schools (2176 students; 1480 teachers) in India to determine the extent of the problem. Schools were helped to develop Anti-Bullying Squads comprising of students and supported by teachers to counteract bullying activities in the school and to devise effective strategies to combat the problem of bullying. A qualitative understanding of the effectiveness of the activities undertaken by the Anti-Bullying Squad was done post 2 months of its institution.
Results: The analysis of results demonstrated an emphatic agreement to the presence of bullying in schools in India. The constitution of the Anti-Bullying Squad was determined to be effective on the basis of the qualitative analysis which was conducted in being able to formulate ways of combating the problem and also in being able to diffuse potential bullying situations. A significant positive connotation was seen to be attached to the presence of the squad in the schools.
Conclusion: There is a need for taking proactive measures in schools to counteract bullying. This has been a largely unaddressed problem in India and the constitution of Anti-Bullying Squads is a significant step forward in diffusing the problem.

Keywords: *Bullying, Anti-Bullying Squad, Psychological well-being, School mental health.*

1. Introduction

Bullying in schools is a significant problem which has been highlighted over the last few decades. However, despite the focus it gets the problem still continues to exist at significant levels within schools. Researchers have indicated that almost all adolescents have been harassed, teased or victimized by their peers at some point in time (Finkelhor, Omrod, & Turner, 2009). When we talk of bullying behaviors we refer to any act of repeated, aggressive behavior directed against a person who has difficulty defending himself or herself (Olweus, 1996). Bullying is known to have a significant detrimental effect upon the individual who experiences it. At the same time, the person who bullies is also impacted as are the individuals who observe such acts.

Within India the prevalence estimates of bullying have ranged between 31% (Kshirsagar, Agrawal, & Bavdekar, 2007) to 53% (Malhi, Bharti, & Sindhu, 2014). However, our exploration of the research done on preventive strategies and the utilization of structured programs that help in tackling the problem of bullying has not revealed any results. Numerous suggestions are made by organizations that work with students in schools to combat this problem of enormous proportions. However, these suggestions have not been substantiated with robust research to demonstrate their effectiveness and push for their implementation across schools.

Traditionally, research done in countries outside of the Indian subcontinent have advocated for anti-bullying programs which can be categorized into 6 different types (Rigby, 2010). These include the traditional disciplinary approach, approaches that focus on strengthening the victim, approaches with a focus on mediation, restorative practice, the support group method and the method of shared concern.

The current research was conducted to determine the extent of the problem of bullying in schools in India. Given the socially aware culture of India, we attempted to utilize the concepts of social psychology and group behavior to develop a unique program to tackle the problem in the country. There is significant research evidence which demonstrates that the best anti-bullying programs have a focus on not just individual social skills but also on the social mechanisms of the organization within which they exist (Olweus, 1993; Perkins, Craig, & Perkins, 2011).

Peer relationships have a significant influence on adolescents' behavior. They tend to determine their beliefs, thoughts and attitude frequently in relation to what their peers demonstrate. This process of social influence finds its applicability across age groups and can be utilized to work in the area of bullying as well.

According to Gest, Osgood, Feinberg, Bierman and Moody (2011), successful bullying prevention programs take existing social mechanisms into account that influence the existing social influence processes. These include the modification of attitudes that support the behaviors, the change of social norms to the extent that students oppose the bullying behavior, and the training in social skills to increase students' resistance to influence of bullies. Based on these mechanisms the current paper also looks to provide an effective anti-bullying intervention strategy that utilizes these processes of social influence through the means of creation of anti-bullying squads.

2. Methodology

2.1. Sample

For the purposes of the research a sample of 2176 students and 1480 teachers from 20 schools in an urban, metropolitan city of India was administered a structured questionnaire developed by the researchers to determine the prevalence of the problem of bullying in schools. The students belonged to grades 8-11, in the age group of 14-17 years. Both males and females were selected for the purposes of the study with both having equal representation in the selected sample of students.

2.2. Design

The research started with the administration of the structured questionnaire to all the participants, including students and teachers. After the administration of the questionnaire the entire sample participated in a workshop which sought to raise the students' awareness about bullying, how it manifests and the impact it has to increase their sense of responsibility and encouragement for the intervention. The schools were then asked to select a representative group of students who would form the Anti-Bullying Squad. The members of the squad were provided with methods to help encourage other students to stop supporting bullies, activate their sense of responsibility and equip them with strategies to help victims during the bullying episode.

The key idea in preventing a bully from bullying was in promoting the idea of strength lies in unity and that if students get together to resist a negative experience of bullying they would themselves be able to take charge of the situation.

Two months post the implementation of the program a semi-structured interview was utilized to test for the effectiveness of the program. Data for the same was gathered from teachers, members of the anti-bullying squad and other student representatives.

2.3. Measures

Two measures were utilized for the purpose of the research. The first was a structured questionnaire that was designed to develop an understand of the problem of bullying, its prevalence, forms, impact and students understanding, feelings of efficacy and knowledge of existing rules and guidelines to tackle bullying in school. The second was a semi-structured questionnaire that was utilized to determine the effectiveness of the implemented program in reducing the problem of bullying, equipping students with the skills to combat situations and changes in their understanding of the problem and how it affects those around them. Both these measures were administered to both teachers and students.

3. Results

The analysis of the data obtained revealed that 41% students have been bullied or seen someone being bullied around them. 76% teenagers agreed that those students who are not a part of a group are more likely to be bullied in school. 60% of the students reported that their friends and peers did not support them and stand up to bullying with them. 59% students indicated that incidents of bullying are not

reported at school and 63% were not aware of any existing policies and mechanisms of addressing the problem existing in their school. 74% students also reported that no adult, teacher or parent had spoken to them about bullying and what they could do if they faced such a situation.

The qualitative analysis conducted of the information received through the semi-structured interview post the creation of the Anti-Bullying Squad and its functioning for 2 months revealed that both teachers and students saw the benefits of the approach. They perceived that post the introduction of the problem there was a reduction in the frequency of the bullying episodes. At the same time students felt well equipped to deal with a situation if it did arise. Furthermore, teachers and students advocated for the continued engagement with the program to ensure that students have a support system and a space to discuss and share the challenging situations they face.

4. Discussion

The present study was designed to develop a robust understanding of the phenomenon of bullying in India, its prevalence and how it manifests as well as the impact it has upon students and whether students have knowledge and awareness of how it can be tackled. Furthermore, we wanted to attempt to utilize the process of social influence to moderate the process of bullying in schools. We wanted to test for the efficacy of Anti-Bullying Squads in preventing incidents of bullying which were created in collaboration with each school.

Stigmatization and isolation have of bullies has not been seen to show any significant results in eliminating bullying in schools (Wolfer & Scheithauer, 2014). The best method for combating this problem has been suggested to be that of activating all students within the framework of the intervention such that existing social mechanisms can be challenged and new processes of negotiating can be created. The creation of the Anti-Bullying Squad was done in order to create such an imbalance in the existing social structure within the school to offset the dynamic which was allowing the bullying behaviors to perpetuate.

The program was found to effectively enhance the social skills and problem solving abilities of the students who were a part of the Anti-Bullying Squad. At the same time, the remaining students were also found to have a better understanding of what bullying is and what it does which helps them in being more wary of such experiences. The presence of the Squad also provided other students with a space where they can go to as for a large proportion of the students a challenge was also the lack of understanding of what they can and need to do in case they are a victim of bullying.

Overall, the intervention was found to be an effective intervention to combat the problem of bullying in schools in India.

5. Suggestions for Future Research

The current model has not been tested in an experimental situation with an experimental group and a control group which would allow for more robust exploration of the effectiveness of the intervention through an analysis of variance. More such research would need to be conducted to establish the efficacy of the program.

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THE LINK BETWEEN L2 LEARNERS' POSITIVE PSYCHOLOGICAL WELL-BEING AND THEIR ATTITUDES TOWARDS PEER FEEDBACK IN CHINA, TAIWAN AND OMAN

Chu Rong-Xuan[1], Fatma Al Hajri[2], & Qian Dai[3]
[1]*Department of English, Shih Hsin University (Taiwan)*
[2]*Tracer Studies, Ministry of Higher Education (Oman)*
[3]*Mental Health Education and Counseling Centre, Sichuan University (China)*

Abstract

This study investigated the relationships between L2 learners' positive psychological well-being and their attitudes towards peer feedback in the L2 classroom. Seligman's PERMA (positive emotions, engagement relationships, meaning and accomplishment) model and a published peer feedback perceptions questionnaire were adapted for the investigation. The university students aged 18-25 from China (n=497), Taiwan (n=620) and Oman (n=515) were invited to participate in the study. The results showed positive correlations between the students' attitudes towards peer feedback and their positive psychological well-being for Chinese($r=.60$, $p<.001$), Taiwanese ($r=.50$, $p<.001$) and Omani ($r=.41$, $p<.001$) samples. In addition, the results showed a significant predictability of PERMA components on the L2 learners' attitudes towards peer feedback across the samples. Also, the results revealed a significant difference in both positive psychological well-being and attitudes towards peer feedback between the samples, F (4,2870) = 58.76, $p < .001$, Wilks's A = 0.85, partial $\eta 2 = .08$. These results suggest that L2 learners' psychological well-being may play an integral role in their attitudes towards peer feedback and point to the potential benefits of positive mental health for promoting collaborative learning in the L2 classroom.

Keywords: *Positive psychology, peer feedback, cross culture, language learning.*

1. Introduction

Positive psychology, as a rapidly growing subfield of psychology, has significant implications for the field of education (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009) as well as the field of second/foreign language (L2) acquisition (SLA) (MacIntyre & Mercer, 2014). Research has demonstrated a positive association between adolescents' positive emotions and their academic achievements, social competence, and engagement in school (Antaramian, Scott Huebner, Hills, & Valois, 2010). In addition, adolescents with a higher level of life satisfaction were found to have better relationships with teachers and peers at school (Gilman & Huebner, 2006).

The present study explored associations between L2 learners' positive psychological well-being and their attitudes towards peer feedback. The PERMA Profiler (Butler & Kern, 2015) and the Peer Feedback Perceptions Questionnaire (Strijbos, Pat-EI, & Narciss, 2010) were adapted to examine the potential associations. To the best of our knowledge, ours is the first study to explore the link between positive psychological well-being and perceptions of peer feedback in L2 classrooms. Ours is also the first work that compared L2 learners' positive psychological well-being as well as their attitudes towards peer feedback between China, Taiwan and Oman. In the following paragraphs, a brief introduction of English learning contexts in China, Taiwan and Oman is provided.

2. Literature Review

One of the prominent models in the field of positive psychology is PERMA (Positive emotions, Engagement, Relationships, Meaning and Accomplishment). PERMA was developed by the co-founder, Martin Seligman, of positive psychology as a conceptual model to help people flourish (Seligman, 2011). Positive emotions as the first aspect of the PERMA model are believed to be able to broaden one's awareness, stimulate one's innovative thoughts and develop one's skills for future actions. Positive emotions embrace openness and possibilities as opposed to negative emotions that tend to narrow one's

focus and predispose specific behavioural tendencies (Frederickson, 2001). The implications of positive emotions have been associated with the studies of learners' positive self (Lake, 2013). The clarification in the functions between positive and negative emotions leads to a more profound understanding as to how they can affect L2 learning and how the seesaw battle of emotions (positive up, negative down) affects L2 learners' willingness to communicate (Maclntyre, 2007). Studies also revealed that positive emotions help interpersonal interaction. Isen (1987) found that people with positive emotions tend to be more flexible in their thinking and more capable of problem-solving. These people also tend to help others more. In a nutshell, positive emotions enable people to extend the domain of what they want to do (Fedrickson, 2009) and help promote people's motivation to engage in interpersonal communication. With such characteristics, positive emotions are arguably suited to be used to examine L2 learners' perceptions of peer interaction and feedback in L2 classrooms.

3. Method

3.1. Participants

Table 1. Demographic information of the participants.

Demographic information of the participants			
	China	Taiwan	Oman
N	500	626	515
Male	212 (42%)	151 (24%)	112 (22%)
Female	288 (58%)	475 (76%)	403 (78%)
Mean Age (SD)	19.3 (1.37)	19.2 (1.18)	20.1 (1.45)
Age range	17-25	18-24	18-30

3.2. Measures

To achieve the purposes of the current study, two published measures were employed: The PERMA Profiler (Butler & Kern, 2015) and The Peer Feedback Perceptions Questionnaire (Strijbos, Pat-EI, & Narciss, 2010). All items were rated on an 11-point Likert scale, with higher scores reflecting greater amounts of the given construct.

The PERMA Profiler (Butler & Kern, 2015) is a 23-item self-report measure for assessing subjective psychological well-being. The PERMA Profiler was developed based on Seligman's (2011) well-being theory, measuring positive emotion, engagement, relationships, meaning and accomplishment, along with negative emotion, health and loneliness. The measure was found to be reliable (23 items; China,α=.93; Taiwan,α=.91; Oman,α=.91).

The Peer Feedback Perceptions Questionnaire (Strijbos, Pat-EI, & Narciss, 2010) is an 18-item self-report measure for exploring students' feedback perceptions in terms of fairness, usefulness, acceptance, willingness to improve, positive affect and negative effect. The measure was found to be reliable (18 items; China, α=.85; Taiwan, α=.88; Oman, α=.75).

3.3. Procedures

The researchers received permission from the three participating universities and the students. The students were asked to anonymously complete the questionnaire in their classrooms outside of class time. They were explicitly told that all data were treated as confidential and they could withdraw from the study at any time. The researchers were present during the data collection to ensure the students' understanding of the questions. The questionnaire took 5-7 minutes to complete.

4. Results

Question 1: Is there an association between L2 learners' positive psychological well-being and their attitudes towards peer feedback?

Pearson's correlation coefficient is used to examine the association between L2 learners positive psychological well-being and their attitudes towards peer feedback. For both Chinese and Taiwanese samples, the students' positive well-being and their attitudes towards peer feedback are positively correlated. The students' attitudes and their negative emotion as well as loneliness are negatively correlated. For Omani sample, the students' positive well-being and their attitudes towards peer feedback are positively correlated. The students' attitudes towards peer feedback and their negative emotion, health and loneliness are not significantly correlated (See Table 2).

Table 2. Pearson's coefficient correlation between Chinese, Taiwanese and Omani students' attitudes towards peer feedback and their PERMA.

	China	Taiwan	Oman
Positive Emotion	.405*	.447*	.269*
Engagement	.343*	.293*	.349*
Relationships	.393*	.408*	.388*
Meaning	.350*	.385*	.343*
Accomplishment	.399*	.369*	.412*
Overall Well-being	.459*	.499*	.410*
Negative Emotion	-.192*	-.284*	.005(p=.928)
Health	.210*	.298*	.064(p=.229)
Loneliness	-.160*	-.196*	-.042(p=.421)

Note. *p< .001

Question 2: To what extent does L2 learners' positive psychological well-being contribute to their attitudes towards peer feedback?

A simple regression was calculated to predict L2 learners' attitudes towards peer feedback based on their overall psychological well-being for Chinese, Taiwanese and Omani samples.

For Chinese sample, a significant regression equation was found [F(1,493)=131.78, p<.001] with an R2 of .21. The Chinese L2 learners' overall well-being can account for 21% of the variation in their attitudes towards peer feedback. The learners' attitudes towards peer feedback could be predicted from their overall psychological well-being by the formula: Attitudes towards peer feedback=66.30 + 0.44 x (Overall psychological well-being).

For Taiwanese sample, a significant regression equation was found [F (1,617)= 204.69, p<.001] with an R2 of .30. The Taiwanese L2 learners' overall well-being can account for 30% of the variation in their attitudes towards peer feedback. The learners' attitudes towards peer feedback could be predicted from their overall psychological well-being by the following formula: Attitudes towards peer feedback= 69.11 + 0.48 x (Overall psychological well-being)

For Omani sample, a significant regression equation was found [F (1,323)= 65.30, p<.001] with an R2 of .17. The Omani L2 learners' overall well-being can account for 17% of the variation in their attitudes towards peer feedback. The learners' attitudes towards peer feedback could be predicted from their overall psychological well-being by the following formula: Attitudes towards peer feedback= 68.81 + 0.36 x (Overall psychological well-being).

The linear regression analyses on the relationships between the PERMA-profilers and L2 learners' attitudes towards peer feedback for the three samples were shown in Table 3.

Question 3: Are there differences in positive psychological well-being as well as attitudes towards peer feedback between Chinese, Taiwanese and Omani L2 learners?

One-way MANOVA was used to analyze the differences in positive psychological well-being and attitudes towards peer feedback between Chinese, Taiwanese and Omani L2 learners. The results revealed a significant difference in L2 learners' positive psychological well-being as well as in their attitudes towards peer feedback based on their L2 learning contexts, F (4,2870) = 58.76, p < .001, Wilks's A = 0.85, partial η2 = .08.

Separate univariate ANOVAs were used to examine the difference in L2 learners' psychological well-being and their attitudes towards peer feedback respectively between Chinese, Taiwanese and Omani samples. The results showed a statistically difference in both L2 learners' psychological well-being, F (2, 1436) = 45.02, p < .001, partial η2 = .06 and their attitudes towards peer feedback, F (2, 1436) = 45.95, p < .001, partial η2 = .06 between the three samples.

5. Conclusion

This study reported that there is significant relationship between L2 learners' positive psychology and their attitudes towards peer feedback in three countries: China, Taiwan and Oman. Though the degree of association reported differ slightly from one group to another, the role of positive psychology in learners' attitudes to peer feedback can be implemented to enhance language learning experiences through interventions such as those used by Macaskill & Denovan, (2014). Though there is no conclusive evidence that the differences among Chinese, Taiwanese and Omani learners in the association between positive psychology and attitudes towards feedback are explained by their cultural differences, in all of these cultures there is a need to improve learners' English language skills. Enhancing learners' attitudes towards peer feedback through enhancing their positive psychological well-being could have a positive effect in learning English.

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EMOTIONS, MEANING MAKING AND THE PSYCHOLOGICAL DEVELOPMENT OF THE ADULT MUSEUM VISITOR[1]

Colette Dufresne-Tassé & Elisabeth Meunier
Maîtrise en museology, Université de Montréal (Canada)

Abstract

Most professionals of the museum milieu consider emotions as a powerful factor motivating a visitor to deal with the objects presented in their exhibitions. The present research, conducted with adult visitors of the general pubic type, not only shows that this is not the case, but also that emotions are so rare with this type of visitors that they cannot contribute much to their psychological development.

Keywords: *Emotion, production of meaning, museum, adult visitor, psychological development.*

1. Introduction

Since about twenty years, Western museums are very eager to offer pleasant to visit exhibitions offering new information that stimulates questioning, reflexion and the psychological development of their visitors (Anderson, 1997; Dufresne-Tassé, 2002; Hein, 2005; Predetti, 2007; Pekarik, 2010*[2]). In other words, museums aim to offer exhibitions that entail an experience that moves and leaves a mark in the visitors (Anderson et al., 2007; Black, 2005; Ckikzentmihalyi et al., 1995; Duke, 2010*), and emotions are seen as the main factor responsible for inducing this sort of experience.

More precisely, emotions would be important because of their motivating character (Black, 2005; Caillet, 2009; Hein et al., 1998; Sander et al., 2011; Sheppard, 2010*). Indeed visitors tend to stroll in exhibitions looking superficially at the objects that they find on their way (Black, 2005; Serell, 1996*); emotions, whatever their positive or negative character, one says, would help preventing this behaviour. They would focus the visitors' attention, and in so doing, would stimulate the visitors' desire to give meaning to what they look at (Black, 2005; Caillet, 2009; Sheppard, 2010).

If this is the case, if emotions really play this role, they should raise up a strong attention that would show through an abundant production of meaning, or better said, an abundant meaning making[3], and this would contain elements that should contribute to the psychological development of the visitors.

Surprisingly, emotions have been very little studied in the museum context (Dierking et al., 2002; Dirkx, 2001; Guyot-Corteville, 2009). To this day, we identified only six empirical investigations (Alesis et al., 2013; Allen, 2002; Camarero-Izquierdo et al., 2009; Clarkson et al., 2005; Meyers et al., 2004; Poli et al., 2007), and they do not deal at all with the emotions' motivating character.

2. Hypothesis

What precedes suggested the following hypothesis: when an emotion appears as a visitor begins to look at a museum object, for instance a painting or a sculpture, meaning making is more abundant then when looking does not raise emotion; an this meaning making contains more elements that participate to the psychological development of the visitor.

Remark: From now on, for practical reason, the generic term "object" will be used instead of painting, sculpture or work of art.

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[2]References marked with an (*) are only examples as the subject matter has been treated in many other publications.
[3]Meaning production or meaning making is understood here in the same way as Hirtle's (2013), i.e. as putting words on what somebody is living through, these words being said aloud or kept for oneself.

3. Definition of emotion

The definition adopted here is the one proposed by Izard (2009) and Sander and al. (2009). Emotion is a transitory affective state felt as an answer to an interior or an exterior stimulation. It is rapidly released. It lasts little and is clearly enough perceived to be expressed in words or onomatopoeias.

4. Means to collect information

A majority of researchers who worked on emotion (Damasio, 1999; Feldman-Barrett et al., 2007; Izard, 2009; Sander et al., 2009) consider that the most valid way to gather information on somebody's emotions is to ask her/him to spontaneously say what she/he feels as this is happening. For this reason, we used the "Thinking Aloud" technique (Ericcson et al., 1993) that we adapted and validated for the museum situation. It consists of asking an adult visitor who arrives at the museum to do her/his visit as she/he wishes, saying aloud what comes to her/his mind without bothering remembering or justifying it (Dufresne-Tassé et al., 1998 a, b). While talking, she/he voices her/his experience as it unfolds or, this is equivalent, she/he reveals what she/he is thinking, imagining or feeling, especially her/his emotions. But at the same time, because she/he puts words on what she/he is thinking, imagining and feeling, she/he produces units of meaning that, joined end to end, form the signification that develops about the observed object.

We called "discourse" this production or meaning making of the visitor, and in order to study it easily, we tape recorded and computerized it (Dufresne-Tassé et al., 2014). So we had written information about the visitor's emotions, when they appeared, right when she/he started observing an object or later on, about the psychological functioning that surrounded them, and finally about the visitor's meaning making, unit by unit.

Drawing on Austin's work (1970), we called unity of meaning what a visitor was doing while speaking; for instance: identifying an object, checking what she/he is thinking about it, comparing it with another one, assigning it a quality, etc.

5. Data collection context

The information necessary to test the hypothesis presented above was collected in a fine arts museum, the Montreal Fine Arts Museum, more precisely in the latter's Canadian Art permanent exhibition. There, the collection[4] was presented with a minimum of information[5]. At the entrance, a small panel was simply saying: "Canadian Art", then each painting or sculpture was accompanied by a label indicating solely the title of the work, the name of its author, the places and dates of both her/his birth and death.

6. Sample

The present research was done with 25 adult visitors of the general type[6]. These were extracted from a larger stratified sample of 90 (same number of men and women pertaining to three age groups: 20-35, 36-50 and 51-65, and enjoying three levels of education: less than a baccalaureate, a baccalaureate and more than a baccalaureate). These 25 were selected because they had no particular knowledge of art history and no particular practice neither of drawing, painting or sculpture. So the only resources they had for meaning making were their emotional capacities and their intellectual baggage (knowledge and experiences).

7. Results

The analysis of the discourses collected from the previously described visitors offers a great variety of information that enables to contextualize the data resulting from hypothesis testing.

7.1. Contextual data

1. As could be expected from general public type of visitors, the sample engaged in the present research paid short visits to the Canadian Art collection as these last about 20 minutes (a mean of 19.50).

[4]Works of art dating from the beginning of the nineteen century to 1960.
[5]This presentation is anterior to the one now displayed in the Claire and Marc Bourgie Pavillion.
[6]Go to any kind of museum less than twice a year.

They also got interested in few works of art (a mean of 23.65), on which they develop few units of meaning (a mean of 6.13)[7].

2. In the visitors' discourses, emotions appear under the five following forms: surprise, astonishment, at once acceptation or rejection (expressed as "I like" or "I do not like"), enthusiasm and fear.

3. Surprisingly, emotions are rare; only a mean of 5.71 (σ 3.72) is identified during the whole time spent by the visitors in the collection.

4. They rarely accompany the beginning of an object observation, or this is equivalent, the beginning of an object treatment (a mean of 1.42; σ 1.25).

5. Thereafter, i.e. once the treatment has started, emotions are a little less rare as a mean of 4.28 is observed (σ 3.24). This is probably due to the fact that they have more numerous opportunities to develop than at the very beginning.

6. When there is no emotion accompanying the beginning of observation, some cognitive functioning replaces it. The latter takes the following forms: identifying what one looks at, noticing that one already knows what he sees or reads, and finally understanding what one looks at or reads.

7. The cognitive functioning that accompanies the beginning of observation is observed a mean of 12.5 times per visit (σ 8.06). This represents approximately eight times more than what is identified with emotion (1.42).

7.2. Data related to testing the hypothesis

The mean length of an object treatment produced when an emotion accompanies the beginning of observation is of 3.33 units of meaning (σ 3.69), while the mean length when this is the cognitive functioning is of 4.86 units (σ 2.15). So not only the difference between the two means does not reach the 0.5 level of significance, but it takes the opposite direction of what was expected in the hypothesis.

7.3. Data regarding the visitor's psychological development

Given the rarity of the units of meaning generated when emotion accompanies beginning of observation, the probabilities of finding in them elements that participate to the development of the visitor were very low. Actually we identified a few occurrences of learning that could enlarge the baggage of knowledge, or if one prefers, the personal universe of the visitor. We also identified some discoveries that could contribute to a better understanding of the visitor's self, like one's personal tastes, difficulties or shortcomings.

As far as the beginnings of observation accompanied by cognitive functioning are concerned, we noticed a few more occurrences of learning and discoveries, but they were of the same kind as the ones observed with emotion.

8. Synthesis and perspectives

The data presented above show that:

1. Emotions are rare amongst adult visitors of the general public type who are strolling in a permanent exhibition presenting objects (works of art) created by artists of their own country;

2. As well emotions rarely appear when the visitor starts looking at an object that attracts her/his attention or, this is equivalent, at the beginning of the treatment that she/he brings to the object;

3. When they show up at this particular moment, emotions do not entail a longer treatment, i.e. a treatment containing more units of meaning than some cognitive functioning;

4. Because of their mere scarcity, these units of meaning contribute little to learning or discoveries that could contribute to the psychological development of the visitor.

Consequently, at least regarding the type of visitors involved in this research, one could not say of emotions that they possess a strong motivating character. In fact, some forms of cognitive functioning seem to have at least as much motivating character.

This last observation leads us to think that the emotional or cognitive orientation present at the beginning of an object treatment is of little importance. The major element would rather be the "echo" that the perception of the object could raise in the visitor's personal universe of knowledge and experiences. For instance, the object perception matching the visitor's tastes or upsetting them, some new knowledge being similar to a knowledge already in place, updating it or directly contradicting it.

Although close to the Bourdieu and Darbel position, ours is different. Indeed, while for Bourdieu and Darbel (1969), only the cultural baggage related to Antiquity or the European Classics is of

[7]The other visitors from the sample of 90 pay longer visits to the collection, get interested in a greater number of works of art and develop about these a less rudimentary signification.

importance, i.e. could be stimulated by what the visitor looks at, we propose that any element of the visitor's personal universe could be. Then it could become the starting point for adding meaning to the object, and enriching its signification.

8.1. Reshaping the questioning

A fine grain analysis of the discourses used in the present research reveals, on top of emotion, nine other affective phenomena that read as follows: feeling, laughter, appreciative reaction, sentiment, pleasure, desire, empathy, self immersion and expression of personal tastes. The most frequent of all these is the appreciative reaction. Not only much more frequent than emotion, it also appears more often as the visitor starts observing an object.

Like emotion, the appreciative reaction consists of a rapidly released answer that lasts little, but it differs from it by including an evident cognitive component and by focusing on the object looked at rather than on what the visitor feels. Due to its similarity with emotion, it would be interesting to check its motivating character. But also, due to its cognitive component, studying it would offer a fair opportunity to revisit the role of the whole cognitive functioning in the development of a deeply moving and culturally enriching museum experience for the adult visitor.

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ATTRIBUTION OF STUDENTS'SUCCESS AND FAILURE: BASIS FOR A GUIDANCE PROGRAM

Mary Ann I. Diaz, RGC[1], Elenita M. Tiamzon, PhD[2], & Elsa L. Batalla, PhD[2]
[1]*Guidance and Counseling Department, World Citi Colleges (Philippines)*
[2]*College of Arts and Sciences, World Citi Colleges (Philippines)*

Abstract

Fritz Heider and Bernard Weiner theory of attribution is a theoretical framework of academic attribution of students' success and failure. The focus of our research is the identification of the association and attribution of the students' success and failure.

In this study we presented results carried out by 240 sophomore students of World Citi Colleges, of different programs (180 females and 60 males) by using purposive sampling method. The students with academic performance ranging from 75 to 80 in their high school were considered.

We were interested to find out the difference or the change of success and failure of the sophomore students based on the three major consideration of attribution. As the main source of data, self-constructed questionnaire was used as assessment tool. The assessment tools focused on the academics, career, and personal attribution of students.

The questionnaire was administered in three consecutive days and retrieved back the questionnaires/checklist forms on the same day of the administration.

The study used the weighted mean, ANOVA, t- test and linear regression in the treatment of data to arrive at the results and findings of the study.

The study revealed that on the academics, the success of the students was attributed on study habits and the teachers. The teachers play a big role in the success of the students. However, the results considered the study habits of the students as the primary consideration of their success in terms of their academics.

On the other hand, the failure of the students can be attributed to the teachers' difficulty in the delivery of the subject matter.

On the Career aspect, the success and failure of the students were attributed with their interest on the chosen program and abilities to perform different activities in the chosen field of specialization.

On the Personal aspect, the success and failure of the students were attributed to their family and environment. The support and cooperation of the family together with the accessibility of the place to school were the major consideration of the students.

Based on the findings, there exists an association between the attributes of success and failure of the students in their academics and this serves as a basis for a guidance program.

Keywords: *Attribution, academic, career, personal, and success-failure.*

1. Introduction

Naturally, human beings are in constant search for the factors that cause them or other people to behave the way they do (Mkumbo & Amani, 2012).

In social psychology, attribution is the process of inferring the causes of events or behaviors. In real life, attribution is something we all do every day, usually without any awareness of the underlying processes and biases that lead to our inferences (Cherry, 2014). Say when you get a poor grade on a quiz, you might blame the teacher for not adequately explaining the material, completely dismissing the fact that you didn't study. When a classmate gets a great grade on the same quiz, you might attribute his good performance to luck, neglecting the fact that he has excellent study habits.

According to alleydog.com, attribution is the process by which people use information to make inferences about the causes of behavior or events. Simply, it is how you go about inferring behavior (your own and those of others).

In a study conducted by Lei (2009), college students had different attributions on success and failure. Differences among student grades and that between success and failure were significant while differences between genders were not. Likewise, it was found to have higher expectation when they came across failure and more willing to work to make progress. Likewise, they feel gratified and proud after success and their responses are stronger. On the other hand, they would feel compunctious and depressed after failure.

Weiner stated, (as cited in Lei, 2009), attribution towards success and failure are of great importance to understand achievement behavior. In addition, people display different characteristics when they make attributions toward success and failure.

Significantly, there are number of factors that influence students' attributions, but teacher feedback also is also crucial. The implications for success and failure conditions are somewhat different and further complicated by the possibility that students may not interpret the same objective event in the same way. For example, some students getting a B on a paper may be a success, given their past lower grades. In contrast, for other students, including many high achievers and college students, getting a B is a failure.

Given the importance of students' perception of events in attribution theory, it is suggested that teachers attempt to give accurate feedback to students, rather than non-credible feedbacks designed to encourage them and maintain their self-esteem. In this sense, teachers will help students to make accurate attributions for their own behavior that in the long run, will be more adaptive.

2. Design

The present study follows the Fritz Heider and Bernard Weiner model, with data collection through quantitative methodologies. It is a study of the academic attribution of student's success and failure.

Figure 1. Operational Framework.

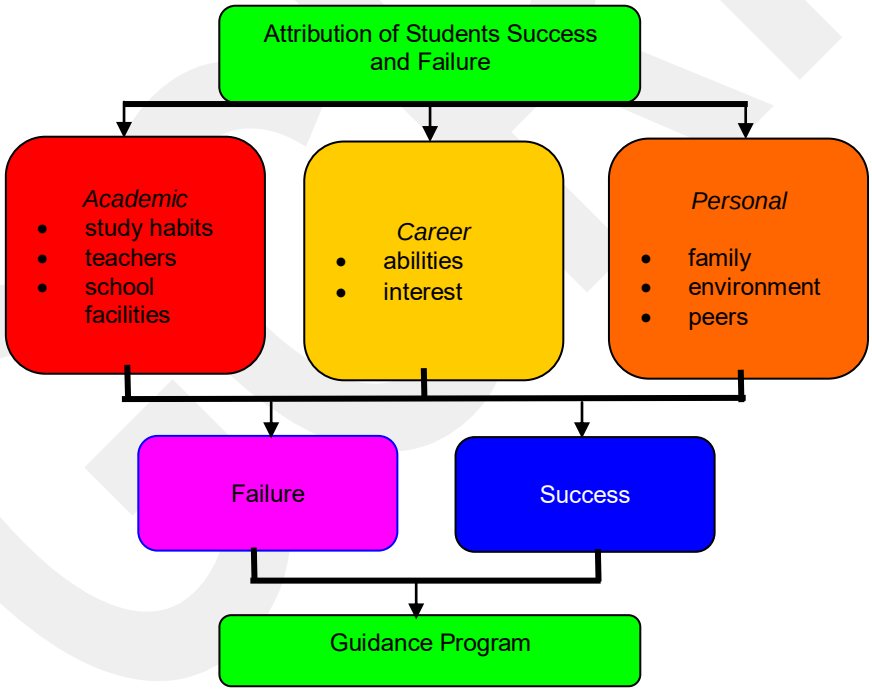


Figure 1 illustrates the academic, career and personal factors which determine the attribution of student success and failure. The academic related factors include the students study habits, teachers and facilities. The career-related factors include the students' abilities while the personal-related factors include the students' family, health, environment and peers. In the process of exploring the main factors, the researchers directed to create a guidance program in World Citi Colleges, Quezon City Campus that aims to respond to the need of the sophomore college students.

3. Objectives

Following the aforementioned design, the present study has the main aim to determine the attribution of students' success and failure of the sophomore college students enrolled at World Citi Colleges, Quezon City Campus as basis for creating a guidance program.

4. Method

4.1. Participants

Participants included were 240 sophomore students of World Citi Colleges, of different programs (180 females and 60 males) by using purposive sampling method. The students with academic performance ranging from 75 to 80 in their high school were considered.

4.2. Instruments

The main source of data was a self-constructed questionnaire was used as assessment tool. The assessment tools focused on the academics, career, and personal attribution of students. The four (4) point likert scale was used to assess the attribution factor. The questionnaire was administered in three consecutive days and retrieved back the questionnaires/checklist forms on the same day of the administration.

4.3. Data Analysis

Descriptive statistics such as mean, standard deviation and percentage was used to analyzed the demographic profile of the participants. Pearson product moment coefficient was likewise used to determine the association between attributes. Linear Regression was used to determine extent of association. All statistical level of significant were set at $p < 0.05$. Statistical Packages for Social Sciences was utilized to analyze the data (IBM, 2010).

5. Summary of Findings

The study revealed that on the academics, the success of the students was attributed on study habits and the teachers. The teachers play a big role in the success of the students. However, the results considered the study habits of the students as the primary consideration of their success in terms of their academics. On the other hand, the failure of the students can be attributed to the teachers' difficulty in the delivery of the subject matter.

On the Career aspect, the success and failure of the students were attributed with their interest on the chosen program and abilities to perform different activities in the chosen field of specialization.

On the Personal aspect, the success and failure of the students were attributed to their family and environment. The support and cooperation of the family together with the accessibility of the place to school were the major consideration of the students.

6. Conclusion

Based on the findings, there exists an association between the attributes of success and failure of the students in their academics and this serves as a basis for a guidance program.

The highest association was on the academics and career aspect. The second highest association was on career and personal aspect. The least association was on academics and personal aspect

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INVESTIGATING THE ROLE OF INDIVIDUAL DIFFERENCES IN THE PREDICTION OF ACADEMIC PERFORMANCE

Omar Al Ali
Leadership Development Center, Abu Dhabi (UAE)

Abstract

Academic success is influenced by individual differences in motivation and achievement. Prior research has focused mostly on academic achievement among young students, and provides inconsistent evidence regarding the extent to which personality traits relate to academic performance. The current study addresses these gaps by examining the "Big Five" personality factors, general cognitive ability, locus of control, and emotional intelligence as predictors of academic performance. 385 student were surveyed during their first month at college in UAE. Personality was measured using the Arabic version of the NEO-FFI, and the Arabic version of Rotter's locus of control scale was also used . Cognitive ability was measured by an Arabic cognitive ability test, and emotional intelligence was measured by the Arabic version of Self-Report Emotional Intelligence. At the end of first year data were collected about their academic performance (GPA).

Correlation analyses showed a complex and intriguing pattern of significant relationships (ranging from .05 to .47) between the Big Five personality traits and academic performance. Conscientiousness, extraversion, and emotional stability were all significantly correlated ($p < .01$) with GPA performance ($r = .47$, $r = .37$, and $r = .31$) respectively. Cognitive ability demonstrated the highest significant correlation with academic performance ($r = .64$, $p < .01$). A significant moderate relationship between emotional intelligence and GPA was also found ($r = .48$, $p < .01$). The results also demonstrated that there was a significant negative relationship between academic performance and external locus of control ($r = -.39$, $p < .01$). Results from the stepwise regression show that five independent variables uniquely predicted overall training performance and together explained 60% of its variance. Cognitive ability was found to be the strongest of the significant variables (beta = .54, $p < .01$), followed by conscientiousness, emotional stability, emotional intelligence, and locus of control (beta = .21, beta = .15, beta = .14, beta = - .12) respectively.

These findings provide evidence of how tests of individual differences predict academic performance and justify their use as educational tools. Implications for future research, student assessment, and intervention design will be discussed.

Keywords: *Individual differences, academic performance, UAE.*

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PARENTING PROGRAMMES: A TRANSPLANT MODEL IN PRACTICE

Katy Smart
Graduate School of Education, University of Bristol (UK)

Abstract

This mixed-methods research explored parents' and trainers' perceptions of the impact of parenting programmes by following 136 families through a total of 20 courses (*Triple-P, Incredible Years and PEEP*). The research questions investigated their views on the parenting programme process, parental behaviour changes taking place post-intervention and subsequent behavioural, developmental and/or educational impact on their children. A major theme that developed from the analysis of parents' data was the importance of the right learning environment. This comprised three phases: the recognition of the importance of parents' pre-existing knowledge; the facilitation of the sharing of this knowledge with other parents; the building on this knowledge-base by application of a Transplant as opposed to an Expert Model of parent-professional practice. Another notable finding was the significance of the family working together. This was highlighted by the unforeseen consequence of one parent attending the programme, creating an imbalance in the parenting structure within the family; inconsistent parenting and the perception of one parent being the expert can potentially lead to conflict. Having attended a programme, parents of pre-school children recognised and supported developmental improvements leading to an associated increase in their child's school readiness. Another noted positive impact, which applied to parents across the programmes, was that they felt more confident in their parenting resulting in a calmer atmosphere at home and a better relationship with their child.

Keywords: *Parenting, transplant model, parenting programme.*

1. Introduction

A number of parenting programmes have been developed, both internationally and in the UK, to meet the varying needs and approaches most suitable to parents. One of the key aims of many such programmes is to help parents develop positive parenting skills to support them in preventing or reducing challenging behaviour in children. Other aims integral to the philosophy of parenting programmes include strengthening the parent-child relationship, increasing children's social and emotional learning, promoting school readiness, promoting parents' awareness of children's development and the importance of maximising learning opportunities.

As part of a wider agenda, parenting programmes have had a greater emphasis placed on their value after the research findings of Desforges and Abouchaar (2003); this had a powerful influence on UK local authorities offering and delivering more parenting programmes. The existing research into parenting programmes has primarily focused on their impact on children's behaviour; this could be attributed to the primary aim of many parenting programmes being directed in this area. However, having a background in psychology and education my research focused on the impact that the programmes have on parental behaviour and the subsequent effects on children's development and attainment. Specifically, I was interested in the parents' perspectives; my research provided parents the opportunity to voice their views.

This study followed families through one of three parenting programmes and beyond. My aim was not to advocate any particular parenting programme or indeed parenting programmes in general; rather my purpose was to explore parents' perspectives on whether they considered parenting programmes had an impact on their own behaviour and whether they considered this had subsequently had any impact on their child. The three parenting programmes my research focused on were *Triple-P*[1], Webster Stratton's *The Incredible Years*[2] and *Peers Early Education Partnership* (*PEEP*)[3], three of the most popularly adopted programmes across the south west of the UK at the time of starting my study.

[1]http://www.triplep.net
[2]http://incredibleyears.com
[3]http://www.peeple.org.uk

By gaining the parents perspectives I aimed to establish how effective parenting programmes were in terms of being a vehicle to deliver advice and guidance. How well did they succeed in getting across information and new ideas? Did they ensure parents felt empowered by the programme rather than being made to feel inadequate? Did they change how a parent interacts with their child? Did this in turn improve the child's progress? Did this change the cycle that affects so many families – poverty (Blanden et al., 2005), teenage pregnancies (Smart, 2003) and mental health (Murray and Cooper, 1997). An investigation into the parenting programme process was a key component of my research.

2. Research Design

I employed a mixed methods research approach utilising questionnaires, featuring both quantitative and qualitative questions, as well as semi-structured interviews. I initially used questionnaires to record demographic data and to establish parental practices and expectations pre-intervention for 136 parents across 20 courses. This was then supplemented by a follow-up questionnaire at the end of the programme to explore parents' initial perspectives, having attended the course, regarding what they then did differently and what they thought they had gained from the course. My study explored the longitudinal perspective by revisiting the families one year after they had completed the programme with a third questionnaire to examine the parents' perceptions of any lasting impact. Post-programme and one-year-on semi-structured interviews with a subset of eight parents allowed me to gain a deeper insight into their perspectives. To ensure a degree of triangulation and to promote trustworthiness in the data (Robson, 2002), I sought a secondary source to provide an alternative perspective to the parents' reports. To this end my research incorporated the views from the parent programme trainers – they saw the parents typically on a weekly basis, following them through the entirety of the course, and were well-placed to provide this additional viewpoint.

For the semi-structured post-programme interviews with parents and trainers I developed a set of informal schedules around which I conducted the interviews. These schedules were informed by an analysis of the pre- and post-programme questionnaire responses. I adopted a thematic approach based on Braun and Clarke's (2006) model to analyse my interview data. Prior to commencing the analysis of the transcripts I created a provisional start list of thematic codes; the interviews were then analysed to extract further themes, moving from a deductive to an inductive paradigm.

Although I have outlined my research method as a linear process, in practice a more iterative approach was required – this arose as each phase of the study informed the next, and in several cases it meant that I needed to return to earlier phases and re-examine them in the light of the new information that had been produced.

3. Findings

A key theme that developed from the parents' interviews to help answer my research question *What are the views of parents and trainers regarding the parenting programme?*, and a particularly noteworthy theme, was the parents' perception that the environment needs to be right to share parenting experiences with other parents. This theme developed from seven of the parents' interviews making this an especially important aspect of my findings. The "right" environment includes a number of factors such as friendly, approachable and helpful staff; a clean and safe place for children to play; the structure and calmness of group; and being able to spend quality time with their child.

A key element in creating the right atmosphere where parents felt comfortable and safe to share their experiences was the staff. One parent wrote on her post-programme questionnaire:

"*The staff have been amazing and the structure has been really good*" (Q-post)[4]

A year after the first interview Jacob[5], a *PEEP* parent, still remembered the value of being able to talk to other parents:

"*I think you can kind of just exchange ideas and just be comforted to know that everybody's just got the same problems*" (I-year)[6]

This was a common theme that was evident both in the questionnaires and during the interviews. For some parents having the right environment gave them somewhere to go where they could meet other parents:

[4]Q-post refers to the post-programme questionnaires
[5]All names used here are pseudonyms
[6]I-year refers to the one-year-on interviews

"*PEEP was hugely beneficial to both Lily and me. Always stimulating and friendly. Much of Lily's childcare has always fallen to me due to my wife's severe illnesses since Lily's birth. Organised groups were fun in themselves and also gave me good contact with other parents*" (Q-year)[7]

For some parents these sessions could become a lifeline to help them through some very difficult times:

"*Making friends as I suffered from postnatal depression*" (Q-post)

"*..that I am not the only one with dealing with sharing and tantrums*" (Q-post)

"*Sometimes I thought I was not good with my children*" (Q-post)

Emma, a young mother of two, found that by talking to other parents she added to her toolkit of strategies in managing her children's behaviour:

"*...for me speaking to other adults has helped me as well because I have learnt like different ways to manage their behaviour and stuff, and obviously at that age like to put rules down and I learnt and feel more confident.*" (I-post)[8]

An analysis of the data suggests that without groups where they can get together to share experiences and ideas, many parents could feel isolated, as if they are the only one who is experiencing these difficulties.

Jacob home tutors his sons and looks after the main household chores. He shared that if it was not for attending the children's centre he "*wouldn't see anybody during the day*". Jacob went on to say that the *PEEP* group was a "*calmer group, there's more opportunity to talk to each other*" and for Jacob this was one of the key themes that developed from his interview, being able to share and talk to other parents.

For Adelajda she found talking to other parents especially valuable; having come from Eastern Europe she did not have any family nearby so turned to these sessions to extend her knowledge around child development and also the English school system. As a primary school teacher I have found parents who have moved to England often find our school system very different from that in their own countries and their own childhood experience; unless a relationship between the parent and educational setting is developed this can be overlooked.

Having the right environment to share information with other parents was a recurring theme across all three parenting programmes. The data suggest one of the most important benefits of attending a parenting programme is the meeting, sharing, talking and learning from other parents. Seven out of the eight parents' data had this as a developing theme, despite there being no questions specifically asking whether parental interaction was an important aspect of the parenting programme. The one exception was Ava, a grandmother who attended the programme with her daughter Olivia; although this theme did not develop from the analysis of Ava's interview, she did however comment that she would have welcomed the opportunity to have attended a parenting programme when her own children were young.

From the interviews and questionnaires, we can conclude that parents value parenting programmes as an opportunity for them to meet and share information with other parents at least as much as they appreciate them for their intrinsic educational value. For some parents, particularly those with pre-school children, it might be the only opportunity they get to interact with other parents and indeed get out of the house. For *The Incredible Years* and *Triple-P* programme, parents usually attend because they have concerns around their child's behaviour; by the end they have developed a toolkit of strategies to support them. For *PEEP* parents the suggestion is it is more about going to a toddler group to meet other parents, play with their child and for their child to socialise. However from talking to parents and analysing the data it seems that they come away with much more; they have learnt about child development, the importance of sharing stories and rhymes, healthy eating and a myriad of other topics that are covered in the programme.

A second key theme that developed from the parents' interviews was how some of the parents considered that whole family involvement was an important element in ensuring the success of parenting programmes; this was particularly evident in the responses from parents attending *The Incredible Years* and *Triple-P* programmes. Although there was no explicit question asking whether the parents felt it important or necessary that there was whole family involvement in the parenting programme, three out of the eight parents spontaneously referred to this topic, commenting on the importance of both parents being engaged in the programme. Isabella, a mother of teenage boys who attended a *Triple-P* Teens programme, felt particularly strongly that it would be beneficial:

"*This is where I think you need something where you do as a family*" (I-post)

One benefit she considered of involving the whole family was:

"*…you know if different members of the family are not remembering the right strategy someone else can say 'mum go away and sit down'*." (I-post)

[7]Q-year refers to the one-year-on questionnaires
[8]I-post refers to the post-programme interviews

Isabella identifies here one important aspect of family involvement; that is the recognition that sometimes you can forget to use the strategies and may need the occasional prompt. This was something that Emily, who attended the *Triple-P* Primary programme, also brought up at her one-year-on interview:

"*When I forget it's more chaotic because they haven't got any expectations of what they they're supposed to be doing when you go somewhere.*" (I-year)

Strategies which Emily had previously found to be effective, but had not used for several months, were now forgotten. Had her partner attended then maybe these would not be lost.

Olivia, a mother of four who attended *The Incredible Years* parenting programme, also commented that:

"*It would be beneficial for partners [to attend the programme]*" (I-post)

Emily, a mother of two young sons suggested at her post-programme interview that:

"*I think it's helpful if you both to go 'cause it's harder for one parent to tell the other parent what to do*" (I-post)

Emily went on to share that she had a very different parenting style to her partner, however for her it would always be her partner's position that would be enforced.

Different styles of parenting could become a contentious issue and put further pressures on a family who may already be experiencing difficulties, as parents disagree or even argue in front of the children, displaying a fractured unit – one that the children could play upon. The lack of family consistency was certainly a contentious issue for Isabella and one which she thought the course could help address:

"*Um I realise now when he starting to get tired, that's a flash, that's a real anger flash point when he's starting to get tired. So because he had a very sporty day yesterday, I tried to get him to bed early; I say early I mean eight o'clock. And at quarter to nine I'm telling his dad off because they've been up there playing games*" (I-post)

Olivia's husband, at the time of this interview, was working with the trainer on a one-to-one basis on the strategies taught on *The Incredible Years* programme. For Olivia this:

"*...was absolutely brilliant, 'cause all these changes were happening and I felt I was equipped but he wasn't, and it's a very difficult time to tell your husband ... it can be a bit condescending*"(I-post)

An interesting aspect of this theme is that it developed from the analysis of interviews where the parents had attended the *Triple-P* or *The Incredible Years* parenting programme. It is often the case that parents who attend these programmes do so as they have concerns around their child's behaviour and feel that it would be helpful if all family members are working together to address this. Conversely *PEEP* parents did not mention during their interviews that they considered it important that the whole family took part in the programme. This could be attributed to the parents not considering *PEEP* to be a parenting programme; several parents wrote on their questionnaire that they did not realise it was a parenting programme.

4. Discussion and Conclusion

A key finding from this research is how parents valued the role of the trainers in **creating the right environment**, where they could share their parenting experiences and support each other within the structure of a parenting group. Importantly, although the perspectives and experiences of other parents were viewed as a critical element of the programme, this was not found to diminish the role of the parenting programme trainer. Seven out of the eight parents interviewed recognised the role of the trainer in setting the scene and supporting them through challenging times in addition to providing general parenting advice and information. The parents spoke positively of their experience of attending a parenting programme and considered that they worked in partnership with the trainers rather than being explicitly instructed and directed. I would like to emphasise this point because it suggests trainers are not adopting the role of an expert, as in Cunningham and Davis' *Expert* model, but rather are working together with parents as in their *Transplant* model (Cunningham and Davis, 1985). This is important because it suggests that parents are being empowered by the approaches to learning being adopted by the trainers, rather than disempowered by being made to feel inadequate as suggested could be the case (Cottam and Espie, 2014). This also indicates that the concerns raised by Crozier (1998), whereby trainers view themselves as the expert and have a deficit view of the parents, may have been successfully overcome – at least on the programmes which formed part of my research. Consequently, as a result of adopting this *Transplant* model, trainers reported that parents are leaving the course with increased confidence, not only in parenting but also in other aspects of their lives.

From both the literature review and my own professional experience, it was expected that certain themes would probably develop from the analysis of the questionnaire and interview data as they had been the focus of previous research: themes such as an improvement in children's behaviour (Barlow and

Parsons, 2005; Hutchings et al., 2007; Furlong et al., 2012) or parents adopting positive parenting strategies (Coren and Barlow, 2009; Lindsay and Cullen, 2011; Furlong et al., 2012). However what was interesting from the interviews with *Triple-P* and *The Incredible Years* parents was the emphasis that they placed on **whole family involvement** in the programme. This is important because it is about providing continuity and consistency in parenting and reducing family conflict, and was identified by the parents as being more likely to take place if both parents adopted the same positive parenting strategies. For one parent to be perceived as the expert, telling the other how they should be parenting, could place a strain on their relationship or possibly make the other parent feel disempowered. It seems the concerns raised in the literature review around Cunningham and Davis (1985) *Expert* model could apply more to the inter-parent relationship rather than the parent-trainer relationship.

In conclusion, given the right learning environment, parenting programmes can offer a successful route to increasing parental knowledge on child development as well as introducing strategies and techniques to support and promote the child's behaviour, development and education. This increase in parental knowledge and subsequent change in parental behaviour often results in a more harmonious home atmosphere, an improved parent-child relationship and a more supportive home learning environment.

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PUTTING THE PAST IN ITS PLACE: AN ALTERNATIVE TYPE OF ASSESSMENT FOR MEASURING SELF-AWARENESS IN COUNSELLING STUDENTS

Suzie Savvidou & Petros Kefalas
The University of Sheffield International Faculty, City College (Greece)

Abstract

Assessment in higher education is constantly motivating new research. Testing is supplemented and often being replaced by assessment in alternative forms, which are based on real-life situations as well as self-reflection. Within the field of counselling, self-reflection needs to start with the trainees' self-identity, an essential part of which is influenced by their past experiences. Past experiences have a major impact on thinking (e.g. optimistic explanatory style, personalizing failures) and feeling (e.g. hopeless, resilient, etc) patterns, which in turn affect the trainees' personal and professional development. In this paper, we present a reflective learning and assessment procedure through a project completed in our postgraduate programme in counselling. The project is completed within a Personal & Professional Development module. The module consists of a theoretical part where the main principles of personality development are presented and a practical part where trainees form triads in which they perform reflective activities aiming to 'putting the past in place' by exploring past experiences that have shaped their real selves. Analysis of assessment indicated several main themes that are rooted in early experiences and potentially affect the feeling and thinking patterns adopted by trainees; such as, the tendency to feel guilty when not behaving upon others' expectations, liking or disliking female figures at work depending on family settings, developing "faulty" ideas about an "ideal parent", stress regulating exchanges of perceptions among fellow trainees and changing negative and stressful views of past experiences into more positive and functional ones through this learning process.

Keywords: *Higher education, assessment, reflective practice.*

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1. Introduction

Assessment in Higher Education (HE) It is now almost two decades that the relationship between learning and assessment is being re-evaluated, due to the growing demand for lifelong learning and reflective practice. As an effect, the development of several types of assessment has been triggered, many of which focus on the use of self. There are several benefits arising through this development, such as development of cognitive competencies (e.g. critical thinking, improved oral and written expression), social competencies (e.g. leading discussions, persuading and co-operating), affective dispositions (e.g. perseverance, flexibility, coping with frustrating situations) (Dochy, Segers, & Sluijsmans, 1999). For several years, HE aimed at producing learners within a narrow specific domain. However, the increasing acquisition of new knowledge and also the use of new communication technologies have demanded case-based and problem-based learning, stressing the importance of authentic learning, i.e. learning in real-life situations (Birenbaum, 1996; in Dochy et al). Student progress is monitored far better by assessing a variety of real-life tasks. For the purposes of the present paper, we focus on students' *reflective skills*.

Reflection as means of learning The main goal in HE is to create graduates that can potentially be reflective practitioners who are able to reflect upon their own practice (Dochy et al., 1999). Without reflective thinking, practice itself is not adequate to develop students' competence just as "being in a healthcare environment does not guarantee learning" (Levett-Jones, 2007).

Meanwhile, there has also been an increasing focus on developing more transparent learning, teaching and assessment (LTA) strategies, especially in the UK. Relevant evidence coming from the UK Quality Assurance Agency suggests that assessment is often a weak dimension of education, lacking clarity and consistency of design and practice (Hargreaves, 2004). The HE Funding Council for England recommends development of LTA strategies through funded activities, specifically related to assessment.

Such activities are supported also outside the UK too, through funded projects on innovative methods of LTA, with the emphasis placed on curricula designs focusing on skills acquired via experiential learning. These developments have pictured a paradigm shift from a teaching-focused to a learning-focused discipline, within which students become more aware of their need to reflect on their own learning, as well as the wider difficulties associated with the assessment of their learning. The literature reveals a major debate on the definition, the issues, the methods, the applications and the assessment of reflective practice. There is so much variation in what reflective practice means (e.g. action research, professional development, teacher empowerment, etc), that usually students find it hard to develop reflective skills, particularly when they are let alone to decide what to include in their reflections. Schon (1983) had suggested that practitioners usually know more than they could say. He had highlighted the growing skepticism about professional effectiveness and also a relevant skepticism on the professionals' ability to contribute to the society's well-being by providing competent services based on special knowledge. It is exactly this skepticism that has triggered the relevant interest and the associated research in the reflective practice area. Despite the lack in providing particular solutions to assessing reflective practice reliably, related research has greatly influenced the development of reflective practice in professional education (Hargreaves, 2004).

Reflective practice is now considered as a universally essential ingredient of professional development. It has become so necessary for a practitioner's professional development that in some disciplines it is a prerequisite for registration in the profession (e.g. health-related professions). The first time that reflective practice was brought up as linked with a practitioner's competence was many decades ago when Dewey (1933; in Levett-Jones, 2007) claimed that clinical experience cannot lead to learning if it is not accompanied by a particular kind of thinking, which he named *"reflective thinking"*.

Models of reflective practice There is a number of practices reported but within the purposes of the present paper, we will refer only to *'reflection-in-action*' and '*reflection-on-action*' and the *'reflection, development and empowerment*' models (Morrisson, 1996). In these models, the reflective practitioner understands and interprets meanings, intentions and actions by keeping the theoretical issues of practice and personal development as a point of reference. Unlike the reflection-in-action model, the reflection-on-action approach takes place once the event or the situation has occurred and not simultaneously. Although there are some advantages of the reflection-on-action model over the reflection-in-action, regarding the cognitive gain that the practitioner acquires, it is only the reflection, development and empowerment model that offers the space for changes, based on the reflection done. It has been suggested as more powerful than others in helping practitioners reshape their distorted views of their lives. Some of the first proponents (e.g. Habermas, 1974; in Morrison, 1996) of this model have used the Freudian approach to support their claims about its power, not only in an educational but also within a therapeutic context: a "patient" can engage in self-reflection with emancipatory power, as the model makes them bring the repressive forces causing dysfunctional distortions to a conscious level. This process makes the 'patient' regain the control over their lives.

There are two distinct elements that need to be apparent in a HE programme: experiential learning and reflective practice (Bourner, 2003). In the next section, we describe the context within our postgraduate students of counselling are encouraged to engage in experiential learning based on a 'reflection, development and empowerment' model within their curriculum. We present the context within which students engage in experiential work in which they explore past experiences from different developmental stages and the effect they had on their character, and the assessed work they produce at the end of the semester being asked to provide evidence of how they became aware of their personality aspects that will be influential in their future work.

2. Background

There is a well known dilemma in counselling regarding whether an efficient counsellor or born or trained. This dilemma has raised questions on the programmes curricula, entry requirements, interview tactics and several other factors that are critical in designing and running a counselling programme. We have addressed these questions in the way we have integrated TLA procedures in our counselling programme (Savvidou, Kefalas & Gassi, 2016). Within the context of this programme, trainees need to undertake the 'Personal & Professional Development' module, in the autumn semester. The module is assessed by a 'Putting the Past in Place' project (90%) and willingness to participate in class activities (10%). This module introduces the main issues and theory regarding personality development, focusing on: (a) how our earlier experiences can make us develop the capacity to aid or hinder our further development and to provide the basis of how we perceive ourselves (Cross & Papadopoulos, 2001), and (b) examples of how aspects of personality can affect the practitioners' functionality in both their personal and professional level. The project is divided in three stages as shown in Table 1.

During the 'Putting the Past in Place' activity, students are advised to think about the three experiences they are going to share with their triad members, that: (a) they feel they were significant enough to have shaped strong or weak aspects of their character as individuals, and (b) they identify aspects of their professional development that are potentially going to be affected by these experiences. Normally they need to choose from the three developmental stages: childhood, adolescence and adulthood. Trainees need to complete four tasks for the final paper which is going to be assessed:

1. identify the three experiences and the way they affected their development;
2. consider whether these had any effects on other members of their family or close environment;
3. compare their perception of the event to the perceptions of their triad members and identify similarities and difference in coping; and
4. describe the influence that these experiences had on their explanatory style.

Table 1. Three phases of the 'Putting the Past in Place' project.

Stage 1	*Confidentiality Contract and the Formation of Triads*	Trainees are given the description of the activity and the background information in week 1. They have also to sign a confidentiality contract for all the activities throughout the semester. They are also required to submit a "Triad Formation Statement", in which they name another two fellow trainees with whom they form triads to run the relevant activity.
Stage 2	*Preliminary Activities*	There are several small interactive activities incorporated in the first half of the semester, where students have the opportunity to decide on either remaining in their initial triad, or change triad if they feel they would be more comfortable disclosing personal material with other trainees of their cohort. The handout of the main activity is uploaded on the VLE, where students can find the instructions and the criteria by which their final paper will be assessed.
Stage 3	*Putting the Past in Place*	Students have to run the main 'Putting the Past in Place' activity a few weeks before the submission of their reflective paper.

Assessment of the final paper is based on how well trainees demonstrate understanding of their past experience and their ability to make critical evaluations of it, as well as their ability to reflect on the emotional, cognitive and behavioural material and its relation to their relating patterns both at personal and professional level.

3. Outcomes and Discussion

Fifteen reflective journals were initially screened, from which five were selected for the present study. Selection was based on the trainees covering all age ranges (23-46) and the whole range of academic origins within the programme (psychology or non-psychology degree background), as well as the quantity and quality of development, verified through the internal double marking process and the external examiner. A grounded theory approach was used to analyse the data collected from this activity. The aim was to gain a better understanding of students' reflection on their past experiences and to also explore the themes that arise regarding their self-awareness and its influence on students' current and future personal and professional aspects. The approach was used in a way that could present different perspectives (personal and professional) arising from reflection on thoughts, feelings and behaviours rooted in those past experiences and their effect on the trainees' perceptual and explanatory style.

Table 2. Personal and Professional Development core and sub-themes.

Core Category Themes	***Developing Self-Awareness***			
Personal Development	Self-disclosure difficulties	Explaining current self, based on past experiences	Identifying dysfunctional traits	
Professional Development	Parental patterns affecting work related patterns	Sharing with colleagues facilitates emotion regulation	Sharing with colleagues changes perception of self positively	Considering a career change after this course

Although there have been studies focusing on the assessment of students professional development (Hensley, Smith & Thompson, 2003) and reflective learning (Henderson & Johnson, 2002) through their clinical practice, assessment of combining both personal and professional development issues and reflective learning have not explicitly been the focus of research within the theoretical part of a counselling programme. We aim to provide some indications of what themes emerge within such context, before trainees start exercising their practice. Table 2 displays how core concepts and sub-themes emerged from the data.

3.1. Personal Development

Self-disclosure difficulties The willingness to disclose personal issues was not described as apparent through the different stages of this learning experience. But the development of trust which was referred to, was explained as the result of the exchange of thoughts and feelings on each trainee's past events and the acknowledgment of different perspectives from which it could be seen.

Explaining current self Several aspects of the trainees' current self were explained as the result of the past experiences they shared with their fellow trainees. Here are some examples: being the first born child in the family was seen as the reason why they developed a sense of responsibility over younger siblings. Having been raised in a female dominated family created gender related self-confidence. Having parents using them as a way to get revenge for their own relationship problems, created feelings of "being small and helpless". Being "forced" to make life choices that were in a way an expansion of parents unmet desires or having one or both parents making the person develop a feeling of being unable to have control over their life or created a tendency of feeling guilty when meeting own desires.

Identifying dysfunctional traits A major concept as it appeared attributed to past experiences was the tendency to feel guilty every time own needs were put first, which participants identified as a "weak" aspect realised through this experience, which needs also to be worked on in the future. Although this guilt was not always attributed to positive situations, it appeared as an explicitly dysfunctional pattern acquired through past events.

3.2. Professional Development

Parental patterns affecting work related patterns A repeatedly brought up realisation was that different parental behaviours causing stress in childhood triggered liking or disliking patterns at work related contexts. A dominating mother, for instance, created the tendency to like better female figures at work and a distrustful father triggered suspicious patterns for male employers. A judgmental father was perceived as the cause of lacking self-confidence as an employee, although this was later transformed into the ability to receive criticism better than others. Workaholic fathers were seen as having cause a "faulty" idea of what an ideal father is like.

Sharing with colleagues facilitates emotion regulation All participants described some relief arising through the exchange of thoughts and feelings with the other triad members. This was seen as an indication that in order to adopt a healthier explanatory style, negative thoughts and feelings need to be challenged through sharing them with other colleagues and not with anyone outside the particular context who not necessarily be able to present a more positive explanation of the event or situation. It was also referred to as a mechanism for developing a more positive view of own self, not only at personal, but also at a professional level.

Considering a career change after this course The psychological effect of having been involved in the whole procedure exchanging interpretations and feelings about the past experiences, triggered the need to consider a career change. This is apparent in cases where the programme was seen as an additional qualification which would enrich the trainee's background and not necessarily as a tool for developing skills that would be exercised in the counselling profession path.

3.3. Discussion

Developing self-awareness admittedly is a challenging task. In applied fields, traditional ways of learning can make the students aware of the issues that relate to it. However, they cannot be adequate for helping them develop the level of self-awareness that is necessary for a complete picture of strengths and weaknesses at personal and professional level. Although practice in general is encouraged in applied fields within an academic programme of study, assessment of its quality cannot guarantee that the trainee actually developed the profession related skills. Reflection usually is not incorporated in the assessment part of a learning experience, particularly when it is about the psychological effect of past experiences on the future counsellor's practice.

We use the reflective practice to assess trainees' self-awareness in relation to aspects of their personality that are attributed to past experiences and to help them realise and deal with the psychological effect of these experiences from a positive perspective. For instance, a trainee knowing what the effect is

of having been raised with particular parental patterns, will be more likely to empathise much better with a client having developed under similar circumstances. Using assessment procedures to identify such skills, facilitates a more accurate estimation of how well-prepared the trainee is for the practical part of the course (e.g. clinical placement) and how reflective practice can be used on an ongoing basis to identify the needs for future personal and professional development. The material used for this paper comes from a selected sample of a particular cohort of students who developed very positive group dynamics within their programme of study and that may pose some limitations. However, future work could draw conclusions on a wider sample of trainees originated from several cohorts with different levels of group dynamics between them.

4. Conclusions

Our approach aims to demonstrate that reflective practice on experiential activities can help a trainee identify strong and weak aspects of themselves that would have a great impact on their future work as professionals. It also helps students make better use of the explanations they give on their past experiences. It can point to the dysfunctional thinking and feeling patterns that affect the way trainees interact as persons and as professionals. Reflecting on past experiences and producing a written output that is assessed, is a more balanced way of developing self-awareness skills in the particular discipline. We believe that assessment of reflective practice can be used in other disciplines too and can help educators prepare efficient practitioners with an accurate estimation of their capabilities. The material used in this paper can be the basis upon which future work will demonstrate whether similar outcomes can be produced from larger samples of such reflective learning activities with deeper analyses of functional and dysfunctional patterns identified through such activities.

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THE PREDICTIVE VALUE OF PERSONAL CONTROL EXPECTANCIES ON THE SCIENTIFIC INTERESTS OF SECONDARY SCHOOL STUDENTS

José Tomás da Silva, Maria Paula Paixão, Teresa Sousa Machado, & Maria Isabel Festas
Faculty of Psychology and Educational Sciences, University of Coimbra (Portugal)

Abstract

In this study we analyze the incremental predictive ability of core variables of the socio-cognitive career theory (SCCT), namely, self-efficacy and outcome expectancies, in the level of scientific interest of secondary school students. More specifically, we aim to gauge the predictive role of specific categories of personal control beliefs (e.g., self-efficacy and outcome beliefs concerning Realistic and Investigative Types), after controlling for the effect of gender and prior school performance (e.g., math grades) on the interest in studying subjects of different scientific domains (e.g., biology, chemistry, mathematics). By means of a quantitative-descriptive research design, we proceeded to a study by questionnaire on a sample of secondary school students of both sexes *(*n = 201, or 46%, boys and n = 239, or 54% girls). Multiple hierarchical linear regressions revealed that sex is a statistically significant predictor of interest in two scientific clusters (Life and Earth Sciences and Hard Sciences). Both personal control cognitive variables emerged as salient predictors in the life and earth sciences cluster (R^2 = .28, p < .001). In the prediction of interest in the hard sciences only Investigative self-efficacy showed to be a significant predictor, after controlling for the background variables (R^2 = .15, p < .001). The results have relevant implications for the understanding of career choices of students in the scientific domains and also for the development of career interventions to foster student's interest for scientific courses and occupations.

Keywords: *Career self-efficacy, outcome expectations, scientific interests, high school students.*

1. Introduction

There is great concern among school officials, politicians, and behavioral and social scientists that students today show less interested than desirable in educational fields in science, technology, engineering and mathematics (e.g., STEM fields). This is unfortunate because occupational projections for STEM fields are very good for the following years. Several schoolers tried to address the reasons for the mismatch concerning supply and demand, one particularly heuristic program is led by socio-cognitive theory, in general, and socio-cognitive career theory, in particular (Lent, Brown, & Hackett, 1994).

Socio-cognitive theory, as explained by Bandura (e.g., 1986), comprises a series of core general propositions, or assumptions, about human psychosocial functioning. Briefly, they can be listed, in accordance with Lent and Maddux (1997), by the following six points: 1) individuals have the capability to symbolize reality (both internal and external) and that ability can be used for various learning purposes, both direct and indirect (e.g., vicarious learning) and also for self-directed learning (e.g., self-refection); 2) human behavior is for the most part purposeful and goal-directed, thus it is usually planned and deliberated; 3) individuals are capable of self-regulation via the exercising of direct control on they own behavior and/or by selecting and modifying the contexts in which they live or operate. In fact, person's usually adopt their own behavioral standards, and thus create their own incentives and (self-)rewards to guide and motivate themselves; 4) behavior is multi-determined, thus it is naïve to base its explanation on a sole set of factors; 5) socio-cognitive approaches usually stress the role that socialization practices, namely those concerning gender roles and other socio-cultural influences, have on behavior; 6) behavioral modification procedures (e.g., psychotherapy and other types of psychological interventions) are basically exemplars of social situations.

Socio-cognitive theory, since its inception in the early eighties of the past century, has received extensive attention from both behavioral scientists and practitioners (e.g., Bandura, 1986, 1997; Maddux, 1995). Its major constructs (e.g., personal control expectancies, goals, contextual affordances) have been successfully applied to various contexts of adaptive human functioning and the theory proved to be quite heuristic and resourceful for understanding and explaining human behavior in the changing environments of the twenty-first century (Bandura, 1995).

The Socio-Cognitive Career Theory (SCCT), developed in early nineties (e.g., Lent et al., 1994), blended Bandura's socio-cognitive major theoretical tenets with various concepts derived from established career models (e.g., those developed notably by Holland, Krumboltz, and Super) and is usually viewed as the major theoretical promoter of the socio-cognitive concepts in the career realm. Socio-Cognitive Career Theory is basically a family of (micro)models, concerning the development of vocational interests (Lent et al., 1994)), career choice (e.g., Lent, Paixão, Silva & Leitão, 2010), academic and work performance (e.g., Brown, Tramayne, Hoxha, Telander, Fan, & Lent, 2008), and academic and career satisfaction (e.g., Lent & Brown, 2006). Perceptions of self-efficacy, outcome expectations, goals and contextual supports and barriers are common constructs of all the above mentioned four models.

The construct of self-efficacy, particularly, "has been shown to be a very useful concept for assessing and facilitating the career development process across the life span" (Gainor, 2006, p. 161), but the other major socio-cognitive constructs also fared well in the career development domain (e.g., Betz, 2007; Lent, Brown, & Hackett, 1994; Sheu & Bordon, 2016). Self-efficacy, generally, has been defined as beliefs about personal capabilities, whether outcome expectations are viewed as beliefs about the consequences of actions (Bandura, 1997; Lent & Brown, 2016). In the SCCT choice model both personal control expectancies are impacted by learning experiences and they jointly influence (both direct and indirectly) interests, choice goals, choice actions, and, finally, performance domains and attainments (Lent et al., 1994). Other personal inputs (e.g., predispositions, gender, race/ethnicity), and contextual factors (both distal and proximal to the choice behavior) are also hypothesized as having direct and/or indirect effects on the postulated psychosocial processes chain.

The empirical relations among the agentic self-referent processes (especially self-efficacy), interests and choice are well established in the literature (Lent & Brown, 2016). There are few doubts, as Lent and Brown (2016) said, that individual´s "are likely to make educational and occupational choices that are consistent with their interests, self-efficacy, and outcome expectations, particularly if their preferred options are accompanied by favorable environmental conditions (e.g., adequate supports, minimal barriers)" (p. 541).

In this research vocational interest is defined, in accordance with Lent et al. (1994) as "patterns of likes, dislikes and indifferences regarding career-relevant activities and occupations" (p. 88). As usual, in this line of research, interests are organized separately by Holland themes (Holland, 1997), which group peoples and environments into six primary types: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C).

2. Design

A quantitative-descriptive design was considered more appropriate for our research goals, since we were particularly interested in describing the relationships among several constructs and its specific operational indicators/variables. Moreover there were no experimental manipulation of the variables neither random assignment of respondents to defined conditions.

3. Objectives

The general goal of the present study is to ascertain the incremental predictive ability of selected self-referent personal beliefs, namely realistic and investigative self-efficacy and outcome expectations in the level scientific interests of Portuguese secondary school students. More specifically, we aim to estimate the predictive role of the set of personal control variables, after controlling the effect of gender and prior school performance (e.g., math grades) on the students interest in studying courses in scientific curricular domains (e.g., biology, chemistry, mathematics).

4. Methods

4.1. Participants and procedures

For this study a non-probabilistic sample was recruited from several secondary schools (enrolling pupils for 10^{th}, 11^{th} and 12^{th} grade) of the central region of Continental Portugal (covering the Districts of Aveiro, Castelo Branco, Coimbra and Viseu). A total sample of 440 students responded to the research survey. Of those participants 201 (46%) were males and 239 (54%) were females. The mean age, for the total sample, was 17.04 years (*SD* = 1.02 years). In terms of school grade, 233 (53%) students were enrolled in 11^{th} grade and the remaining 207 (47%) were in the 12^{th} grade. The students were thoroughly informed about the goals and time demands of the study and were also assured that the answers would be anonymous and confidential. They were told that they could drop out of the study at

any time if they wish so. All the students contacted agree to participate in the survey. The questionnaire was administrated by a full trained research assistant in regular classes, at time agreed with the teachers.

4.2. Instruments

The students started by filling-in some sociodemographic information (e.g., sex, age, school grade, school attended, and mathematics achievement in the 9th grade [5-point scale; higher scores convey higher school achievement]) on a brief questionnaire. The survey also contained several scales about various psychosocial constructs. For the present study only some constructs were used, namely those related to measuring self-efficacy, outcome expectations and scientific interests (for other results of the larger research project, see Leitão, Paixão & Silva, 2007).

Self-efficacy and expectancy outcomes for realistic (e.g., concerning mechanical, manual, and physical tasks) and investigative (e.g., concerning scientific and mathematical activities) Holland types were assessed by two 7-item scales, initially developed in USA by Gore (1996) and then used by Lent and collaborators in several studies (e.g., Lent et al, 2010; Lent, Brown, Nota, & Soresi, 2003). The items are occupational titles (e.g., Fireman, Biologist) to which the participants reply using a 10-point scale (e.g., 0 = No Confidence/Not Very Much; 9 = Complete Confidence/Very Much). Data reported by Lent et al. (2003) indicate that alpha coefficients for the 7-item self-efficacy and outcome expectations scales are usually above .8. In this study the Cronbach alphas were .89 (realistic self-efficacy), .90 (investigative self-efficacy), .90 (realistic outcome expectations), and .91 (investigative outcome expectations).

The students rated their scientific interest (1 = No interest; 5 = Much interest) concerning Physic scientific subjects taught in Portuguese secondary courses (e.g., Statistics, Chemistry, Physics, Mathematics). An exploratory factor analysis with principal axis factoring and followed by a *varimax* rotation of the sample scores extracted three factors explaining 53% of the common variance. The interest factors were named life and earth sciences (Biology and Geology), hard sciences (Chemistry, Physics and Mathematics), and Technology (Informatics and Engineering). The item concerning Statistics loaded onto all factors and was excluded from further analysis. Subsequently, factor scores (via the regression method) were derived for each respondent on the above mentioned factors. Those scores were the criteria variables used in our regression models.

4.3. Results

Means and standard deviations on previous math achievement, Realistic (R) and Investigative (I) self-efficacy and outcome expectations and on the three scientific interest factors (standardized scores) are presented on Table 1.

Table 1. Means and Standard Deviations on the predictors and criteria variables.

	Mean	*SD*
Math Grade	3.82	0.85
Realistic self-efficacy	19.60	13.97
Investigative Self-efficacy	27.53	14.86
Realistic outcome expectation	16.81	13.99
Investigative outcome expectation	25.11	15.61
Life & Earh scientific interest	0.00	0.95
Hard sciences Interest	0.00	0.82
Technology interest	0.00	0.79

The pattern of correlations among the predictors (sex, math grade, R and I self-efficacy and outcome expectations are displayed on Table 2. Sex is statistically significantly correlated with all three scientific factor scores. Previous math school grade correlates significantly only with the factor 2 (scientific interest in hard sciences). Realistic self-efficacy and outcome expectations scores correlate statistically and significantly with factors 2 and 3, but not with factor 1, whether Investigative self-efficacy and outcome expectations show significant correlations with both factor 1 and 2, but not with factor 3. The effect sizes of the correlations are moderate-large for the Investigative Holland type, but small for the Realistic type.

Table 2. Pearson Correlations of the predictor's with the scientific interest factors.

	Scientific interest Factors		
	F 1	F 2	F 3
Sex	.27**	-.14**	-.31**
Math grade	.05	.22**	.06
Realistic self-efficacy	-.05	.15**	.19**
Investigative self-efficacy	.41**	.31**	.03
Realistic outcome expectation	.03	.16**	.15**
Investigative outcome expectation	.42**	.29**	.01

Note: Sex (1 = male, 2 = female); ** $p < .01$

The results of three Hierarchical Multiple Linear Regression (HMLR) models (one for each criteria variable) are presented in Table 3. All regression models were statistically significant ($p < .01$) and the amount of percent variance explained was 11%, 15% and 28%, respectively for interest in technology courses, hard sciences and life and earth sciences.

Table 3. Hierarchical Multiple Regression models predicting the student's interests in Life & Earth Sciences, Hard Sciences and Technology (N = 440).

	Life & Earth Sciences						Hard Sciences						Technology					
	Model 1			Model 2			Model 1			Model 2			Model 1			Model 2		
	B	*SE*(B)	β	*B*	*SE*(B)	β	*B*	*SE*(B)	β	*B*	*SE*(B)	β	*B*	*SE*(B)	β	*B*	*SE*(B)	β
Sex	.51**	.09	.29	.35 **	.09	.18	-.24**	.08	-.14	-.28**	.08	.17	-.51**	.07	-.32	-.46**	.08	-.28
Math grade	.05	.05	.04	-.05	.05	-.05	.22**	.04	.23	.17**	.04	.18	.07	.04	.08	.08	.04	.08
R Self-efficacy				-.02**	.01	-.22				-.00	.01	-.04				.01	.01	.08
I Self-efficacy				.02**	.01	.33				.01*	.01	.20				.00	.01	.02
R outcome expectancy				.00	.01	.05				.00	.01	.01				.00	.01	-.01
I outcome expectancy				.01**	.01	.20				.01	.00	.12				-.01	.00	-.03
R^2		.07			.28			.07			.15			.10			.11	
F change		17.4**			30.7**			16.4**			11.1**			25.5**			0.63	

The most salient and consistent predictor across the three models was participants sex. Student's achievement in mathematics (assessed in 9th grade) only contributed for the prediction of interest in hard sciences courses. Self-efficacy beliefs (realistic and investigative) were statistically significant predictors of students measured interest in Life/Earth sciences school subjects and both percepts incrementally contributed for the total variance explained on this component. Investigative self-efficacy was the most salient predictor, followed closely by realistic self-efficacy (negative relation) and investigative outcome expectations. Participant's sex (being female) also contributed significantly to the prediction of the measured criteria. Concerning the student's interest in Chemistry, Physics and Mathematics school subjects (hard sciences variate), investigative self-efficacy has the largest contribution (β = .20), closely followed by math grade (9th grade GPA) and sex (males have higher interest score than females). Self-efficacy contributed incrementally to the amount of variance explained, even after controlling for sex and math previous achievement. Finally, to the prediction of student's interest in informatics and engineering (technology variate) only participant's sex (males revealing higher interest scores than females in technology school subjects) achieved statistical significance.

5. Discussion

Recently many countries reports around the world expressed their concern about the declining state of STEM enrollments by students. There is some apprehension among education and labor decision-makers that in many places we are unable to replenish the pool of scientists, engineers, computer science specialists and mathematicians needed for fulfilling the demands of an increasingly technology driven industry and business world of work.

In this study we tried to learn if SCCT major hypothesis can be applied to this supply and demand mismatch. We reasoned that students less interest for STEM fields could be one important factor in the declining numbers of students choosing to study STEM subjects and that SCCT may provide an empirically valid and unifying account of vocational interest development and occupational choice processes (Brown & Lent, 1996). In accordance with the previous literature we have hypothesized that person attributes (e.g., self-efficacy and outcome expectations) would be particularly helpful for individual's to self-regulate their own educational and occupational behavior. More specifically, we tried to ascertain the incremental influence (after controlling for some background variables) of realistic and

investigative beliefs on the students interest in school subjects in three major educational fields, namely life/earth sciences, hard sciences and technology.

Generally, our results supported the study hypothesis relating to students interest in the life/earth and hard sciences. In the case of selection of technology school subjects our hypothesis wasn't confirmed. In respect of the former academic clusters, as predicted, self-efficacy and outcomes expectations explained additional variance in the level of student´s interest, after controlling for sex and previous math achievement, of 21% and 8%, respectively. Sex appears to be a salient predictor of interest, but its role is contingent upon the type of academic subject in consideration (females achieved mean higher interest scores than males in the Life/Earth sciences cluster, and the opposite was true for the Hard sciences and Technology clusters). Our results also showed that self-efficacy, comparatively to the outcome expectations, is the stronger predictor of interest, and moreover the investigative disposition has more influence on the individual's interest, than realistic Holland personality type. These results are consistent with the SCCT original hypothesis (e.g., Lent et al., 1994) and recent meta-analysis results (Sheu, Lent, Brown, Miller, Hennessy, & Duffy, 2010).

6. Conclusions

Self-referent variables (self-efficacy and outcome expectations) influence the type of academic preferences that student's make across the school curriculum. Since these cognitions can be changed by several methods (e.g., counseling, psychoeducation interventions: Brown & Lent, 1996), psychologists do have the means to help students who have the required abilities to succeed in STEM fields, but avoid that type of choices because of lack of confidence to acquire the needed level of self-efficacy (and outcome expectations) to confidently pursue training for academic disciplines in science and technology.

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PARENTS, PEERS, TEACHERS & SCHOOL: ATTACHMENT'S FIGURES ALONG DEVELOPMENT: THE PIML QUESTIONNAIRE

Teresa Sousa Machado, Carolina Neves, José Tomás da Silva, & José Pacheco Miguel

Faculty of Psychology and Educational Sciences, University of Coimbra (Portugal)

Abstract

Since Bowlby's first studies, attachment theory has been updated in order to integrate new dynamics between significant caretakers that, throughout life span, become significant. The possibility to construct, and maintain, a secure attachment along development is a fundamental basis to develop a self-representation as worthy, to build adaptive ways to deal with problems and relationships, and to develop an idea of the world as a safe place to live. Over development, conceptions of *others* become more comprehensive, and secure children become increasingly able to regulate their own behaviors, and the attachment system is activated less frequently. Insecure children, on the other hand, came to view the world as unpredictability and/or not trusty, and they tend to respond either by shrinking from it, or doing battle with it. This study provides first data from *People in My Life* (Ridenour, Greenberg, & Cook, 2006), translation and adaptation to Portuguese sample of pre-adolescents and adolescents; and analyses the relations between attachment to parents, peers, teachers, and school environment and quality of life. Attachment was assessed by Portuguese version of *People in My Life (PiML)* assessing attachment dimensions' as: a) communication, trust, alienation to parents/peers; b) affiliation and alienation to teachers; c) school affiliation/danger (Ridenour, Greenberg, & Cook, 2006). Quality of life was evaluated with two dimensions, "feelings" and "*self-perception*", from *Kidscreen* Portuguese version (total 11 items) (Gaspar, & Gaspar de Matos, 2011). A sample of 704 Portuguese students (35.4% from public, and 64.6% from private school), selected by probabilistic method of convenience was used: 375 (53.3%, girls), and 329 boys (46.7%), mean age = 12.6, *DP* = 1.52 (minimum age = 10; maximum =17). Data was analyzed separated for *pre-adolescents* (N=335; mean age = 12.6, *DP* = 1.52; minimum age =10; maximum=12); and *adolescents* (N=369; mean age =13.83; minimum age =13; maximum =17). Dimension "*feelings*" (6 items – explained 61.9% of variance, in the *pre*-adolescents sample), and "*self-perception*" dimension (5 items, 10.3% of variance explained *pre-adolescents sample*). Correlational studies analyzed relations between quality of attachment to parents/peers/teachers and school environment, reported by pre-adolescents/adolescents, and quality of life analyzed by two of the dimensions of *Kidscreen*.

Keywords: *Attachment, quality of life, PiML, Kidscreen, adolescents.*

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THE CHILDHOOD CAREER DEVELOPMENT SCALE (CCDS) – PSYCHOMETRIC PROPERTIES IN A SAMPLE OF PORTUGUESE PRE-ADOLESCENTS

José Tomás da Silva[1], Sofia Vieira[1], Teresa Sousa Machado[1], & Ludovina Almeida Ramos[2]
[1]*Faculdade de Psicologia e de Ciências da Educação, Universidade de Coimbra (Portugal)*
[2]*Departamento de Psicologia e Educação, Universidade da Beira Interior (Portugal)*

Abstract

Most studies in Vocational Psychology have mainly focused on adolescence although several authors highlighted that some career constructs emerge during childhood. However, effective knowledge of how children learn about the world of work and how they prepare for it is still scarce. This may be due, in part, to the lack of reliable and valid measuring instruments for this population. Thus, in order to assess child career development, Schultheiss and Stead developed the *Childhood Career Development Scale* (CCDS) [Schultheiss, D. & Stead, G. (2004). Childhood Career Development Scale: scale construction and psychometric properties. *Journal of Career Assessment, 12*, 113-134. doi: 10.1177/1069072703257751]. The CCDS is based on Super´s life-span theory according to which the career development progresses through 5 stages, each of them characterized by different vocational tasks: growth (0-14), exploration (15-24), establishment (25-44), maintenance (45-64, decline (after 65). The CCDS is a self-response scale with 52 items that assess eight of the nine original dimensions of Super's interactive model. Respondents use a 5-point Likert scale, ranging from "Strongly agree" to "Strongly disagree". In this work, we aimed to evaluate the psychometric properties of CCDS in a sample of 312 pre-adolescents from the central region of Portugal, aged from 10 to 13 years old (M = 11.41; SD = 1.107), of which 149 are male (48%) and 163 female (52%). In this study, item and scale analyses (central tendency, dispersion, and reliability) and the validity of the results (e.g., internal structure) via principal components analysis were carried out. The main objective of this work is to contribute to the vocational development literature, analyzed from a life-span perspective, and to enable the elaboration of intervention programs directed to younger children.

Keywords: *Career, development, CCDS, psychometric, properties.*

1. Introduction

Most studies in Vocational Psychology have mainly focused on adolescence although several authors highlighted that some career constructs emerge during childhood (Hartung, Porfeli & Vondracek, 2005; Porfeli, Hartung & Vondracek, 2008). However, effective knowledge of how children learn about the world of work and how they prepare for it is still scarce. This may be due, in part, to the lack of reliable and valid measuring instruments for this population (Schultheiss & Stead, 2004). Thus, in order to develop an instrument to assess child career development, Schultheiss and Stead developed the *Childhood Career Development Scale* (CCDS). The CCDS is based on Super´s Life-span theory (1957) according to which the career development progresses through five stages, each of them characterized by different vocational tasks: growth (0-14), exploration (15-24), establishment (25-44), maintenance (45-64, decline (after 65). Super and his colleagues centered their investigations mainly in the adolescence period and adulthood; however, in 1990 Super proposed an interactive model of vocational development specifically directed to the first stages of life. This model, due to its innovative heuristic background, consists in nine dimensions, mainly: curiosity (need to learn about the world); exploration (search of information about the *self* and the environment); information (recognition of the importance of acquiring and using occupational information); key-figures (models or people that influence the subjects development); interests (consciousness of the interests and skills where the person succeeds); locus of control (degree of perception about internal / external control over present and future); time perspective (awareness that past, present and future events contribute to a life plan); self-concept (representations of the self in different roles and life situations) and planning (recognition of the importance of planning) (Super, 1990; Wood & Kaszubowski, 2008). Theoretically, the success achieved by individuals in each of

these dimensions will be a good predictor of their future capacity for problem solving and decision making (Super, 1990). In order to test the validity of that model some operationalization of the hypothetical constructs is needed. That void was filled by the development of the CCDS.

The CCDS is a self-response scale that evaluates eight of the nine dimensions of the interactive Super's model (1990). Subjects respond using a 5-point Likert scale, ranging from "Strongly agree" to "Strongly disagree"; higher scores in which subscale indicate that the subject is more developed in this dimension. In the original study accomplished with South African children from 9 to 13 years old (Schultheiss & Stead, 2004), the instrument was composed by 48 items allocated in eight subscales: planning, self-concept, locus of control, curiosity, time perspective, information, key-figures and exploration. Concerning its psychometric properties, specifically in terms of reliability, all subscales had values higher than .70, except for exploration (.61) and information (.25). The CCDS version used in the USA with children aged from 9 to 11 years was reformulated and included more items (52 items, four new ones were added) and eight subscales, slightly different from the previous one: planning, self-concept, locus of control, curiosity/exploration, information, interests, key-figures and time perspective. In this version two of the preexistent subscales were merged into a single (curiosity/exploration) and a new subscale, named interests, emerged. When the authors examined the internal consistency of the scores, they obtained .84 for planning and self-concept; .72 for information; .68 for interests; .79 on the locus of control subscale; .66 for curiosity/exploration; .68 in the key-figures subscale and .69 for time perspective (Stead & Schultheiss, 2010).

Wood and Kaszubowski (2008) used the CCDS in an independent investigation and found significant sex effects on some subscales; boys tend to have lower scores than girls in the curiosity dimension.

The validation of the Portuguese version of the CCDS (Oliveira, 2012) was based on the North American version of 52 items. This study was carried out in the northern region of Portugal and used a sample of 704 participants from 9 to 14 years old. The results of this first study showed some similarities but also several differences relatively to the American study. One of the main similarities concerns the number of dimensions (eight) that was found in both studies. On the other hand, one of the main differences is that curiosity/exploration dimension originated two different subscales in the Portuguese sample (named, respectively, exploration with internal support and external support); another difference is related to the key figures dimension; This dimension was not extracted in the Portuguese sample, and it was found that the items constituting it saturated equally in the subscales temporal perspective, interests and curiosity / exploration with external reinforcement. Similar to the results obtained in some subscales of the North American version, the extraction of eight factors in the Portuguese study also gave low values of internal consistency for the scores on the dimensions of temporal perspective, interests and curiosity/exploration with external support.

The CCDS indisputably came to fill a major gap in the investigation of vocational development in childhood and adolescence (Porfelli et al., 2008); however, the studies that have been carried out until now have pointed some limitations concerning the scores' precision but also about the clarity of the internal structure of dimensions. This study aims to contribute to a deeper understanding of the properties of the instrument and, in particular, to test the generalization of the CCDS results in the central region of Portugal.

2. Method

Sample

The sample of this study included 312 pre-adolescents from schools in Coimbra, aged from 10 to 13 years (M = 11.41; SD =1.11), 149 male (48%) and 163 female (52%). On the first moment of assessment, the students were on the 5th (N = 109), 6th (N = 109) and 7th grade (N = 94) and the majority didn't have retentions on their school path. In relation to the educational qualifications of the parents, particularly the father, about 61% of the sample has higher qualifications than the middle school. In the case of the mother, 69% has qualifications equivalent to the 9th grade. It should be noted that these data are part of a more comprehensive transversal and longitudinal study within the PhD program.

Procedure and instruments

The process started with the notification of *The National Protection Data Base* about the processing of personal data and the authorization of the Ministry of Education for the survey in the school context, which was approved. After formal authorization from educational institutions, parents were asked to provide informed consent, authorizing the participation of their students in the investigation. In relation to the CCDS, we contacted the authors of the Portuguese version that provided the translated version of the instrument. The participants filled in a sociodemographic questionnaire in the classroom and the Portuguese version of the CCDS (Oliveira & Taveira, 2012).

3. Results

We obtained the descriptive statistics (e.g., mean, standard deviation, skewness and kurtosis) of the responses to each item of the instrument, the correlation (corrected) of each item with the total of its subscale and the reliability (internal consistency) for the scores of each subscale as well as for the total items. The analyses of the dimensionality of items responses was achieved through a principal components analysis (PCA) in the original data matrix followed by a Varimax rotation. The presentation of the results was, by convenience, organized by the results of the PCA.

Principal Component's analysis of item scores. The sample adequacy to perform the PCA was proved by the KMO index (.88) and the statistical significance of Bartlett's Sphericity test (χ^2 (1326) = 6889.7, $p < .001$). In order to decide the number of components to extract, we used several types of criteria (Pallant, 2005). After taking into account those criteria we decided to interpret the solution with eight components; those components explain about 52% of the total variance. Furthermore, this solution is similar to the one adopted by Schultheiss and Stead (2004) and also by the author of the Portuguese study (Oliveira, 2012). Next, we define the eight components its main psychometric characteristics.

Component I. This component integrates items 9, 10, 11, 12 and 13, all with loadings higher than .50, except for item 11. The items means vary from 3.69 (item 1 and 13) to 4.33 (item 11), with a total mean of 3.87. In terms of variability, scores are between 0.78 (item 11) and 1.19 (item 12), revealing a sufficient degree of the responses given. For skewness and kurtosis, only the item 11 moves away from the normal distribution. The items configure the subscale named *Information* in previous studies. In terms of reliability an alpha of .68 was obtained.

Component II. This component corresponds to the *curiosity/exploration with internal support* subscale; means oscillate from 2.99 (item 6) and 3.84 (item 3) with a total mean of 3.43. The variability ranges between .92 (item 3) and 1.16 (item 7) and, in terms of skewness and kurtosis, all items follow a normal distribution. It includes items 2, 3, 4, 5, 6, 7, 8, 12, 18 and 47. Items 3, 5, 6, 7 and 8 load above .50. The item 12 also loads on the component VII. Regarding the internal consistency, the alpha obtained was .72.

Component III. In this component, items 11, 14, 15, 16, 17, 26, 29 and 30 show loadings above .30, while items 14, 15 and 17 are above .50. The total mean is 4.55, ranging from 4.27 (item 16) to 4.68 (item 26). The items variability is adequate (.58 on the item 26 and .90 on the item 16). The skewness and kurtosis indicate the presence of some non-normality (for example, item 14 with -2.42 for skewness and 7.92 for kurtosis, among others). This subscale was named *Interests* and the reliability was .76.

Component IV. In this component loaded items 18, 19, 20, 21, 22, 23, 24 and 39, all with saturations greater than .50 except the latter. The item 18 has a loading on another component. Means range between 3.91 (item 20) and 4.14 (item 21). The variability of the responses is appropriate and, in terms of skewness and kurtosis, the results don't deviate significantly from the normal distribution. Only the item 21 appeared somewhat problematic with a value of kurtosis of 1.70. We named this dimension as the *Locus of control* subscale. The Cronbach alpha for the aggregate was .83.

Component V. In this component come into the items 25, 27, 28 and 29; the items 25 and 28 have loadings higher than .50. The items refer to the curiosity/exploration with external support. Means vary from 3.52 (item 2) and 4.00 (item 27), with a total mean of 3.69. The standard deviation values show an adequate level of variability. In what concerns skewness and kurtosis, only item 27 has a value of skewness considered problematic (-1.23). The alpha obtained was the lowest of all subscales ($\alpha = .53$).

Component VI. It consists of items 2, 5, 31, 33, 34, 42, 45, 51 and 52; the items 31, 33, 34, 51 and 52 have loadings above .50. Items 2 and 4 also correlate with the component V. The means range from 3.75 (item 28) to 4.29 (item 31), with a total of 4.79. In terms of variability we found no problems; for skewness and kurtosis only the item 31 has a value of kurtosis of 2.00. We called the component *temporal perspective* and obtained an alpha of .64, considered weak.

Component VII. It includes items 11, 22, 23, 24, 30, 32, 42, 43, 44, 45, 46, 47, 48, 49 and 50, with loadings equal or higher than .30; starting on the item 43 and for the remaining the loadings are higher than .50. Item 11 also correlates with the component VI and items 22, 23 and 24 also showed cross-loadings on the component III; item 30 also loaded on the component VI. Means range from 4.16 (item 46) to 4.51 (item 32), with a total of 4.33.Tthe variability is adequate and, concerning to skewness and kurtosis, we identified some problems. Items 32, 42, 43, 47 and 48 assume values on these statistics that does not represent a normal distribution. This subscale was named *planning* and its reliability is high ($\alpha = .86$).

Component VIII. The items that integrate this component are 16, 35, 36, 37, 38, 39, 40 and 41, all with structural coefficients higher than .50, except for item 16 (it also loads in component III). We obtained means between 4.33 (item 35) and 4.48 (item 37), with a total of 4.42. The variability is suitable and only the items 37 and 41 reveal problems on the kurtosis values (respectively 2.00 and 4.08). This is the subscale, of the whole spectrum, with the highest internal consistency value, with the alpha obtained of .89. The dimension was named *self-concept*.

4. Discussion and conclusions

The lack of theoretically valid instruments with robust psychometric characteristics that would adequately assess vocational development at earlier ages has long been a gap in Psychology. However, Schultheiss and Stead (2004) sought to create a scale that would assess the degree of vocational development of children between the 4th and 7th grades by adopting the eight dimensions of the interactive model of Super (1990). This scale has been applied and studied in many countries but the results were not always psychometrically acceptable. In this study we replicated and tested, in an independent sample of the one used in the initial study of instrument adaptation in Portugal (Oliveira, 2012), the generalization of the psychometric properties of the scores in terms of reliability (e.g., internal consistency) and structural validity.

Comparing both the results obtained in the original study (USA) and the ones obtained by the Portuguese researchers with the results of the present study, we realize that there are some similarities but also some discrepant data that should be pointed out. Concerning the similarities, we extracted an eight factor solution; however, with this structural solution, some items assumed a problematic behavior with cross-loadings on different components (something that Oliveira had already noticed in the first study carried out in Portugal). This signals some type of undesirable item complexity that detracts from good measurement. In general terms, there is some evidence pointing to the advantage of removal of the psychometrically inappropriate items (e.g., items that correlate with more than one component). This debugging may even go through the elimination of some constructs that appear consistently in the literature as diffuse and ill-defined. Oliveira's recent study (2016), supports this line of reasoning when she suggested a reduced internal structure for the CCDS, which contemplates only the dimensions of planning, locus of control and self-concept as being the best fit for different samples; in a next study, we will test this hypothesized solution.

After depurating the measure from the psychometric defects previously identified, the results of the CCDS can be suitably used as powerful indicators on the clinical practice of career intervention. In particular, they can be used by psychologists and other career professionals to implement career interventions target for the individual's least developed dimensions; these interventions and/or psychoeducational programs may be implemented by school psychologists (preferably) but can also benefit from the contribution of some other educational agents, such as teachers (via career education modalities). It would also be pertinent in future research to relate these results to other variables such as, for example, students' academic performance and other indicators of vocational behavior, particularly those associated with career decision-making competences.

Another important goal for future research is to understand how children/adolescents progress in the different dimensions evaluated by the CCDS throughout its life-long development; being for that essential the resource to longitudinal studies; a study within this research paradigm is also being done by the authors with adolescents from central region of Continental Portugal.

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GCRIS

DIFFERENT PERCEPTIONS OF THE TEACHING PROFESSION BY MALE AND FEMALE TEACHERS

Danijela S. Petrović
Department of Psychology, Faculty of Philosophy, University of Belgrade (Serbia)

Abstract

The aim of this study is to examine gender differences in the results obtained within the 2013 Teaching and Learning International Survey (TALIS 2013) on a sample of teachers from Serbia related to self-efficacy, job satisfaction, co-operative practices and professional development. In Serbia, the sample consisted of 3 857 teachers (ISCED 2) from 191 schools (65.8% female and 34.2% male teachers). A standardized TALIS questionnaire for teachers was used for data collection. The results show that female teachers perceive themselves as more efficient than male teachers in regard to efficacy in classroom management ($F(1)= 6.92$; $p <.01$), efficacy in instruction ($F(1)= 22.05$; $p <.001$), efficacy in student engagement ($F(1)= 4.01$; $p <.05$) and teacher self-efficacy ($F(1)= 10.91$; $p <.001$). In addition, women are more satisfied with the profession ($F(1)= 14.21$; $p <.001$) and job ($F(1)= 6.16$; $p <.01$), while satisfaction with the current work is at the same level as that of their male colleagues. Female teachers are more involved in teacher co-operation ($F(1)= 14.38$; $p <.001$) and exchange for teaching ($F(1)= 31.60$; $p <.001$), but there are no differences between male and female teachers regarding professional collaboration. Additionally, female teachers largely considered their professional development (PD) to be effective ($F(1)= 9.97$; $p <.01$) and also largely recognized the need for PD for teaching for diversity ($F(1)= 37.31$; $p <.001$), as well as for pedagogy of teaching a particular subject ($F(1)= 8.40$; $p <.01$). The obtained findings that female teachers are more satisfied with their job and profession, perceive themselves as more efficient and more co-operative, but at the same time are more willing to further develop professionally speak in favour of the view that the feminization of the teaching profession does not necessarily have negative consequences.

Keywords: *Teachers, effectiveness, job satisfaction, professional development, TALIS 2013.*

1. Introduction

TALIS 2013 is the second OECD Teaching and Learning International Survey, developed by the OECD, experts in the field of teaching, and the international research consortium (OECD, 2013). Having the concept of efficient teaching and learning (OECD, 2013), it examines teachers' working conditions as well as those in which learning takes place (OECD, 2009 and 2014b). Its main goal is to aid participating countries to review and define policies in order to develop a teaching profession of the highest quality. To this end, TALIS provides information from the perspective of practitioners in schools by collecting internationally comparable, valid and timely data. Additionally, it allows for cross-country analysis through which it enables countries to identify others facing similar challenges and to learn from other policy approaches (OECD, 2009 and 2014b).

The selection, development and retention of teachers in the teaching profession are the key factors that lead to higher student achievement in schools around the world (OECD 2011). Thus, on the one hand TALIS examines the teachers' beliefs and attitudes which they bring to the classroom, their pedagogical practices as well as their perceptions of how their professional development needs are being met (OECD, 2009 and 2014b). On the other hand, TALIS recognizes the importance of school leadership, thus it also examines the support school leaders give to teachers (OECD, 2009 and 2014b), as well as the ways in which which teachers' work is recognised, rewarded and appraised (OECD, 2009 and 2014b). Finally, TALIS aims to identify the extent of influence of certain factors to teachers' reports of job satisfaction and self-efficacy (OECD, 2009 and 2014b).

TALIS measures three aspects of teacher self-efficacy: classroom management, instruction and student engagement (OECD, 2014a). Similarly, TALIS measures two aspects of teacher job satisfaction: satisfaction with the profession and satisfaction with the current work environment (OECD, 2014a). Research shows that while teachers are generally satisfied with the aspects of their jobs that relate to their teaching work, such as work tasks and professional growth, they tend to be dissatisfied with other aspects

surrounding the performance of their job – for example, working conditions, interpersonal relations and salary (Crossman and Harris, 2006; Dinham and Scott, 1998). Additionally, women report lower levels of job satisfaction than men, especially regarding their working conditions (Liu & Ramsey, 2008). A number of studies also indicate that female teachers report higher levels of stress than male teachers (e.g., Antoniou, Polychroni and Vlachakis, 2006; Klassen and Chiu, 2010; Purvanova & Muros, 2010).

Co-operation among teachers is a tool for improvement of classroom teaching practice and school climate and it is a basis for successful educational reform (Daly, Moolenaar, Bolivar & Burke, 2010; DuFour, 2004; Murawski & Swanson, 2001). TALIS 2013 investigated co-operation among teachers as an important aspect of teachers' professionalism. TALIS 2013 used two indicators to measure co-operation among teachers: (1) exchange and co-ordination for teaching referring to practices such as exchange of teaching and learning materials, participation in team conferences, establishment of standard for student assessment, etc. and (2) professional collaboration including practices such as providing feedback after class observation, engagement in joint activities in the same classes or across classes, etc.

Studies conducted during the last two decades clearly show that the professional development of teachers is one of the key factors for the improvement of students' achievement and for the teachers' commitment to their work (e.g. Darling-Hammond, 1999; Hargreaves, 2002; Hattie, 2009; Johnson, Kraft & Papay, 2012). In literature different definitions of professional development can be found. TALIS 2013 used a broader conceptualization of teachers' professional development which includes various activities aiming to develop individual skills, knowledge, and expertise of teachers in order to improve their teaching practices (OECD, 2013). Special attention is paid on teachers' need for professional development in subject matter and pedagogy, as well as, teaching for diversity (OECD, 2014b).

Many countries are characterized by the presence of a significant number of female teachers in the education system. Serbia is also among the countries where women represent a significant majority of the teaching workforce, particularly in early childhood education and in primary levels of education (Radović, 2007). The so-called feminization of the teaching profession raises a number of questions, starting from the reasons that lead to the over-representation of women in the teaching profession in certain countries, to how this gender imbalance in the teaching workforce affects students, their learning and achievements (e.g. Carrington, Tymms, Merrell, 2008; Drudy, 2008; Skelton, 2002).

Additional insight into this issue can be obtained if we explore how female and male teachers perceive the education and the teaching profession.

2. Objectives

The aim of this study is to examine gender differences in the results obtained within the 2013 Teaching and Learning International Survey (TALIS 2013) on a sample of teachers from Serbia related to the self efficacy, job satisfaction, co-operative practices and professional development. Self-efficacy refers to the level of confidence teachers have in their abilities, while job satisfaction is the sense of fulfilment and gratification that teachers get from working (OECD, 2014b).

3. Methods

The TALIS 2013 survey methodology was developed by experts in the field of teaching, international research consortium and by the OECD (OECD, 2013). Separate questionnaires for teachers and school leaders, each requiring between 45 and 60 minutes to complete, were developed by international an expert group and used to gather the data (OECD, 2014a). TALIS 2013 questionnaires included the following research areas: characteristics of teachers and work environment, teachers' pedagogical practices, beliefs and self-efficiency, school leadership, job satisfaction, rewarding and feedback that teachers receive, opportunities for professional development, etc. (OECD, 2014b). TALIS 2013 questionnaires were completed on paper or online.

Teachers and school principals in mainstream public and private schools are the target population for TALIS surveys. TALIS began in 2008 in 24 countries, focusing on lower secondary education (OECD, 2009). TALIS 2013 covered 33 countries and economies, and beside lower secondary, some countries choose to survey primary schools (6 countries) and upper secondary schools (10 countries). Furthermore, 8 countries choose to survey schools that participated in PISA 2013 in order to establish a school-level link between the two studies (OECD, 2014a). In Serbia only teachers from higher grades of primary schools - ISCED Level 2 participated in TALIS 2013.

In the countries that participated in TALIS 2013, a representative sample of 200 schools and 20 teachers along with their school principals were selected for the study (OECD, 2014b). Around 106 000 lower secondary school teachers responded to the survey, representing more than 4 million teachers in 33 participating countries (OECD, 2014b). In Serbia, 3.857 teachers from 191 from primary schools (65.8% female and 34.2% male teachers) took part in TALIS 2013. Teachers in Serbia completed the questionnaires on paper.

3.1. Instruments

The self-efficacy scale was defined from three subscales (OECD, 2014a) – *Efficacy in classroom management* (e.g. 'Calm a student who is disruptive or noisy'), *Efficacy in instruction* (e.g. 'Provide an alternative explanation for example when students are confused'), and *Efficacy in student engagement* (e.g. 'Motivate students who show low interest in school work'). All three subscales were measured by four items. All items in the scales were measured on a four-point scale. Response categories were 1 for "not at all", 2 for "to some extent", 3 for "quite a bit", and 4 for "a lot" (OECD, 2014a). Cronbach's alpha for the Efficacy in classroom management, Efficacy in instruction, and Efficacy in student engagement scales for Serbia was .80; .72 and .78 respectively (OECD, 2014a).

The Teacher job satisfaction scale was formed from two subscales (OECD, 2014a) - Satisfaction *with current work environment* (e.g. 'I would recommend my school as a good place to work') and Satisfaction with profession (e.g. 'If I could decide again, I would still choose to work as a teacher'). The both subscales consist of four items. All items in the scales were measured on a four-point scale, for which the response categories were 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree" (OECD, 2014a). The scales' internal on the Serbian sample was .75 and .83 respectively.

The *Co-operation among teaching staff scale* was defined from two subscales (OECD, 2014a) - Exchange and coordination for teaching (e.g. "Exchange teaching materials with colleagues") and professional collaboration (e.g. "Observe other teachers' classes and provide feedback"). Responses were given on a 6-point scale with categories of 1 for "never", 2 for "once a year or less", 3 for "2-4 times a year", 4 for "5-10 times a year", 5 for "1-3 times a month" and 6 for "once a week or more" (OECD, 2014a). On the Serbian sample, reliability coefficient alpha for these scales was .76 and .65 respectively (OECD, 2014a).

The Effective professional development scale comprises four items aiming to measure the professional development activities (e.g. Collaborative learning activities or research with other teachers) teachers took part in during the last 12 months (OECD, 2014a). The items were administered on a four-point scale, with each item having response categories of 1 for "not, in any activities", 2 for "yes, in some activities", 3 for "yes, in most activities" and 4 for "yes, in all activities" (OECD, 2014a). Reliability coefficient alpha for the effective professional development scale for Serbia was .70 (OECD, 2014a).

The degree *of Need for professional development in subject matter and pedagogy* was measured by the scale with five items (e.g. "Knowledge and understanding of my subject field"; "Pedagogical competencies in teaching my subject field(s)"). This scale had four response categories: 1 for "no need at present", 2 for "low level of need", 3 for "moderate level of need" and 4 for "high level of need" (OECD, 2014a). Reliability coefficient alpha for this scale for Serbia was .85 (OECD, 2014a).

The scale for assessment *of Need for professional development for teaching for diversity contained* six items aiming to measure the degree to which teachers currently need professional development in for example, "Teaching in a multicultural or multilingual setting" or "Approaches to developing cross-occupational competencies for future work or future studies" (OECD, 2014a). All of the items had four response categories: 1 for "no need at present", 2 for "low level of need", 3 for "moderate level of need" and 4 for "high level of need" (OECD, 2014a). Reliability coefficient alpha for this scale was .80 (OECD, 2014a).

One-way analysis of variance (ANOVA-test in SPSS 23.0) was used to determine gender differences.

4. Results

The results show that female teachers perceive themselves as more efficient than male teachers in regard to three aspects of self-efficacy (efficacy in classroom management , efficacy in instruction, and efficacy in student engagement), as well as, teacher self-efficacy in general (Table 1).

Table 1. Gender differences in regard to self-efficacy.

		n	M	SD	df	F	p
Efficacy in Classroom Management	Female	2512	12.82	1.82	1	6.92	.01
	Male	1307	12.65	1.83			
Efficacy in Instruction	Female	2512	12.48	1.60	1	22.05	.001
	Male	1307	12.22	1.65			
Efficacy in Student Engagement	Female	2512	11.58	1.69	1	4.01	.05
	Male	1307	11.46	1.72			
Teacher Self-Efficacy	Female	2512	12.29	1.58	1	10.91	.001
	Male	1307	12.11	1.62			

As can be seen from Table 2, female teachers are more satisfied with their profession and job, while their satisfaction with current work is at the same level as that of their male colleagues.

Table 2. Gender differences in regard to job satisfaction.

		n	M	SD	df	F	p
Satisfaction with Current Work Environment	Female	2508	12.00	1.99	1	.82	.36
	Male	1310	11.94	2.01			
Satisfaction with Profession	Female	2508	12.19	2.00	1	14.21	.001
	Male	1310	11.93	2.04			
Teacher Job Satisfaction	Female	2508	12.09	1.89	1	6.16	.01
	Male	1310	11.93	1.92			

The results show (Table 3) that female teachers are more involved in teacher co-operation in general as well as in exchange and coordination of teaching (e.g. exchange of teaching and learning materials, participation in team conferences, etc.) but there is no difference between male and female teachers regarding professional collaboration (e.g. engagement in joint activities in the same classes or across classes, etc.).

Table 3. Gender differences in regard to co-operation among teachers.

		n	M	SD	df	F	p
Exchange and Coordination for Teaching	Female	2515	10.90	1.95	1	31.60	.001
	Male	1304	10.52	1.99			
Professional Collaboration	Female	2515	8.92	1.82	1	2.88	.09
	Male	1304	8.82	1.90			
Teacher Co-Operation	Female	2515	9.91	1.85	1	14.38	.001
	Male	1304	9.67	1.91			

However, female teachers considered to higher extent their professional development (PD) to be effective and also largely recognized the need for PD both for pedagogy of teaching a particular subject and for teaching for diversity (Table 4).

Table 4. Gender differences in regard to professional development.

		N	M	SD	df	F	p
Effective Professional Development	Female	1923	8.56	1.77	1	9.96	.01
	Male	979	8.35	1.76			
Need for PD in Subject Matter and Pedagogy	Female	2494	9.16	1.94	1	8.40	.01
	Male	1302	8.97	1.95			
Need for PD for Teaching for Diversity	Female	2495	9.54	1.79	1	37.31	.01
	Male	1288	9.16	1.90			

5. Discussion and conclusion

Unlike previous research in which female teachers reported lower levels of job satisfaction than male teachers (e.g. Liu & Ramsey, 2008) and lower level of classroom management self-efficacy (e.g. Klassen and Chiu, 2010), the results obtained in this study show that female teachers have a more positive stance toward almost all of the investigated variables. Female teachers are more satisfied with their job and profession, perceive themselves as more efficient and more co-operative, but at the same time they are more willing to further develop professionally. We believe that such results speak in favour of the view that the feminization of the teaching profession does not necessarily have negative consequences.

However, future research should explore the reasons why female teachers see themselves as more efficient in many situations and are more satisfied with their work than male teachers. Furthermore, future studies should consider gender differences in teachers' perceptions of self-efficacy, job satisfaction, co-operation among teachers and need for professional development at different stages of teachers' professional development (e.g. teachers at the beginning of their careers versus teachers after several years of work or teachers at the end of their professional careers).

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METACOGNITIVE SKILLS AND MATHEMATICAL PROBLEM-SOLVING AMONG 6TH GRADE STUDENTS

Amal A. Al-Shabibi
Learning disability teacher, Ministry of education (Oman)

Abstract

The Study aimed to investigate the differences in Metacognitive skills and mathematical problem-solving among 6th grade students of varying levels of achievement (learning disabled, average achievers and high achievers). In addition, the study aimed to find whether there is a difference according to gender. The study sample included 90 students in grade six(30 students enrolled in a learning disability program, 30 average-achieving students and 30 high-achieving students. Three instruments were used including; mathematical problem solving test, verbal metacognitive scale and non-verbal metacognitive scale. Attempts were made to ensure the validity and reliability of these measures. In the metacognitive skills the results show that there is a significant difference among the three groups indicating that students in the learning disability program showed the lowest score. while in the mathematical problem-solving the high-achieving showed the highest performance but there is no difference between the average achieving and the students enrolled in a learning disability program. However, there is no gender differences in both mathematical problem-solving and metacognitive skills. Furthermore, there was positive correlations between the two scales of metacognition skills (verbal and non-verbal) , suggesting that they can be used alternatively in any future purpose. The results are discussed in terms of possible interventions to improve the metacognitive skills of the students enrolled in the learning disability program and hence improve their academic performance in the mathematical problem solving skills.

Keywords*: Mathematical problem solving, metacognition, learning disability students, average - achieving, high-achieving.*

1. Introduction

Mathematics is the foundation for further study in a number of school subjects and mathematics problem solving builds logical reasoning skills that can be applied in many Situations (Mullis, Martin, Foy & Arora, 2012). In Omani's schools 20% of mathematics' assessment used to evaluate mathematical problem solving skill. This evaluation start from first grade and so on. So across-graded growth, mathematical problems tasks get more difficult and turn to be a real challenge. Despite the difference in ability among students to solve this kind of tasks. Many literatures reviews (e.g. Geary, Hoard, Nugent & Bailey, 2012; Hessels & Schwab, 2015; Shondrick, 1992) found that students with learning disabilities showed the lowest performance in this skill comparing with other students with different levels of academic achieving. Therefore this group need intrinsic help to improve their thinking to solve the mathematical problems. According to Flavell (1979), metacognition plays an important role in problem solving. The term of metacognition was coined by Flavell in the late 1970s. It refers to "one's knowledge concerning one's own cognitive processes, outcomes and anything related to them" (Flavell, 1976, p.232). In this study it refers to "the awareness individuals have of their own thinking; their evaluation of that thinking; and their regulation of that thinking" (Clarke & Wilson, 2004: p.4).The instruction of metacognition help students to think which strategy is the best to solve some problems, outperformed their counterparts and had positive effects on lower and higher achievers(Kramarski, Mevarech & Arami, 2002).

2. Design

A Quantitative correlational research design involving academic test of mathematical problem solving and two scales in metacognition were used to collect data.

3. Objectives

The purpose of this study and research questions:

The study aims to investigate the differences in mathematical problem-solving and Metacognitive skills according to different groups of students of varying levels of achievement (learning disabled, average achievers and high achievers) and gender. Also it aims to examine the differences between the two scales of metacognition skills(verbal and non-verbal).

Therefore this study has three main questions:

1. Are there statistically significant differences in the mathematical problem-solving test among students respect to groups(students enrolled in the learning disability program, average achievers and high achievers) and gender after controlling for age?
2. Are there statistically significant differences in metacognitive skills scale among students respect to groups(students enrolled in the learning disability program, average achievers and high achievers) and gender after controlling for age?
3. Are there statistically significant differences in students performance on the verbal metacognitive skills scale and the non-verbal metacognitive skills scale among students?

4. Methods

4.1. Participants

The population of the study consisted of (2108) students of grade six. The study sample included 90 students, which presented as(4%) of the total population(mean age = 11.07 years, *SD* 0.68 years). The participants were selected from various schools in Al Batinah South Governorate in the Sultanate of Oman. The sample were divided into three groups (15 boys & 15 girls in each group), the first group consisted of 30 Students enrolled in the learning disability program. They have been nominated by their teachers as underachievers in math, then they have been through some diagnostician processes according to procedures followed by ministry of education policy in the Sultanate of Oman to defined them. The second group consisted of 30 average-achieving students. Students in this group were selected according to their grades ranging from 65 to 79 out of 100 in six basic subjects in the Omani curriculums which are: islamic, arabic, english, mathematics, science and history. The third group consisted of 30 high-achieving students. Students in this group were selected according to their grades ranging from 90 to 100 out of 100 in the same subjects which mentioned above.

4.2. Instruments

Three instruments were used in this study including; mathematical problem solving test, verbal metacognitive scale and non-verbal metacognitive scale.

4.2.1. Mathematical problem solving test. For construction of the mathematical problem solving test, an achievement test was built to measure the ability of solving mathematical problems among the students groups. The test consisted of 14 items, all of which were multiple choice questions. Each item was created as a problem in four categories which were: multiplying and dividing numbers, fractions, measurement, and geometry. These categories were selected from the Omani's mathematical curriculum of six grade.

4.2.2. Metacognition skills scales. For construction of the metacognition skills, two models were used to built the scale. These models were: Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry (Flavell, 1979) and Towards the modeling of mathematical metacognition(Clarke & Wilson, 2004). The scale consisted of 12 items in three categories which were: metacognitive awareness, self regulation and self evaluation. Each item describe a learning situation, with five possible situations for metacognitive behaviors. So student should choose the most close response to their own behavior which they apply it in their real life. In this study metacognition was measured off-line the learning process as a self report.

Metacognitive measures which depend less on student's verbal ability and working memory capacity may have more ecological validity than the others(Lai, 2011). Terrace and Son (2009) suggest that investigate the development of metacognition in young children is important to determine the extent to which metacognition requires language(Terrace & Son, 2009). Therefore the author built two scales: verbal and non-verbal. The non-verbal scale came as another copy of the first one, but it was expressed by pictures.

To examine the validity of the three instruments, construct validity was tested for using Pearson correlation coefficients to check for the correlations among subscales and each scale to the whole scale.

As for mathematical problem solving test results illustrates that the correlation coefficients among all subscales are significant at the p= 0.01 level. results also shows that correlation coefficient between the four subscales and the whole scale were between 0.60-0.81.

In verbal metacognition scales, as an overall trend, it can be seen that Pearson correlation coefficient among all subscales were also significant at the p= 0.01 level . Moving to correlation coefficients between the three subscales and the whole scale, In verbal metacognition scale correlation coefficient were between 0.71-0.88. But in non-verbal metacognition scale they were between 0.69-0.85.

All correlation coefficient of the three scales indicated to be significant at the p = 0.01 level in both scales. Based on that, we conclude that three scales were found to be highly valid as a construct.

Cronbach alpha reliability analysis was also conducted for the all scale's items. The internal consistency for the sample's performance on the mathematical problems solving measure(14 items; α = .71), verbal metacognitive scale(12 items; α = .71) and non-verbal metacognitive scale(12 items; α = .71) was found to be highly reliable.

4.3. Procedures

To collect data of this study, three steps were followed .Firstly, mathematical problem solving test was implemented. Participants were assessed together according to their group. Ten minutes were used to organize the classroom to be a suitable testing room and to read test's instructions. Then the examiner gave students 5 minutes for each question. In these 5 minutes the examiner read the question, gave the students a break to think about it and justified their answer in empty space in the left side of question before they chose the answer and so on. After they finished the 5 minutes for each question, examiner gave students extra ten minutes to check their answers for second times or returning back to any question that they didn't answer it before. Therefore, the total time of the test was 80 minutes, despite the ten minutes at the beginning before they started the exam.

Secondly, the verbal metacognition skills scale was implemented. Student were assessed individually.

Thirdly, after one month, non verbal metacognition skills scale was implemented in order to make a reasonable time between both scales to examine the difference in sample's responding.

5. Results

5.1. Analysis of Covariance

Two-way analysis of covariance (ANCOVA), with student age as a covariate, was conducted to examine differences among the three groups of students and gender in their performance on: metacognitive skills scale and mathematical problem test. The results were summarized in table 1, 2 and 3

Table 1. Means and standard deviations of students in metacognitive skill and mathematical problem solving with respect to the groups and gender after controlling for age.

Group	Gender	*n*	Metacognitive skill		Mathematical problem solving	
			M	*SD*	*M*	*SD*
students enrolled in a learning disability program	Male	15	40.80	4.11	4.60	2.53
	Female	15	40.53	4.60	4.87	2.75
average-achieving students	Male	15	49.47	2.53	5.73	3.06
	Female	15	45.07	4.64	5.00	2.33
high-achieving students	Male	15	48.93	4.17	8.73	1.98
	Female	15	52.73	3.26	8.80	2.24

Table 2. Results of the 2-way ANCOVA about differences among students in metacognition skills with respect to the groups, gender and their interactions after controlling for age.

Source	SS	df	MS	F	*P*-value	Partial Eta Squared
Group	1286.30	2	643.15	40.78	< .001	.50
Gender	1.01	1	1.01	.06	.80	.01
Group × Gender	253.74	2	126.87	8.04	< .001	.16
Error	1309.09	83	15.77			

Table 2 reveals that the difference among students in metacognition skills with respect to the groups after controlling for age was statistically significant at the p < .001 level (partial $\eta 2$ =.50, large effect size). While there was no statistically significant difference among students in metacognition skills

with respect to the gender at the p < .05 level. The table also shows that there was a statistically significant difference among students in metacognition skills with respect to the interaction between groups and gender after controlling for age at the p < .001 level (partial η2 =.16, small effect size). The Bonferroni post-hoc measure revealed there were statistically significant difference between means of metacognitive skills when adjusted for age between among the three groups at the $p < .005$ level, with preference for the high achieving students. Also the result showed significant difference between means of metacognitive skills when adjusted for age between the average achieving students and students enrolled in a learning disability program at the $p < .001$ level, the preference for the average achieving students.

Table 3. Results of the 2-way ANCOVA about differences among students in mathematical problem solving with respect to the groups, gender after controlling for age.

Source	SS	Df	MS	F	*P*-value	Partial Eta Squared
The groups	255.99	2	127.99	20.41	< .001	.33
Gender	.05	1	.05	.01	.93	.00
Groups × Gender	3.95	2	1.97	.31	.73	.01
Error	520.48	83	6.27			

Table 3 indicates that the difference among students in mathematical problem solving with respect to the groups after controlling for age was significant at the p < .001 level (partial η2=.33, moderate effect size). While there was no significant difference among students in mathematical problem solving with respect to the gender. Also there was no significant difference among students in mathematical problem solving with respect to the interaction between groups and gender after controlling for age. The Bonferroni post-hoc test revealed that there was a statistically significant difference between means of mathematical problem solving when adjusted for age between the high achieving students and the two groups at the $p < .001$ level with preference for the high achieving students. However results found no statistically significant difference between means of mathematical problem solving adjusted for age between the average achieving students and the students enrolled in the learning disability program at the $p = .05$ level.

5.2. Paired samples T-Test

Paired samples T-Test was conducted, to compare the differences between the two scales of metacognition skills (verbal and non-verbal). The results indicated that there was no statistically significant difference at the $p = .05$ level between the verbal metacognition skills scale(M=46.26, SD = 5.96) and the non-verbal metacognition skills scale(M=46.51 , SD = 6.09) condition; t(89)= -.51, p= .61.

6. Discussion

This study investigate the differences in Metacognitive skills and mathematical problem-solving among 6th grade students of varying levels of achievement. The results show there is a significant difference in the metacognitive skills among the three groups indicating that students in the learning disability program showed the lowest score, while the high achieving students showed the highest score in these skills. This means that the academic achievement is responsible for this differences. Many researchers (e.g. Lai, 2011; Schunk & Ertmer, 2000) in cognitive psychology have linked metacognition to a number of other constructs, one of them is motivation. So metacognitive increase academic motivation, learning and lead to higher achievement. Therefore the motivated students obtained higher grades than other students and showed the best metacognitive self-regulation skills of all students (Dekker et al., 2016).

The results also indicated that the high-achieving students showed the highest performance among the groups, while there was no significant differences between the average achieving students and the students enrolled in the learning disability program, even though there is differences in their metacognitive skills. According to Flavell (1979) metacognition plays an important role in problem solving. However in the present study the average achieving students haven't used their metacognitive skills to solve mathematical problems which can be attributed to the lack of experience of using metacognitive skills in learning situations(Fernández, Cueli, Pérez, Krawec & Castro, 2015). However, this result contradict with other studies such as; Hessels and Schwab (2015) and Shondrick (1992) which found that the learning disability students showed the lowest performance in mathematical problem solving among the groups or students without learning disability.

Another result of this study found that there is no significant differences was respected to gender(male and females) in both mathematical problem-solving and metacognitive skills. So this study found that there is no sterotype favoring specific gender in metacognition or in mathematical problem solving.

This study also found that is there was positive correlations between the two scales of metacognition skills (verbal and non-verbal), suggesting that they can be used alternatively in any future purpose.

7. Conclusions

In the whole, this study came as an extant to many researches that discuss metacognition differences among groups with another variables such as; reading comprehension, academic performance, reasoning thinking, critical thinking and motivations.

The results in this study may give educators more understanding to some variables that related to the mathematical problem solving skill. And get use these result in any future purpose or interventions to improve the metacognitive skills of the students enrolled in the learning disability program and hence improve their academic performance in the mathematical problem solving skills. And helping average-achieving students to improve their experience of using metacognitive skills in learning situations.

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TECHNOLOGY USE: THE INFLUENCE OF PSYCHOLOGICAL VARIABLES

Kathryn Flood[1], Rory McPhee[1], Diane Buhay[2], & Lisa Best[1]
[1]Department of Psychology,
[2]Department of Information Services and Systems,
University of New Brunswick, 100 Tucker Park Road, Saint John, NB, E2L 4L5(Canada)

Abstract

Although the rise in technology and social media use is well-documented, fewer researchers have examined links between technology use and individual differences. Thus, our purpose was to examine associations between personality, subjective well-being, and personal and educational technology use. In this online study, 266 male and female university-aged students completed a demographics questionnaire, psychosocial questionnaires (i.e., life satisfaction, personality, affect), and a technology use questionnaire. Based on reported usage, participants were assigned a total score for Personal Technology Use and Educational Technology Use; subscales within each domain allowed for the effects of Social Media Use, Content Creation, Gaming, and Communication to be assessed. There were few gender differences in overall technology use and most participants reported using several different types of technology. Two hierarchical regressions were conducted to determine if technology use (either personal or educational) added significantly to models predicting Satisfaction with Life. In both models, lower Neuroticism and Openness coupled with Extraversion, Conscientiousness, Flourishing, and Positive Affect predicted higher Satisfaction. Interestingly, although the Educational Technology Use Scales added significantly to the prediction of Life Satisfaction, increased personal use of Social Media and decreased Content Creation and Online Communication Tools were associated with higher satisfaction. Taken together, these findings provide information about the effects of technology on university campuses and have the potential to provide a framework to maximize student success. Finally, it may be that high levels of technology use are not as negatively related to psychological well-being as previously thought.

Keywords: *Technology use; personality; life satisfaction; technological preferences; affect; flourishing.*

1. Introduction

University students report spending a significant amount of time using technology, with some estimates indicating that students dedicate more than 10 hours a day to technology (Best, Buhay, & McGuire, 2010). The advent of various technologies has meant that modern consumers of information are not simply information gatherers but are able to produce, create, and share content creations (Kennedy, Dalgarno, Gray, Judd, Waycott, & Bennett, 2007). Web 2.0 is a set of second generation web-based technologies and services that are designed to promote ease of information sharing. Although the term "Web 2.0 technology" is used in different ways, most researchers agree that these technologies include blogs, podcasts, wikis, social networking (i.e., Facebook) social bookmarking (i.e., Pinterest), and file sharing sites (i.e., Dropbox). Clark, Logan, Luckin, Mee, and Oliver (2009) found that teenaged students were more likely to use Web 2.0 technologies in their personal lives than in their academic lives. When using these tools for academic purposes, students focused on communication with teachers. Similar trends are indicated in surveys of undergraduate students and although technological tools are widely available, undergraduates typically focus on social networking tools that are perceived to increase social connectedness (Best, Buhay, & McGuire, 2010).

1.1. Subjective Well-Being: Dispositional and Situational Influences

Individual personality traits define the consistent manner in which individuals behave, think, and feel. The Five Factor Model (FFM; Costa & McCrae, 1985; 1992), conceptualizes personality as consisting of five basic factors. Neuroticism is characterized by the tendency to experience vulnerability psychological distress. Extraversion involves sociability, activity, and positive affect. Openness to experience is associated with intellectual curiosity, behavioural flexibility, and a willingness to adjust ones attitudes in different situations. Agreeableness is characterized by trust, sympathy, and cooperation. Lastly, Conscientiousness is characterized by organization and diligence. Researchers and clinicians use the FFM to investigate the relation between personality and other variables of interest. High Neuroticism is strongly related to anxiety and depressive disorders (Clark, Watson, & Mineka, 1994) disordered eating

(MacLaren & Best, 2009), non-suicidal self-injury (MacLaren & Best, 2010), neediness (McBride, Zuroff, Bacchiochi, & Bagby, 2006) and substance abuse disorders (Ball, 2005). Overall, the research is clear that higher neuroticism coupled with lower extraversion is associated with lower satisfaction with life (SWL; Schimmack, Oishi, Furr, & Funder, 2004).

SWL is a term that encompasses cognitive (assessment of life circumstances) and emotional (presence of positive and absence of negative emotions) aspects of subjective well-being (Diener, Emmons, Larsen, & Griffin, 1985; Tay, Kuykendall, & Diener, 2015). SWL correlates highly with perceived social support (Su, Tay, & Diener, 2014). Individuals with high SWL have close personal relationships, rewarding occupational or educational experiences, and enjoyable leisure activities. As an extension to their work on SWL, Diener et al. (2010) developed scales to assess flourishing and emotional affect (positive and negative). Flourishing is a specific component of well-being defined by psychosocial prosperity. As such, flourishing encompasses universal psychological needs, including competence, relatedness, and self-acceptance. In addition to having rewarding social relationships, individuals with high levels of flourishing contribute to the happiness of others and are respected by others.

Positive and negative affect are important aspects of subjective well-being and impact both psychological and physical health. Affect is thought to contribute to subjective well-being because of underlying approach (associated with positive emotions) and avoidance (associated with negative emotions) tendencies (Carver, 2004). Individuals who report high levels of positive emotions and low levels of negative emotions are more likely to actively engage in their physical and psychological environments and these approach behaviors are thought to enhance psychosocial connectedness (Tay et al., 2015). Individuals with high levels of negative affect are generally less satisfied with their life circumstances and are more likely to have higher levels of depression and anxiety. Further, positive emotions are associated with better cardiovascular, immune function, and endocrine system health, negative emotions can lead to dysregulation in these systems (O'Leary, 1990).

1.2. Purpose of the Current Study

In recent years, the use of technology for personal, educational, and professional purposes has increased dramatically and, thus, understanding how this increased exposure affects psychological well-being is important. Although initial research on the effects of technology use on personality has indicated that lower Extraversion and higher Neuroticism were associated with increased social media usage (Hamburger, & Ben-Artzi, 2000), more recent research has not confirmed these relationships. Further, the impact of increased technology use on psychological well-being is mixed, with some research reporting increased use leads to positive outcomes (Wei & Lo, 2006) and others indicating negative consequences (i.e., Kim, LaRose, & Peng, 2009). Given the mixed findings, our purpose was to examine specific effects of personality, psychosocial variables, and technology use on overall subjective well-being.

2. Methods

2.1. Participants

In total, 266 participants (Mage = 21.64 years, SD = 6.61) completed an online questionnaire package. The majority of participants were Canadian (94.4%) and enrolled in a university program during questionnaire adminstration (92.9%).

2.2. Materials

In addition to a Demographics Questionnaire, participants completed: (1) *Big Five Inventory* (John, Donahue, & Kentle, 1991) to assess Extraversion, Neuroticism, Agreeableness, Openness, and Concienciousness; (2) *Flourishing Scale* (Diener et al., 2010) assesses percieved success in different areas of their lives (i.e., self-esteem, relationships, optimism); (3) *Satisfaction with Life Scale* (Diener et al. 1985) assesses global life satisfaction; (4) *Scale of Positive and Negative Experience* (Diener et al., 2010) to assess positive and negative feelings; and (5) *Teaching and Learning Inventory* to assess learning preferences and the use of the library and related services. The Inventory included 28 questions that assessed the use of technology tools (personal and educational). Any technology that was used at least once in a university term coded as frequently used. Mean total scores for Personal and Educational Technology Use were calculated and were defined as the average of each of the scale items, with scores close to 1 indicating more technology use. Subscale scores measured levels of Gaming, Content Creation, Communication, and Social Media Usage.

2.3. Procedure

In this online study, participants were recruited from (1) psychology classes and (2) social media. After signing an informed consent form, participants were presented with a general demographic

questionnaire. The other questionnaires were presented in random order. Total participation time was approximately 40 minutes.

3. Results

Overall technology use for personal and educational purposes is shown in Table 1. It is clear that students used a variety of technological tools for both personal and educational purposes. As expected, some tools are popular in both settings; for example, text and instant messaging are widely used for both personal and educational purposes. As would be expected, some tools are more commonly used for education (i.e., web based software, clickers) and others are more commonly used for personal purposes (i.e., music and video downloads). We assessed specific gender differences in technology use and found that males had higher total technology use scores, $F(1, 252) = 4.68$, $p = .03$, and used more technology in their personal lives, $F(1, 252) = 6.30$, $p = .013$. In addition, individuals who were younger used a wider variety of personal technologies ($r = .20$, $p = .002$), specifically those related to content creation ($r = .22$, $p = .001$). Younger participants also relied more on their handheld devices ($r = -.17$, $p<=.008$) and wanted more technologies used by their university professors ($r = -.13$, $p=.05$).

Table 1. Percent of students who report using each type of technology at least once in an academic term.

	Scaled Items	Educational	Personal	t	p
Content Creation	Created a blog	2.3%	7.6%	-1.80	.074
Content Creation	Contributed to a blog	4.9%	11.7%	-3.38	.001
Content Creation	Created a WEB page	0.8%	3%	-3.61	.0001
Content Creation	Modified a WEB page	1.9%	4.9%	-2.71	.007
Content Creation	Created a podcast	1.1%	1.1%	-0.58	.57
Content Creation	Contributed to a WIKI	5.7%	4.5%	0.50	.62
Content Creation	Spreadsheets	42.4%	28.8%	4.13	.0001
Content Creation	Slide presentation software	68.9%	31.1%	10.53	.0001
Content Creation	Photoshop	10.2%	18.2%	-3.88	.0001
Content Creation	AudioCreation	4.2%	7.6%	-2.71	.007
Content Creation	VideoCreation	6.8%	9.8%	-2.38	.018
Content Creation	Programming Language	11.0%	5.3%	3.05	.003
Content Creation	Web based software	39.8%	29.2%	3.35	.001
Social Media	Uploaded Video	12.1%	11.7%	-0.54	.59
Social Media	Photosharing tools	18.2%	14.8%	.58	.56
Social Media	Facebook	89.8%	89.4%	-1.46	.145
Social Media	Twitter	20.8%	40.2%	-7.55	.0001
Social Media	Social Bookmarking	13.3%	7.6%	2.31	.022
Communication	Skype	14.4%	33.3%	-7.76	.0001
Communication	Text messaging	83.3%	88.6%	-3.76	.0001
Communication	Used IM	61.4%	81.4%	-7.44	.0001
Gaming	Second Life	3.0%	2.3%	0.38	.71
Gaming	Online multiuser game	9.5%	17.0%	-4.27	.0001
Miscellaneous	Downloaded music	22%	69.3%	-14.54	.0001
Miscellaneous	Downloaded a video	22.7%	43.6%	-6.90	.0001
Miscellaneous	Subscribed to RSS feed	4.2%	4.2%	-0.58	.57
Miscellaneous	E Books	49.6%	21.2%	7.76	.0001
Miscellaneous	Clickers	15.5%	3.0%	5.28	.0001

3.1. Relation between Psychological Variables and Technology Use

Frequent use of technology was related to FFM traits. Specifically, Total Technology Use was associated with higher Extraversion ($r = .15$, $p = .02$) and Openness ($r = .13$, $p = .042$) coupled with lower Neuroticism ($r = -.15$, $p = .017$). Educational Technology Use was associated with higher Extraversion ($r = .15$, $p = .019$) as well as lower Neuroticism ($r = -.20$, $p = .001$) and Negative Affect ($r = -.15$, $p = .017$). In addition, psychological variables were associated with the use of education technologies. Individuals with higher Neuroticism had lower Content Creation ($r = -.19$, $p = .003$) and Social Media scores ($r = -.18$, $p = .003$). The use of these tools was also related to lower levels of Negative Affect ($r = -.13$, $p = .041$ and $r = -.15$, $p = .019$, respectively). As expected, Social Media use was associated with higher Extraversion ($r = .18$, $p = .004$) and Agreeableness ($r = .13$, $p = .038$). Conscientiousness was associated with less Gaming for educational purposes ($r = -.17$, $p = .006$).

Personal Technology Use was associated with higher Extraversion ($r = .13$, $p = .046$) and Openness ($r = .14$, $p = .034$) coupled with lower SWL ($r = -.15$, $p = .018$). In terms of specific technological tools, as would be expected, Gaming was associated with lower Conscientiousness

(r = -.17, p = .008) and SWL (r = -.13, p = .038). Higher Content Creation scores were associated with lower Neuroticism (r = -.13, p = .034) and higher Openness (r = .20, p = .001). Finally, Handheld Use was associated with higher Extraversion (r = .18, p = .004). Individuals with lower levels of Negative Affect (r = -.13, p = .042) and SWL (r = -.16, p = .014). had higher Communication scores.

3.2. Predicting Life Satisfaction (SWL)

Finally, two hierarchical regressions were performed to assess whether the combination of psychological and technological use variables could be used to predict SWL. It was hypothesized that levels of educational and personal technology use would predict SWL over and above Personality, Flourishing, and Affect. In both regressions, age and gender were entered in Block 1, personality factors were entered in Block 2, Flourishing and Affect were entered in Block 3, and technology use variables were entered in Block 4. In both cases, all model assumptions were met and collinearity diagnostics indicated tolerance and variance inflation factors that were well within acceptable levels.

Technology in Education. Regression analyses indicated that 51.3% of the variability in SWL was accounted for, $F_{(14,212)} = 17.99$, $p < .001$, multiple $R = .74$, adjusted $R^2 = .51$. In Block 1, age and gender were not statistically significant. In Block 2 there was a statistically significant R^2 change, with lower Neuroticism (β = -.39) and Openness (β = -.14) as well as higher Extraversion (β = .15) and Conscientiousness (β = .20) significantly adding to the model. Block 3 variables were also statistically significant, with Flourishing (β = .40) and Positive Affect (β = .27) contributing to the model. Block 4 Educational Technology Tool variables were not statistically significant, indicating that they had no impact on SWL.

Technology in Personal Life. Regression analyses indicated that 56.4% of the variability in SWL was accounted for, $F_{(14,218)} = 21.17$, $p < .001$, multiple $R = .77$, adjusted $R^2 = .56$. In addition to the contributions of Block 1, 2, and 3 variables, Block 4 Technology variables did add significantly to the model (R^2 Change = .041). Lower Content Creation (β = -.12), and Communication (β = -.18) coupled with higher Social Media Use (β = .13) added unique variance to the model. Thus, the personal use of technology affected SWL and individuals who used a wider variety of content creation tools and focus more on online and text communication had lower SWL. Contrary to previous research, increased social media use was associated with greater SWL.

4. Discussion

Our goals were to (1) describe how technology is used for personal and educational purposes, (2) understand the relation between psychological variables and technology use, and, (3) examine if the use of technology affects SWL. In order to fully appreciate our results, it is important to understand that the life satisfaction of our sample was high (Diener et al., 1985), indicating individuals who are happy with their lives and feel that things are going well. Although only 15% of participants had scores indicating below average levels of SWL, SWL scores did vary and a small percentage of participants indicated that they were extremely dissatisfied with their lives. In spite of the high SWL, correlational and regression analyses indicated that specific psychological and technological variables affected subjective well-being.

The current results are not consistent with previous research indicating that lower extraversion and higher neuroticism were associated with increased social media usage (Hamburger, & Ben-Artzi, 2000). Our results suggest that increased use of technology was generally associated with lower neuroticism and higher extraversion; social media use for educational purposes was also associated with higher extraversion. These differences might be due to differences between early and late adopters of technology as early adopters have been shown to have different personality profiles than those who become users after technologies are well established (Dillon, 2001).

It is of particular interest that, although the correlations between psychological variables and the use of educational and personal technology yielded similar results, the regression analyses indicated that increased use of educational technologies did not predict life satisfaction. On the other hand, increased focus on content creation and communication for personal purposes did lead to decreases in satisfaction. Further, and contrary to previous findings, increased social media use for personal purposes led to increases in life satisfaction. Thus, it may be that a focus on content creation and communication technology is related to less dedication to social connections and increased social media use suggests increased value placed on social connectedness.

In a similar survey, Best, Buhay, and McGuire (2010) reported that individuals spent over 10 hours a day using technology. They also noted that the vast majority of participants used very familiar and accessible tools and were less likely to use tools associated with content creation. In 2010, Facebook, text messaging, and instant messaging were the most common tools used for education. For personal purposes, individuals used Facebook, text messaging, instant messaging, video downloads, and creating a web page. When we designed the current study, we expected that individuals would use a wider range of tools for both educational and personal purposes. The current results suggest that this is not the case.

The tools that are popular for educational and personal purposes are virtually identically. Best et al. (2010) suggested that in spite of a large amount of time dedicated to technology, users of the current generation are not more technologically savvy than those of previous generations.

5. Concluding Remarks

Taken together, these findings give researchers a unique view into the complex relations between individual differences and technological advances. The current results highlight the point that the popularity of a specific technology may be a reflection of societal values. For example, there is currently a focus on the importance of social connectedness and this focus may be at the root of the findings that increased use of social media technology contributes to subjective well-being. We would argue that in order to fully understand the relation between psychosocial variables and technology, one has to also understand current societal and cultural pressures.

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EXAMINATION OF INCLUSIVE DISTANCE TOWARDS STUDENTS WITH SPECIAL EDUCATION NEEDS

Danijela S. Petrović
Department of Psychology, Faculty of Philosophy, University of Belgrade (Serbia)

Abstract

In many countries around the world, one of the major challenges for the education systems is the implementation of inclusive education (IE). It is believed that teachers are of crucial importance for successful implementation of IE and so their positions towards IE have been frequently researched. In order for IE to be efficient, it is important that students with special educational needs (SEN) are accepted by their peers. Therefore, the aim of this study is to determine the level of presence of inclusive distance with primary school students. The study used the Inclusive distance scale, containing 7 items and testing the willingness of primary school students to enter into social relationships with SEN peers with different level of closeness, ranging from accepting SEN peers to attend their school and class, through the readiness to socialize with SEN peers in school, do group assignments, socialize outside school, sit at the same desk, to accepting SEN peers as best friends. Inclusive distance towards the following categories of SEN students was examined: students with speech, hearing or visual problems, students with physical disabilities, students with reduced intellectual abilities, students from Roma families and students from poor families. The study included 434 students (52.7% girls and 47.3% boys) from three primary schools in three towns in Serbia. Two age groups were examined - fourth grade (49.8%) and eight grade students (50.2%). The study included only students for whom parent's consent was obtained. For the majority of SEN students, the average obtained score of inclusive distance was less than 2 (maximum=7, minimum=0). Slightly higher inclusive distance was determined towards students from Roma families (M = 1.67), students with physical disabilities (M = 1.62) and students with reduced intellectual abilities (M = 1.52). The lowest inclusive distance was determined towards the students from poor families (M = 0.62) and students with hearing problems (M = 0.92). Gender differences did not determine the level of inclusive distance towards particular categories of SEN students. However, girls are more willing to do group assignments with SEN peers than boys. Older students expressed lower levels of inclusive distance compared to younger students only towards Roma peers. The obtained results show a generally low level of inclusive distance of students, indicating that students are very open and willing to interact and have various forms of social relations with SEN peers.

Keywords: *Inclusive education, inclusive distance, students, special education need.*

1. Introduction

A number of scholars consider the negative attitudes of peers toward SEN students as a major barrier to successful educational and social inclusion of SEN children and youth in schools (e.g., Bossaert, Colpin, Pijl, & Petry, 2011; McDougall, De Wit, King, Miller, & Killip, 2004; Ring & Travers, 2005; Simeonsson, Carlson, Huntington, McMillen & Brent, 2001; Vignes et al., 2009).

Previous research on the attitudes of typically developing students towards SEN peers revealed that students generally hold neutral attitudes towards peers with disabilities (for an overview see de Boer, Pijl and Minnaert, 2012). The majority of studies show that girls hold more positive attitudes toward SEN peers then boys (e.g. Bossaert, Colpin, Pijl & Petry, 2011; Nikolaraizi & de Reybekiel, 2001; Laws & Kelly, 2005; Nowicki, 2006; Siperstein, Parker, Bardon & Widaman, 2007; Vignes et al., 2009). However, results on age differences are not consistent. For example, some studies revealed that older students have more positive attitudes (e.g. Nowicki, 2006; Vignes et al., 2009) while in other studies was found that younger students are more positive (e.g. Swaim & Morgan, 2001). The experience with SEN peers measured in terms of the presence of inclusive units in schools or the presence of SEN peers in class shown both positive (e.g. Nikolaraizi & de Reybekiel, 2001; Siperstein et. al., 2007) and negative (e.g. Godeau et al., 2010; Vignes et al., 2009) effects on the attitudes of typically developing students towards SEN peers. Furthermore, some studies show that students' attitudes differed according to the type

of disability. For example, Laws and Kelly (2005) pointed out that students hold the most positive attitudes towards peers with intellectual or physical disabilities and the least positive attitudes towards peers with behavioural problems. On the other hand, Nowicki (2006) found that students have more positive attitudes towards peers with intellectual disabilities than towards peers with physical disabilities. However, the studies relating students' attitudes toward SEN peers with the type of disability are not so frequent.

The system-wide implementation of inclusive education in Serbia started in year 2010/2011. The Law on Foundations of the Education System in 2009 laid the ground of inclusive education (NARS, 2009). Legislative changes, among others, have the goal to increase the quality of education for various groups of children with special education needs, including children from marginalized and vulnerable social groups. However, one of the key challenges for inclusive education in Serbia is the inclusion of Roma children in schools due to a high social distance towards the Roma population. For example, some previous studies revealed that the social distance of children in primary schools is the largest towards Roma peers (Franceško, Mihić & Kajon, 2005) and that Roma children have a much lower sociometric status in class than non-Roma children (Kajon, Mihić & Franceško, 2007).

2. Objectives

The main aim of this study is to assess the level of manifestation of inclusive distance among primary school students. The specific objectives of the study are to determine gender and age differences in the existence and intensity of inclusive distance. Given the modest practice of inclusive education in Serbia, assessing how students in primary schools respond to and accept SEN peers can be a lever for improvement of the inclusive education policy. Additionally, the social distance of classmates towards SEN peers can be a factor that might influence (support or constrain) the 'social participation' of SEN students in inclusive classrooms (Koster et al, 2009). Therefore, investigating the inclusive distance of students towards SEN peers may be an important step towards better social participation of students with SEN in inclusive schools (Bossaert, Colpin, Pijl & Petry, 2011; Vignes et al., 2009).

3. Methods

A total of 434 students participated in the study (52.7% girls and 47.3% boys) from three primary schools in three towns in Serbia. Two age groups were examined - fourth grade (49.8%) and eight grade students (50.2%). The study included only the students that had their parents' consent. The mean ages of students were 10.9 and 14.9 years.

The short version of the Inclusive distance scale (Petrović, 2010) was used in the study. The scale was developed based on Bogardus' (1925, 1930) social distance scale. The Inclusive distance scale contained 7 items testing the willingness of students to enter into social relationships with SEN peer, of different levels of closeness, ranging from accepting SEN peers to attend their school and class, through readiness to socialise with SEN peers in school, do group assignments, socialise outside school, sit at the same desk, to accepting SEN peers as best friends. Inclusive distance towards the following categories of SEN students was examined: students with speech problems (stuttering, etc.), students with severe hearing impairments (hearing loss), students with severe visual impairments (low vision), students with physical disabilities, students with reduced intellectual abilities, students from Roma families, and students from poor families.

Selected relationships are related to the school context and are graduated according to the degree of closeness of relationship that involves the lowest closeness (to go to your school) to a relationship that involves the highest closeness (to be your best friend). The primary school students were asked to indicate whether or not they would enter into any of the offered relationships with each category of SEN peers. The degree of inclusive distance is determined for each category of SEN students individually, in a way that respondents receive one point for each non-acceptance of the relationship. The maximum inclusive distance towards a particular group of SEN students is 7 points (rejection of the all examined relationships), while the minimum is 0 points (acceptance of the all examined relationships). On the basis of the average individual measures of inclusive distance towards a specific group of SEN students an Inclusive distance index (IDI) is generated for a particular group of SEN students. The minimal distance value of the Inclusive distance index (IDI) is also 0, and the maximum is 7, that is, the range of scores on this measure ranges from 0 to 7. Inclusive distance toward particular categories of SEN students is considered as *low* when IDI has a value lower than 2, *moderate* when IDI has a value ranging from 2 to 5, and *high* when IDI has a value higher than 5.

The reliability of the Inclusive distance scale was checked based on the split-half method. The results show that the Inclusive distance scale has a satisfactory reliability. For seven of the examined relationships the Guttman Split-Half Coefficient was .85, while the coefficient for the seven categories of SEN students was .90. The Guttman Split-Half Coefficients obtained in a previous study (Petrović & Luković, 2012) were .89 and .87, respectively.

4. Results

The intensity of inclusive distance towards different groups of SEN students is shown in Table 1. Statistical significant differences in inclusive distance towards SEN students from a particular group were determined. The minimum distance determined was towards students from poor families ($t(431) = 9:03$, $p < .01$) and students with speech problems ($t(431) = 11.60$, $p < .01$), followed by students with visual impairments ($t(430) = 12.68$, $p < .01$) and students with hearing impairments ($t(431) = 13.99$, $p < .01$), then toward students with reduced intellectual abilities ($t(431) = 14.95$, $p < .01$), while the largest inclusive distance was determined towards students with physical disabilities ($t(430) = 7.15$, $p < .01$) and students from Roma families ($t(430) = 14.85$, $p < .01$).

Table 1. The intensity of inclusive distance towards different groups of SEN students.

	n	Min	Max	M	SD
Students from poor families	432	0	7	.62	1.43
Students with speech problems	432	0	7	.92	1.65
Students with visual impairments	431	0	7	1.09	1.78
Students with hearing impairments	432	0	7	1.28	1.90
Students with reduced intellectual abilities	432	0	7	1.52	2.12
Students with physical disabilities	431	0	7	1.62	2.23
Students from Roma families	431	0	7	1.67	2.33

The degree to which the participants were not willing to enter into a particular relationship with SEN peers is shown in Table 2.

Table 2. The degree of non-acceptance of particular social relationships with SEN peers.

	n	Min	Max	M	SD
School attendance	433	0	7	.45	1.11
Class attendance	432	0	7	.84	1.52
Socialising in school	433	0	7	.92	1.70
Group task	431	0	7	1.16	1.88
Socialising outside school	432	0	7	1.50	2.12
Siting at the same desk	432	0	7	1.68	2.23
Best friend	432	0	7	2.21	2.63

The most acceptable types of the relations with SEN peers was that they attend the same school ($t(432)=8.39$, $p<.01$), then the same class ($t(431)=11.45$, $p<.01$) and to socialise with SEN peers in school ($t(432)=11.26$, $p<.01$).

Table 3. Age and gender differences in inclusive distance.

	Grade 4		Grade 8		Male		Female	
	M	SD	M	SD	M	SD	M	SD
Poor families	.71	1.45	.53	1.40	.73	1.58	.53	1.29
Speech problems	.89	1.60	.95	1.70	.88	1.62	.96	1.68
Visual impairments	1.05	1.73	1.12	1.82	1.15	1.90	1.03	1.67
Hearing impairments	1.20	1.85	1.36	1.95	1.39	2.03	1.19	1.78
Intellectual disabilities	1.46	2.13	1.59	2.11	1.60	2.17	1.46	2.08
Physical disabilities	1.42	2.13	1.82	2.31	1.59	2.21	1.64	2.25
Roma families	**1.99**	**2.52**	**1.36**	**2.10**	1.86	2.51	1.52	2.18
School attendance	.48	1.14	.41	1.08	.50	1.20	.40	1.03
Class attendance	.88	1.60	.79	1.44	.95	1.62	.74	1.43
Socialising in school	.98	1.81	.86	1.59	.98	1.65	.87	1.75
Group task	1.09	1.84	1.23	1.93	**1.40**	**2.08**	**.95**	**1.68**
Socialising outside school	1.45	2.15	1.56	2.10	1.44	2.00	1.56	2.21
Siting at the same desk	1.69	2.28	1.68	2.18	1.78	2.27	1.60	2.19
Best friend	2.22	2.73	2.22	2.53	2.22	2.60	2.21	2.65

The typically developing students are less willing to do group assignments with SEN peers ($t(430)=12.75$, $p<.01$), to socialise with them outside of school ($t(431)=14.72$, $p<.01$) and to sit at the same desk with SEN peers ($t(431)=15.70$, $p<.01$). The least acceptable relation for mainstream students is to be best friends with SEN peers ($t(431)=17.54$, $p<.01$).

Table 3 shows age and gender differences in inclusive distance. As the results demonstrate, there is no statistically significant difference in inclusive distance between older and younger students, except towards peers from Roma families, where younger students have a higher inclusive distance ($F(1)=7.74$, $p<.01$). Gender differences are only present when it comes to doing group tasks with SEN students, where girls show a lower distance then boys ($F(1)=6.26$, $p<.01$).

5. Discussion and Conclusion

Results obtain in this study show that primary school students have a low level of inclusive distance towards their SEN peers, that is, it was determined that the Inclusive Distance Index (IDI) towards all categories of SEN students (students with speech, hearing or visual problems, students with physical and intellectual disabilities, students from Roma families and students from poor families) had a value less than 2 (the range of IDI was from .62 to 1.67). Based on these results, we can conclude that SEN students in regular schools in Serbia are well accepted by their peers, which is an important prerequisite for the implementation of the inclusive education.

However, although the low value of IDI was obtained it was found out that there were statistically significant differences in the inclusive distance towards certain categories of SEN students. Thus, inclusive distance is the highest towards Roma students and students with physical and intellectual disabilities. On the other hand, inclusive distance is the lowest towards students from poor families and students with speech problems. Similar results were obtained in the previous study (Petrović & Luković, 2012). It is important to note that other studies of social distance towards ethnic groups in Serbia also found the highest distance towards Roma people (e.g. Franceško, Mihić & Kajon, 2005; Kajon, Mihić & Franceško, 2007). This means that special attention should be paid to the 'social participation' of Roma students in inclusive classroom.

This study used the shortened version of the Inclusive distance scale (Petrović, 2010). When it comes to accepting different social relations (with varying degrees of closeness) in a school setting, the least accepted is the friendship relationship, i.e. being best friends with SEN peers, after which comes sitting at the same desk and socialising outside of school. On the other hand, it is highly acceptable for SEN peers to attend the same school and the same class. These results confirm the expectation regarding which relations with SEN peers will be the most and the least accepted and justify the use of the shortened version of the Inclusive Distance Scale.

The results obtained in this study show that inclusive distance towards peers with special educational needs does not change much with age, except towards students from Roma families, where fourth grade students have a higher inclusive distance than those in the eighth grade.

Unlike previous research dealing with attitudes towards SEN students (e.g. Bossaert et al., 2011; Nikolaraizi & de Reybekiel, 2001; Laws & Kelly, 2005; Nowicki, 2006; Siperstein et. al, 2007; Vignes et al., 2009), where it was determined that girls have more positive attitudes towards SEN peers than boys, this study has shown that girls are only more willing to do group assignments with SEN peer than boys.

The Inclusive distance scale has proven to be a useful instrument for investigating the relations towards different categories of SEN students. We already highlighted the fact that the negative attitudes of students towards SEN peers are viewed as one of the key obstacles in successful realization of educational inclusion (e.g. McDougall et al., 2004; Ring & Travers, 2005; Simeonsson et al., 2001; Vignes et al., 2009). Because of this, a more precise insight is needed into the relationship of students with SEN peers, as a starting base for taking specific measures in improving the acceptance of these children. We believe that the implementation of the Inclusive Distance Scale can provide useful information on the current situation in individual schools, and also find a wider use in further research in this field. For example, it would be advisable to check the applicability of the Inclusive distance scale in different educational contexts and on a larger and more representative sample. Furthermore, future studies should take into account both parents' and teachers' perspective on inclusive distance towards SEN students.

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ELEMENTARY AND MIDDLE SCHOOL STUDENTS' PERCEPTIONS OF TESTS

Gökçe Bulgan
Department of Psychological Counseling and Guidance, MEF University (Turkey)

Abstract

Tests continue to have a large place in the educational system. Particularly in the Turkish educational system, students have to take national exams that identify their subsequent schooling and future job opportunities. Test anxiety, which is often experienced by students during test taking, is strongly related to students' academic achievement (Crişan & Copaci, 2015; McDonald, 2001; Owens, Stevenson, Hadwin, & Norgate, 2012). Even though there has been a large body of international research on test anxiety (Bodas & Ollendick, 2005; Lowe & Ang, 2012) studies on this area in the Turkish literature has been limited mostly to high school and university student samples. Considering Turkish students' low achievement in mathematics and science fields in international tests (Eğitim Reformu Girişimi, 2014), it is important to focus on understanding how students perceive tests and how they feel during test taking in order to take effective preventive measures. Therefore, the current study is focused on assessing children's perceptions of tests through content analysis. The sample is consisted of 1143 participants (566 girls and 570 boys) attending 3rd (n = 320), 4th (n = 420), 5th (n = 197), and 6th (n = 206) grade classes in three public schools in Istanbul, Turkey. A brief demographic information form and two open-ended questions were administered to participants at the beginning of a class period. It took approximately 15-minutes for the students to complete the questions. Findings indicated that three main domains emerged from the data. The domains and the categories under each domain were as follows: evaluation (grades, success, learning and development, and intelligence), emotions (excitement, fear and anxiety, happiness, curiosity, mixed feelings, and disappointment), and experiential process (answering questions, studying, difficulty, thinking, having fun, cheating, and silence). Understanding students' perceptions of and experiences in tests and testing early on in their studies will give researchers and practitioners the chance to plan effective applications for treatment and prevention, which would influence students' future achievement and experiences in testing. The study findings could also help teachers and mental health professionals working with elementary and middle school students plan for more effective teaching and counseling programs that take into account students' anxiety levels during tests.

Keywords: *Testing, test anxiety, students, application strategies, psychology in schools.*

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IMPLEMENTATION OF SOCIAL-EMOTIONAL LEARNING PROGRAMS IN JAPANESE SCHOOLS: SCHOOL TEACHERS' PERCEIVED ANCHOR POINTS

Reizo Koizumi
Graduate School of Education, University of Teacher Education Fukuoka (Japan)

Abstract

Although a lot of evidence-based social and emotional learning (SEL) programs have been reported, it is not easy to incorporate them into standard educational practice. This study examined what kind of factors school teachers perceive as anchor points (bases for constructing and developing a system) to implement and sustain SEL programs in schools. Japan is one of the countries in which a national curriculum has been firmly established, and schools have difficulties to take in new contents such as SEL programs into the present curriculum. A questionnaire was administered to 111 Japanese school teachers (elementary schools, junior high schools, and special schools) to investigate their perception about the anchor points for implementing and sustaining SEL programs in schools. Four factors were extracted by exploratory and confirmatory factor analyses of the responses to elements for incorporation: (1) Procedures of Conducting a Program (e.g., trials at one class or one grade level), (2) Necessary Contents and Items for Implementation (e.g., teaching plans, teaching material), (3) Partnership with Families and Local Community (e.g., having partnership with local community), (4) Leadership in Conducting a Program (e.g., leadership of the chief teacher in practical research section). Out of the four factors (2) Necessary Contents and Items for Implementation and (4) Leadership in Conducting a Program were more highly perceived by teachers as influential factors for incorporating SEL programs. Concerning proper curriculum areas for SEL programs, Special Activities area showed the highest evaluation scores among other possible areas such as Moral Education or Integrated Study Class (a kind of project method). This result was clearer for elementary school teachers than for junior high school teachers. Main aims of SEL programs were improving communication competence and interpersonal relationship abilities rather than improving academic achievement, human rights education, or career education. These results indicate that we need to consider more effective anchor points (elements), more proper curriculum areas, and more suitable aims in implementation of SEL programs into standard educational practice.

Keywords: *Social-emotional learning program, schools, anchor point, teacher, implementation.*

1. Introduction and purpose

A lot of evidence-based social and emotional learning (SEL) programs for children have been reported. In spite of those reported effects of SEL programs in academic research on children's behavior and academic achievement, it is a different issue to implement them in regular school settings (Askell-Williams, H., Dix, K. L., Lawson, M. J., & Slee, P. T., 2013). In the ecological perspective both SEL programs and school environments need to be considered.

Japan may be one of the most difficult countries for SEL program implementation, because a national curriculum has been firmly established and schools have difficulties to take in new contents such as SEL programs into the present curriculum. In fact, SEL programs comprised of structured sequential sessions ("structured sequential SEL programming") are not prevalent in Japanese schools. Most SEL programs are offered in a form of segments or parts, and each school constitutes its own SEL curriculum with those program segments ("segment-based SEL programming"). Furthermore those segments need to be emerged into the present curriculum so that it meets the criteria of the national curriculum, that is the curriculum structure, the contents of all school subjects, and even their total numbers of classes of each school subject in a whole school year.

In this circumstance the author focuses on Anchor Point Planting approach for SEL program implementation. Originally an anchor point is defined in an ecological and developmental perspective as an element of the person-in-environment system that facilitates transaction between the person and the environment (Koizumi, 2000). In a system-construction viewpoint an anchor point means bases for

constructing and developing a system. In SEL program implementation in a school-wide setting, for example, 10 anchor points are proposed: introduction procedure (a top-down style or a bottom-up style), school principal's leadership, SEL coordinator (teacher), selecting a proper SEL program, a trial in one class or one grade level, curriculum construction, a section among teachers in charge of SEL, training workshops, classroom and school environment (e.g., posters, slogans), and coordination with parents (Koizumi, 2016). If these anchor points are planted properly, SEL programming is expected to be successfully incorporated into standard educational practice.

The aim of this study was to examine Japanese school teachers' perception of anchor points for implementation and sustaining of SEL programs in Japanese schools, and their evaluation of curriculum areas for the programs as well as the aims of the programs. The obtained results would contribute to the promotion of SEL program implementation in Japan in a more successful manner.

2. Methods

2.1. Participants and procedure

Participants were recruited at some seminars for teaching license renewal during a summer vacation period. Total 111 Japanese school teachers (38 males and 73 females) responded to a questionnaire voluntarily at several recess periods. They were 64 elementary schools teachers, 33 junior high school teachers, 10 high school teachers, and 4 special school teachers. Teachers with teaching experience less than 10 years were 37, those with from 11 to 20 years were 31, and those with more than 21 were 29 among elementary school to high school teachers (N=97). No principals or vice principals were included.

It was explained at the beginning of the first recess period that participation is voluntary and they are not required to sign their names. It was also added that responses were nothing to do with the evaluation of the seminars' credits.

2.2. Material

The questionnaire was composed of three parts: Perception of Anchor Points, Curriculum Areas for SEL Programs, and Aims of SEL Programs. Perception of Anchor Points was measured with 19 candidates as anchor points. These anchor points were based on Koizumi(2016) explaining Anchor Point Planting Approach for SEL program implementation. The question was as follows: How much do you think these items are needed to implement social and emotional learning programs in a school-wide setting. Participants rated each item on an 11-point rating scale (ranging from 0 = does not need at all to 10 = need very much).

Curriculum Areas for SEL Programs were evaluated with five areas: Special Activities, Moral Education, Integrated Study Class (a kind of project method), and a specifically settled subject, and extra curriculum time (morning meetings and end-of-the-day meetings). The question was as follows: Which curriculum areas do you think are proper for social and emotional learning in the school curriculum. Participants rated each item on an 11-point rating scale (ranging from 0 = not proper at all to 10 = proper very much).

Aims of SEL Programs were composed of 5 items: Improving Academic Achievement, Human Rights Education, Career Education, Improving Communication Competence, and Interpersonal Abilities. The question was as follows: What do you think are the aims of SEL programs? Participants rated each item on an 11-point rating scale (ranging from 0 = not proper at all to 10 = proper very much).

3. Results

3.1. Factor analysis of Perception of Anchor Points

The responses to "Perception of Anchor Points" section were analyzed via a factor analysis (maximum likelihood estimation followed by promax rotation). A four-factor resolution was adopted based on Cattell's scree test (see Table 1). The results of confirmatory factor analysis showed satisfactory adoptive indexes (χ^2=36.04, *df*=32, CFI=.986, RMSEA=0.044, AIC=130.83). The four factors were named (1) Procedures of Conducting a Program (e.g., trials at one class or one grade level), (2) Necessary Contents and Items for Implementation (e.g., teaching plans, teaching material), (3) Partnership with Families and Local Community (e.g., having partnership with local community), and (4) Leadership in Conducting a SEL Program (e.g., leadership of a teacher in charge of practical research in the school), respectively.

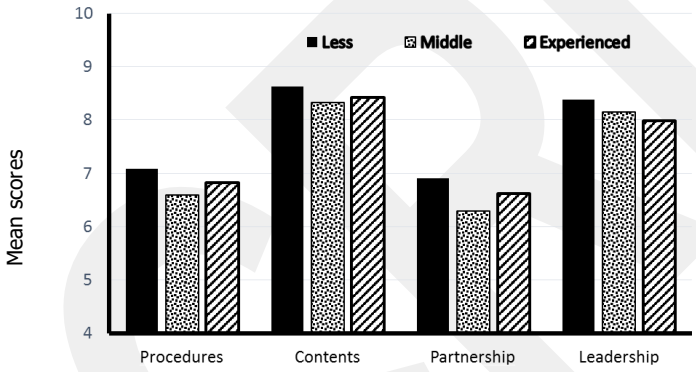
The Cronbach's alphas of the four subscales were .74, .73, .78 and .77, respectively. Four subscale scores were calculated by averaging the responses to each item of the subscales.

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Table 1. Results of a factor analysis.

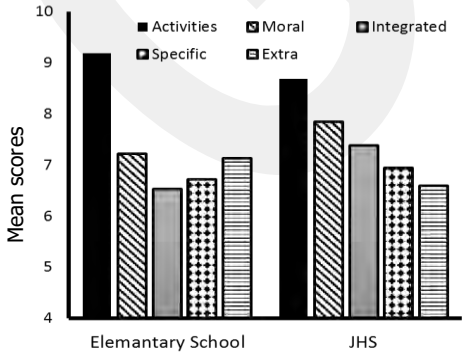
Factor and item	F1	F2	F3	F4	Communarity
F1.Procedures of Conducting a Program					
Trials at one class or one grade level	**.813**	-.169	-.034	.022	.530
Section in charge of SEL in a school	**.775**	.059	.037	-.196	.611
Being selected as a pioneer model school	**.566**	.058	-.019	-.060	.327
Middle-aged leaders playing a role model for implementation	**.501**	.166	-.031	.196	.475
F2.Necessary Contents and Items for Implementation					
Teaching plans and teaching material	-.069	**.769**	-.046	-.028	.504
Selecting a proper and teacher-friendly SEL program	-.049	**.686**	.087	.004	.490
Scheduled training workshops for teachers	.215	**.593**	-.051	.054	.536
F3. Partnership with Parents and Local Community					
Partnership with local community	.110	-.217	**.923**	.080	.850
Partnership with parents	-.158	.213	**.868**	-.092	.777
Model schools in the near areas	.233	.166	**.332**	.105	.404
F4. Leadership in Conducting a Program					
Leadership of the chief teacher in practical research section	-.009	.032	-.108	**.933**	.858
Leadership of the chief teacher in curriculum management	-.111	.012	-.015	**.655**	.396
Leadership of the chief teacher in each grade	.010	-.048	.179	**.636**	.460
Factor contributuion	3.062	2.767	2.573	2.306	
Correlations between factors		.538	.470	.327	
			.396	.378	
				.199	

Figure 1. Perceived anchor points.



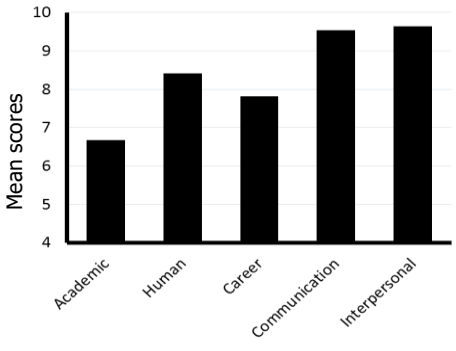
Procedures = Procedures of Conducting a Program
Contents = Necessary Contents and Items for Implementation
Partnership = Partnership with Families and Local Community
Leadership = Leadership in Conducting a Program
Less = Teaching experience less than 10 years
Middle = Teaching experience from 11 to 20 years
Experienced = Teaching experience more than 21 years

Figure 2. Curriculum areas for SEL.



Active = Special Activities
Moral = Moral Education
Integrated = Integrated Study Class
Specific = a specifically settled subject
Extra = extra curriculum time

Figure 3. Aims of SEL.



Academic = Improving academic achievement
Human = Human rights education
Career = Career education
Communication = Improving communication competence
Interpersonal = Interpersonal Relationship abilities.

3.2. ANOVAs of perception and estimation

A three x four (Experience and Factor) factorial analysis of variance was computed with Perception of Anchor Points to examine what kind of factors school teachers perceive as effective anchor points and how it is different among groups with different experience period. Figure 1 shows the mean subscale scores by Experience group and Factor. The Factor main effect was significant ($F(3, 312) = 46.83$, $p < .00$, $\eta_p^2 = .311$). Multiple comparison with Bonferroni correction ($p < .05$) showed that the scores of Necessary Contents and Items for Implementation and those of Leadership in Conducting a Program were higher than those of the other two factors. The other main effect and the interaction were not significant.

A two x five (School and Area) factorial analysis of variance was computed with Curriculum Areas for SEL Programs. This was to examine which areas school teachers estimate as proper area(s) in implementing a SEL program and how it is different between elementary school teachers and junior high school teachers. High school teachers and special education school teachers were not included because the participants were not many in these groups. Figure 2 shows the mean subscale scores by School and Area. The Area main effect was significant ($F(4, 364) = 16.21$, $p < .00$, $\eta_p^2 = .151$), and the School x Area interaction was marginally significant ($F(4, 364) = 2.04$, $p < .10$, $\eta_p^2 = .022$). Analyses of simple main effects and multiple comparison with Bonferroni correction ($p < .05$) showed that special activities scores showed a tendency to be higher than the other four areas among elementary school teachers, but special activities scores were marginally higher than only a specifically settled subject and extra curriculum time (morning sessions and day-end sessions) in junior high school teachers.

A two x five (School and Aim) factorial analyses of variance was computed with Aims of SEL Programs. This was to examine which aims school teachers perceive as proper aim(s) in implementing a SEL program and how it is different between elementary school teachers and junior high school teachers. High school and special education school teachers were not included because the participants in these groups were not many. The Aim main effect was significant ($F(4, 364) = 79.31$, $p < .00$, $\eta_p^2 = .452$). Figure 3 shows the mean scores by Aim. Multiple comparison with Bonferroni correction ($p < .05$) showed that the scores were different from each other except those between Human Rights Education and Career Education, and Improving Communication Competence and Interpersonal Relationship Abilities. The other main effect and the interaction were not significant.

4. Discussion

The results of the factor analysis indicated that school teachers' perception of the anchor points for SEL program implementation were roughly categorized into the four groups: management (Procedures of Conducting a Program), actual conducting (Necessary Contents and Items for Implementation), family & local community (Partnership with Families and Local Community), and leadership (Leadership in Conducting a SEL Program). Items concerning school management such as leading by a board of education, school principal's leadership, and vice principal's leadership were not extracted as a factor.

The participants are classroom teachers and the above results showed that their perception of anchor points is based on their everyday teaching activities. So the two factors, actual conducting and leadership, were evaluated higher than the other two factors (management, family & local community). For successful SEL program implementation some key practices were recommended: e.g., SAFE (sequenced, active, focused, and explicit) (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). In case of "segment-based SEL programming", other facets become key issue, such as teaching plans and teaching material which are supplied by program inventors or organizations in case of "structured sequential SEL programming". Leadership of a chief teacher in curriculum management is also important in "segment-based SEL programming", because how to tailor a SEL program (Weare, 2010) and emerge it into the current curriculum requires this type of efforts.

Curriculum area for SEL was mainly special activities and its aim was to improve students' communication competence and interpersonal relationship abilities. Differences between elementary school teachers and junior high school teachers, as well as differences among the groups with different teaching experience were not obvious. School teachers may have similar perception and estimation for SEL program implementation in the present preliminary stage for SEL.

5. Conclusion

For successful SEL program implementation, Necessary Contents and Items for Implementation (e.g., teaching plans, teaching material) and Leadership in Conducting a SEL Program (e.g., leadership of a teacher in charge of practical research in the school) play an important role as anchor points. School teachers estimate that SEL is properly conducted in Special Activities area in the present Japanese national curriculum, and its main aims are improving communication competence and interpersonal relationship abilities.

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GCRIS

PARENTING STRESS AND ITS INFLUENTIAL FACTORS: AMONG KOSOVAR MOTHERS

Prof. Ass. Zamira Hyseni Duraku, Phd
Department of Psychology, University of Prishtina, Hasan Prishtina, Kosovo

Abstract

Parenting behaviors are considered to be influenced by curtain stressors, deriving from parental or child domain, situational or contextual domains. The main goal of this study is to examine the interplay of children's age and gender with the parenting stress level among Kosovar mothers. The Parenting Stress Scale (PSS; Berry & Jones, 1995) was used to assess parenting related stress among Kosovar mothers. The measuring instrument consists of an online survey distributed to a sample of (N=226) Kosovar mothers. Evaluation of the individual predictors indicated that number of children, child age, and child gender were all significantly associated with high levels of parenting stress, all ps < .05. Parents of more than one child were over 8 times more likely to have high levels of parent stress (OR = 8.120). Conversely, parents of children younger than school age had decreased odds of high parenting stress (OR = .083). Similarly, those who had female children, were less likely to experience high parenting stress (OR = .346) compared to those with children of mixed genders. The Kosovar mothers' parenting stress indicators, are in line with the existing parenting stress triggers found within other population groups, since number of children, child age, and child gender were all significantly associated with high levels of parenting stress.

Keywords*: Parenting stress, mothers, children's age, child gender.*

1. Introduction

The term 'stress' has gained increasing popularity in the behavioral and health sciences the past five decades (Krohne, 2002). It is considered that the life cycle in which people tend to experience increased levels of stress is when they become parents; a time also deemed most demanding in terms of adult life responsibilities. While becoming a parent is recognized as one of the most powerful human experiences, often accompanied by celebratory and relieved emotions, occasionally it is also a time of anxiety and stress (Lawoko & Soares, 2002, *cited in*, Sumpter, 2009).

Curtain stressors, deriving from parental or child, situational or contextual domains influence parenting stress, which encompasses the difficulties in adjusting to the parenting role (Garbarski, 2014). Parenting stress is also defined as a cognitive and emotional reaction to childrearing demands, that are experiences than can be taxing or overwhelming to a parent's resources (Lazarus & Folkman 1984; cited in Krohne, 2002).

According to research findings, a significant level of parenting stress has been found in both, mothers and fathers (Laveee, Sharling & Katz, 1996), however in the overwhelming majority of instances, women are considered the primary caregivers (Sheppard, 2003), thus, frequent research studies have focused on identifying the effects and associated factors related to parenting stress among mothers specifically.

Though some stress is considered a normative and inevitable part of the parenting process, high parenting stress can affect both the mother and the child (Deater-Deckar & Scarr, 1996). Parents who experience parenting stress, are more likely to practice poor parenting behavior; use harsh discipline methods (Sturge-Apple, Sour, & Skibo, 2014); be less involved with their children; and have a negative view of their role as a parent thereby influencing the child's development (Abiding, Jenkin & McGaughey, 1992). The presence of children in the family is found to also affect or lower marital happiness, increase the conflict between husband and wife, (Carlson 2007), add parents' psychological distress (Wolf, Noh, Fisman, & Speechley, 1989) and lower their life-satisfaction (Migram & Atzil, 1988).

Most current research findings, pertaining to the interplay of child characteristics' influence on parenting stress, are related to child developmental disabilities or child behaviors and the social support availability for parents [Baker, 1994; Dumas, Wolf, Fisman, & Culligan, 1991; Kobe & Hammer, 1994; Krauss, 1993; *cited in* Lavee, Sharlin & Kizz 1996). Yet, though parenting stress has been found to be higher in delayed condition families (Baker, Blacher, Crnic, Edelbrock 2002), there is also evidence that the level of parenting stress among parents of children with disabilities and non-disabilities does not differ (Baker, Mclntyre, Blacher, Crinc, Edelbrock, Low, 2003).

Few research studies conducted to date associate the impact of child characteristics, age, gender, and the number of children to the mother's parenting stress. Nevertheless, according to existing field research mothers of sons reported more stress than did mothers of daughters (Scher & Sharabany, 2005). Furthermore, findings of another study conducted by Lavee, Sharlin & Kizz (1996), also indicate that the higher number of children has a direct impact on the level of parenting stress and the parental role (p. 130). Child growth and development is considered to be an indicator of parenting stress as well. At early ages, parental behaviors, stress & depression, have been found to be associated with the health and well-being of their children (England, Sim & NRC, 2009). According to other research findings, for mothers of children under the age of eight (8), parental stress is believed to link with their problems in functioning in essential and routine roles, failure to help the child achieve self-regulation, anger and irritability or enmeshing dependency or both, less consistency in mother-child relationships over time and escalating negative qualities of interaction over time (Radke-Yarrow & Brown, 1993).

However, other studies indicate that parenting daily hassles and major life stress are relatively stable across the preschool period (Crinc, Gaze, Hoffman, 2005) and the effect of stress on parenting has been found to be subject on social support. Mothers with high social support were found to be more positive, and the social support has found to moderate the effect on stress and parental behaviors (Crinc & Booth, 1991). The support from family members, fathers and grandmothers specifically, has also been found to be associated with lower stress among mothers (Burchinal, Follmer, and Bryant, 1996).

While based on previous research findings parenting stress is linked to numerous stressors, including children's characteristics, there is no evidence that these factors interplay with the parenting stress among Kosovar mothers. Therefore, the main goal of this study is to examine the interplay of children's age and gender with the parenting stress level among Kosovar mothers.

2. Method

2.1. Participants/Sample

A summary of the sample descriptives are outlined in Table 1. As shown, the majority of participants were married (94.2%), and nearly three-fourths of the participants held a Master's degree. Participants ranged in age from 20 to 54, with an average of 30.58 (*SD* = 4.48). Further descriptives are shown.

Table 1. Summary of Demographics.

	n	%
Relationship Status		
Married	213	94.2
Divorced	2	0.9
Partnered/Unmarried	6	2.7
Partner Abroad	4	1.8
Widow	1	0.4
Education (Self)		
High School	7	3.1
In College	5	2.2
Bachelor's Degree	23	10.2
Working on Master's	20	8.8
Master's Degree	168	74.3
Working on PhD	3	1.3
Education (Partner)		
High School	45	19.9
In College	33	14.6
Bachelor's Degree	67	29.6
Working on Master's	29	12.8
Master's Degree	44	19.5
Working on PhD	5	2.2
PhD	3	1.3

Table 1. Summary of Demographics (cont.).

	n	%
Employment (Self)		
Employed	153	67.7
Unemployed	71	31.4
Employment (Spouse)		
Employed	211	93.4
Unemployed	14	6.2
Working Status		
Unemployed	71	31.4
8 hr per day	98	43.4
> 8 hr per day	23	10.2
Part Time	34	15.0
Working Status (Spouse)		
Unemployed	13	5.8
8 hr per day	94	41.6
> 8 hr per day	92	40.7
Part Time	27	11.9
Income Sources		
Income from Employment	212	93.8
Not Employed - Using Savings	3	1.3
Financial Support from Family	10	4.4
Financial State Support	1	0.4
Household Composition		
Close Family	140	61.9
Extended Family	86	38.1
Gender (Children)		
Girl(s)	79	35.0
Boy(s)	90	39.8
Boys and Girls	57	25.2
Child Age		
Infant	49	21.7
Toddler	73	32.3
Preschooler	9	4.0
School Age	15	6.6
Adolescents	1	0.4
Mixed Ages	79	35.0
Total	226	100.0
Child Health		
No Diagnosis	220	97.3
Medical Diagnosis	3	1.3
Changes in Behavior	3	1.3
Child Treatment		
No	225	99.6
Yes	1	0.4
Age		
Mean		30.58
Standard Deviation		4.48
Min		20
Max		54
Number of Children		
Mean		1.49
Standard Deviation		.68
Min		1
Max		5

2.2. Procedure

Participants for the current study were recruited through a series of parenting groups for Kosovar mothers. Prior to completing the survey, potential participants were informed of the purpose of the study, time demands, and potential risks and benefits. They were further informed that their responses would remain confidential and that their participation may be revoked at any time. Time to complete the survey was approximately 15-20 minutes.

The Parenting Stress Scale (PSS; Berry & Jones, 1995) was used to assess parenting related stress among Kosovar mothers. The PSS is an 18-item self-report scale that assess both positive and

negative themes of parenthood. Positive themes include emotional benefits and personal development, and negative themes include demands on resources and restrictions. Items are asked on a 5-point scale, ranging from Strongly Disagree to Strongly Agree. Lower scores indicate lower levels of stress, whereas higher scores are indicative of higher stress. For the present study, the scale was forward translated to Albanian. Internal consistency of the scale in the current sample was acceptable ($\alpha = .811$).

2.3. Data Analysis

Prior to conducing primary analyses, preliminary and exploratory analyses were conducted to assess the quality of the obtained data. In particular, missing data was evaluated along with the assumptions of statistical testing. No significant violations were identified. To predict levels of parenting stress, total parenting stress scores were collapsed into High and Low groups based off the central value (mean and median = ~ 63). Using this classification, binary logistic regressions were used to predict the likelihood of having high levels of parenting stress.

3. Results

Prior to conducting the primary regression analyses, preliminary analyses were conducted to assess the bivariate, or simple, relationships between all variables obtained and parenting stress scores. Relationships between categorical variables was assessed using cross tabulations with chi square tests, and continues variables were assessed by levels of parenting stress using tests of difference (i.e., *t*-tests, analysis of variance [ANOVA]). Predictors used in the final regression were based on significant findings in the preliminary analyses as well as those that were theoretically hypothesized to be related to high levels of parenting stress.

A summary of the primary analyses are shown in Table 2. As indicated, the overall model predicting high levels of parenting stress was significant, χ^2 (5) = 16.21, p = .006; Nagelkerke R^2 = .092. Evaluation of the individual predictors indicated that number of children, child age, and child gender were all significantly associated with high levels of parenting stress, all ps < .05. Parents of more than one child were over 8 times more likely to have high levels of parent stress (*OR* = 8.120). Conversely, parents of children younger than school age, had decreased odds of high parenting stress (*OR* = .083). Similarly, those who had female children, were less likely to experience high parenting stress (*OR* = .346) compared to those with children of mixed genders.

Table 2. Binary Logistic Regression Predicting High Levels of Parenting Stress.

	β	*SE*	Wald	*OR*	
Parent Age	.05	.04	1.83	1.049	
Multiple Children	2.09	1.09	3.66	8.120	*
Child Age (School Age or Higher)	-2.48	1.10	5.06	.083	*
Gender			6.83		
Girls (Compared to Mixed Gender)	-1.06	.48	4.96	.346	*
Boys (Compared to Mixed Gender)	-.36	.45	.63	.699	

Note. Model summary: χ^2 (5) = 16.21, p = .006; Nagelkerke R^2 = .092; *OR = Odds Ratio*; * p < .05

4. Conclusion

The Kosovar mothers' parenting stress indicators, are in line with the existing parenting stress triggers found within other population groups, since number of children, child age, and child gender were all significantly associated with high levels of parenting stress. According to research results, parents of more than one child were 8 times more likely to have higher levels of parenting stress, which was also found in a research conducted by Lavee, Sharlin & Kizz (1996), which has also revealed that higher numbers of children have a direct impact on the level of parenting stress and in their parental role (p. 130). Furthermore, the current results show a correlation with the existing literature from which it is derived that mothers of sons reported more stress than did mothers of daughters (Scher & Sharabany, 2005). Also, the current finding, which shows that parents of children younger than school age had decreased odds of high parenting stress, is in line with other research findings as well, through which it hass been found that daily parenting hassles and major life stress are relatively stable across the preschool period (Crinc, Gaze, Hoffman, 2005). Ultimately, considering the structure of the Kosovar family, in which new parents are provided with help from parents/parents in law/and extended family in raising and caring for children, family support can be expected to influence the first stages of development. As mentioned above, family support, specifically from fathers and grandmothers, has been found to also be associated with lower stress levels among mothers (Burchinal, Follmer, and Bryant, 1996).

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PARENT-ADOLESCENT CONFLICT RESOLUTION MODEL TO ENHANCE TIME MANAGEMENT, STUDY HABITS AND ACHIEVEMENT

Fatma Ebru Ikiz[1] (Assoc. Prof.), Feridun Balcı[2], Kemal Balkan[1] (Master Student), & Yunus Havan[2]

[1]Counselling and Guidance, Dokuz Eylul University(Turkey)
[2]Negotiator and Mediator Association (Turkey)

Abstract

Conflicts are natural and inevitable parts of life and people can resolve these conflicts by negotiating face-to-face in a constructive way. Conflict can be amplified or inhibited based on the extent to which family members differ and agree about values and goals. In cooperation with Negotiator and Mediator Association and Dogru Statu Educational Institution, conflict resolution, negotiation and mediation service was provided as a model by counselling service towards the solution of conflicts between parents and adolescents in order to enhance the academic success levels of adolescents. The purpose of this study is to (a) develop a counselling program in order to resolve conflicts between parents and adolescents, and investigate (b) the main concern areas (conflict topics), (c) the conflict topics according to gender, (d) solution processes, (e) the effectiveness of solution processes according to gender, (f) distribution of participants according to reaching to their aim. The study group of the research which utilized qualitative research methods, consisted of 189 adolescents and their conflicted parents, received Parent-Adolescent Conflict Resolution Model (PACREM). PACREM was developed for seven sessions, 45 minutes per session and consisted of structuring the group process, understanding the concept of conflict, negotiation and mediation, its resources, basic 13 needs, training of transforming knowledge and skills to daily life, termination and follow-up study. Results showed that the main concerns of parent and adolescent conflicts were time management problems, studying habits, communication concerns, internet usage, less management of anger, value disagreements, spending less time to study, sibling concerns, freedom needs, differentiations between school choices and vocational goals, respectively. The solution processes mostly emphasized are time management studies and compromise. Consequently, PACREM was successful that among 189 parent-adolescent conflict, 145 of them indicated that they reach their aims by compromise (76.7%), 44 of them indicated that they don't reach their aims and need more negotiation (23.3%).

Keywords: *Conflict resolution, negotiation, mediation, adolescent, counselling.*

1. Introduction

Conflicts are natural and inevitable parts of life and people can resolve these conflicts by negotiating face-to-face in a constructive way. Conflict can be amplified or inhibited based on the extent to which family members differ and agree between needs, values, life and vocational goals generally. Literature emphasized some parameters about parent-child conflicts such as religiously based parameters (Mahoney, 2005); the ecology of parent–child conflicts and marital conflicts (Feldman, Masalha, Derdikman-Eiron, 2010); conflict frequency and internalizing and externalizing adjustment problems (Branje, van Doorn, van der Valk & Meeus, 2009), adolescent behavioral problems and uncertainty (Moed, Gershoff, Eisenberg, Hofer, Losoya, Spinrad, & Liew, 2015); conflict strategies and power differences between parents and children (Recchia, Ross, & Vickar, 2010); adolescent coping strategies and psychopathology symptom severity (Marceau, Zahn-Waxler, Shirtcliff, Schreiber, Hastings, & Klimes-Dougan, 2015).

Theories of socialization propose that children's ability to handle conflicts is learned at home through mechanisms of participation and observation; participating in parent-child conflict and observing the conflicts between parents (Feldman, Masalha, Derdikman-Eiron, 2010). Religious systems of meaning are proposed to influence conflict by promoting which goals and values should sought in family life and the appropriate means to achieve these ends (Mahoney, 2005). The conflict strategies (planning, opposition) and resolutions (standoff, win-loss, compromise) across family subsystems, with an emphasis on power differences between parents and children (Recchia, Ross, & Vickar, 2010); and also adolescent

coping strategies (Marceau, Zahn-Waxler, Shirtcliff, Schreiber, Hastings, & Klimes-Dougan, 2015), as well as parent–child attachment, and family characteristics about intimate relationship satisfaction (consisting of the degree of independence, intimacy, romantic attitude and behaviours, assertive conflict resolution/communication, liberated beliefs of sexual roles and equality of decision-making) (Cruz, 2014) indicated to play key roles both in the extent to which parent–adolescent dyads resolved conflict.

Currently, physiological underpinnings of parent emotional sensitivity and responsiveness during parent–child interactions is accepted as important (Zhang, Cui, Han, & Yan, 2017) and parent marital conflict indicated to have direct effects on youths' internet addiction and both father-child and mother-child attachment were all important mediators (Yang, Zhu, Chen, Song, & Wang, 2016). Dyads with more emotionally responsive mothers who made fewer oppositional comments, more constructive comments by mothers were also more likely to reach a compromise versus a win−loss resolution (Nelson, Boyer, Sang, & Wilson, 2014). Moreover, literature suggested that parents were able to learn and implement mediation techniques (Ross, & Lazinski, 2014).

Negotiation education is a type of training in which knowledge, skills, attitudes, and values that enhance the constructive resolution of conflicts and establish harmonious relationships are taught (Johnson & Johnson, 2006). When the literature is reviewed, it is seen that different education models are implemented at different regions in the world and that it is usual for the content and scope of each of these models differ respectively (Bar-Tal & Rosen, 2009; Harris, 2004). Based on the aforementioned studies and differ from them, present study aims to educate adolescents and parents on how to solve their conflicts and negotiate their problems in order to enhance the academic achievement of adolescents indirectly through rehabilitating communication, internet usage, time management and study habits.

2. Methods

Present research is a qualitative study. Semi structured interview forms were established to collect data. One form includes demographic variables and needs, aims and conflict areas. The other form includes negotiation contract and follow-up.

2.1. Objectives

The purpose of this study is to (a) develop a counselling program in order to help parents and adolescents to resolve their conflicts, (b) investigate the main concern areas (conflict topics), (c) investigate the conflict topics according to gender, (d) solution processes, (e) investigate the effectiveness of solution processes according to gender, (f) distribution of participants according reaching to their aim.

2.2. Design of Model

Parent-Adolescent Conflict Resolution Model (PACREM) was established by the researchers especially for this study through one year before applications. The construction and objectives of the model were given below on Table 1.

Table 1. General Structure and Objectives of Parent-Adolescent Conflict Resolution Model (PACREM).

	Objectives	Activities	Sessions
1. Part: Introducing conflict resolution process and model, understanding the nature of problem from both parties.	1.1. Helping adolescent meet and introduce each other 2. Understanding "conflict" construct and "resolution" processes 3. Understanding the differentiating perceptions, values, aims and needs	Introduction activity, meeting play, Reflecting and Paraphrasing, Empathy	Session 1
	2.1. Identifying "problem" according to adolescent-parent pairs 2. Understanding 13 needs 3. Identifying Negotiation and Mediation process	Establishing rules Introducing conflict resolution models	Session 2
2. Part: Negotiation and mediation	3. Meeting parents and refreshing about model and their roles	Reflecting and Paraphrasing, empathy	Session 3
	4. Negotiation between adolescent and parent pairs	Identifying needs and aims and applying other strategies	Session 4
	5. Managing adolescent- parent pair mediation process	Reflecting feelings, thoughts and solution suggestions	Session 5
3. Part: Termination and follow-up study	6. Termination of counselling	Decision making and life scene re-establishing	Session 6
	7. Follow-up meeting	Searching whether pairs reach to their aims or need more negotiation	Session 7

PACREM was developed for seven sessions, 45 minutes per session and consisted of structuring the group process, understanding the concept of conflict, its resources, solution processes, basic 13 needs, negotiation and mediation processes, training of transforming knowledge and skills to daily life, decision making processes, termination and follow-up study. Activities and its order are all original because preventive counselling approaches and conflict resolution models establishes our source of inspiration and we emphasize cultural dynamics, try to be unique according to family structure and demographic characteristics. Researchers try to help the clients to establish a unique style of time management schedule and study habits; try to help them to better communicate with each other in order to enhance the academic achievement levels of adolescents indirectly.

2.3. Participants

Participants were 189 adolescents and their conflicted parents, all of them were the students of Dogru Statu Educational Institution, Buca, Izmir. All of them were voluntarily participate to the model. 90 of the adolescents (47.6%) were 17 years old, 99 of them (53.4%) were 18 years old. 66 of the adolescents were 11th grade students (junior students), 123 of them were 12th grade students. (senior students). Totally 376 people without mediators joined to the conflict resolution, negotiation and mediation process.

Table 2. The distribution of adolescents according to gender.

Gender	F	%
Girl	91	48.1
Boy	98	51.9
Total	189	

Table 2 identifies the distribution of adolescents according to gender. It is understood that nearly equivalent number of both gender choose conflict resolution, negotiation and mediation process in order to overcome their conflicts with their parents.

Table 3. Parent Adolescent pairs attend to the model.

Pairs	F	%
2	55	29.1
3	88	46.6
4	39	20.6
5	7	3.7
Total	189	

Table 3 represents the distribution of pairs attending to the model. Regarding to pair variables, 55 of adolescents (29.1%) were signed on contract with mediator; 88 of adolescents (46.6%) were signed on contract with their mother and mediator; 39 of adolescents (20.6%) singed on contract with their mother, sibling and mediator; 7 of adolescents (3.7%) were signed on contract with their parents, sibling and mediator in the negotiation process. Group of two were used for time management concerns, often. Group of three, four and five were used for other conflicts.

3. Results

First of all, we determine conflict topics by analyzing interview forms. According to the main concern areas that were identified by both adolescents and their parents are given on Table 4. According to the results, mostly identified conflict concerns were time management problems, studying habits, communication concerns, internet usage, less management of anger, value disagreements, spending less time to study, sibling concerns, freedom needs, differentiations between school choices and vocational objects, respectively.

Table 4. Distribution of conflict topics according to gender and sample comments.

Conflict topics	Girl	Boy	Total	Sample Comments
Time management	53	50	103	I can’t find any time to study, also to have fun. If a day were twenty-eight hours, I could catch everything up.
Studying habits	33	36	69	I can’t focus to study. I haven’t studied until this year. I even don't know how to study.
Communication concerns	19	16	35	My mom and my big brother always shout me. They calls very often. She gives a lot of home responsibilities. When I don’t do things that she want, she doesn’t speak with me.
Internet Usage	18	29	47	I spend so much time on internet and video games. I forget eating, drinking and of course studying. I need to fix this.

Table 4. Distribution of conflict topics according to gender and sample comments (cont.).

Conflict topics	Girl	Boy	Total	Sample Comments
Less management of anger	15	12	27	My mom always talks to me to motivate me but it doesn't work. Then I can't endure and I shout her.
Value disagreements	13	5	18	My mom cooks some vegetables. She forces me to eat all of them but I hate vegetables. She doesn't understand me.
Spending less time to study	12	25	37	This is my last year in high school. I have to go out of this home so I should study. My friends always forces me to hang out.
Sibling concerns	11	4	15	My sister wears my clothes and uses my stuff always. Also, she never does anything for me.
Freedom needs	10	13	23	I want meet with my boyfriend and spending time at some cafes. But my parents never allow.
Differentiations between school choices and vocational objects	2	4	6	I would like to go to vocational high school. My mom says "You have to go to Anatolian high school at least."
Total	186	194	380	

When we investigate the effectiveness of solution processes according to the gender of adolescents, as given on Table 5, the statistically significant effect was found on time management solution for the benefit of adolescents who identified that they reach their aims by having a compromise with their parents on re-establishing time management process.

Table 5. The effectiveness of solution processes according to gender.

Mediation results: Decided solution processes	Reach to aim or not	Gender						
		Girl		Boy				
		n	%	n	%	x	sd	p
Time management	Reach to the aim	51	56	40	40.8	4.383	1	.036*
	Don't reach	40	44	58	59.2			
Negotiation	Reach to the aim	32	35.2	39	39.8	.431	1	.511
	Don't reach	59	64.8	59	60.2			
Compromise	Reach to the aim	14	15.4	26	26.5	3.513	1	.061
	Don't reach	77	84.6	71	73.5			
Promise not to do	Reach to the aim	18	19.8	13	13.3	1.461	1	,227
	Don't reach	73	80.2	85	86.7			
Better communication	Reach to the aim	22	24.2	20	20.4	.388	1	,534
	Don't reach	69	75.8	78	79.6			

After follow up meeting, each adolescent and parent dyads were invited in order to re-evaluate the solution process in which they agreed on to apply: whether each part reach to the intended aim or not. Results showed that negotiation and mediation process was successful that among 189 parent-adolescent conflicts, 145 of them indicated that they reach their aims by compromise (76.7%), 44 of them indicated that they don't reach their aims and need more negotiation (23.3%).

4. Conclusions and Discussion

According to the underlying dynamics about parent-child conflicts and their conflict resolution processes, either attachment (Cruz, 2014), or martial satisfaction (Feldman, et al, 2010; Yang, et al, 2016); either problem behavior of adolescents (Branje, et al, 2009; Moed, et al, 2015; Marceau, et al, 2015) or value discriminations (Mahoney, 2005) considered till today. Present study offers a model to re-establish the relations between adolescents and parents, and contribute to the literature by focusing on developing unique time management and study habits schedules to enhance the school achievement of adolescents and organize their life both in relations with siblings and constructive internet usage. As a result, both boys and girls choose conflict resolution, negotiation and mediation process in order to overcome their conflicts with their parents. Researchers were worked with group of three (adolescent, mother and mediator) mostly that these participants established almost half of the whole participants. The interpretation of this result is that except group of two, adolescents would not like to be together with more than one parent, in order not to be under pressure in the process. Mostly identified conflict concerns were time management problems, studying habits, communication concerns, internet usage, and the solution processes mostly emphasized are time management studies and compromise. Consequently, PACREM was successful that among 189 parent-adolescent conflict, 145 of them indicated that they

reach their aims by compromise. This study is limited to the method that quasi-experimental design or mix method can be used for further studies. This kind of fieldworks is suggested for school counsellors in order to enhance communication and achievement in adolescents. The inclusion of fathers should be supported.

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ARGUMENTATIVE DESIGN AND CLASSROOM DISCUSSION MEDIATION: CREATING A REFLECTIVE ENVIRONMENT

Gabriel Macedo, Nancy Ramírez, & Selma Leitão
Cognitive Psychology, University Federal of Pernambuco (Brazil)

Abstract

In this paper we present an argumentative pedagogical design that has been continuously applied in the university context aiming to enrich learning strategies through the use of debates as a way of teaching canonical content and as a tool for cognitive development. In this work we focus on the role of classroom assistants, university students trained to assist in the classroom activities, as mediational agents to the learning process of students, through: maintaining the argumentative setting active, mediating an argumentative discussion and creating a reflective thinking environment in class. Therefore, we investigate the role of mediating peer discussion in the development of reflective thinking within first year psychology students in a Brazilian university. The mentioned design is based on pragma-dialectical understanding of critical discussion, the reasoned dispute between two parties (protagonists and antagonists) on the merits of a subject, and also on sociocultural approaches to human development (especially those dialogically oriented) stating that human psychological processes are semiotic mediated and must be understood under its context and historicity. We recorded six months of the argumentative classroom natural context and we follow the change of discursive production of eight students small group mediated discussion we reflect on the role of the monitor in promoting these changes. This is a qualitative longitudinal research following the tradition analyzing discourse practices as a tool for investigating psychological processes in context. We found in this specific setting that the role of the assistants is central, once, through mediational practices they help to create a particular classroom scenario oriented to reflective practices: (1) collaborative work, helping to create an environment in which joint work may happen, be it by challenging, questioning or supporting one another, (2) reflective, through a discursive approach students are asked to engage in discursive practices of reviewing, justifying and opposing each other positions, and (3) challenging, through orienting discussions in which the students are challenged to improve the quality their opinions, self-evaluation and motivating to argue (assuming both protagonist and antagonist discursive roles) during classroom activities. With this research we reflect on the central role of assistants as mediational agents in helping to promote a reflective classroom environment and the importance of the classroom design to the investigation of educational settings.

Keywords: *Cognitive Development, Classroom Discussion, Mediation, Argumentative Design, Reflective Thinking.*

1. Introduction

In this paper we explore the work done with students selected as assistants of an Introductory Discipline of the Psychology course (henceforth DIP). This course, for which the assistants were selected, is characterized by its intensive argumentative immersion. We train these assistants aiming to facilitate their familiarization with teaching methodologies and how the DIP is structured through the appropriation of what is going to be taught (curricular content and argumentative skills), the use of the discursive actions of semiotic mediation and gradually improving their participation in how the course is planned week by week. This pedagogical design goal is directed mainly towards the cognitive development and the canonical co-construction of knowledge. Demanding from the assistants not only engaging in the joint work of planning and organizing the DIP as an argumentative scenario but also, understand the role that they play in how the students will interact with each other and with the proposed design.

DIP as an educational tool starts from the basic assumption that argumentation, in its cognitive and discursive dimension is a means of triggering processes of change in points of view, negotiation of ideas, consideration opposing views on controversial topics and the revision of personal and collective opinions. Understanding that their role is central to sustain a proposal that aims to create a school environment that is both reflective (demands review of positions), challenging (which is provoking for

students), and collaborative (that students need to operationalize tasks and discussions in a collaborative way). On top of our theoretical background is the notion that higher mental functions are scaffolded by sign mediation acting upon cognitive and behavior regulation (Vygotsky, 1981).

2. Argumentative Design: Model of Critical Debate

The DIP is an obligatory first year Psychology course curricular component, organized according to thematic cycles of debates (five cycles) on polemical issues. This design is the classroom application based on the Model of Critical Debate (cf., Fuentes, 2009, 2011) adapted by Leitão (2011; cf., 2012).

Argumentation is a socially shared discursive practice (Billig, 1996) related to reasoning processes (Mercier & Sperber, 2011) with high epistemic value (Leitão, 2012) and central to scientific/critical thinking (Jimenéz-Aleixandre & Erduran, 2007), and in the DIP we take it not only as premise to argumentative class activities, but most importantly, to create an educational context highly immersive in argumentative practices.

This model's adaptation makes the DIP a unique design within the Psychology bachelor program, structured around rule-grounded debates on controversial topics in Psychology – the disagreement is guaranteed by the polemic question itself. Thus, we will call DIP/MDC discipline based on the Critical Discussion Model. This design is based on pragma-dialectical understanding of critical discussion (van Eemeren, Grootendorst & Snoeck Henkemans, 2008), the reasoned dispute between two parties (protagonists and antagonists) on the merits of a topic, and also on sociocultural approaches to human development (especially those dialogically oriented) stating that human psychological processes are semiotic mediated and must be understood under its context and historicity (Valsiner & Rosa, 2007).

The DIP/MDC is built around four distinctive phases that meet specific pedagogical objectives: i) *Introduction to the topic to be debated*, in which students are to be familiarized and engaged with the canonical content corresponding to both positions to be debated. ii) *Preparatory workshops for the Critical Debate*, in this phase the use of the argumentation is made more explicit through the production and organization of arguments in favor or against the topic debated considering both their own views on the topic, but also, anticipating and challenging the opposed group's arguments. iii) *Critical Debate*, classroom designed characterized by being an interactive activity, rule-based and structured, between groups with specific roles (proponent, opponent, investigative/judges) which aims at a balanced and rational debate through the evaluation of the quality of the arguments and not only the oratory skills that shows convincing powers of the debaters. iv) *Closure and feedback* at which time students can generally assess what has happened to each cycle and discuss conceptual doubts that have emerged from the debate. In this last moment, the teacher plays the central role of mediation.

In this setting, the assistants have the role of "guardians of the frame" (Perret-Clermont, 2001) to install and maintain the social architecture of the design in other to establish a cooperative space for thinking and learning (Perret-Clermont, 2015). This role implies that the university students are trained to assist in the classroom activities as mediational agents to both keep the design working and to help the class students on construction knowledge using argumentation as a tool to facilitate it. Likewise, the assistants participate in planning the execution of argumentative activities in the classroom that allow the fulfilment of learning objectives and the improvement of reasoning.

3. Classroom Discussion Mediation

Because the DIP is built according to a well-structured pedagogical strategy, it is also necessary to pre-prepare the assistants in advance to meet the demands of the discipline. At the same time, during the semester and to the extent that discussion cycles are planned, specific training on argumentative and curricular content is performed to ensure the process of mediation for the construction of knowledge and cognitive development. In order to comply with classroom argumentation mediation activities, the assistants participate in a preparatory course based mainly on the practice of argumentative skills: a) Difference between common sense and critical sense/reasoned opinion (Carraher, 1983, Leitão, 2011). b) Types of information (Besnard & Hunter, 2008). c) Training in discursive actions – on the argumentative, pragmatic and epistemic levels (Leitão, 2007, 2009) – that favor the emergence of argumentation. d) Argumentative operators (connective) and their functions in discourse. e) Establishment of criteria to evaluate the quality of arguments (criteria based on Govier's proposal, 2010). These contents are subsequently worked in parallel with the curricular content in the DIP / MDC.

During the execution of the DIP / MDC, the mediation role of the assistants is especially relevant in the group discussion activities and the activities designed to prepare the debate (e.g., discussion of texts on facebook, construction of the line of reasoning, negotiation and establishment of evaluation criteria). The assistants' role is based on discursive actions (cf. Leitão, 2009) aiming to regulate

perspective review, information source weighting and immersion in an argumentative space by doing: encouraging point of view production, the use of justifications to support their opinions, anticipating counter-arguments and addressing opposition, encouraging the use of reliable sources and scientific knowledge to substantiate their points of view, reinforcing the critical examination of arguments without the inclusion of questions of value, emotionality, ideologies, and attitudes.

4. Methods

This is a qualitative longitudinal research following the discourse analysis tradition as a tool for investigating psychological processes in context. In this work we focus on the role of classroom assistants, university students trained to assist in the classroom activities, as mediational agents to the learning process of students, through: maintaining the argumentative setting active, mediating an argumentative discussion and creating a reflective thinking environment in class. Therefore, we investigate the role of mediating peer discussion in the development of reflective thinking within first year psychology students in a Brazilian university in context of the DIP/MDC (Leitão, 2012).

The building setting of data *corpus* was generated in the context of implementation of the DIP/MDC. We recorded six months of the argumentative classroom natural context and we follow intentionally (cf., Patton, 2002) the change of discursive production of eight students during small group discussions throughout and we reflect on the role of the monitor in promoting these changes.

The situations chosen for analysis focused on classroom situations that favored collaborative work. In this sense, the two situations chosen were:

i) *Debate preparation workshop*: moment of the DIP/MDC in which systematic activities are carried out to identify, produce and/or evaluate arguments for the construction and conceptual appropriation of students on the curricular content. From these activities, on the psychological level, it is sought to favor the development of cognitive abilities (with focus on the content, e.g., conceptualization) and metacognitive (focusing on the organization of the thought, e.g., revision of perspectives).

ii) *Discussion in social network (facebook)*: this activity seeks to have students discuss with their group colleagues about conceptual aspects related to the topic of debate (e.g., negotiation of texts and arguments that will be used on the day of debate) and aspects Pragmatic and rhetorical (e.g., the strategy to be implemented and the organization of the group).

In order to analyze this extract we use two levels of discursive acts described by Leitão (2009) to understand how the assistants keep the design working both in a pedagogical and argumentative level. This helps us to look for discursive operators that in the 1) epistemic level guides the joint construction of knowledge aiming to learn curricular content and in the 2) argumentative level that discursive actions that creates an opening for two sided discussion, consideration of opposition and demands argument production, evaluation and counter-arguments.

Table 1. Example of Assistant-Students interaction: Guardian of the frame and Joint work.

Assistant participation	**Discursive action analytical indicator**	**Students participation**	**Discursive action analytical indicator**
First round			
I'd like to ask you to address during your readings that you highlight and bring it on Monday concepts that are not clear so we don't miss it in our discussion as it is important for understanding and developing arguments and counter-arguments.	*Epistemic action*: calling for conceptual discussion *Argumentative action*: calling for arguments and counter-arguments	S1-The author says that it life development is boosted by learning, once learning is a human constant. Therefore, socialization plays an important role to understand the possibility of gender identify change. Obs: these arguments are not solid. In case I find theoretical support to this argument I'll share.	Textbook conceptual discussion: gender identity and canonical knowledge in the Author's voice. Group sharing and speech addressed to group discussion. S2-Debate polemic question as part of the knowledge construction.
Second round			
Where is it highlighted in the text S2? In order for you to create a reasoning line, so it can take shape it is also necessary that you think of possible counter-arguments.	*Epistemic level*: action guiding the communicative interaction towards the textbook. *Argumentative level*: calling for the anticipation of counter-arguments.	S2- From the textbook (…) Foucault and Butler, proposes the inexistence of SEX as an established biological fact as determined by its' nature (biologic or genetic). In other words (…) all classification on gender and sexual desire is under social-cultural influence.	Explicit reference to different textbooks. Scientific knowledge articulation: sex, gender and sexuality Articulating different interlocutors and scientific "voices"

Table 1. Example of Assistant-Students interaction: Guardian of the frame and Joint work (cont.).

Assistant participation	Discursive action analytical indicator	Students participation	Discursive action analytical indicator
Third round			
Hey guys, it's time to structure your reasoning line, try to give a look for a general premise common to all that was thought. Anticipate the antagonists' counter-arguments may also be helpful for you.	*Epistemic level*: orienting towards socially sharing knowledge construction *Argumentative level*: taking other position into account while thinking in arguments and counter-arguments	S2: Good morning guys, I think we should take some time to define our reasoning line, things in favor and against, make it look sharp, and decide what the debaters will argue for	Assuming the role guiding the discussion towards arguments and counter-arguments

5. Discussion

This extract is taken from the second debate online discussion where the assistant is supposed to help the students creating a reasoning line producing arguments in favor and against (anticipating the other group's arguments) the issue debated and, also, helping them to justify their positions demanding a critical position on the topic discussed and how they present what they bring as arguments and counter-arguments. The assistants must keep in mind that they need to create an argumentative discussion and also help on the construction of knowledge on the topic to be discussed (gender identity studies in Psychology).

With this table what we present two different features of the assistant's role: 1) through the use of some communicative key points secure that the students will consider both sides of the discussion taking both protagonists and antagonists standpoints into account when creating their debate strategies, and 2) securing that a critical position will be co-constructed by the students towards the information discussed by certifying that the students use warranted information, justified opinion and scientifically structured arguments.

We observe the importance of the assistants as "guardians of the frame" to create a beneficial space for thinking (Perret-Clermont, 2001) when they are the ones ready to take over the guidance of the discussion towards an argumentative goal; mostly interesting is that the students' start doing it to each other as a form of shared knowledge regulation. We must say that there is a tendency of sophistication of justification production and a growth of autonomous consideration of both parties in the discussion featured in the discursive opposition between protagonists and antagonists.

6. Conclusions

We found in this specific setting that the role of the assistants is central, once, through mediational practices they help to create a particular classroom scenario oriented to reflective practices: (1) collaborative work, helping to create an environment in which joint work may happen, be it by challenging, questioning or supporting one another, (2) reflective, though a discursive approach mediate in classroom discussion discursive practices that oriented peer to peer discussion on reviewing, justifying and opposing each other positions, and (3) challenging, through orienting the discussions aiming to improve the quality their opinions based on argumentative practices, self-evaluation and motivating to argue (assuming both protagonist and antagonist discursive roles) during classroom activities. With this research we reflect on the central role of assistants as mediational agents in helping to promote a reflective classroom environment and the importance of the classroom design to the investigation of educational settings.

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PSYCHOEDUCATION ON REPRODUCTIVE HEALTH FOR ADOLESCENT WITH INTELLECTUAL DISABILITY

Frieda Maryam Mangunsong
Faculty of Psychology-Universitas Indonesia (Indonesia)

Abstract

Adolescents with intellectual disability tend to show inappropriate sexual behaviour, such as lack of sexual knowledge and social skills as well as low interpersonal skill (Craig & Lindsay, 2010). Isler, Beytut, Tas, and Conk (2009) state that adolescents with intellectual disability experience sexual desire and sexual needs, even when no one would talk to them about their feelings. On the other side, these adolescents also have a risk to be sexually abused (Browne & McManus, 2010). Isler et al (2009) suggests that parents are the primary sex educators for their children, but many parents are afraid to talk with their children (regardless whether their children are disabled or not) about sex.

Based on this phenomenon, needs assessment were conducted to parents and teachers who accompany their Intellectual Disability adolescents dealing with their reproductive health issues. To achieve this, we employed the Reproductive Health Module that includes characteristics of adolescents with intellectual disability and practical ways to assist adolescents understand how the reproductive health system impact their cognitive, affection and psychomotor functions.

The module was validated using a Focus Group Discussion with a group of parents, teachers, caregivers of adolescents with intellectual disability, and representatives of Non Government Organizations and relevant stakeholders. The module was specifically arranged according to the needs of the participants. The training was conducted using lectures, Questions and Answers, games, and role-plays.

A group of parents, teachers, and caregivers of the Intellectual Disability teens (N = 18), who in everyday life involved and interacted with them were invited to participate in the training. The training was conducted in six sessions, each session lasted for two hours. Two main facilitators and four co-facilitators were involved in each session.

We found this module significantly effective to increase the knowledge and skills of participants. This was reflected in the results of the training that showed a significant difference between the t-test result of pre-training ($t\ (17) = 17.131$, $p = 0.000$) and t-test post-training ($t\ (17) = 27.577$, $p = 0.000$).

As participant outcomes, more special educators, parents, intellectual disability caregivers will need to know the training module of Reproductive Health, with psychoeducation approach for adolescent with Intellectual Disability.

Keywords*: Reproductive Health, Psychoeducation, Intellectual Disability.*

1. Introduction

Craig and Lindsay (2010) stated that since 1980, researchers and medical practitioners have begun to focus on the sexual behaviours of mentally disabled individuals. Hingsburger, Griffiths and Quinsey (in Craig & Lindsay, 2010) suggested that factors, which influence inappropriate sexual behaviours in mentally disabled male individuals consist of limited knowledge of sexual education, low social and interpersonal skills, limited chances of conducting appropriate sexual relationships, and a naïve sexual drive rather than sexual inappropriate or deviant behaviour. Isler, Beytut, Tas and Conk (2009) suggested that mentally disabled adolescents experience sexual drive and needs, even though nobody in their surroundings had ever discussed these feelings with them.

On the other hand, mentally disabled children are very prone towards assault due to their needs for private care and helplessness which resulted in their obedience (Browne & McManus, 2010). Difficulties in languages, speaking or vocabularies, and limited or disturbed cognitive abilities may cause social and emotional isolation, increasing the risks of misusing inhibitors, which may hinder disclosure and detection in mentally disabled sexual offenders. Reproductive health and information regarding avoidance in misuse may decrease these risks; however, mentally disabled children are often neglected

because they are considered as not being able to take advantage of such knowledge. Kopac (2002) suggested two inhibitors in the care of reproductive health of mentally disabled young females, as follow: 1) Lack of empathy and/or care from the healthcare provider; and, 2) Difficulties in finding a main provider that genuinely cares about reproductive healthcare of mentally disabled female individuals.

Children do not possess the capabilities to protect their selves from harassments from older children, adolescents and adults. Also, they have difficulties in communicating their feelings regarding the oppression and assault, especially for mentally disabled adolescents with many limitations compared to normal adolescents. Isler et al. (2009) revealed that teachers, parents and healthcare providers must comprehend these problems and be able to offer assistance. The roles of healthcare providers include encouraging family and carers to provide basic sex education. They may assist in preparing individuals to develop healthy relationships and protect their selves from unhealthy situations.

Isler et al. (2009) stated that parents are the main educators in sex education for their children; however, many parents are afraid of discussing about sex with their children (disabled or not). Parents are often worried due to:

(1) Discussing about sex will encourage experimenting in sexual acts;

(2) Parents may not have enough knowledge to handle answering questions correctly; and,

(3) Their children might know too much or too little regarding sexual behaviours.

Hingsburger, Griffiths and Quinsey (in Craig & Lindsay, 2010) have developed a behavioural program and comprehensive education to increase personal, social and sexual competencies from mentally disabled male individuals with inappropriate behaviours. The assessment and treatment approach focuses on interpersonal relationships and skills.

Furthermore, a study by Asra (2013) showed that psychoeducation for parents of adolescents with mental disability is effective in increasing the knowledge of sexual education in the mentally disabled adolescents. In addition, another study by Sulistyoningrum (2013) revealed that social supports from teachers could significantly influence healthy sexual behaviours (r= 0.514, p=0.002).

The exposure shows the importance of psychoeducation regarding reproductive health for mentally disabled adolescents when the psychoeducation is conducted to teachers and parents of mentally disabled adolescents as companions in caring for their reproductive health and welfare. The current research focused on giving psychoeducation about reproductive health to parents, teachers and carers of mentally disabled adolescents. The purpose of psychoeducation for reproductive health is to give knowledge regarding reproductive health to mentally disabled adolescents so that their sexual behaviours may become appropriate. The question in this research is “Is giving reproductive health psychoeducation to parents, teachers and companions of mentally disabled adolescents effective?”

2. Method

2.1. Research Participants

There was a total of 37 participants in this research, however, only 18 participants were able to complete full psychoeducational activities and submitted complete research instruments. The rest of the participants (N = 19) submitted invalid and unusable data. The 18 respondents consisted of 4 parents, 8 teachers and 6 carers of mentally disabled adolescents. The parents and teachers were from SLBC Asih Budi Jakarta (Asih Budi School of Special Education Jakarta), whereas the carers were from SLBC Tri Asih Jakarta (Tri Asih School of Special Education Jakarta) and Bina Grahita Social Home (PSBG) Ciung Wanara Bogor.

2.2. Measuring Instruments

Psychoeducation Module. This research utilised psychoeducation module which consisted of six sessions. Session 1 – increasing the skills of instructors (carers/assistants/parents) of mentally disabled adolescents; session 2 – me and my body; session 3 – protecting my body; session 4 – me and my environment; session 5 - fight for your right; and session 6 – develop your potential. These modules have been tested on parents, teachers and carers. These modules have also been revised based on test results, so that the contents of these modules were appropriate to the needs of parents, teachers and carers of mentally disabled adolescents.

Knowledge of Reproductive Health. The knowledge regarding reproductive health was measured using a questionnaire composed by the researcher. The questionnaire has been previously tested on parents, teachers and carers. Results from the validity and reliability tests for the questionnaire showed that, out of 29 questions regarding reproductive health, only 20 questions were valid and reliable with an Alpha Cronbach coefficient of 0.757. Hence, the result suggested that the knowledge of reproductive health questionnaire used in this research is valid and reliable.

2.3. Procedures

The research was conducted by firstly collecting data regarding problems that parents, teachers and carers of mentally disabled adolescents face through interviews with parents, teachers and carers of mentally disabled adolescents and Focus Group Discussion (FGD). Interviews were conducted on four parents and four teachers from SLBN 01 Lebak Bulus and Asih Budi, as well as four carers from PSBG Ciung Wanara. FGD was done twice. Participants of the first FGD session consisted of one teacher from SLBN A 01 Lebak Bulus with an experience in composing reproductive health modules for the blind and deaf, two teachers from Asih Budi, four policy makers, and two members of non-governmental organisations (Yayasan Kita dan Buah Hati). Participants of the second FGD session (N = 17) consisted of five teachers from SLB C (SLB C Asih Budi, SLBN C 01 and 06), two parents from SLBN 01, three carers (Tri Asih and PSBG Ciung Wanara), four policy makers (Ministry of Health, Ministry of Social Affairs, and Ponorogo Public Health Office), and three members of non-governmental organisations (YKBH, WPF and UNFA). Based on the data through interviews and FGD, a reproductive health module was composed to be given to parents, teachers and carers of mentally disabled adolescents. The composed module was tested on parents, teachers and carers as a material to perfect the composed module before being used for training purposes by parents, teachers and carers of mentally disabled adolescents.

The reproductive health training was given to parents, teachers and carers of mentally disabled adolescents. For that, the researchers invite parents and teachers of Asih Budi Special Education School Jakarta, as well as carers of mentally disabled adolescents from Tri Asih Special Education School and Ciung Wanara Social Home. The training session began after participants were requested to fill out a questionnaire regarding reproductive health. After the training session was finished, participants were requested to fill out another questionnaire about reproductive health.

2.4. Data Analysis

The initial research of this study consisted of interviews and FGD methods. As for the main research of this study constitutes a quantitative research using a quasi-experimental design. The designs that are used in this research are pre-test and post-test, which involved an intervention given to a group without any control group. The effectivity of the psychoeducation was judged by comparing pre-test and post-test scores on reproductive health knowledge on parents, teachers and carers of mentally disabled adolescents. The obtained data was analysed statistically using *t*-tests. Based on these statistical analysis, the effectivity of the psychoeducation given to parents, teachers and carers of mentally disabled adolescents was evaluated and concluded.

3. Results

The results of the interview on the initial study showed that parents, teachers and carers viewed that mentally disabled adolescents possess a range of skills – from the intelligence aspect, communication skills, and others. Physical developments of mentally disabled adolescents were the same as the physical developments of normal children, with the only exception would be additional trainings and guidance were necessary to help them take care of themselves. They were also attracted to the other gender, which may be expressed openly. The expression might range from expressing their feelings publicly to showing public display of affection to the other gender. Parents and teachers had difficulties in explaining and teaching reproductive health. The right module or media that might have been used to guide mentally disabled adolescents in regards to reproductive health had not been published or produced.

The first FGD resulted in an agreement in regards to the material contents which will be used in the module. The results of the FGD consisted of module materials, media, props used and material deliverance method. The second FGD constituted an agenda with a purpose of perfecting the previous module. The results of the second FGD consisted of pre and post-test judgments that were conducted at the beginning and the end of the training (not during every training session). Module materials must be specified more in detail; however, it was enough to use non-vulgar pictures or dolls as props, and to distribute the training materials to two groups, which consisted of parents with sons and daughters, and teachers with carers of mentally disabled adolescents. Scientific terms were used to label reproductive organs and to clarify which body parts were not allowed to be touched with pictures as props. Explain places to report incidents in case undesirable events happen. Specify behaviours which are allowed and non-allowed. Add materials regarding work that may be done.

Table 1 shows the characteristics of our research participants. As seen on table 1, there were more female participants than male participants. In addition, there were more participants who were university graduates (50%) than senior school graduates (38.9%). Most of the participants were aged above 50 years old (33.4%).

Table 2 shows the descriptive statistics of reproductive health knowledge on parents, teachers and mentally disabled adolescents. The table shows a significant difference between the knowledge of reproductive health before and after being given psychoeducation. The scores in post-test were significantly higher than in pre-test (p<0.01).

Table 1. General Overview of Participants.

Characteristics		Total	Percentage
Sex	Male	4	22,2
	Female	14	77,8
	Total	18	100
Education	Middle School	1	5,6
	Senior School	7	38.9
	Higher Diploma	1	5.6
	Bachelor's	9	50
	Total	18	100
Age	20 – 30	3	16,7
	31 – 40	4	22,2
	41 – 50	5	27,7
	51 – 60	6	33.4
	Total	18	100

Table 2. Statistical Test Results Pre and Post Test.

	N	Mean	Standard Deviation	T	df	Sig (2-tailed)	95 confidence interval of difference	
							Lower	Upper
Pre-Test	18	15.5000	3.83866	17.131	17	.000	13.5911	17.4089
Post-Test	18	17.4444	2.68377	27.577	17	.000	16.1089	18.7791

This study suggests that modules and reproductive health that is composed by the researcher is able significantly influence change in knowledge of parents, teachers and carers of mentally disabled adolescents. This module may be used to facilitate parents, teachers and carers in assisting mentally disabled adolescents so that their behaviour may be desirable. Such assistance is necessary to help these adolescents to protect their selves and not to commit any sexual activity, which may harm others.

4. Discussion

The initial research of this study revealed several problems faced by parents, teachers and carers in caring and assisting mentally disabled adolescents. It is a challenge on its own for parents, teachers and carers in teaching mentally disabled adolescents regarding their reproductive health. Their cognitive limitations make them prone to either committing undesirable acts or being a victim of sexual assault. The assistance of significant others is very important. However, it was seen in this study that parents, teachers and carers did not yet have a reference that could be used as their guides in assisting mentally disabled adolescents. A module that could fulfil and facilitate them in assisting mentally disabled adolescents was needed, particularly in regards to reproductive health.

Results of the research show that composed reproductive health modules might be effective in increasing the knowledge of parents, teachers and carers. Relevant knowledge about reproductive health can facilitate them when assisting mentally disabled adolescents. They can explain and train the behaviours of mentally disabled adolescents in regards to reproductive health, so that mentally disabled adolescents may avoid actions which could harm their selves and others.

The limitation of this research lies on the relatively small amount of research participants. However, participants in this research involved parents, teachers and carers because they most often interact with mentally disabled adolescents. Parents, teachers and carers who joined psychoeducation in this research may become agents of change who will invite other parents, teachers and carers to help mentally disabled adolescents, particularly in facing issues regarding their reproductive health.

Further research that can be done is to use control towards involved participants, and use control groups, so that research results may become more accurate. Post-test measurements is also suggested to be done several times to recognise optimal effects from the training, so that grace period may be known to have another training. Furthermore, other variables are also needed aside from knowledge, such as skills of parents, teachers and carers in assisting mentally disabled adolescents, particularly in regards to

reproductive health. In other words, how parents, teachers and carers practice in explaining and teaching mentally disabled adolescents regarding reproductive health. This is because parents, teachers and carers possess enough knowledge but was not able to apply it optimally.

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INTELLECTUAL HUMILITY AND MORALITY CONCERNING POLITICAL AND SOCIAL ISSUES IN THE UNITED STATES

Megan C. Haggard[1], Wade C. Rowatt[2], & Joseph Leman[2]
[1]*Institute for the Study of Human Flourishing, University of Oklahoma (USA)*
[2]*Department of Psychology & Neuroscience, Baylor University (USA)*

Abstract

Intellectual humility, as owning one's intellectual limitations, can impact how an individual understands and interacts with important political and social issues. Using both general and specific Intellectual Humility measures, a community sample of United States citizens were asked to give their opinion and rate their confidence on the following issues: European debt crisis, payment of collegiate athletes, screening and resettlement of Syrian refugees in the U.S., reduced sentences for non-violent criminals, and laws enforcing public bathroom use by biological sex. In addition, participants also completed the Moral Foundations Questionnaire (Graham et al., 2008), which conceptualizes morality as differing levels of attention to concerns of harm/care, fairness/reciprocity, in-group/loyalty, respect/authority, and purity/sanctity. The results indicate a strong, negative correlation between individuals' confidence in their political or social belief and their intellectual humility concerning it. Participants also drew on distinct moral foundations to make their determinations about the issues, including purity/sanctity and respect/authority for screening and resettlement of Syrian refugees in the U.S., in-group/loyalty and purity/sanctity for payment of collegiate athletes and for reduced sentences for non-violent criminals, and respect/authority for laws enforcing bathroom use by biological sex. Future research concerning how to engage other moral foundations and intellectual humility in political and social issues will be discussed.

Keywords: *Intellectual Humility, Morality, Social Issues, Politics.*

1. Introduction

Recently, teams of philosophers and psychologists have collaborated to create stronger definitions and scales of intellectual humility, which have been found to correlate with pro-social values such as benevolence, gratitude, and empathy (Krumrei-Mancuso, 2016). In particular, the Limitations-Owning Intellectual Humility Scale (Haggard et al., under review), which conceptualizes intellectual humility as owning one's intellectual limitations, feeling comfortable with intellectual limitations, and loving learning, may be important when considering responses to controversial socio-political issues. Individuals who exhibit more intellectual humility may be more open to political and social discourse, more understanding of opposing views, and more willing to seek out useful information related to these topics. While most prior work has focused on connecting intellectual humility to personality trait measures, Hoyle and colleagues (2016) theorize that intellectual humility may differ depending on the topic or issue to which the individual responds or considers. Specific intellectual humility, defined as recognizing that one's view on a specific issue/topic may be fallible in accordance with appropriate evidence, may also then be an important aspect to consider with regards to peoples' confidence in their views about socio-political issues such as immigration and national debt.

In addition, importance assigned to different aspects of morality, including harm/care, fairness/reciprocity, in-group/loyalty, respect/authority, and purity/sanctity, may impact how individuals respond to socio-political issues (Graham et al., 2009). Haidt and colleagues (2007; 2009) assert that political differences in the United States can be accounted for using the Moral Foundations – Political liberals tend to rely primarily on concerns of harm/care and fairness/reciprocity as important to moral decision-making, whereas political conservatives draw on harm/care, fairness/reciprocity, in-group/loyalty, respect/authority, and purity/sanctity equally when making moral decisions.

This understanding of moral psychology allows for a more nuanced view of how individuals conceptualize morality in differing ways, a distinct difference from previous scales. Each of the topics chosen touches more than one of the moral foundations, which can provide needed context for how confidence in view related to these topics is influenced by an individual's moral attunement to the foundations.

2. Methods

Three-hundred twenty-two adults (156 female; Mage = 36.44, SD = 10.66, 77% Caucasian) from the United States completed a survey on Amazon's Mechanical Turk in exchange for $2.00. Participants completed the Limitations-Owning Intellectual Humility Scale (Haggard et al., under review), Specific Intellectual Humility Scale (Hoyle et al., 2016) and confidence indices for five socio-political issues: the European debt crisis, screening and resettlement of Syrian refugees in the U.S., monetary compensation of collegiate athletes, reduced sentences for non-violent criminals, and laws enforcing public bathroom use by biological sex. We examined the correlations between issue confidence, limitations-owning intellectual humility, specific intellectual humility, and the five moral foundations mentioned above (Graham et al., 2011).

2.1. Measures

Limitations-Owning Intellectual Humility Scale (Haggard et al., under review): This scale of intellectual humility has three subscales – owning intellectual limitations, comfort with intellectual limitations, and love of learning. It is composed of 12 items, which individuals responded to on a 9-point Likert scale with only the poles identified as Strongly Disagree and Strongly Agree. It demonstrated good reliability (α = .85).

Specific Intellectual Humility (Hoyle et al., 2016): For each of the five socio-political issues individuals encountered, they answered the short-version of the specific intellectual humility scale. Each question assessed how likely individuals felt they would alter their views on the issues based new information. Responses were recorded using a 5-point Likert scale ranging from Does Not Accurately Describe My Feelings to Accurately Describes My Feelings. It demonstrated strong reliability across all socio-political issues (α = .93-.95).

Moral Foundations Questionnaire (Graham, Haidt, & Nosek, 2008): Participants also completed the Moral Foundations Questionnaire, which consists of 30 questions that tap into individuals' attunement to the five moral foundations: harm/care, fairness/reciprocity, in-group/loyalty, respect/authority, and purity/sanctity. Individuals first respond to how relevant each of the concerns is to their personal moral decisions, then the extent to which these concerns are important. Reliability ranged from adequate to strong in this sample (α = .76-.93).

3. Results

Specific intellectual humility on each of the five issues was positively correlated with each other, which indicates that intellectual humility related to a single issue may be connected to higher intellectual humility overall. However, limitations-owning intellectual humility was negatively related to specific intellectual humility for the issues of reducing prison sentences for non-violent criminal offenders and specific laws enforcing public bathroom use by biological sex. It is also important to note that an individual's confidence in their understanding of a specific issue was strongly negatively correlated to specific intellectual humility regarding the issue.

In addition, the moral foundations displayed unique connections with intellectual humility in each of the issues. Concerns with harm/care and fairness/reciprocity were correlated positively with humility about the European debt crisis, whereas fairness/reciprocity and in-group/loyalty were correlated positively with monetary compensation for collegiate athletes. Moral concerns about respect for authority were positively correlated with intellectual humility on the issues of reduced prison sentences and gendered bathroom use, which was also connected to concerns of in-group/loyalty. There were no connections between any of the moral foundations and the issue of screening and resettlement of Syrian refugees in the United States.

4. Discussion

Understanding how individuals think about their views on socio-political issues is an important aspect for a democracy on both national and international levels. Challenging overconfidence and modeling intellectual humility in regards to contentious issues may help to appreciate others' views and perhaps remedy tense political climates. In addition, appealing to the moral foundations of harm/care, fairness/reciprocity, in-group/loyalty, and respect/authority of individuals may influence how humble and confident they are in their stances. Engaging in dialogues that tap into these moral concerns may help to increase understanding and encourage people to seek common political and social ground (Graham & Haidt, 2007).

Table 1. Bivariate correlations and reliabilities (N = 318).

	1	2	3	4	5	6	α
1. IH – Debt	--						.94
2. IH – Immigrants	.44**	--					.95
3. IH – Athletes	.32**	.42**	--				.94
4. IH – Crime	.33**	.56**	.44**	--			.93
5. IH – Gender	.21**	.50**	.40**	.42**	--		.94
6. Limitations-Owning IH	-.04	-.09	-.09	-.16**	-.13*		.85
7. Confidence (Issue Specific)	-.52**	-.42**	-.50**	-.41**	-.52**	--	--
8. Harm/Care	.16**	.02	.08	-.10	-.03	.20**	.84
9. Fairness/Reciprocity	.19**	.07	.11*	-.01	-.06	.22**	.91
10. In-group/Loyalty	-.05	.01	.12*	.10	.16**	-.08	.93
11. Respect/Authority	-.04	.01	.08	.13*	.15**	-.06	.76
12. Purity/Sanctity	-.11	-.10	.07	.05	.09	-.06	.79

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RELIGIOUS PRACTICES IN RESILIENCE OF INDONESIAN DISASTER SURVIVORS

Julia Suleeman
Faculty of Psychology, Universitas Indonesia (Indonesia)

Abstract

Indonesia experiences lots of disaster such as earthquake, tsunami, eruption as well as other disaster caused by human such as fighting. The ability to live with disasters that can happen anytime characterizes the Indonesian people in areas where disasters often occur. This particular study aims to identify the religious aspects associated with the resilience of the disaster survivors from Aceh (Acehnese ethnic), Bogor (Sundanese ethnic), Mount Lokon (Minahasa's ethnic), Bitung (Malukunese ethnic) and Mount Merapi (Javanese ethnic), with some areas experience natural disaster repetitively. The theoretical framework of resilience is taken from Wagnild's (2009) characteristics (i.e., meaningfulness, perseverance, equanimity, self-reliance, and existential aloneness). Altogether 30 participants from Aceh, 31 from Bogor, 18 from Mt. Lokon, 24 from Bitung and 65 from Mt. Merapi took part in this study, using interviews as the main data collection technique. Results show that there are similarities and also differences in the religious practices across these ethnics. Surrender to God and accept the disaster as part of God's will is common in all participants. For Acehnese and Sundanese, religious rituals should be observed dutifully. For Minahasanese, belief in God and always do good as paying respect to Mount Lokon are often practiced. For Malukunese, disaster brings one closer to God while praying and worshipping God are often practiced. For Javanese, safety rituals, and beliefs in God or supranatural power are important. This study has important implications for the understanding of each culture as well as preparing interventions to help disaster survivors healed from traumatic experience and ready to cope into normal life.

Keywords: *Religious practices, resilience, Indonesia disaster survivors.*

1. Introduction

Compare to neigbouring countries, Indonesia, located in the Pacific ring of fire and Alpide Belt, and between Indoaustralia, Eurasia, and Pacific plates, experiences lots of disaster such as earthquake, tsunami, eruption as well as other disasters caused by human such as flooding, forest fires, and fighting. In the year 2016, the number of natural disasters in Indonesia reached 2,342 cases, an increased of 35% compared to the previous year (www.bbc.com, 2016). Natural disasters occured in the furthest west of Indonesia to the furthest east and in all five biggest islands (Sumatra, Java, Kalimantan, Sulawesi, and Papua) as well in many smaller islands (Bali, West Nusa Tenggara, East Nusa Tenggara, and Maluku islands). Fighting among two or more groups happen easily because Indonesia consists of around 300 ethnic and/or cultural groups with different religion and/or beliefs and tolerance (see for instance, Abuza, 2006; Crouch, 2011). The ability to live with disasters that can happen anytime characterizes the Indonesian people in areas where disasters often occur. Five specific locations with a history of disasters were chosen for this study: Aceh, Bitung, Bogor, Kinilow, and Sleman.

North Aceh in Aceh Special Province witnessed local conflicts between Gerakan Aceh Merdeka (struggling for Aceh national independence) and Indonesian government since in the year 1976. Thousands were killed from both Aceh people and Indonesian army. Following tsunami that hit the area in December 2004 and killed arond 200,000 people, in April 2005 an agreement ended the fighting. However, the trauma of having family members disappeared suddenly is still there (Mundzir, 2013). Bitung is a location in North Sulawesi Province where around 300 families experienced Halmahera conflict in the year 1999 were relocated. Bogor District in West Java Province has several areas that experiences avalanche since hundred of years ago. Kinilow District in North Sulawesi Province experiences aseries of eruption from Mount Lokon since a few hundred years ago. Sleman District in Central Java Province experiences a long history of Mount Merapi's active eruption since centuries ago.

Each of these five areas has specific ethnic group: Acehnese, Sundanese, Malukunese, Minahasanese, and Javanese and each of them has unique cultural characteristics. Delgado (in La

Framboise, Hoyt, Oliver, & Whitbeck, 2006) emphasizes the important role culture plays in the formation of individual's resilience. This is related to what values are important and what should be preserved. To understand the cultural background of the participants for this study, a brief description of the Acehnese, Sundanese, Kinilow and Javanese culture.

People coming from Acehnese ethnical and cultural background grow up with Islam as the religion and their way of life. Aceh area is also called porch of Mecca. At this moment, Aceh Province is the only Indonesian province that applies Syariah law and in fact, Islamic law had been the applied since the 17th century (Hadi, 2010). Each Acehnese cultural norm and practice should be alligned with Islamic teaching and values, taken from Hadits and Koran (Alibasjah, 1994). The need to be independent from Indonesia as a nation has been coloring the development of Aceh province.

Sunda refers to people who live in West Java province. The root of Sunda as a word is *su* which means good and all good characteristics. Sundanese people is believed to have good characteristics which include *cageur* (healthy), *bageur* (good behavior), *bener* (righteous), *singer* (alert), and *pinter* (smart/cunning). Historically, two kingdoms in this area are believed as the oldest kingdoms in Indonesia, dated to more than a thousand years ago.

The families who reside in Bitung were survivors of conflict between two religious groups, Muslim and Christian, happened in Ternate, North Maluku island, November of 1999. Indonesian Central Statistics Bureau noted that this conflict had made Maluku as one of three dangerous areas in Indonesia beside Aceh and Nusa Tenggara (Barron, Kaiser, & Pradhan, 2004). Thousands were killed, and houses were demolished. Families who then reside in Bitung are Christians.

Mount Lokon of 1580 m height is located in Kinilow district, North Sulawesi province and is one of the most active volcano in Indonesia. The pattern of its eruption is quite unique. It can have a series of eruption that happens almost everyday, or at least several times in a month. After that, a bigger eruption would occur. In year 1951, 1991, 2001 it erupted and endangered thousands of people in the surrounding area. Since year 2011, Mount Lokon has never stops erupted and the people in the surrounding area regard this as part of their routine daily life. Part of their belief system perceives *Opo* (or grandfather) Lokon as a figure that would take care of their lives. The people believe that when eruption happens, someone had violated certain moral or ethical rules. In order to prevent more eruption, people should behave morally good and should avoid conflicts with each other. Close to Mount Lokon are two more volcanoes, Tatawiran and Tompaluan. Tatawiran is believed as a wall that protects the people from the damages caused by Mount Lokon's eruptions.

Javanese culture refers to the cultural norms and practices of Javanese people who live in the southern part of Central Java province with the Yogyakarta palace as the center of Javanese culture (Hariyono, 1993). One imporant characteristic of Javanese culture is on the abilty to be infuenced by other cultures while reserving its basic essence (Magnis-Suseno, 1991). Since many centuries ago, Javanese people who value religion and religious beliefs highly have been willing to learn about other religions in addition to the beliefs they have had already even though some may claim that the Javanese people do not learn other religions deeply (Subandrijo, 2000). Hinduism, Buddhism, and Islam have given some influence to the Javanese beliefs (called *Kejawen*) that are practiced now. Harmony with nature and other beings is important and should be emphasized (Magnis-Suseno, 1991). Nature can destroy human lives, but through nature life is blessed or, in other words, human cannot live without nature and the sources it has. Metaphysical is important in *Kejawen*. Javanese people worship supernatural beings because they take care human lives. What happen to nature including earthquake, eruption from volcanoes are part of how nature takes care of human (Geertz, 1960). If people worship supernatural beings regularly, disasters will not bring curse but blessing. Feeling peaceful (called *slamet*) is measured by how people can adjust their lives according to how they live accordingly by worhip regularly (Magnis-Suseno, 1991). Praying for achieving *slamet* are two folded: by praying *nyuwun kawilujengan* (asking for safety, happy and contentment in everyday life) and to be free from all difficulties and disasters (Subandrijo, 2000). In order to do that, paying respect to parnts and other authoritative figurs and elderly is important. *Slametan* is the spesific rite to set this prayer (Mulder, 2001; Subandrijo, 2000). It starts with praying together and ends with eating together. To achieve *slamet*, Javanese people have to be *nrimo* and *rela*, both refer to a state of being patient, not protesting but accepting what will happen willingly without being hurtful or apathic (Magnis-Suseno, 1991; Subandrijo, 2000). With this kind of attitude, difficulties and disasters are bearable.

2. Objectives

This particular study aims to identify the religious aspects associated with the resilience of the disaster survivors from Aceh (Acehnese ethnic), Bogor (Sundanese ethnic), Mount Lokon (Minahasa's ethnic), Bitung (Malukunese ethnic) and Mount Merapi (Javanese ethnic).

3. Methods

3.1. Participants

Participants were representing those living in these five areas: Aceh, Bogor, Bitung Kinilow, and Mount Merapi, Central Java. As participants they were recruited by their respective village leader, usually men. The researcher provided the characteristics needed form each participant such as, living in that specified area in their whole life, never moved to any other plae, at representing five age groups: 15 – 20 years old, 21 – 30 years old, 31 – 40 years old, 41 – 50 years old, and above 50 years old. Other requirements from those expected to become participants are live in the area affected of disaster most of their lives, were present when the disaster striked, and were recommended by their respective village leader.

3.2. Data collection technique and data analysis

Personal interviews or focus group discussion were used to get data from participants. Personal interviews were preferred than focus group discussions but in some cases, participants were reluctant to have individual interaction with the researcher or her research asisstant; rather, they preferred focus group discussion to share their opinion and feeling. This was true for participants from Bitung and Bogor. Questions to dig participants' understanding about resilience when disaster strike were posed. But for this report, only answers related with the religious aspect of their resilience were analyzed by identifying themes relevant to the research question. To protect the participants' identities, only their initials were provided.

4. Results

Results show that there are similarities and also differences in the religious practices across these five cultural groups, as outlined in Table 1 below.

Table 1. Results.

	Aceh (n1 = 30)	**Bitung** (n2 = 12)	**Bogor** (n3 = 17)	**Kinilow** (n1 = 18)	**Merapi** (n1 = 65)
Age range (in years old)	17 – 62	35 – 72	35 – 55	15 – 57	30 – 83
Religion	Islam	Christian	Islam	Christian	Islam and Christian
Religious activities	*Shalat* regularly, celebrate religious feast, fellowship with other survivors through Koran reciting.	Praying, singing, joining prayer meeting, fellowship with other survivors, Bible reading.	*Shalat* regularly, thanking God for being alive, Koran reciting.	Thanking God, praying, worshipping God, working together, and always do good as paying respect to Mount Lokon.	Islam: *shalat*, individual and group Koran reciting. Christian: pray, Bible reading, fellowship with other survivors. Both religion: safety rituals and beliefs in God or supranatural power.
What it meant to engage in religious activities	Reflect the meaning and purpose of life	God wants us to have a strong faith through difficulties	God is in control of human lives	God is in control of human lives; land is sacred.	God is in control of human lives; land is sacred. *nrimo* and *ikhlas* (accepting difficult conditions)
Benefits of doing religious activities	Peaceful, accept God's sovereign in life, a stronger faith.	Peaceful, no fear, a stronger faith, surrender to God	Peaceful, no fear, surrender to God	Peaceful, no fear, surrender to God	Peaceful, no fear, surrender to God
How religious activities relates with resilience	Accept the disaster, life will get better	Accept the disaster as means of having a stronger faith; disaster brings one closer to God	Accept the disaster	Accept the disaster	Accept the disaster
How to accept and interpret disaster	Try to avoid death, or get killed; but when it happened, just accept it.	Try to avoid death, or get killed; but when it happened, no need to get bitter, learn to forgive.	Try to avoid death and danger; but when it happened, just accept it.	Try to avoid danger; but when it happened, just accept it.	Try to avoid danger; but when it happened, just accept it.

For Acehnese and Sundanese, religious rituals should be observed dutifully. Surrender to God and accept the disaster as part of God's will is common in all participants. All participants perceive that living on a specific land that is inherited for generations is important. This means that moving to a safer place to avoid the disasters might not be preferable. For Bitung participants, this created an uneasiness since they were abruptly taken from the places they called home for generations.

Many Aceh participants could receive tsunami more than conflict. Tsunami was perceived as coming from God, something they could not avoid. But conflict was human made that could have been avoided. During conflict era, it was difficult to earn money because they were afraid to go out of the house when Indonesian army was in their village.

5. Discussion

Generally, when individuals are faced with stressors and difficulties, religion and religious activities are considered beneficial (Abu-Raiya & Pargament, 2015). These were exactly done by the participants of this study, regardless of their ethnic and religion background. The attachment between the Javanese and Mount Merapi is recognized since centuries ago (Lavigne, et al, 2008). Ritual to worship supranatural power and spirit of Mount Merapi becomes part of the community's life. For generations, they were taught that Mount Merapi as a source of life rather than a destroyer. Similar attachment to Mount Lokon can be observed among the Minahasanese, and with people in Bogor. For Minahasanese and Javanese, land is sacred; Divine Being in the mountain should be worshipped regularly to avoid the disasters. Mountain eruption is acceptable because the lava makes the soil fertile; if rituals and offering are properly attended, human sacrifices will not be needed. All will be safe no matter what. But the participants admitted that probably a few commit sin(s) and the impact of the disaster will bring damage to all in the area. It is not surprising when the local authority found difficuties to relocate people when a warning sign of avalanche or eruption appears. Fortunately, using religious activities have helped the disaster survivors to accept the difficulties as part of growing in faith, thus trusting God that what would happen is part of God's plan for them. Interestingly, both Christian and Islam believers have grasped this understanding similarly. Or, it can be said that engaging in religious activities is effective regardess of the the type of religion the disaster survivors have.

Engaging in religious activities is considered effective in cases where individuals experience difficulties for quite some period of time. As the participants admitted, they could not easily avoid or escape the difficulties that came instantly, or with only a short notice, whether it was a natural disaster, or other disaster caused by human. Only when they move out to a different and safer place, they could avoid the difficulties. However, they could believe in some other authority beyond their ability to control lives as this helping them to ease the pain. Moreover, the difficulties that were experienced together, not necessarily with other family members, had also build hope that it was not their own individual's mistake for the pain that they carried over. As Walsh (2007) said, engaging in religious activities had helped disaster survivors to be acceptance to the difficulties they were facing. They realized that God is in control, and that nothing happened that is beyond God's control. As human, we just accept whatever happened, especially when unexpected events without any warning happen as tsunami or avalanche. This study has important implications for the understanding of each culture as well as preparing interventions to help disaster survivors healed from traumatic experience and ready to cope into normal life.

6. Conclusion

Religious activities that came out from personal interviews are praying regularly to God, holybook reading, and fellowship with other believers. By doing these activities, the disaster survivors could feel peaceful, and are strengthen to face the difficulties, regardless of the ethnic and religion background they come from. Furthermore, they also believe that God will provide a way out, a solution for the difficulties they face. It can be concluded that engaging in religious activities have helped the disaster survivors to become resilient.

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WHAT BECOMES OF THE SELECTIVELY MUTE? EXPLORING NARRATIVES OF ADOLESCENTS PREVIOUSLY DIAGNOSED WITH SELECTIVE MUTISM

Paschale McCarthy, Ph.D.
Asst. Professor, Psychology Department, The American University of Paris,
5 Ave de la Tour Maubourg, 75007 Paris (France)

Abstract

Selective Mutism is a rare, childhood psychological disorder that is characterized by a total absence of speech in social contexts, despite the child being capable of speech and speaking typically with the family in the home. Research on this disorder remains limited and one of the most striking gaps in the current body of knowledge is the absence of research into the retrospective accounts of experiencing this disorder as a child. In fact, the selectively mute child's own perspective is largely absent from the literature. This research seeks to fill this gap in the literature on selective mutism by affording previously mute children an opportunity to voice their unique, subjective experience of the disorder. A narrative approach was employed to explore the *experience* of mutism in 12 adolescents previously diagnosed and treated for selective mutism as well as its effects on social/ emotional development at another critical period in a child's development- that of adolescence. The research also attempted to give voice to the symptomatology and how it was perceived by the child -how they made sense of their own symptom and how they perceived the months or years of silence. Analysis of the narratives revealed some commonalities across individual experiences in terms of issues of identity construction, fear of change/difference, isolation from peers and a gradual move from self-protection to coping. The use of narrative accounts allows for a unique perspective of what selective mute feels like from the inside and how it might affect early development and self-identification.

Keywords: *Selective mutism, anxiety disorder, social anxiety, narrative approach, social/emotional development.*

1. Introduction

Selective Mutism is a childhood psychological disorder that is characterized by a total absence of speech in social contexts, despite the child being capable of speech and speaking typically in the home, with his/her family. The most recent edition of the Diagnostic Statistical Manual (DSM-V) removed the disorder from a placement in Other Disorder of Infancy, Childhood, and Adolescence and classified selective mutism among the Anxiety Disorders, due to the large similarities with social anxiety and social phobia. Indeed, as selective mutism is etiologically similar to anxiety disorders, it is often comorbid with social anxiety disorder, as children with social anxiety disorder and selective mutism often experience comorbid symptomatology, including but not limited to anxiety (APA, 2013). In common with social anxiety disorder, children with selective mutism typically demonstrate marked fear of scrutiny, humiliation and negative judgement but in the case of selective mutism, the fear seems to be largely crystallized around the act of speaking. A family history of social anxiety is frequently cited in the history (Chapira et al, 2007**).** Traditionally, selective mutism has also been explored as a symptom of the specific anxiety disorders of social phobia, separation anxiety, and posttraumatic stress disorder (Anstendig 1998). Selective mutism is now considered a distinct psychological disorder which manifests in childhood and typically « disappears » in early adolescence. Currently, a diagnosis of selective mutism is established according to the following 5 criteria on the DSM-V (APA 2013): Consistent failure to speak in specific social situations (in which there is an expectation for speaking, e.g. at school) despite speaking in other situations. The disturbance interferes with educational or occupational achievement or with social communication. The duration of the disturbance is at least one month (not limited to the first month of school as many children are reticent or timid initially) The failure to speak is not due to a lack of knowledge of the spoken language required in the social situation. The disturbance is not better accounted for by a communication disorder (e.g., stuttering) and does not occur along with autism spectrum disorder or related disorders.

To date, little research of quality exists on this unusual and debilitating childhood disorder, its course and its treatment, despite a renewed interest over the past decade. Most research involves case studies or small groups. A review of the more recent literature indicates that selective mutism is held to

be a rare disorder which is reported in considerably less than 1% of the population; although recent research suggests that the prevalence is greater and is increasing. A school-based sample yielded a prevalence of .71% (Bergman, Piacentini, & McKracken, 2002, Elizur and Perednick, 2003; Vecchio & Kearney 2005). Research supports the fact that selective mutism will typically afflict more girls than boys with a gender ratio of 1.5: 1 to 2.1 (Black & Uhde, 1995; Kristensen, 2000) .The mean age of onset is 5, although this may be younger as children may go unremarked and undetected in the first or second year of school as many children take time to adapt to the socialisation required at school. Researchers also note that co-morbidity is frequent (disorder such communication disorder, encopresis, depression, oppositional-defiant behaviors have often been cited in cases) with this disorder (Kristensen 2002).

Research also suggests that the children are temperamentally inhibited from infancy (Chavira et al 2007) and their personality has been traditionally described as strong-willed and stubborn (Omdal, 2015). An interesting and consistent finding across research conducted in various countries is that selective mutism is more prevalent in bilingual and immigrant populations ; this has been noted in France, Isreal, Britain, Norway and the United States to name but a few (Moro, 2002, Toppelberg et al 2005 Elizir and Perednick, 2003, Omdal & Galloway 2007). Recently, research focus has been placed on treatment and behavioral management of the disorder. Because the etiology of selective mutism remains unclear, there is disagreement among researchers regarding the most effective treatment approaches but the literature does provide empirical support for individual behavioral intervention of selective mutism (Oerbeck, Johansen, Lundahl, & Kristensen, 2012). Indeed, early intervention is considered a necessity as, if selective mutism is left untreated, the academic, social, and emotional repercussions can be devastating for the individual in adult life Shipon-Blum (2007). In reviewing the literature, perhaps one of the most striking gaps in the current body of knowledge on selective mutism is the absence of research into the retrospective experience of experiencing this disorder as a child. In fact, the researcher Omdal (2015) notes that the selectively mute child's own perspective and information from formerly selectively mute persons is largely absent from the literature. This research seeks to attempt to fill this gap in the literature on selective mutism by affording the previously mute child an opportunity to voice their unique, subjective experience of the disorder.

The children in this research had been the subjects of previous research six years before. All subjects were female, bilingual in English/French and had met all the criteria for diagnosis of Selective Mutism as defined by the DSM at the time of the original research (DSM-IV). Their ages had then ranged from 5 to 11 years and the symptom of mutism had been present from the outset and had lasted longer than 6 months before entering therapy. All children were entirely silent at school and in all social situations, but spoke freely in both languages at home. At that time, the main objective of the research was to examine the potential role of bilingualism in the etiology, prevalence, and expression of selective mutism (McCarthy, 2013). Other objectives included to explore the role of mother tongue in the construction of earliest identity and how a duality in language and identity construction could lead to vulnerability at critical periods in the child's development (such as entering school). The current research pursues the study of this select population and seeks to explore the subjective *experience* of mutism and its effects on social and emotional development at another critical period in a child's development- that of adolescence. As selectively mute children did not express their emotions about the disorder or its treatment during this period of their lives (Omdal and Galloway 2007), the study also had as an objective to give voice to the symptomatology and how it was perceived by the child at the time-how they made sense of their own symptom and how they experienced the months or years of silence they had imposed upon themselves. The *narrative approach* was employed to allow for a more natural conversational type of interview in order to obtain detailed descriptions and reflections on their experiences in their own words.

2. Study

The research employed a method of narrative interviewing (Chase 2003) which involved some semi-structured questions in the format to orient the interviewer, but the principle objective was to encourage the subject to reflect and explore their own experience as freely as possible. The subjects were female 12 adolescents (ages 12-16) previously diagnosed with selective mutism during the period of 2006-2010 (DSM-IV). All subjects had received therapy for selective mutism for differing periods of time within that period (ranging from 5 months to 2 years). The focus of the narrative interviewing was to give voice to the *experience* of selective mutism in terms of their subjective description of being mute in social situations, their social interactions and other people's reactions at that time in their childhood, their self-image, and their perception of their current adjustment. All interview were conducted by the researcher and were conducted in English. Items were grouped under four headings:

- *How the selective mutism began*
- *How it affected relations with others at the time*
- *How it affected self-perception at the time*
- *How they moved to coping*

3. Analysis

The primary aims of the analysis of the data obtained from narrative interviews were to identify common themes across the individual narratives and to draw out the implications for understanding, conceptualizing and treating selective mutism. A qualitative thematic analysis was used in analyzing the transcribed interview and observational data. Analysis of the data allowed for the identification of four common themes which recurred with frequency in the individual narratives,

- Identity and identity construction
- Fear of change/difference
- Isolation/alienation
- Move from self-protection to coping

4. Identity and identity construction

As the subjects were all approaching or in adolescence, it is perhaps not surprising to find questions of identity central to the reflections of the subjects. Adolescence can be characterized by the need to construct a stable identity. All subjects interviewed recognized the strength of their early identity at school as being primarily for their silence. People are often fixed from outside themselves with labels that they must include or resist in their identity definition (Josselson and Harraway, 2012). This early label came to define the child's presence and their relationships to others in social contexts, and the children came to accept it. The fact that the children spoke freely, and often volubly, in their own home with their families may have contributed to the sense of a duality in identities- a public and a private identity. The narratives of the subjects frequently referred to the difficulty of moving from a recognized, early "identity" to an unknown identity. The mute identity (Omdal 2015) may have allowed for passivity but also a recognition and acceptance which was possibly comforting to the child. The following are some examples of the subjects' reflections on identities and labels at the time of their selective mutism.

« I was the silent girl in the class»
« *I was the Shy One… »*
« I don't know how it started but I was known as the girl who couldn't speak »
« I was considered « the baby » of the class and they had to speak for me »
«Even the kids in other classes knew who I was. Everyone called me « the mute » **»**
« I was just the girl who never spoke and that was that. »
« …-they didn't think about it too much-just thought I was a mute. »

5. Fear of Change/Difference

The change in identity from the mute identity to a speaking –and more typical-identity was evoked in all the narratives. Additionally, a strong desire for consistency, predictability and sameness was voiced in many of the narratives. This seemed more far-reaching than the early identity proffered by the mutism and brought forward the child's fears in general. Omdal (2014) noted that a child in a research study who seemed overtly willing to overcome her muteness and speak in social situations communicated a need for sameness through her writing as she observed that she did not want anything to be different, but wanted everything to stay as it was-she " wanted it like it was now" (Omdal, 2014, p. 120). Some reflections included:

« They got used to me being silent so I stayed that way. It was easier for everyone »
« It was just impossible to suddenly be like everyone else-I was used to being different »
« I was afraid of what would happen next -things were ok as they were »
« I guess I was scared…it was just- what would people think-how everyone would stare and judge- I'd never opened my mouth before »
« You can't just go from the Mute to a talker »
« I was terrified when I did talk I'd say the wrong thing »
« …I think their view on me was that I was shy, speechless, probably nice and I didn't want to change that »

6. Isolation/Alienation

Predictably**,** the narratives made frequent reference to feeling isolated from their peers. As the children were silent both in class and outside class (in the playground, at lunch, on class outings), they were often left to themselves. In this manner, they withdrew from the requirement to take part and thereby risk exposure. The symptom of mutism in a young child can provoke strong reactions in the people in their surroundings, and reactions may include avoidance. There was little reference to feeling bullied or victimized in any way, but several narratives made reference to strong and recurring feelings of being outside the group. Such recounting included:

« …mostly they just ignored me and I hung out on my own-just walking around »

« When I think of it now I think it affected how I got along with the other kids-I was usually alone or to the side watching… »

« I took a book to school so I could read at lunch every day-they stopped trying to get me to talk and left me alone and I was fine with that »

7. Move from self-protection to coping

Despite the obstacles, the children gradually began to speak in social situations. Typically, moving through a personal hierarchy of social situations and finding a means to cope with a build-up of social stress enabled them to move forward and cope more effectively in social situations. Overcoming barriers related to speech in more and more situations and towards more and more people, the child gets motivated to give up the mute identity (Omdal 2015). The motivation came from differing sources- new friends, a desire to play, a need to be part of the group-but the move to speech also came from a renewed sense of agency and efficacy. The child often began to see herself as someone not in need of such intense protection or preservation, but as an individual with a certain temperament which was acceptable and tolerable to the outside world. The fear of scrutiny, judgment and ridicule gradually became less intense as the child took the risk of speaking and being heard. This move to coping also affected how the some of the subjects viewed their development. Samples of narratives included:

« When I think of it now I think it affected how I got along with the other kids-I was usually alone or to the side watching and I got tired of it and wanted it to change so I knew I had to break through it »

« I still don't like new situations and meeting new people but now I remind myself not to think about me so much »

« I'm not sure how I started talking but I think it was gradual-it had to do with being so comfortable talking with someone that wasn't my parents or family ».

« I slowly started saying small things –like just a word- to my best friend and to my teacher and nothing changed drastically so I kept on going ».

« I'm still a little shy but I always do try to break through at the start because if not I will create a blockage for myself and it'll just get harder and harder »

« It got easier when I started talking and only thought about what I was saying and forgot the fact they could judge me »

8. Conclusion

The experience of selective mutism as a young child implies a variation in typical early social/emotional development as well as a different and unusual experience of school life and early socialization. In reviewing the narratives of the selectively mute, it would seems clear that this experience of selective mutism typically leaves a residual memory trace which is carried into the critical developmental period of adolescence and later into the adulthood (Omdal 2007). Identity construction is influenced and affected by the dramatic symptom of the mutism and the mute identity that it confers ; the « identity » itself then becomes a powerful obstacle to change and to development. Analysis of the individual narratives would suggest that the child may become trapped within this identity and may find it difficult to construct a more multiple and integrative self-construct or identity. The early, social « self » becomes defined by an absence, the absence of speech, and therefore of many typical forms of social bonding outside the home. A differentiation between a private self and a public self may develop; a public or social self which is governed by feelings of fear and shame and must be kept concealed. The selective mutism becomes a critical point of reference in self-identification and serves as a barrier for change. Equally, the narratives reveal some commonalities of temperament and experience in that a desire for predictability and consistency is strongly expressed as well as a concomitant desire for lack of change. The narratives revealed a temperamental and behavioral inhibition frequently associated with anxiety, but the anxiety-provoking situation is the everyday possibility of judgment, ridicule or humiliation and the fear is of self-exposure. This leads to a developing sense of the self as requiring protection and preservation from the outer world-the world outside the security of the family-and, ultimately, a requirement to remain concealed and silent when exposed to this outer world. The need or necessity for silence in social situations may allow the situation to be endured, but the cost to the child in terms of isolation from peers and a sense of alienation from the world around them is great and the narratives indicate that this weighed heavily on the children as they went through this experience. The move to change is necessarily slow and gradual and requires sensitive guidance. Analysis of the narratives suggests the need to work slowly and gradually through different social situations is appreciated by the subjects and confidence in the self as a speaker and a communicator is gained little by little. In tandem, the acceptance of the self as a « shy » or inhibited individual in novel social settings is also gained gradually and a self-awareness is used as a means to support and encourage the self, rather than to inhibit and criticise the self. This, in turn, allows for more openness and readiness in communication with others.

Selective mutism remains a complex, intriguing and little understood disorder. The lack of quality research on this population may create misunderstandings and poor awareness of the disorder and its implications for children who experience it. Few studies to date have explored the personal understanding and experience of the selectively mute. By exploring the subjective narratives of those who have experienced the disorder first-hand, we may come closer to an understanding of the many factors which may precipitate and maintain the disorder during the crucial years of early socialization. While the population in this study is small, the personal accounts of the subjects allow a unique perspective on what it feels like to be selectively mute and how this experience might affect development, self-concept and self-identification in later years. Future research should aim to further understand the underlying temperament, emotions and experiences which may give rise to the development and maintenance of selective mutism in young children.

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SUICIDES OF YOUNG GUARANI / KAIOWÁ OF MATO GROSSO DO SUL, BRAZIL

Sonia Grubits
Psychology Department, Universidade Católica Dom Bosco (Brazil)

Abstract

According to the latest data from the National Health Foundation - FUNASA (2008), the state of Mato Grosso do Sul in Brazil, has 40,245 Guarani / Kaiowá. According to FUNASA, there were 410 suicides in that nation from 2000 to August 2008. In the first half of 2011, 15 cases were reported. Most suicides were men and 65% were 15 to 29 years old. Their most common method is hanging. This work presents the conclusions of studies related to the problem causes, emphasizes the conception of bewitchment, with implications on the concepts of life and death instincts, collective unconscious and suggestion. The compulsory confinement process to which this group has been submitted, which includes the overpopulation of their villages and the imposition of new beliefs, values and leaderships unfamiliar to their culture are mentioned as causal factors. Beyond the urgent revision of the government's policy regarding indigenous land, we suggest the ransom of their ethnic identity as a way to affirm and reorganize the Guarani/Kaiowá group.

Keywords: *Indigenous youth, Suicides, Culture.*

1. Introduction

Suicide is currently considered one of the major public health problems in the world. It is the second or third cause of deaths among teenagers and young adults, depending on age groups. Some minority ethnic groups as native populations, among whom are the Guarani-Kaiowá of Mato Grosso do Sul, Brazil, have alarmingly high suicide rates. The analysis of the data and accounts obtained demonstrate that the causes of native suicides are a combination of psychological, social, cultural, and environmental aspects.

Presently, circa 800,000 natives from various ethnic groups, each with its sociocultural, political, and economic peculiarities and specificities, live in the different regions of Brazil. The state of Mato Grosso do Sul shelters the second largest indigenous population, with 73,000 individuals divided in eight ethnic groups: Guarani-Kaiowá, Terena, Kadwéu, Atikum, Ofaié, Kinikinaw and Guató, who dwell in 75 villages located in 29 town boundaries (Brazil, 2010). The Guarani-Kaiowá, who are concentrated in the southern region of the state, are the most numerous (64%). They are closely linked and live in the same villages and/or territories (Mura, 2007).

In this state, the city of Dourados shelters most natives: 12,716 individuals from three ethnic groups, two of which are prominent (Guarani and Kaiowá),[1] who live almost only in the Jaguapirú and Bororó villages, two of the 4 hamlets, with Panambizinho and Porto Cambira, situated within the city boundaries, which have their own specificities and present many threats to mental health. The 3.539 ha Indigenous Reserve of Dourados includes the Bororó (6.077 people) and Jaguapirú (6.219 people) villages, i.e. 12.296 people, who explicitly lack land, reason why it is considered the most populous reserve of Brazil (Vick, 2010). Such high demographic density implies a considerable worsening of the psychosocial and ethnocultural tensions within the villages, with direct impacts on mental health, more particularly if we take the mythological and traditional particularities of these natives into account. Main problems include high rates of violence, homicides, suicides, and alcohol and/or drug abuse.

[1]Despite some controversy, the denomination Guarani-Kaiowá was chosen in this work because it is the way local indigenous call themselves, mainly because they are children of a Kaiowá father and a Guarani mother, or vice versa.

Vick (2010) reports that the suicide mortality rates in the *Distrito Sanitário Especial Indígena* (DSEI - Special Indigenous Health District), Mato Grosso do Sul, in the state of Mato Grosso do Sul, and in Brazil are 59.4/100.000 (2010); 8.1/100.000 (2007) and 4.7/100.,000 (2007), respectively. These data reveal appalling disparities between native and non-native suicides.

The Guarani ethnic group is subdivided into Guarani-Ñandeva, Guarani-Kaiowá and Guarani-Mbya, who have different languages, customs, ritual practices, political and social organization, religious guidance, as well as a specific way to interpret the reality they experience and to interact according to situations in their history and topicality (Almeida & Mura, 2003).

Southern Mato Grosso do Sul shelters 99.5% of the Guarani-Kaiowá, who live in 33 villages. The others (0.5%) dwell in more than 12 villages in the northern region of the state. Almeida and Mura (2009) assert that the Guarani [...] call the places they occupy *tekoha*, so that this term designates a physical place – land, woods, fields, waters, animals, plants, remedies, etc. – where the *teko*, the Guarani "way of being" (way of life), takes place. Each *tekoha* is led by a chief, "captain" or "cacique" who is responsible for the village. In each village, a *Conselho Local de Saúde Indígena* (Local Council for Indigenous Health), formed by indigenous counselors, gathers internally to discuss issues directly or indirectly linked to health. Its resolutions are later presented to the *Conselho Distrital de Saúde Indígena* (Regional Indigenous Health Council).

Guarani engage in assíduous and frequent religious activities. These include canticles, prayers and dances that, depending on the place, situation or circumstances, may occur daily. They begin at nightfall and last many hours. Rituals are conducted by a *ñanderu*, who is a prayer, a *pajés* and a spiritual leader. They may address either daily life needs, as harvesting, the absence or excess of rainfall, etc., or physical and spiritual diseases.

2. Suicide Research

According to World Health Organization (2013), every year, almost one million people die from suicide. These figures roughly correspond to a "global" mortality rate of 16 per 100.000, or one death every 40 seconds. In the last 45 years suicide rates have increased by 60% in the world. Suicide is among the three leading causes of death among those aged 15-44 years in some countries, and the second leading cause of death in the 10-24 years group; these figures do not include suicide attempts which can be up to 20 times more frequent than suicide. Mental disorders (particularly depression and alcohol use disorders) are a major risk factor for suicide in Europe and North America; however, in Asian countries impulsiveness plays an important role. Suicide is complex, since it involves psychological, social, biological, cultural and environmental factors.

3. Objective

The objective of this study is to review different current research on high suicide rates among adolescents and young adults in the Guarani communities of Mato Grosso do Sul, Brazil. We also sought to understand indigenous behavior, its social, psychological and cultural causes.

4. Methods

We identify previous studies with indigenous groups, publications on the causes of suicides among adolescents and young adults of the Guarani ethnic group in Mato Grosso do Sul.

5. Different studies

As stated by a report published by The Guardian (2013), the Guarani-Kaiowá are plagued by one of the highest suicide rates in the world since they are 34 times more likely to kill themselves than "Brazil's national average". Indigenous peoples worldwide often suffer far higher rates of suicide than the majority population. Many other indigenous communities in the world, including the Tiwi Islanders in Australia, Khanty herders in Siberia and Inuits in Greenland, have unusually high suicide rates.

Darrault-Harris & Grubits (2000) adds that suicide is only common in given ethnic groups who contacted the colonizing culture and that peaks are usually followed by declines. In fact, the Terena, a large tribe living in the same Reserve of Dourados as the Guarani-Kaiowá, present insignificant suicide rates. Even among the Guarani, no suicides have been reported in the Mbya group.

The indigenous population of the state of Mato Grosso do Sul, especially the Guarani-Kaiowá, presents high rates of suicide, homicides, (physical and sexual) violence, use and abuse of alcohol and other drugs, in addition to problems related to mental health (Vick, 2008).

According to Vick (2010), in eleven years (since 2000), deaths by suicide (mostly hanging) and homicides (especially white arms) represent a mean of 20.12% of general mortality. Within yearly variations, in 2008, "mortality from external causes" was responsible for close to 29% of the total mortality in the DSEI-MS. As for the suicide cases that occurred within the DSEI-MS, whose territory shelters eight ethnic groups, it is worth stressing that, except for two, all the other suicides, i.e. 506 cases, where committed by Guarani-Kaiowá.

Brand (1997) considers that the main problem is the progressive destructuration of the extended families, due to what he calls "confinement", which prevents the Guarani from moving throughout their wide historical territory, since the State obliges them to remain in small reserves. In the eleven years analyzed, suicides are more frequent among males than females (68% *vs* 32%). As for age, one observes that youth present the highest rates. In fact, the population most at risk is aged 10-29 (83%), followed by people over 30 years (17%) (Brasil, 2010). Curiously, the youngest people to commit suicide are females. Deeper studies are thus needed to understand why female suicides concern younger people than male suicides. As for the methods used to commit suicide, 96.6% of the cases between 2000 and 2010 recurred to mechanical constriction, hanging or similar methods, and 3.37% ingested toxic substances (Vick, 2010).

6. Conclusions

The explanatory models on indigenous suicide show a set of factors associated to the fact that their culture is immersed in social conditions intimately linked their quality of life, which depends on land ownership and their capacity to sustain their society. Two are undoubtedly stressed: emotion management and the limited perspectives of models of life allowing full realization (well-being) (Coloma, 2010).

The cultural aspects involve mainly their belief in magic spells, i.e., rituals performed to harm somebody or even lead them to death. The victim of a spell gets spiritually weakened and vulnerable to suicide. In addition to witchcraft, their accounts state two syndromes linked to culture already mentioned in this work, which cause great sorrow to their spiritual soul: deep grief and burning passion.

The natives also give some explanations about suicide and identify a few risk factors as: behavior changes characterized by sorrow, crestfallenness, shame, aggressiveness, isolation, rebellion, school dropout; external interferences as alcohol and drug abuse, domestic (sexual, physical and psychological) violence; spiritual aspects (spells and rituals); death of loved ones and discrimination.

The field research allowed *in loco* observations and the application of tools to obtain information, making it possible to investigate psychosociocultural aspects related to the suicides of Guarani-Kaiowá. Analyzing the environmental, family, psychological, social, and cultural contexts in which the participants in this study are inserted revealed the existence of risk factors similar to those mentioned in the Suicide Prevention Manual (for the general population), published by the Ministry of Health (2006), as isolation, family conflicts, alcoholism, depression (or deep sorrow as the Guarani-Kaiowá call it), previous suicide attempts, low self-esteem, family history of suicide, recent, important loss and, to a lesser extent, feelings of guilt.

Such studies on suicide are always difficult to handle, in cultural terms, because of communication limitations (language spoken) and of different cultural meanings. On the other hand, due to cosmogonic reasons, the population avoids to comment such events, especially when they took place in their family. The phenomenon of suicide among naive studied here is perceived as complex and multicausal. Our analyses were intended not only to describe the problem by deepening the dimension and interpretation of its characteristics, but also to identify aspects that help discuss and design a model of prevention, intervention and postvention for societies "outside" the modern Western world.

However, we may conclude that the contents observed, reported and later analyzed in this research help us better comprehend the phenomenon of suicide among Guarani-Kaiowá. Contributions range from the knowledge on the environmental, social, family, psychological and cultural contexts to the identification of risk factors and possible causes. These will lead indigenous health professionals to adopt new action strategies when faced with suicides. They can, for instance, try to collaborate with young natives to discover their potentials, values, gifts and vocations, so that they feel able to handle their own emotions and lives in their personal, family, and social spheres. They can assist them on their way to autonomy and protagonism by stimulating them, valuing their culture, awaking their self-esteem, and contributing to their quest for alternative paths leading to better, more dignified and less dependent lives, where alcohol, drugs and suicide are not the only options.

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IS SHAME EMOTION STRONGER THAN GUILT EMOTION IN JAVANESE AND BUGINESE CULTURES?

Guritnaningsih Santoso, Lucia R. M. Royanto, & Julia Suleeman
Faculty of Psychology, Universitas Indonesia (Indonesia)

Abstract

Shame and guilt emotion are two emotions that evolved through the process of moral values socialization in a culture. Collective societies like Asia, including Indonesia, are well known with shame-based culture. On the contrary, individualistic societies like Western countries are well known with guilt-based culture. In shame-based culture, people will experience shame emotion more than guilt emotion when they are in a public place. There are two ethnic groups in Indonesia among others that are well known in instiling shame emotion to control one's behavior. Shame culture in Javanese ethnic group is known as *isin*, and in Buginese ethnic group it's known as *siri*. However, there is a tendency to shift towards individualistic characteristic or orientation in many communities in Indonesia. Some phenomenon showed that the role of shame emotion to regulate and encourage moral behavior has weaken. This study aims to investigate the tendency of young generations from both cultures to have higher shame emotion than guilt emotion. This study also intend to explore the process of moral values socialization in instilling shame and guilt emotions among young generations in Javanese and Buginese ethnic groups. This research used *mixed methods*. For quantitative approach, 45 youths from Javanese culture (M_{age} = 19.70) and 45 youths from Buginese culture (M_{age} = 19.31) were involved. Shame and guilt emotions were evaluated by TOSCA 3 and followed by interviews on their cultural values socialization. For qualitative study, data were collected through in-depth interview with four people from Javanese culture, and four people from Buginese culture as well. Result shows that shame emotion of young generation in both cultures is weaker than guilt emotions. For both ethnic groups, all actions that raise shame emotion will also considered as actions which may bring guilt emotion. In Javanese ethnic group, shame emotions is socialized through language and manners, whereas for Buginese ethnic group, shame emotion is socialized through advices.

Keywords: *Buginese ethnic group, Javanese ethnic group, guilt emotion, shame emotion, young generation.*

1. Introduction

Indonesia is one of Asian countries that still have strong rules and moral values. In the community there are many mores, customs and traditions applied, therefore the behavior of the people is still based on them. However, because of the modernization and also the flow of the information, some of the traditions are getting weaker.

According to Index Mundi (2016), Indonesia consists of over 300 ethnic groups and the ethnic groups are very diverse, thus they have different characteristics. Two unique ethnic groups that will be examined in this research are Javanese and Buginese. Javanese ethnic group lives in Java island, the most populated island in Indonesia, while the Buginese ethnic group lives in southern Celebes (Sulawesi) island. Both ethnic groups are considered different, because Javanese people are soft spoken and more reserve, while Buginese people are more tempestuous. Jones (2007) who examined Indonesian people compared with Australian people based on Hofstede's theory, found that Indonesian people, including Javanese and Buginese tend to be high in power distance and low in individualism. This makes the Australians tend to be more informal in hierarchy and more individually motivated.

According to another study, Asian people and Western people are also different in their perception on shame and guilt. A study by Fessler (2004) showed that the Americans in the Southern California showed guilt in guiding their behavior, while the Bengkulu ethnic group in Indonesia tended to show more shame. Why this happens? The Indonesian people values harmonious life, thus it is important for them to be seen good. External sanction from the community is threatening for them, thus to become obedient seems important for the Asian people. If they make a mistake, they will feel ashamed because

their behavior is influenced by the perception of others. In contract with the Asian people, for the Westerner, conscience plays as an important role in guiding their behavior.

As a collective community, Asian people are experiencing more shame emotions than guilt emotions, especially when they are in the public area (Su, 2011). The development of shame and guilt feeling is related with cultural values in the society (Wallbott & Scherer, 1995). Matsumoto and Juang (2004) described that culture can develop different emotions because of the difference of the reality. Every culture has different needs and purposes, therefore it gives different experiences for the people.

Javanese and Buginese people are brought up with shame culture and it can be understood from the words they use. For Javanese people, shame or *isin* is also important because it guides the behavior of the people. For not to be ashamed, one should live in agreement with each other. Somebody must do a certain behavior in order not to be ashamed. For Javanese people it is important to live in harmony, at peace, no conflict or disagreement, no arguments (Bratawijaya, 1997). Therefore, a good communication and cooperation, good consensus and respect to each other are important to avoid somebody from misunderstanding. In life, we must build social relationship in order to achieve a neat social system. In this case, Javanese people has some important values such as *aja dumeh* or be modest, *tepa salira* or respect each other, *sluman slumun slamet* or avoid conflicts. For Javanese people, everything is perceived from others' perception. Thus before we behave we must consider what others' think about what we will do. All those values are learned through the poems in traditional songs and it is called *pupuh.* The values are also passed through *wayang* or puppet show that performed in the community. Many *letters* consist of conventional values and character in the Javanese community. The values are also learned from advices given by the elders.

In Buginese people the word *siri'* or shame is important since it directs their behavior. Actually there are five main values to guide the behavior of the Buginese, i.e. honest (*lempu'),* intellectual, decent (*astinajang),* strong will (*getteng),* and strive, but the core of the culture is *siri',* or shame, shyness, pride or disgrace (Matthes, 1874, in Rahim, 1985). A person who has no s*iri'* is a person without social identity and honor. This is strengthened by Said (2008) that *siri'* makes the Buginese believe that ' it is better to die than to be ashamed in front of other people'. This value, according to Rahim (1985) is inherited from generation to generation by the older people, and it is passed by giving advice (*pappangaja'*) and also by giving will *(paseng*). Both of the values can be found in some old books of the Buginese.

Both Javanese and Buginese are brought up more with shame emotions rather than guilt emotions. Both emotions stem from moral emotion, i.e. an emotion that connecting moral knowledge and moral decision and moral behavior (Tangney, Stuewig & Mashek, 2007). Moral emotion is important to. understand a person whether she/he is compliant with the moral standard in the environment. Therefore, shame emotion and guilt emotion can prevent a person to behave contradicting with the values in the community or morally wrong. When somebody lives in a community, she/he will try to keep off from behaviors that can make her/him ashamed, by complying the rules and standards in the community. For example, a girl who lives in a kampong, tries not to go home late, because the people around her will think that she is a bad girl.

The experience of the person in the community is important in the development of shame emotion and guilt emotion (Tangney & Fischer, 1995). In Indonesian context, socialization of the moral emotion, in this case shame emotion and guilt emotion motivate the person to obey the moral standard and also the norms in the community. The person in the community tries to internalize the social standard and to control the behavior so that it can be appropriate and consistent with the norms in the society (Baumeister, Stillwell, & Heatherthon 1994; Bedford, 2004; Parker, 1998, in Su, 2011). The socialization by parents is important for adolescents to develop their moral motivation (Buchmann & Malti, 2009).

2. Objectives

This study aims to investigate the differences in shame emotion and guilt emotion in young generation in Javanese and Buginese ethnic group. The other objective of this study is to examine the socialization process of both emotions.

3. Methods

This study used mixed method, a combination of quantitative and qualitative approach. The qualitative data is expected to interpret the results from quantitative data (Creswell, 2003). For the quantitative approach 45 late adolescence participants from Javanese and 45 late adolescence participants Buginese ethnic groups were involved. The Javanese participants were live in Yogyakarta and Buginese participants were live in Makassar in their entire life. For the qualitative approach 4 participants from each ethnic groups were involved. The study is carried out in Yogyakarta in Java island, and in Makassar

city in Sulawesi island. The questionnaires used Indonesian language, however in the data collection, translators were involved to help the researcher, because some of the participants were not fluent with Indonesian language.

The instrument of this study is a revision of TOSCA 3 (Test of Self-Conscious Affect 3). This instrument measures individual experience in feeling pride, shame, and guilt emotion, however for this study shame and guilt emotion only will be used. TOSCA 3 revised had been used before by Barlian (2013) and it was adapted, based on some focused group discussions. Open ended questions interviews are used to get the qualitative data and its objective is to get some information on participants' knowledge, experiences and socialization process related to cultural and moral values.

4. Results

The explanation of result of this study will be divided into two parts, the quantitative result and the qualitative result. From the statistical analysis, the differences between shame and guilt emotions among the adolescence in the two cultures are significant. The difference of shame emotion and guilt emotion in the Javanese adolescence is significant, with guilt emotion is higher compared to shame emotion ($t = 13.895$, $p < .005$). The difference of shame emotion and guilt emotion in the Buginese adolescence is also significant, with guilt emotion is higher compared to shame emotion ($t = 10.385$, $p < .005$). This can be seen in the table 1 below.

Table 1. The Difference between Shame Emotion and Guilt Emotion in Javanese and Buginese Culture.

Culture	Emotion	N	Mean	Mean Difference	SD	t	df	Sig
Javanese	Shame Emotion	45	30.33	20.38	9.84	13.895	44	.000**
	Guilt Emotion	45	50.71					
Buginese	Shame Emotion	45	35.16	16.80	10.85	10.385	44	.000**
	Guilt Emotion	45	51.96					

** $p<0.05$ significant

For the qualitative results, it can be concluded that there are some similarities in the emerging of shame and guilt emotions. Others' perception plays as an important role for the adolescents in Javanese and Buginese shame and guilt emotion.

The Javanese people are brought up in a close knit family and the behavior of the family members are organized by the system inside the family. For the Javanese adolescents, shame emotion arises when their personal matters or past experiences are known by others, doing mistakes, get punishment, and when he/she cannot describe some things about his/her religion. This shame emotion most often is expressed by trying to face the problem, asking for apology, tell others about his/her feeling, or take it as a humor. For Javanese adolescents, guilt emotion comes up when people assume that he/she is close minded. When he/she is in the guilt emotion, he/she will try to find a solution, doing contemplation and praying, or stop doing bad behavior.

For the Buginese adolescents, shame emotion occurs in response to something about family matters, impolite behavior, blamed by others, meeting new people, opposite sex, or meeting people who can give evaluation on him/her, and also when he/she is going to apologize. Whereas guilt emotion emerges because of his/her own behaviors, like when somebody makes mistakes, lies and false promises. This guilt emotion is sometimes, not always expressed by asking for apology. However in Buginese culture, admitting his/her mistakes are not easy and it makes them feel haunted and regretful. He/she feels ashamed when he/she has to apologize because he/she is not accustomed to do so.

In Javanese culture, children are taught to feel ashamed from the beginning, especially when they interacting with older people or in a new environment. They are also expected to live harmoniously in the community.The moral values are socialized to the children by using Javanese language, and by giving advices on how to behave in their social environment. Parents and teachers are encouraging the children to make an apology, and teaching some common rules and manners in schools and society. For example, girls are not allowed to go home late, girls must behave gracefully, using proper Javanese language (*kromo inggil*), and adaptable.

Siri' for Buginese culture is the core of the culture and it is developed since the beginning. Unlike the old generations of the Buginese that learn *siri'* from the teachers who teach them to read Al Quran (*Guru Mengaji*) and traditional person in the community called *Panritta'*, the adolescents now only get the understanding about *siri'* from parents and school. As a consequence, the comprehension about *siri* in adolscents are not as comprehensive as the previous generations.

5. Discussion

Tangney (2003) explained that shame emotion could be elicited with or without others' presence. It could appear on the thoughts of how other people perceived his/her behavior. Most likely, in Buginese culture, shame emotion can prevent a person to apologize, because he/she considers about others perception. Thus, the expression of guilt emotion is not always shown by asking for apology.

According to Tangney (1995) shame emotion is focused on self, and guilt emotion is focused on behavior. *Isin* in Javanese culture and *siri'* in Buginese culture, are both trigger someone to feel ashamed when he/she does an inappropriate behavior, or when he/she makes a mistake. This means, in both Javanese and Buginese cultures, guilt emotion is taught implicitly inaccordance with shame emotion. Thus it is natural if somebody feel ashamed, he/she will ask for an apology, which according to Tangney (1995), apology is a behavior shown when somebody feels guilty.

Buginese culture teach people not to feel ashamed in front of others. This pressure makes them feel guilty when they feel ashamed, and this motivates them to apologize. According to Ausubel (1995), this condition can be considered as a *moral shame*, which makes somebody is afraid of other people's negative perspective about oneself. Therefore, shame emotion that associated with guilt emotion is one of *moral shame* example. This findings assumed that shame in Buginese had linked with *moral shame,* however further study is still needed to explain this.

As Eisenberg, Cumberland and Spinrad (1998) stated that the socialization about emotion in the family will help the children to have a more understanding on emotion. Because *siri'* and *isin* are only introduced and developed in the family and school, thus it is understandable that shame emotion is not as strong as before. However, the parents are still giving advices to the children, and the children have the opportunity to observe the behavior of their elders.

6. Conclusion

From the above explanation, it can be concluded that shame emotion still has strong root in the Javanese and Buginese community and it is adopted by the adolescents. However, from the statistical analysis, guilt emotion outweighs shame emotion. One of the reason is because inappropriate bahavior not only brings out shame emotion but also guilt emotion. It can be seen from their tendency to ask apologize. Another explanation is adolescents are still studying at school, where they are more exposed with Western values through books, internet and friendships with outer world which may reduce their shame values, and finally reduce adolescent's shame emotion.

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GCRIS

SUBJECTIVE WELL-BEING AMONG TEACHERS WITH AND WITHOUT VICTIMIZATION EXPERIENCES

Kristi Kõiv
Institute of Education, University of Tartu (Estonia)

Abstract

The focus of this study was on the subjective well-being among teachers with and without workplace victimizations experiences, taking into consideration the measurement of self-reported frequency of victimization in school context. Two-stage cluster sampling was used to select representative sample of teachers (N=578; M=46.8; SD=11.3) into four studygroups: teachers as victims of adult bullying (N=64), teachers as victims students bullying (N=76), teachers as victims of adults and students bullying (N=75), and non-victims of bullying (N=363). Teachers' well-being in terms of satisfaction with different domains of life (achievement, close relationships, him/herself) was measured across victim categories. It was revealed that teachers as targets of students and adults bullying reported less satisfaction with him/herself than teachers with no bullying experiences in school settings. Regarding satisfaction with present achievement, teachers without victimization experiences and teachers with adult bullying victimization experiences were significantly more positive than teachers reported being bullied by students and by students and adults. Also, it was revealed that the lowest scores were found among teachers as victims of students and adults bullying compared with other study groups in the area of satisfaction with close relationships. Findings reflect the role of wellbeing domains in the vulnerability to victimization of teachers by students and adults.

Keywords: *Subjective wellbeing, bullying, teachers' victimization, school settings.*

1. Introduction

In school settings (Smith, 2011) and workplace (Coyne, 2011) bullying is defined as a form of aggression, involving repetition and an imbalance of power. Bullying bahavior at school can be exhibited by students toward other students, by teachers toward students, by school principals or colleagues toward teachers, but also teachers can be bullied by colleagues, principals, students or parents. For example, teacher-targeted bullying focuses on the impact of the behavior on the victims' well-being: "aggression directed against those who should be sources of learners' social, cognitive and emotional well-being and who should ensure their safety" (De Wet, 2010a, p. 190).

Prevalence of teacher victimization have looked from the perspective of victimization of teachers by students (e. g. De Wet, 2012; Kauppi, Pörhölä, 2012; Ozkilic, & Kartal, 2012) and victimization of teachers by multiple individuals (e. g. Benefield, 2004; Kõiv, 2011; NASUWT, 2012) at school settings. Although the prevalence of victimization of teachers by their learners, principals and colleagues has been recognized as an increasing problem during last decade (Kõiv, 2015; NASUWT, 2012), the negative impact of this problem had rarely been researched during last decade.

Research on teacher victimization by students showed that teachers' stress levels increased due to their victimization (Ozkilic & Kartal, 2012); and teaches as victims subjectively expressed the tendency to withdrew emotionally and psychologically from professional and social activities in schools to avoid further mistreatment (De Wet, 2010a). Qualitative (De Wet, 2010b; 2012) and quantitative (Blasé, Blasé, & Du, 2008) researches have showed that consequences to teachers of long-term bullying by their principals were serious and harmful psychological, emotional, physical and work-related effects to themselves, their work, and their families. Studies in the area of teacher victimization in workplace have indicated effects of teachers' victimization to their intention to leave from school (Djurkovic, McCormack, & Casimir, 2008); and associations between pervasive bullying and violent acts with teachers' psychological strain (Fox, & Stallworth, 2010). Also, the findings of qualitative research (Fahie, & Devine, 2014; De Vos, & Kristein, 2015; de Wet, 2011; 2014) revealed that workplace bullying experiences may elicit various negative physical, psychological, social, and economic effects on teachers

as victims. However, while previous studies looked at teacher victimization's negative impact from one of the sources, such as co-teachers, students, or principals, it did not consider bullying of teachers from multiple sources.

To the best of our knowledge, the multiple impact of students and adults bullying on teachers' well-being has not been investigated in previous research, and the only source dealing with the impact of students violence on teachers' well-being is Dzuka and Dalbert's (2007) study revealing that the more experiences of violence the teachers reported, the lower was their well-being – the less satisfied they were with life, the less often they experienced positive effect, the more often they experienced negative effect, and also the less strongly they endorsed a personal belief in a just world. It was also introduced that all aspects of teachers' subjective well-being (life satisfaction, positive effect, and negative affect) predicted the quality of school life and teachers burnout (Cenkseven-Önder, & Sari, 2009.

For this study, subjective well-being refers to cognitive and affective evaluations that individuals make about the quality of their own life, and is reflected in terms of their satisfaction with different domains of life that contribute to their overall life satisfaction or domain satisfactions when people evaluate major life domains (e.g. physical and mental health, achievement, social relationships) (Diener, 2006). Teacher well-being is defined as an individual sense of personal professional fulfillment, satisfaction, purposefulness and happiness, constructed in a collaborative process with colleagues and students (Soini, Pyhältö, & Pietarinen, 2010). Also, recent studies are underpinned by an understanding of well-being of teachers as socially influenced with the focus to contribute more deeply to the interpersonal relationships as a factor of teacher well-being (Acton, & Glasgow, 2015). However, an under-researched area to examine relationship between teachers' domain-specific well-being and their multi-target victimization experiences in school settings emerges the new research question: Whether or not teachers who are victimized by students and adults at school can be distinguished by the level of self-reported satisfactions with different domains of life. The research question is actual in the light of previous (Kidger et al., 2016) collations – teachers' well-being general scores were lower than among working population; and during last decade (NASWUT, 2011) teachers as multi-target victims of bullying in school settings continue to suffer under different personal and work-related (e.g. loss of confidence, dread the thought of going to work, damages to family life) problems.

The aim of the study was to describe differences between three domains of subjective wellbeing among teachers with and without victimization experiences taking into account three victim statuses of teachers (victims of adults, victims of students, and victims of students and adult).

It was hypothesized that teachers as targets of students and/or adults bullying will report less satisfaction with their achievement, relations with close relations and him/herself than teachers with no bullying experiences in school settings.

2. Method

2.1. Study design and sample

Survey estimates are derived from a stratified, multi-stage cluster sample: in the first stage randomly selected three schools were selected from all 15 separate districts from Estonia representing basic schools and gymnasiums in rural and urban areas, whereby the ratio of different types of schools among sample schools corresponds to the whole-country representation; in the second stage of sampling all teachers from in each school were selected; and during stage three teachers with and without workplace victimization experiences was identified.

In total, 578 teachers participated, representing a 48.2% response rate in relation to the online format individually sent questionnaire submitted by the author. From whole sample 511 females (88.4%) and 67 males (11.6%). The mean age of the subjects was 46.8 years (SD=11.3) with youngest subject was 21 years old and the oldest was 69 years old. The average number of years in the teaching profession for the participants was 12.7 years (SD=4.72).

2.2. Instruments

A self-reported instrument for the measurement of prevalence of different types of bullying of teachers by students and by adults (other teachers, principals, parents and maintenance staff) in school context was developed (Kõiv, 2011) consisting of 15 items which described acts harming or hurting the target person. Participants indicated how often they had been bullied at school during last six month using a 3-point scale (never, often, very often) after a definition of bullying. A person was considered a victim when he/she reported being bullied "often" or "very often" at least one out of a list of bullying items. Participants were classified into one of four categories: "victims of student bullying", "victims of adult bullying", or "victims of student/adult bullying", whereby the last victim-category consisted subjects who had been both victims of student bullying and victims of adult bullying. The fourth type of classification

of teachers was "non-victims" – teachers without victimization experiences, when they self-reported being bullied "never" across all 15 questionnaire items in the school context related with their relations with pupils and adults.

The subjective well-being was measured by the questionnaire providing respondents to self-assess their satisfaction in three key domains of life: satisfaction with present achievement, relations with close individuals and with him/herself ("How satisfied are you with ___?"). Respondents express their satisfaction or dissatisfaction with each item on a five-point Likert scale: 1 = very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, and 5 = very satisfied.

3. Results

From whole sample (N=578) 13.1% (N=76) of teachers were placed into the victims of student bullying category, 11.1% (N=64) were placed in the victims of adult bullying category, 12.9% (N=75) formed the victims of student/adult bullying category, and 62.8% (N=363) were placed into the non-victims category.

The mean scores on the three domains of the subjective wellbeing measure were displayed across victim-categories (victims of student bullying, victims of adult bullying, victims of students/adults bullying, and non-victims) in the Table 1, whereby the higher scores were associated with an increased tendency to demonstrate higher satisfaction. Using paired *t*-test, several differences across four study groups were significant (Table 2), whereby statistically significant differences are referred to below.

Table 1. Mean scores for victim-categories on the three domains of subjective wellbeing scales.

Satisfaction area	Victims of student bullying (N=76)		Victims of adult bullying (N=64)		Victims of student/adult bullying (N=75)		Non-victims (N=363)	
	M	SD	M	SD	M	SD	M	SD
Satisfaction with present achievement	2.71	0.75	2.93	0.51	2.65	0.82	2.98	0.38
Satisfaction with relations with close individuals	3.15	0.76	3.17	0.76	2.74	0.93	3.24	0.70
Satisfaction with him/herself	2.63	0.86	2.51	0.87	2.43	0.81	2.82	0.65

Table 2. Comparison of means of three scales of subjective wellbeing across four groups of teachers (t-values).

Satisfaction area	*t*-value					
	Victims of students bullying vs. victims of adults bullying	Victims of students bullying vs. victims of students and adults bullying	Victims of students bullying vs. non-victims	Victims of adults bullying vs. victims of students and adults bullying	Victims of adults bullying vs. non- victims	Victims of students and adults bullying vs. non-victims
Satisfaction with present achievement	2.07**	1.04	2.89**	1.75*	0.61	3.23**
Satisfaction with relations with close individuals	0.14	1.82*	0.95	1.91*	0.69	1.77*
Satisfaction with him/herself	0.77	1.44	1.89*	0.58	2.70**	3.90**

*p < .05. **p < .01

In all instances, teachers as victims of student and adult bullying tended to rate themselves less favourably in terms of their satisfaction with preset achievement, him/herself and close relationships. Significant differences were found between victims of student and adult bullying and all other study groups in the area of satisfaction with close relationships: Teachers as victims of student and adult bullying experiences rate themselves less favorably compared with groups of non-victims, victims of student and adult bullying.

Regarding to self-evaluations in the area of satisfaction with present achievement, teachers without victimization experiences and teachers with adults bullying victimization experiences had significantly higher scores than teachers reporting being bullied by students and by students/adults. Also, it was found that higher evaluation scores in the area of satisfaction with him/herself were revealed among teachers without victimization experiences compared with teachers as single and multi-target victims of bullying in school context.

4. Conclusion

To further understand how the subjective well-being of teachers as victims of bullying compares to the well-being of teachers without victimization experiences, we explored their self-reports of satisfaction with different domains of life. Research results showed that the differences between teachers as single and multi-target victims of student and adult bullying and teachers without victimization experiences in school emerge in three key domains of life: Satisfaction with achievements, close relationships, and themselves.

It was hypothesized that teachers as targets of students and/or adults bullying will report less satisfaction with their achievement, relations with close relations and him/herself than teachers with no bullying experiences in school settings. The hypothesis was partly confirmed. Namely, it was revealed that teachers as targets of students and/or adults bullying expressed lower satisfaction with him/herself compared with non-victims of bullying. Consequently, we found that teachers, who were single and multi-target victims of children's and adults' bullying in school were more likely to exhibit low self-satisfaction compared with those who had no victimization experiences in school context. These findings reflect the role of low satisfactions with him/herself in the vulnerability to victimization of teachers by students and adults. Finding is parallel with previous studies exploring: retrospectively lower general self-esteem among victimized teachers (Schäfer et al., 2004); differences between workplace bullying victims, observes of bullying and employees with no bullying experiences, whereby targets and observes expressed lower feelings of self-confidence (Vartia, 2001); and differences between teachers with and without workplace bullying experiences with prevalence of insecure – avoidant, anxious/ambivalent, current attachment among victimized teachers (Kõiv, 2016).

Present research results showed that teachers as targets of bullying were not a homogeneous group, dividing them into three subgroups with scoring differently across the two domains of satisfaction with life. Research hypothesis was not supported in the area of teachers' satisfaction with present achievement revealing that non-targets of bullying and targets of adult bullying scored higher on the satisfaction with present achievement than targets of students bullying and multi-targets of bullying by students and adults. Also, it was revealed that in the domain of satisfaction with close relationships teachers as single targets of victimization were similar with non-victims: Victims of adult bullying, victims of learners bullying and non-victims had relatively high scores (no statistically significant differences) on satisfaction with close relations compared with multi-targets of student and adult bullying.

Thus, present results about differences between three samples of workplace victims and non-victims among teachers supported the notion that differences in domain-specific well-being exist between teachers as single and multi-targets of workplace bullying and non-victims. We may speculate that teachers' satisfaction with self may play a greater role in workplace victimization than teachers' satisfaction with current achievement and close relations. However, whether such a domain-specific wellbeing is a cause or consequence of victimization remains unclear in the present study, and there is a need for future research in this area.

The role of the improvement of teachers' well-being – especially in the area of self-satisfactions, helps us to understand the ways for prevention of teachers' victimization by students and adults, because of that improvement of teachers' well-being relates to enhanced academic achievement and reduces risk of problem behavior among young people they teach (e.g. Sisask et al., 2014).

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TREATMENT OF OCCUPATIONAL MENTAL HEALTH IN FRANCE AND SWEDEN – BETWEEN THE STRESS MODELS AND PSYCHODYNAMICS OF WORK

Jonathan Benelbaz
PhD student; Psychologist; Laboratoire de Psychologie Clinique, Psychopathologie, Psychanalyse (PCPP - EA4056), Université Paris Descartes - Sorbonne Paris Cité (France)

Abstract

In terms of theory and practice related to occupational mental health, Sweden and France are two countries with different theoretical traditions. While Sweden is highly influenced by physiological stress-models, the scientific tradition in France is influenced by "psychodynamics of work". This research aims to compare theory and practice related to occupational mental health in France and Sweden. As a first step, the study explores the different theoretical frameworks in both countries. In the next step, the research bridges theory and practice. It includes semi-structured interviews of 42 staff-members, working in institutions specialized in prevention and treatment of disorders related to occupational settings. The interviews aim to elucidate methods recognized as most efficient among the staff members. The study also enables comparison on methods between countries and explores gaps and similarities between theory and practice in treatment of occupational mental health

Keywords: *Comparative study, occupational health, psychodynamics of work, rehabilitation, stress.*

1. Introduction

Sweden and France are countries playing an important role in the area of occupational mental health. In France, there is a scientific tradition influenced by psychodynamics of work, which has a theoretical framework related to comprehensive sociology, phenomenology, French ergonomics and psychoanalysis (Dejours, 1997; Dejours 2014). This tradition is influencing the methods used by local actors involved in the treatment of occupational health issues. On the other hand, in Sweden, the theoretical framework is mainly colored by physiological- and psychosocial stress models, in connection to research and rehabilitation methods related to occupational health (Theorell, 2006). Furthermore, the practice of the rehabilitation methods in Sweden is characterized by a tradition of prevention and rehabilitation in terms of workers' security. Also, improvement of the health in working life is one of the main objectives reported by The Swedish National Institute of Public Health (Linell, Richardson & Wamala, 2013). There is a presence of several institutions, such as the Institute of Stressmedecin in Gothenburg region and Stockholm Stress Center in the capital city, which are dedicated to research and rehabilitation of disorders related to occupational settings. There is also is a dedication to the development of several tools related to diagnostic of symptoms related to stress and burn-out, such as the Karolinska Exhaution Disorder Scale (Sabonchi, Perski & Grossi, 2012) and Karolinska Exhaustion Scale (Besèr et al. 2014). Finally, Scandinavia is one of the geographical regions publishing the vast majority of articles related to occupational stress (François, 2002).

However, more research is needed in the rea of psychotherapeutic methods allowing rehabilitating patients on sick leave due to Common Mental Disorders – CMD (Vingård, 2015). With regards to people on sick leave for CMD, there are few studies comparing different psychotherapeutic approaches and the current research does not seem to recommend a specific psychotherapeutic method (Sandahl et al., 2011, Vingård, 2015). There are some studies on CBT-interventions with the aim to promote return to work. However, while these studies do not aim to compare between psychodynamic and CBT approach, the main conclusions are that beneficial interventions should be focused on work-situations and involve the employer in the rehabilitation process (Lagerveld & al., 2012).

1.1. Objective

This qualitative study was designed to shed light on the work methods applied by practitioners, influenced by different countries, theoretical frameworks and involved in rehabilitation work of patients suffering from stress-related disorders in connection to their work-environment. While the purpose of the research was not to discern the efficiency of various methods, it aimed to explore differences, similarities, advantages and disadvantages of psychotherapeutic work methods, from a practitioner point of view.

2. Method

2.1. Design

The research area in France was located in the Paris region and was constituted by a network of different actors involved in the treatment of mental disorders related to occupational settings. The practitioners had all received training in the theory and methods of psychodynamics of work and are operating either in hospital settings, in non-governmental organizations and in private practice. The research area in Sweden was divided between Stockholm and Gothenburg. The practitioners included in the study were affiliated directly or indirectly, to the Institute of Stressmedecin and Stockholm Stress Center. These two institutes were specialized in conducting research and were involved in rehabilitation of patients with stress-induced disorders, mainly related to occupational settings.

The study was conducted by face-to-face interviews with semi-structured format. The interviews aimed to discern the interaction between the practitioners and their patients. A qualitative research design was chosen as this was an exploratory study. As this study has no previous research, grounded theory framework was used (Paillé, 1994).

2.2. Participants

The population of the study was different practitioners involved in treatment, rehabilitation and prevention of mental disorders related to occupational environments. The sample consisted in 42 practitioners recruited from the various institutions, specialized in treatment and rehabilitation of disorders related to occupational mental health.

Table 1. Distribution of sample.

	Country			
	Sweden		France	
Occupation	N	%	N	%
Psychologists/psychotherapists	13	65%	12	55%
Occupational Health Physicians	3	15%	7	32%
Psychiatrists	0	0%	3	14%
Organizational consultants	2	10%	0	0%
Physiotherapists/biologists	2	10%	0	0%
Total	20		22	

2.3. Procedure

The research-interview was conducted face-to-face in the practitioner's consulting room. Prior to the interview the practitioner was given a written consent to participate in the study. The interview consisted of questions asking the practitioners to describe how to work with the patient in the rehabilitation process. The interviewer also asked about the theoretical framework of the practitioner. Following the interview, a summary for each one of the two settings was sent to each practitioner for verification.

2.4. Analytic strategy

The data was analyzed using a thematic coding method. 10 initial interviews were used a descriptive coding method. The initial codes were then grouped into categories and arranged into a patterned order. Data collection occurred until a point of thematic saturation was reached. The data was managed by manual methods. The use of a process of respondent validation maximized the rigor of the study.

3. Results

The description of the work-methodology of the practitioners was broken down into 16 sub-categories, related to the methodological aspects in the rehabilitation process.

Table 2. Methodological aspects of the practitioners.

French practitioners	Swedish practitioners
Coordinate with a multidisciplinary network	Include the patient in a team of practitioners
Prescribe sick-leave and provide certificate	Diagnosis
Listen to the story of the patient	Clinical interview
Explore the meaning of work for the identity	Understand the physiological reactions
Understand the connections with the past	Mapping out the various stressors
Find links between the past and the present event	Focus on cognitions and behavioral activation
Discuss various options related to the future	Prepare return to work
Take into account sociopolitical aspects	Include the employer in the rehabilitation process

From a methodological standpoint, the practitioners in each one of the two settings were having different methodological approaches. The practitioners in Sweden tended to be highly influenced by Cognitive Behavioral Therapy, quantitative measures and a physiological orientation with an emphasis on educating the patients on biological reactions of stress and providing them with coping skills. However, the French practitioners were often driven towards the qualitative aspects, focusing on the chronological narration of the patient with the aim to elucidate the organizational-, intra-psychic and unconscious aspects related to the disorder of the patient.

However, whereas the 16 sub-categories were different between the two therapeutic settings, the rehabilitation work of the practitioners could be defined by 5 common main themes.

The 5 common main themes reflect the main objectives aimed by the practitioners. These objectives were the same for all practitioners, regardless of the therapeutic settings and the theoretical orientation: break the isolation of the patient; recognize the suffering of the patient; listen to the story of the patient; explore the underlying reasons of the disorder of the patient; initiate reflection and action for the future.

3.1. Break the isolation

The practitioners are aiming to include the patient in a network or team of different practitioners, brought together to act on the rehabilitation.

3.2. Recognize the symptoms of the patient

There is an influence on guilt on the relationship on the relationship with burn-out (Gil-Monte, 2012). Patients tend to feel guilt because of their symptoms. Therefore, the practitioner is formally recognizing the disorder of the patient. This step aims to provide acknowledgment and to legitimize the symptoms of the patient.

3.3. Listen to the recital of the patient

The patients tend to complain about working in a chaotic environment. The aim to have a practitioner listening to the story of the patient is to put some order in his/her train of thoughts.

3.4. Explore the underlying reasons of the disorder of the patient

The practitioner and the patient are elucidating the underlying reasons of the symptoms related to the disorder.

3.5. Initiate reflection and action for the future

The practitioner and the patient are exploring action plans to get back on track. This could generally involve strategies related to returning to work-environment.

4. Discussion

Regardless of the methodology and the therapeutic setting of the practitioner, 5 main themes were always present in the rehabilitation process. Thus, these 5 themes would correspond to the different stages in rehabilitation of stress-related disorders.

The practitioners in Sweden receive public findings and have greater resources. Therefore, the rehabilitation system is well organized. Furthermore, the Swedish institution has the advantage of involving the employer in the rehabilitation process. However, the practitioners are mainly focusing on rehabilitation on an individual basis, whereas no space seems to be left for preventive work on the work organization.

Whereas the practitioners in France tend to be focusing on the person more than the work organization, the practitioners are taking into account the work organization on a sociological level. Hence, the practitioners tend to have a wider perspective by also focusing on group dynamics. However, probably because of lack of funding, the practitioners tend to be more isolated from one another, since the majority operates either part-time or in private practice. Consequently, there is a lack of common procedures in the rehabilitation process.

The underlying reasons for the differences between the countries might not only be theoretical but also cultural and political. The Swedish institutions dedicated to action-research related to rehabilitation are receiving public funding aiming to reduce the amount of long-term sick-and disability leave, which represent a significant financial cost for the Swedish state (Hogstedt et al. 2004). A great importance is dedicated to prevention of Exhaustion Disorder, which is recognized by the Swedish National Board of Health and Welfare as a formal justification for sick-and disability leave.

However, the efficiency of the rehabilitation method might not be related to the methodological aspects but the therapeutic alliance established between the patient and the practitioner. The therapeutic alliance would allow all parts to cooperate towards a common objective. The five main-themes discovered in the study might be aspects required to establish a therapeutic alliance.

5. Conclusions

Both approaches are common in including the person in a network of different actors in order to put the person in a context of coherence and of sense of usefulness to prevent alienation. However, whereas the Swedish institutions are more colored by psychoeducative means, the practitioners in France are more influenced by a psychodynamic approach with an emphasis of the narrative experience of the patient. The theoretical framework is very different between the two networks and the process applied often varies among the countries. However, the main gap is more perceivable in theory than in practice, at the level of the patient-practitioner interaction. Regardless of the theoretical framework the practitioner was leaning back on, the different steps in the rehabilitation process appeared to be identical.

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GCRIS

ROMANTIC ATTACHMENT AND PARENTS' ATTACHMENT: A STUDY WITH PORTUGUESE *VS* BRAZILIANS YOUNG ADULTS

Flávia Ferro Costa Veppo, Teresa Sousa Machado, & José Pacheco Miguel
Faculty of Psychology and Educational Sciences, University of Coimbra (Portugal)

Abstract

Since Bowlby's studies about attachment theory, the eventual influence about the quality of early relationships (with parents), on future close relationships, is probably in the mind of all of those that are involved in adult-adult close relationships. Indeed, various contemporary studies analyze how self-reported adult attachment styles are related to romantic styles of attachment, and/or influence the "choice" of love partner relationships' characteristics. The previous question is to reconcile two research traditions of attachment study: the one more clinical and/or developmental, and the one more embodied on social psychology, with more long tradition of using questionnaires about attachment representations based on past memories. Bowlby himself predicted that the representations constructed in infancy – through internal *working models of self* and *attachment* – will influence the "more immediate" quality of new significant relationship. The goal of this investigation is to explore the relations between attachment to parents, assessed by Portuguese's *Father and Mother Attachment Questionnaire* (QVPM), (Matos, Barbosa & Costa, 2001), and romantic attachment, assessed by Portuguese's *Love Attachment Questionnaire* (QVA) (Matos, Cabral, & Costa, 2008). Two samples were used: Brazilian young adults (N=197), and Portuguese young adults (N=175).

Keywords: *Parents' attachment, romantic attachment, Portuguese sample, Brazilian' sample.*

1. Attachment theory and romantic relationships

The attachment theory is based on the premise that the behavior of attachment is anchored in the evolutionary history of the subject, in which emotions are perceived as consisting of fundamental functions to survival, these being of primary nature and not limited only to childhood. According to the attachment theory, the subjects internalize behavioral models from repeated interactions with caregivers, and these will serve as a cognitive map that will guide subsequent relationships.

Ainsworth et al. (1978) described three classic patterns of attachment, based on obvious behaviors during the experiment of the *Strange Situation* in observations in the family context, known for: secure attachment, avoidance and anxious/ambivalent. Each pattern has differentiated strategies in an attempt to solve problems, as an example, in how the subject handles and processes the episodes of pain and anguish and how he seeks to reestablish his emotions.

At the beginning of the studies about attachment, the focus was on analyzing issues related to childhood, however, currently there is an enlargement of the applications of its concepts to various other phases of development, despite Bowlby (1969/1982) having previously recognized the attachment as an ongoing process that accompanies the subject throughout its life cycle. Main, Kaplan and Cassidy (1985) gave attention to representational dimension of attachment, Hazan and Shaver (1987, 1994) explored the romantic relationships from the perspective of the attachment, and Bartholomew (1990, 1997) has given its contribution to develop an approach prototypal, this being the most widely used in our study.

In his seminal formulation with respect to the attachment, Bowlby postulated two types of internal models, these being different but complementary, abstracted from early experiences: a model of the self and other (Bowlby, 1969/1982, 1973). The model of the self reflects beliefs about care and acceptability of the figure of attachment, while the model of the other refers to expectations about the availability of care and response capacity during periods of distress. These models serve as the basis of the attachment behavioral system, designed in accordance with the early development, being that once bound, become relatively stable throughout life (Feeney, 2004: Hazan & Shaver, 1994).

With the purpose of obtaining more accurate styles, Bartholomew (1990) used a two-dimensional model, based on the models of the self and other, as conceptualized by Bowlby and divided between models both positive and negative, combining them later in order to describe shapes prototypical to adult attachment: secure, preoccupied, fearful and dismissing. The development of this

model has, as a central concept, internal working models, being the model of the self associated with the belief of the subject as worthy of attention and affection, related to emotional dependence and anxiety experienced in relations; while the perception of responsiveness and accessibility of another, is associated to models of others.

The behavioral system of attachment covers a set of behaviors intrinsically motivated, developed independently of whether the caregivers meet the needs to attachment or not (Cassidy, 1999; Guedeney, 2004). It should be noted that the absence of attachment behaviors with an emotionally significant figure, expresses a defensive attitude in the face of any distress experienced, and not the absence of attachment. The ability to establish a bond with other people is considered as a fundamental characteristic and central in the development of the personality, in order to consider its effectiveness and mental health of forms of parental attachment. The condition *sine qua son* of romantic attachment is the tendency to maintain proximity to companion, and thus, maintain the system attachment off (Bowlby, 1988/1992). More specifically, it would be as if the companion remained close so that their functions of care were perceived as accessible, i.e., not referring to physical proximity itself, but the proximity characterized by believing in access to them, these being acting in accordance with the mental representations of each one.

This way, we are able to realize that the attachment refers to a system that develops along the cycle of life, and that is to consider: security, affection and related behaviors emotionally significant (Bowlby, 1988/1992; Mikulincer & Shaver, 2003, 2004). According to Bowlby (1979), the "*formation of a bond is described as falling in love, maintaining a bond as loving someone*" (p. 130.), and according to the author, no accompanying behavior feels stronger than the behavior of attachment. In a romantic relationship, when one partner shows signs of need, the other is generally motivated to provide functions of care, described by the attachment theory as: (a) safe haven; (b) secure base; and (c) protection against internal and external threats (Bowlby, 1969/1982). These functions are accompanied by strong emotions that involve the accessibility to the companion, and culminate in feelings of safety.

According to Feeney (2004), to understand the source of stability or instability of adult romantic attachment, it is necessary to consider in detail the concept of internal models, because these mechanisms will affect the emotional expectations of the subject throughout his life. The working models are subject to updates, and as the subject develops, the pattern of attachment becomes more of the subject and not as dependent on the primary relationship. In other words, it has the opportunity to be redesigned according to experiences capable of disconfirm past experiences and thus, articulate new conceptions about the bonds. In the first years of life, the working models are more permeable to changes, while in adulthood they tend to become more solid, and work in an automated and unconscious mode, therefore more resistant to change. Once established, these models will act as advisors to the filter and organize the relational experiences that, in general, tend to remain stable (Hazan & Shaver, 1994; Maia et al., 2014).

Because of the expectations established by working models, subjects with a secure pattern tend to establish romantic relationships with individuals who have the same pattern and consequently have more satisfactory relationships, while subjects with an avoidance pattern, tend to establish romantic relationships with ambivalent subjects in view of the confirmation of their beliefs (Collins & Read, 1990; Feeney, 2004; Kirkpatrick & Davis, 1994). Much has been asked about the role of romantic attachment in the sense of providing a (re)formulation of the attachment pattern established in early childhood according to working models internalized. It is then explored to what extent the romantic relationships may constitute a scenario of breach or reaffirmation of the attachment established, and the influence ratio in accordance with the belief that the subject has, as worthy or not of affection and attention. According to Thompson (1999), these models skew the manner in which each one interprets the memories on the experiences they had with their figures of attachment, i.e., these serve as a filter driven by implicit rules about other relationships, thus being able to confirm, maintain or break the expectations built.

2. Method

2.1. Participants and procedures

For the selection of the sample, we used the method not probabilistic by convenience. The sample consists of 372 subjects: 201 females (97 Portuguese and 104 Brazilian) and 171 males (78 Portuguese and 93 Brazilian), whose ages range between 18 and 39 years (A=21). Among the subjects, the mean value of age examined was 23.03 years (SD=3.85), while the Brazilian sample presented a value a little higher, with an average of 26.83 years (SD=4.94). The completion of the questionnaires lasted on average 15-20 minutes.

2.2. Measures

For the realization of this research were chosen instruments that meet the theoretical conceptualization approached, as well as the goals and the hypotheses outlined for the research: *Father and Mother Attachment Questionnaire* - QVPM (Matos, Barbosa & Costa, 2001), and the *Love Attachment Questionnaire* - QVA (Matos, Cabral & Costa, 2008).

The QVPM is a questionnaire of self-report that evaluates the attachment representations of adolescents and young adults in relation to the father and the mother. The questionnaire is composed of 30 items, distributed by 3 dimension: "Trust-quality of emotional bond", "Dependence-inhibition of exploration and individuality", and "Avoidance-inhibition of individuality". The items can still be viewed in accordance with the prototypes of Bartholomew (1990; 1997), i.e., the items were designed so that it is possible to perform differentiation of patterns through the analysis of *clusters* (Gouveia and Matos, 2011). QVPM – Portuguese sample presents a Cronbach's α=.79; and QVPM – Brazilian sample presents a Cronbach's α=.80.

The QVA is an instrument of self-report validated for the Portuguese whose original version consists of 52 items, and aims to assess the perception about the quality of the romantic attachment in accordance with the attachment theory and the two-dimensional Bartholomew model (1990; 1997). For this research, we used the reduced version of 25 items (Matos, Cabral & Costa, 2008) composed of 4 dimensions: "Trust", "Dependence", "Avoidance", "Ambivalence". Cronbach's QVA Portuguese sample α= .91; QVA Brazilian sample α= .88.

3. Results

With the objective of verifying how the attachment parental interferes in romantic attachment have the dimensions of the QVA comparing to the parental prototypes made by cluster analysis non-hierarchical of the QVPM. We will start by presenting the data relating to the sample in which confers to these Portuguese correlations.

Table 1. Analysis of clusters of QVPM compared the dimensions of the QVA (Portuguese).

Dimensions	Secure		Preoccupied		Fearful		Dismissing	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father
Trust	25.33	25.07	25.19	25.47	23.87	24.03	20.00	22.56
Dependence	17.47	17.93	19.09	19.96	20.51	19.57	22.80	19.50
Avoidance	13.16	12.71	14.48	14.18	13.69	14.16	17.20	15.63
Ambivalence	14.51	14.95	17.88	17.67	18.00	17.77	24.20	20.06

There is a smaller average in the dimension *Trust* in the loving partner among the *Dismissing* subjects with both parents; by his side there is a greater average in this dimension between the Secure subjects with the mothers and Avoidance with the fathers, but this difference is not statistically significant in relation to the mother ($F_{(3.171)}$=2.42, p=.068), nor in relation to the father ($F_{(3.171)}$=1.79, p=.15). In relation the dimension *Dependence*, there is a smaller average between the *Secure* subjects with both parents, and a higher average between the Dismissing subjects with the mother and Preoccupied with the father. The mean difference found between the prototypes of attachment in relation the dimension *Dependence* does not show a statistically significant difference in relation to the mother ($F_{(3.171)}$=2.25, p=.084), nor in relation to the father ($F_{(3.171)}$=.811, p=.489). The dimension *Avoidance* in relation to the loving partner had mean higher among *Dismissing* subjects with both parents and smaller average between the *Secure* subject, but did not differ significantly among themselves in relation to both parents - mother ($F_{(3.171)}$=1.02, p=.387) and father ($F_{(3.171)}$=1.15, p=.331). The dimension *Ambivalence* showed higher average on *Dismissing* subjects with both parents; but the average is lower among the *Secure* subjects, being these differences were statistically significant in relation to the mother ($F_{(3.171)}$=3.25, p=.023), and not statistically significant in relation to the father ($F_{(3.171)}$=1.91, p=.130). There is a very close value between the patterns of attachment *Preoccupied* and *Fearful* in relation to both parents.

The results found in the Brazilian sample in relation to the analysis of the *clusters* of the *Father and Mother Attachment Questionnaire* (QVPM) and the dimensions of the *Love Attachment Questionnaire* (QVA) are presented in Table 2.

Table 2. Analysis of clusters of QVPM compared the dimensions of the QVA (Brazil).

Dimensions	Secure		Preoccupied		Fearful		Dismissing	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father
Trust	28.26	27.24	28.68	26.36	27.50	29.06	23.71	25.78
Dependence	17.60	17.08	20.30	20.16	18.74	18.06	15.19	17.65
Avoidance	16.81	16.24	15.09	15.69	15.72	15.63	18.29	17.89
Ambivalence	20.63	20.36	20.75	24.19	21.89	19.28	23.45	22.97

There is a lower average in the dimension *Trust* in the loving partner among the *Dismissing* subjects with both parents; however, there is a greater average between the *Secure* subjects with the mothers and *Fearful* with the fathers, and this difference was statistically significant in relation to the mother ($F_{(3.193)}$=4.68, p=.004), and in relation to the father ($F_{(3.193)}$=3.03, p=.031). In relation to the dimension *Dependence*, there is a smaller average between the subject of attachment *Dismissing* with mother and *Secure* with the father, and a higher average between the *Preoccupied* subject. The mean difference found between the prototypes of attachment in relation to *Dependence*, there is statistically significant difference in relation to the mother ($F_{(3.193)}$=4.27, p= .006), and there is not statistically significant in relation to the father ($F_{(3.193)}$=1.68, p=.173). *Avoidance* had mean higher among *Dismissing* subjects with both parents, and smaller average between the *Preoccupied* subject with the mother and *Fearful* with the father, did differ significantly among themselves in relation to the mother ($F_{(3.193)}$=2.79, p=.042), and not statistically significant in relation to the father ($F_{(3.193)}$=1.59, p=.193). *Ambivalence* showed higher average between the *Dismissing* subjects with mother and *Preoccupied* with the father, and smaller average between the *Secure* subjects with the mother and *Fearful* with the father; these differences were not statistically significant in relation to the mother ($F_{(3.193)}$=.96, p=.413), and statistically significant to the father ($F_{(3.193)}$=4.67, p=.004).

4. Discussion

In relation to *trust* in the relationship, in Portuguese sample we saw that the prototype secure and preoccupied with both parents have higher averages, as expected given those are the two prototypes that have a positive role model for other according to Bartholomew (1990; 1997); while in the Brazilian sample, were the subject of attachment preoccupied with the mother and fearful with the father were the ones to have higher averages. In relation to the dimension of dependence to the loving partner, we expected the subject of preoccupied attachment to parents to present the highest average, in view of the high dependency that he would with parents and that could also be present in the romantic relationship. We confirm this hypothesis in the Brazilian sample, but in the Portuguese sample this relationship appears only with the paternal figure, having been seen a greater reliance on the loving partner in dismissing patterns in relation to the mother. The form is rather curious, considering that the standard divested is framed between the subjects that relate less dependence because of the model they have of themselves as self-sufficient, an issue that could be better exploited in further investigations. The avoidance dimension, concerning the loving partner, presented high averages in the dismissing prototype developed with parents in both samples, a result that was already expected, since these are the subjects that usually do not seek support from other people, due to lack of confidence in others. In the Portuguese sample the subjects who reported less avoidance were framed in the secure prototype, while in the Brazilian sample, it was the subject of the preoccupied pattern, being these two the prototypes that have a positive role model for others, soon they were whom we expected to reveal less avoidance in their relations. In the Portuguese sample, the ambivalence in loving relationship was lower in the secure prototype and higher in the dismissing with both parents pattern of attachment. In the Brazilian sample the same was found the same in relation to the mother, but in relation to the father, the preoccupied subjects had an higher average, while the fearful subjects showed lower average, being these data very different when compared to the sample in relation to the father. The results of this study underscore the importance of parents as figures of essential attachment, since the importance of these roles in the delivery of a basic sense of security and availability maintained by young adults, and that in spite of the transfer carried out to fellow loving, the attachment established with parents is present even if indirectly and very probably for life. In our research we noticed several differences compared the attachment developed with parents and with loving partner between the sample Portuguese and Brazilian, having in view the influence of cultural differences. Other investigations could better explore some issues between the parental relationships and romantic that we were not treated because the present limitations in our study, mainly because we have chosen a quantitative approach, which did not allow us to explore some questions in order that have not been dealt with in the instruments that we use.

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THE YEZIDI MINORITY REFUGEE POPULATION AND EUROPEAN HUMANITARIAN ORGANIZATIONS

Kyle A. Msall, Ph.D.
College of Arts and Sciences, American University of Kuwait (Kuwait)

Abstract

With the recent influx of refugees and internally displaced persons (IDPs) into Iraqi Kurdistan due to the Islamic State of Syria and al-Sham (ISIS), local and international nongovernmental organizations (NGOs) have implemented many humanitarian programs throughout the region to help the people taking refuge in the region. Unlike before August 2014 where the region's refugee population of 200,000 was mainly Syrian Muslims fleeing from the Syrian war, the current situation of about 2 million refugees and IDPs consists of many minority populations such as the Yezidi population that have fled from their homes near Sinjar and other cities in western Iraq. The study aimed to understand the Yezidi culture through their perspective which brought out the troubles the population has faced since the rise of ISIS. The study was conducted by interviewing Yezidi IDPs taking refuge in the Kurdistan Region of Iraq in June, 2015 in IDP camps as well as with Yezidis living outside of the camps in abandoned buildings. Although the Kurdistan Region of Iraq is relatively safe, the findings of the study suggested that the Yezidi population have had tremendous challenges and effects directly from the rise of ISIS, including difficulties in Europe as refugees. This has led to a cultural-shift taking place in the Yezidi culture. The study sheds light on several under-represented fields including minority populations in Iraq and how they were affected by ISIS as well as how international humanitarian guidelines seem to leave out minority populations. The aim of the study was to highlight the different culture of the Yezidi minority population and to bring the misdirection of current humanitarian organizations/guidelines to the spotlight. Doing so is essential for the success of European nations who are dealing with the current refugee crisis.

Keywords: *Minority populations, refugees, cultural relevance, humanitarian organizations.*

1. Introduction

Beginning in mid-2014, the terrorist organization known as the Islamic State of Iraq and al-Sham (ISIS) began its campaign into Iraq from Syria. One of the first towns and regions that ISIS captured was the Yezidi city of Sinjar. This was widely publicized because ISIS declared genocide against the Yezidi people and began methodically killing Yezidi men, killing or taking male children for child soldiers, kidnapping women and children for sex slavery, and surrounding Mt. Sinjar where many Yezidis were stranded and thus died due to starvation and dehydration. Those that escaped fled to the area known as Iraqi Kurdistan. The number of refugees and internally displaced persons (IDPs) within Iraqi Kurdistan went from around 230,000 to over a million in the span of about three months (Kurdistan Regional Government, 2015). The influx of the minority population, as is the case with similar situations in other regions, was handled primarily by humanitarian organizations that relied upon international humanitarian guidelines such as the inter-Agency Standing Committee (IASC), Core Humanitarian Standard (CHS), and others in order to aid in the response to this crisis. These guidelines were formed to help these humanitarian organizations not only respond to crises such as this, but to also to have the organizations develop culturally relevant programs within their organization (Abramowitz & Kleinman, 2008).

1.1. Who are the Yezidis?

The Yezidis are an indigenous population living in northern Iraq and have migrated to other regions such as southeastern Turkey, Armenia, and, more recently, several regions in Europe. Much of the Yezidi culture is based upon their strong religious beliefs of Yezidism which is also heavily tied with their view of being a unique ethnic group (Açikyildiz, 2014; Phelps, 2010; Msall, 2016). These distinct religious views, cultural norms, and values differentiate them from the vast majority of refugees within Syria and Iraq (Maisel, 2013). An example of this difference, and one that underlies the reasoning for

ISIS to commit genocide on the Yezidi population, is that they are often referred to as devil worshipers because of their archangel having a close resemblance to the same angel in Islam and other religions such as Christianity that refused to kneel before Adam. Islam and Christianity perceive this angel as being associated with Satan, however, the Yezidis perceive the figure as someone who would only kneel before God and therefore is the messenger between God and the Yezidi people, known as Taus Melek. (Açikyildiz, 2014; Arakelova & Amrian, 2012; Msall, 2016). There are many other customs and beliefs that separate this population from the other populations but there are also some similarities such as the belief that pork is unclean and therefore the Yezidis, like Muslims, are forbidden to eat pork. In general, Yezidis tend to keep a distance from other populations because of the belief that too much contact with a follower of another religion will make one less of a Yezidi (Rydgren & Sofia, 2011).

1.2. Effects of ISIS on Yezidis

As mentioned above, the Yezidi population went through a great ordeal when ISIS declared genocide on them with the basis of this declaration being because of their "devil worshiping" acts. The ISIS terrorist organization believed that if the Yezidis were left alone, they would corrupt Islam and that the killing of Yezidis was actually halal (permitted) according to the Quran. Not only did ISIS seek out to destroy the culture and Yezidi people, but they also targeted women and children within the population. Many women and children were kidnapped during the ISIS campaign against the Yezidis and most of the females that were kidnapped (some as young as six) were sold into sex slavery or given to ISIS soldiers as war trophies (Watson & Botelho, 2014). Along with the kidnapping of women and children, ISIS also committed mass killings, mass forced religious conversions, and rape among the Yezidi population. All of these acts together devastated the Yezidi community throughout Iraq and forced thousands to flee from their homes. Most of the Yezidi IDPs went to Iraqi Kurdistan near the city of Dohuk. Many of the Yezidi people further fled to the countries of Europe afterwards and many have reported that they do not wish to return to their homeland

1.3. Response

Although the atrocities against the Yezidi population coincide with the outlined definition of genocide within the Convention on the Prevention and Punishment of the Crime of Genocide in 1948 and the acts of genocide listed in Article II and Article III (UN, 1951), the United Nations did not formally acknowledge the acts of ISIS as genocide against the Yezidi population. The US State Department (2016) found evidence to support the claim that ISIS was responsible for genocide.

The Kurdistan Regional Government (KRG) made great strides in accepting as many refugees from Syria and IDPs from other parts of Iraq as possible and the numbers quickly increased over about a three month period from approximately 230,000 persons to approximately 1.3 million persons within the KRG's border. Although the KRG did and does provide aid and support in many different and great ways, there was some fallout in a specific way that the KRG handled the female escapees from ISIS. For female survivors and those who were returned to their families from ISIS, the KRG implemented a forced invasive virginity test for all female returnees. This procedure is extremely invasive and some groups have reported that it is against human rights. Such procedures, although planned and implemented with best intentions, may result in more trauma for the individual being tested and could bring more shame and humility to the individuals and families. One of the major findings of the study was in relation to this response by the KRG and suggested that even though the Yezidi minority population and the Kurdish population share the same land and have some similar customs and values, the cultural change among the Yezidis with regards to their perception of the female returnees from ISIS was not taken into consideration of this response.

The study also revealed that appropriate guidelines for working with minority populations within the context of conflict and genocide, while present, are lacking in several key aspects that could benefit the organizations and governments that are working with such populations. The Yezidis are one example of this but the impact and findings of this could be applied to similar situations with other minority populations as well as implemented into present global humanitarian guidelines, such as the IASC, Core Humanitarian Standard, and the Humanitarian Accountability Project for future use. Culturally relevant humanitarian organizations and programs are essential with non-Western populations and minority populations and have been shown to provide an increased in effectiveness especially within the psychology field (Bender, Clark, & Gahagan, 2014; Coldiron, Liosa, Roederer, Casas, & Moro, 2013; Copping, Shakespeare-Finch, & Paton, 2010; Daoud, Shankardass, O'Camp, Anderson, & Agbaria, 2012; Sonderegger, Rombouts, Ocen, & McKeever, 2011)

2. Method

The data was conducted in Iraqi Kurdistan in and around the cities of Erbil, Dohuk, and Lalish. The participants included male and female IDPs all over the age of 18 and several humanitarian organizations working within the Iraqi Kurdistan region. The IDPs were interviewed by the researcher and an interpreter while the organizational workers completed a questionnaire. The research design was based on the convergent parallel model by Creswell and Clark (2011). Since the research conducted was part of a large scale project, only part of the information gathered and findings are focused on for this particular paper with the primary focus on organizations and the application of the findings on European organizations.

3. Results

The results of the questionnaire showed that the humanitarian organization local workers did differ significantly across the three groups (non-Yezidi workers that did not have experience working with Yezidis, non-Yezidi workers who did have experience working with Yezidis, and Yezidi workers) in terms of their knowledge of the Yezidi culture, $X^2(2, N = 37) = 13.62, p < .05$. This was expected because of the group of Yezidi workers that were in the sample. However, when the Yezidi workers were removed from the sample, there was no significant difference between the non-Yezidi groups of workers and the scores on the questionnaire suggested that there was little to no knowledge reported among them. When the variables of the questionnaire were analyzed separately, however, there were some variables that showed significant differences between the two non-Yezidi groups. Two examples were the variable regarding the food restricted in the Yezidi culture $p < .001$ between no Yezidi experience ($M = 12.29$) and Yezidi experience ($M = 24.55$) and the variable regarding the Yezidi perception and treatment of person with physical disabilities $p = .029$ between no Yezidi experience (M = 18.98) and Yezidi experience ($M = 11.77$).

4. Discussion

The result above suggested that the non-Yezidi humanitarian organization workers had little working knowledge regarding to the Yezidi culture and community. However, there were a few variables from the questionnaire that showed significant differences between the two non-Yezidi groups with several of the variables showing that those workers with no Yezidi experience reported a greater understanding of the Yezidi culture and community than did those who had experience. This was an unexpected outcome but it does seem to make sense when taking into consideration the context within Kurdistan. Because the majority of the Kurds in Iraqi Kurdistan view the Yezidis as Kurdish (Açikyildiz, 2014), it is a reasonable notion that those Kurdish workers who did not have experience working with Yezidis applied their own beliefs and culture to the Yezidi population. It would not have been until the workers actually came into contact and worked with the Yezidi population that their beliefs toward the Yezidis would be challenged and therefore the workers would realize that the Yezidi culture and community are in fact different than the Kurdish culture and community. Further, the fact that the Yezidi culture is going through a change process could add more confusion to those workers with experience working with Yezidis. This would explain the significant outcomes between the two non-Yezidi workers for the questionnaire.

With the change of the Yezidi culture and the low scores on the Yezidi culture questionnaire completed by the humanitarian workers, the study suggests that although international humanitarian guidelines such as the CHS and IASC recommend humanitarian organizations to address local cultures, not enough is being done to address the local minority cultures. One of the main points in addressing local cultures, according to the IASC (2007), is to have local aid workers within the humanitarian organization. However, as shown with this study, local aid workers alone do not bring the cultural relevancy needed to the organizations working with minority populations. It is more than simply a lack of cultural relevancy and, as with the case of the Yezidis, can lead to perceived discrimination among those individuals within the minority population. In response to the findings, a few recommendations were developed which humanitarian organizations could implement into their organizations and programs in order to improve cultural relevance of organization within the Middle Eastern region as well as Europe. The recommendations are especially important for those organizations working with minority populations in Europe due to the lack of cultural experience within the Middle East and the possible “lump sum” effect where all refugees from the Middle East are treated the same regardless of their religion, culture, background, etc. These recommendations include having a research-based approach when developing humanitarian programs for not only Yezidis, but with all minority populations the organizations is

working with. Another recommendation is for the organizations to collaborate with religious and community leaders within the minority populations on topics pertinent to the organization's goals. An example of this would be to hold training sessions with medical and psychological practitioners along with the religious leaders in order to strengthen ties with the community and to merge the religious views and community values with the medical provider programs offered for refugees and IDPs. The fact is that mental disorders due to direct and indirect trauma increase dramatically among displaced persons. (Mann & Fazil, 2006; McFarlane & Kaplan, 2012). However, with this increase, there is a shortage of guiding frameworks for mental health care that would consider cultural dimensions in the context of displacement (Bala & Kramer, 2010; Slobodin & De Jong, 2015). This is where psychologists and religious and/or community leaders could come together and develop a culturally relevant mental health program for that particular minority population. This is essential in addressing both the lack of overall mental health resources and addresses the recent findings that Western or "imported" psychology does not relate to the local culture, values, or beliefs of indigenous non-western populations (Allwood and Berry, 2006; Moghaddam et al., 2007). This would also enable the leaders to recommend individuals within their community to the medical providers with the knowledge that the services provided will be better suited for that population.

5. Conclusion

This study focused on the humanitarian organization workers' cultural knowledge of the Yezidi population and found that the non-Yezidi workers had insufficient knowledge regarding the Yezidi culture. Since all workers were a part of nongovernment humanitarian organizations, the results suggest that cultural awareness training focusing on minority populations was not implemented by the organizations for local workers. This was most likely because having local workers has been deemed a good way to increase cultural relevancy within the organizations by the IASC, HAP, and CHS. However, by working with Yezidis, the non-Yezidi workers reported a decrease in knowledge toward the Yezidi culture which suggested that these workers applied their own culture and beliefs to the Yezidis and it was not until working with them that their Yezidi cultural knowledge was challenged.

Although international guidelines such as the IASC, CHS, and HAP have been developed to provide direction and help to these humanitarian organizations, it seems that the guidelines overall are lacking the necessary instruction and focus on minority non-western populations. This is especially important for those humanitarian organizations working with refugees within Europe because although many refugees are from Syria and Iraq, there are many minority populations within those two countries that are a part of the influx of refugees. Without culturally relevant programs and organizations, the individuals within the minority population may begin to perceive discrimination from the very organizations that are there to help them. As suggested, some basic and low-cost recommendations such as having research-based programs and working with religious and community leaders within the minority populations would begin to develop the much needed culturally relevant humanitarian programs for these displaced minority populations.

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UNCONSCIOUS-CONSCIOUSNESS: A COMPREHENSION DIALECTICAL SINCE VIGOTSKY'S PSYCHOLOGY

Jeferson Montreozol[1], Edna Kahhale[2], & Inara Leão[3]
[1]*Coordenação de Pesquisa e Pós-Graduação, Faculdade Unigran Capital (Brazil)*
[2]*Programa de Pós-Graduação em Psicologia Clínica, Pontifícia Universidade Católica de São Paulo (Brazil)*
[3]*Programa de Pós-Graduação em Psicologia, Universidade Federal de Mato Grosso do Sul (Brazil)*

Abstract

This work is highly theoretical nature, and aims to restore, in all the Vigotsky studies, the relationship between consciousness and the unconscious, because the unconscious is treated in an unsystematic way in his work. Therefore, we take the epistemological and methodological assumptions of historical and dialectical materialism, which have allowed us to understand how Vygotsky conceives both instances of the psyche, safeguarding the cultural derivation of its features. Thus, while socio-cultural construction, the unconscious can only be grasped in its dialectical relation to consciousness, not being an absolute and dominant instance of this, but rather, ensuring and enabling the existence of this other pole. We also believe that due to common epistemic orientation between the analyzes contained in Marxist theory and historical cultural theory, the understanding of the unconscious as dialectical pole of consciousness is different from the explanations now produced in certain theories of psychology, for example, psychoanalysis and cognitive theories. We have reached some understandings about the unconscious in the relations with labor activity, with language and, in particular, with the role of emotions and interpersonal relations in the constitution and development of psychic instance, which is historically promoted by the model need to society.

Keywords: *Unconscio, Dialectical, Consciousness, Vigotsky, Psychology.*

1. Introduction

The questions that gave rise to this work were raised from the development of the research "The Dialectical Relationship between Consciousness and the Unconscious: investigation of its constitutions and manifestations under the approach of the Social-Historical Psychological Theory", which has been developed by Group of Studies and Researches on the Psychological Aspects of the Social-Historical Theoretical Approach (GEPAPET-Sócio-Histórica), from the Federal University of Mato Grosso do Sul (UFMS / Brazil), under the coordination of Professor Inara Barbosa Leão. In this research we have sought to depeen the understanding of the unconscious and the consciousness within the parameters of the theoretical reference developed by Vygotsky.

Together with some studies, the present discussion about the relationship between consciousness, unconsciousness and corresponding themes in the different historical periods has been consolidated as a research proposal for the elaboration of the doctoral thesis in Clinical Psychology of one of the authors of this article.

To that end, productions have already been generated (Montreozol, Santos & Leão, 2011; Montreozol & Kahhale, 2016), which put us in front of the need not only for conceptualization, but for understanding its genesis, its transformation movement and the dynamics of this category and relationship analyzed.

2. The Unconscious: brief history

The unconscious is not a discovery of Psychoanalysis. Far from being something absolutely new, in the late 19th century it appears as part of a *Zheitgeist* common to that time. And as a theoretical concept, we need to retake the story for its understanding not only in the works of different authors, but in how the material conditions have determined elements that are captured by the authors in their works.

This is because "the historical understanding of the human psychological phenomenon is precisely the understanding of its transformations, occurring in the flow of time, through the relations of mediation between its multiple factors and that give the dynamics of psychological reality" (Antunes, 1989, p. 31).

From ancient Philosophy and also in the Philosophy of the Middle Ages, as in St. Thomas Aquinas, the unconscious figure as a certain cosmic principle, the basis of the vital process. However, it is from the profound transformations in the mode of social relation that we have a change in theories that seek to understand the human, in which the unconscious starts to stand out for the explanation of psychic development. The unconscious always has the sense of something that is unavailable to the subject, and for that reason, its existence can only be considered as opposition of the own consciousness (Santos, 2015).

Thus, understanding these elements in psychic reality is only possible from a historical moment that envisions the emergence of subjectivity, mainly organized in the form of individuality: the capitalist mode of production. This author also points out that "the history of the unconscious would be, to say the least, incomplete without analyzing the material conditions that enabled it to emerge as an explanatory element of the human psyche" (Santos, 2015, p.76). The emergence of this new man who has lost the support of the collective of which he was a part and must strive for himself to be one of the workers in the social system.

In this perspective, the various works that directly or indirectly approach the theme of the unconscious, appear already in the synthesis elaborated by Vigotsky, when the author brings

> [...] the relationship that Leibniz makes between unconscious and perception will be approached in the form of the difference between afferent and efferent nerves; the relation pointed out by Kanta of a kind of mark of what we live remains unconsciously in our psyche; the struggle between the different systems, present since the philosophy of Herbart; the relation between unconscious and art, present in Schellin. Also present is the dialectic (...) and the deeper conception in Hegel of the existence of unconscious motives that will only be fulfilled when the actions reach their objectives. (Santos, 2015, p.111)

Before psychological science, Henri Wallon and his psychogenetic theory allowed an advance in the understanding of the human activity and the role of the emotions in the stages of psychological development. The fecundity of his contributions is due to the global perspective by which he focuses on human development, especially the child development, using both dialectical materialism as a philosophical foundation and method of analysis that enabled his ideas to solve many impasses and contradictions to which lead to theories based on rigid and mechanical logic. In this perspective, we are mainly concerned with the study of emotions, since they are at the origin of consciousness (and, as we may conjecture, of the unconscious), operating the transition from the organic to the social world, from the physiological to the psychic plane.

In Sigmund Freud's works, Psychoanalysis developed by the author constructs the notion that the unconscious covers both the acts that are merely latent, temporarily unconscious, and repressed contents that, if they happen to become conscious, would be prone to disorganize the structures and the psychic apparatus. In his metapsychological article on the Unconscious (2014), Freud explains the concept by presenting the notion that the data of consciousness exhibit many gaps, and for this reason there is a need for the presupposition of other acts, for which consciousness offers no proof .

As discussed earlier, Freud was not the first author to speak about the unconscious, about unconscious thoughts or components. However, the author assumes a primary position when he treats this concept by designating a psychic system independent of consciousness and endowed with its own activity, with its own laws and rules. And together with the notion of the unconscious, the psychoanalytic conception of sexuality dispenses with the category of sexual instinct, since it is not only related to the genital organs, but is considered as a more comprehensive bodily function. Pleasure is his goal, and only as a posterior element to sexuality serves as the purpose of reproduction.

In view of this panorama, and with the intention of approaching the theme, we seek references for work on the theme of the unconscious and the social-historic approach, cultural-historic and historical-dialectical materialist, along with sites such as: Virtual Health Library (VHL); Virtual Health Library in Psychology (VHL - Psi), which include SciELO (Electronic Library covering a selected collection of Brazilian scientific journals), LILACS (Latin American and Caribbean Literature in Health Sciences), and MEDLINE (International Literature In Health Sciences). In these, the result was negligible. And yet, when we search in the Google Scholar world search engine the indexers "sexuality and social-historical unconscious", the final object of interest of these researchers, we find references to developed works that cover only one of the two indexers: the unconscious, or sexuality.

We realize that there are still few researchers and scholars in the human and social sciences who have developed inquiries about the unconscious from Social-Historical Psychology in the works of Vigotsky and, perhaps, combining the theme of the concept of unconscious with sexuality. We understand that this attitude of the professionals is still related to the fact that psychology has for a long time maintained its traditionalist stance, basically using the knowledge produced by medicine and psychiatry to work on sexuality, which has culminated in a practice that refers only to subjects behavioral classifications.

An example of this can be found in the treatment that psychiatric science has given for many years to the classifications of heterosexuality and homosexuality. This last one always named as disorder or disease, generating great protests against such social discrimination of any subject by reason of its sexual identity. This can be seen in the various manuals published by entities throughout history, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM), published by the American Psychiatric Association (APA), and the International Classification of Diseases (ICD), developed by the World Health Organization (WHO).

We then consider that the boundary between the pathological and the normal will always be arbitrary, generally based on more moralistic, traditional conceptions than on scientific knowledge of sexuality. Admitting this would already be an apogee for the advancement of our understanding of our judgments, and also, if anything above all, the key to tolerance of diversity. And we also understand that the fact that the unconscious already appears as a prominent theme in psychological science becomes an expensive nodal point to Psychology, since this science presented its moment of crisis due to the absence of a correct methodological orientation, to which Vigotsky (2004, p. 392) points out that in order to overcome this crisis it would be necessary to "create a general psychology whose concepts are formulated in direct dependence on the general dialectic, because this psychology would be nothing more than the dialectic of psychology (...). "

3. A dialectical understanding of the Consciousness-Unconscious relationship

Throughout Vigotsky's work we find many concepts that are not well defined, such as the question of emotions, culture, experience, and also the unconscious, either because the development of the works by the author accompanied a dialectical becoming, in which formal logic was not maintained to follow the productions, or even by the premature death of the same in the year of 1934.

In order to understand briefly what the author sought to trace in this concept, we analyzed twenty six texts produced in the period from 1926 to 1933, which are mostly listed in two publications: Obras Escogidas (Spanish edition, Volumes I-V) and Theory and Method In Psychology. In these, the unconscious appears with great frequency, sometimes as a fundamental methodological question, sometimes as a quality of psychic processes, or as related to the question of art. However, the constant element found is the intrinsic and inseparable relationship with consciousness in the integrality of the psychic phenomenon.

We see that when he treats the unconscious, as he does to consciousness, Vigotsky relates it as a greatness or sphere, a form of psychic organization that is intangible and not material, even though it rules its existence in anatomical-physiological configurations. Thus, the unconscious is not only adjectivized to consciousness, it is a greatness derived from consciousness (Vigotsky, 2001), arises from consciousness and gradually separates from it and developing its own mechanisms of action (Santos, 2015).

In this perspective, consciousness is understood as the sum of subjective processes, images of perception, higher psychological functions, built on the physiological basis of the brain. It is constructed from the relation between sense and meaning: meaning appears as conceptions and definitions socially constructed, representing the perceptions about the reality in which the subject is inserted and indicate the limits and possibilities of this representation; already the sense depends on the individual experience, in a subjectivation of the reality, not only as a mere copy, but as an active process between the subject and the material reality mediated by instruments made available by the culture.

In some situations, what is sensed by the subject is not completely signified by him because does not have the instruments available for a (new) object to be captured in its complexity. Leite (2005, p.26) points out that "the process of knowledge, the relation between the subject that knows and the objective reality to be known, contains in itself its limit: subjectivity". Thus, "the meaning that arrives at the subject can be modified, altered or simply not have a meaning attributed to it, and when this happens, they constitute themselves as unconscious elements" (Montreozol, Santos & Leão, 2011, 49) .

Even if they are not completely appropriated by the subject, such content continues to exist in society and therefore, they continue to act on their psychic reality, also influencing how they develop (or not - because they do not have enough elements) their behavior.

And if, on this theoretical basis, consciousness is understood as praxis as a possibility to act and to understand / explain the motives that led to action, the unconscious can be understood when this possibility is not given, in which the theory disassociates itself from practice and human behavior becomes an alienated behavior, without understanding of reality.

4. Conclusions

Understanding the unconscious in historical-dialectical materialism, and also in the psychology developed by Vygotsky, becomes an imperative in the face of the new Psychology that is intended to be created, especially in the reality of a population deprived of cultural and economic issues, represented by the countries of Latin Latin America, among them, Brazil.

Obviously the information presented here is still incipient, initial and superficial. However, some considerations can be taken and one of them is the relationship that the unconscious has with consciousness. It is necessary that this discussion be deepened, because the greater the unconscious elements, the more difficult the relations established in reality, and, consequently, the less effective the actions performed by the subjects. Thus, we consider it important to note some observations. The first, related to the character itself, gives us final considerations, since we do not understand this work as the end point of the discussions on unconscious in a Social-Historical perspective, on the contrary, here are some guiding elements for discussions that in The future need to be deepened and unfolded. The second, refers to the specificity of our theoretical approach, since any others could generate different thoughts and results.

This form of understanding of reality allows us to apprehend consciousness and unconscious as social constructions that maintains a dialectic relationship each other, and is therefore not insurmountable. It is not phylogenetically determined, but constructed through the internalization that the subject makes of the social relations and, therefore, depends on its activity.

So we have to think of a Psychology that will rescue man and allow him to be made available to humanity that seems to escape him when he is allied to the impossibility of knowing it. And for this reason, the beginning of a reorganization in the human psychic structure must allow the subject to transpose the contents, now unconscious, into the consciousness, thus allowing an experience with greater possibility.

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GOAL PROGRESS IN SELF-CARE: MEDIATING ROLE OF COMMITMENT TO SELF-CONCORDANT GOALS

Ladislav Lovaš & Marcela Bobková
Department of Psychology, University of Pavol Jozef Šafárik (Slovakia)

Abstract

Aim of presented research was identification of relationship among goal commitment, self-concordance and goal progress as goal dimensions in the sphere of self-care. Hypothesized was that relationship of self-concordance and goal progress in the sphere of self-care is mediated by goal commitment. With respect to this aim was prepared research questionnaire with indicators of following psychological characteristics of goals from the sphere of physical and psychological sphere of self-care: goal commitment (3 items), self-concordance (4 items), and goal progress (2 items). Answers were obtained from 156 students (aged 18 – 26 y; 77 M, 79 F). Correlational analysis confirmed close relationship among goal commitment, self-concordance and goal progress in both cases (goals in the sphere of physical as well psychological self-care). Further analysis confirmed that in both spheres was relationship between self-concordance and goal progress mediated by goal commitment. These findings are discussed in the context of goal dimensions structure and in the context of self-care stimulation and effectiveness.

Keywords: *Self-concordance, goal commitment, goal progress, self-care.*

1. Introduction

Self-care is a basic prerequisite for personal prosperity in various spheres of life of the individual. Every day we invest time and energy to keep ourselves at optimal mental and physical condition – it assumes an ability to implement our intentions, goals and needs. There is no broadly accepted definition of self-care. Self-care can be characterized as deliberate care performed by individuals to improve physical and mental health in order to maintain well-being (Godfrey at al., 2011). People who in the process of goal attainment make more progress and strive for more autonomous reasons experience enhanced well-being. Self-determination is therefore an important moderator variable of the impact of goal progress on well-being (Sheldon & Kasser, 1998). According to Cox and Steiner (2013) self-care plays important role for social workers, and for helping professions in general, because it can help in prevention of chronic stress. In this context was our aim to analyse psychological background of self-care from the perspective of goal attainment. More concretely was the aim of the present study to verify the mediating role of goal commitment in the relation between motivation represented by goal self-concordance and goal progress.

The reason why a person is pursuing a goal is an important predictor of goal attainment (Werner, Milyavskaya, Foxen-Craft & Koestner, 2016). Self-determination theory of human motivation says that the quality of a person's motivation plays more important role for predicting many important outcomes than the total amount of motivation. The concept of causality orientation within self-determination theory refers to the extent to which people are self-determined. Therefore, when people are autonomously motivated, they feel a sense of autonomy and experience self-endorsement of their actions, or volition in the process of pursuing a goal (Deci & Ryan, 2008). The term *self-concordance* refers to the degree to which a goal reflects personal values and interests (Koestner, Lekes, Chicoine, & Powers, 2002) and stands in contrast to controlled motivation, which defines experience of the pressure to think, feel, or behave in certain ways. According to self-determination theory self-concordance can be characterized as the extent to which basic psychological needs are fulfilled (Ryan & Deci, 2000). Self-concordance is described as a continuum of internalization and consist of *external regulation*, which controls the behaviour of an individual on the basis of reward or punishment, *introjected regulation* of avoidance of guilt and discounting, *identified regulation* of acting in the context of personally important values, and *integrated regulation* that expressing inherent identification of an individual with what she or he does (Chirkov, Kim, Ryan, & Kaplan, 2003).

Goal setting theory explains why some people perform better in the process of goal-directed behaviour. The initial idea is the hypothesis that goals motivate action – affect performance. The setting of a goal is a discrepancy-inducing process and as such permits people to perceive progress toward a specific goal. Following this, the theory attempts to specify the regulatory mechanisms, causal factors and moderators of performance (Latham & Locke, 1991). According to Locke and Latham (2006) are feedback, which people need to track their progress, and commitment to the goal, key moderators of goal setting.

Control theory of behaviour is based on feedback principles. By comparison between goal (a reference point) and perceptual input (an identification one's location toward a goal) living systems make adjustments in output function. To diminish perceived discrepancy (deviation from standard) the actions of approach are induced. Self-regulation of anti-goals results in discrepancy enlarging in order to escape (Carver & Scheier, 2002). Within self-determination theory is feedback used in terms of monitoring of goal progress (Locke & Latham, 2002). Recent research suggests that more self-concordant goals are more likely to be successfully accomplished because pursuing those goals feels easier. Greater goal progress is made because of subjective ease, and not because people exert more actual effort to reach a goal truly wanted (Werner, Milyavskaya, Foxen-Craft et al., 2016). When people pursue such goals they also experience fewer obstacles, which prevent people from goal non-attainment (Milyavskaya, Inzlicht, Hope, & Koestner, 2015).

Goal commitment is the major aspect of goal intensity and refers to the extent to which an individual is attached to the goal – considers it important, wants to reach it, and keeps it despite obstacles. Intensity is the attribute of goals referring to mental effort or scope involved in a mental process. Less committed people give up in the face of hard goals and may favour easier ones (Latham & Locke, 1991). Relinquishment of commitment involves reduction in the importance attached to the goal (Wrosch, Scheier, Carver & Schulz, 2003). If there is no commitment, then difficult goals do not enhance performance. It means that commitment to those goals is an assumption of persistence in pursuing it. Significant factor that increase one's commitment is volition. Free engagement in the actions implies self-consistency. Self-set goals are more psychologically binding than assigned goals that can be attributed to external sources. Research has found that individuals high in need for achievement have higher commitment in self-set conditions – when goal originates from self-concept. Subjects low in need for achievement would very likely achieve commitment to difficult goals only across reward-punishment type of situations (Hollenbeck, Williams & Klein, 1989).

In this context we hypothesised that goal commitment can be a mediator in relationship between self-concordance and goal progress. We expected people to perceive more progress on self-concordant goals only when this relationship is mediated by stronger commitment to them.

2. Method

2.1. Participants and procedure

Participants were 156 undergraduate students (79 females, 77 males) ages 18-26 (M = 22.03, SD 2.04). Respondents were asked to choose from each of two lists of goals, one that is the most important to them. Then they completed scales related to that goals. First list was created by goals from the area of the physical self-care, and second form the area of the psychological self-care.

2.2. Measures

As goal dimension were identified three variables: goal self-concordance, goal commitment, goal progress. At the beginning there were the instructions: *„In different spheres of your life you undoubtedly pursue some goals that you intend to implement. They represent intentions, plans and projects. We would like to know characteristics of your goals in the sphere of the self-care."* List of the most frequent goals that have been chosen by participants include for physical self-care "improve physical fitness (29.5%)", "eat healthy (18.6%)", "gain muscles (26% of males)", "lose weight (16.5% of females)" and for psychological self-care "autonomy and independence (31.4%)", "have my destiny firmly in the hands (16.7%)", and "purposefulness and diligence (12.8%)". – which can be found in the research of personal goals provided by Koestner et al. (2002) and Monzani et al. (2015).

2.2.1. Goal self-concordance. Using approach adapted from Koestner et al. (2002) and Monzani et al. (2015) participants were asked to rate their motivation – why they set to attain that goal. External, introjected, identified and intrinsic reasons were measured by using four items rated on a scale of 1 (*not at all for this reason*) to 7 (*completely because of this reason*). The items were: „striving because somebody else wants you to or because you'll get something from somebody if you do", „striving because you would feel ashamed, guilty, or anxious if you didn't strive for this", „striving because you

really believe it's an important goal to have – you endorse it freely and wholeheartedly", and „striving purely because of the fun and enjoyment that striving provides you." According to Koestner et al. (2002) self-concordance score was calculated by deducting the sum of the external and introjected regulation from the sum of the intrinsic and identified regulation.

2.2.2. Goal commitment. Goal commitment was assessed using three items: „No matter what happens, I will not give up this goal", „I have the urgent feeling to immediately start working on this goal", „Even if it means a lot of effort, I will do everything necessary to accomplish this goal." They were rated on 1 (*completely disagree*) to 7 (*strongly agree*) scale. Scale and items were adapted from Koestner et al. (2002) and Monzani et al. (2015). Reliability was for physical self-care α = .784 and for psychological self-care α = .767.

2.2.3. Goal progress. Goal progress was assessed using two items: „I have made a great deal of progress concerning this goal", „I have had quite a lot of success in pursuing this goal." Both were rated on a scale of 1 (*completely disagree*) to 7 (*strongly agree*). Scale and items were adapted from Koestner et al. (2002) and Monzani et al. (2015). Internal consistency of items was for physical self-care α= .849 and for psychological self-care α = .872.

3. Results

3.1. Mediation

We tested classical mediation model in Figure 1 using the Process Macro for SPSS. In case that the 95% confidence interval did not include 0 an effect was considered significant.

Figure 1. SEM model of goal progress and pairs of regression coefficients. Values in bold are significantly different (95 % CI, p < 0.001). Values above represent measurement in physical self-care and values below represent measurement in psychological self-care.

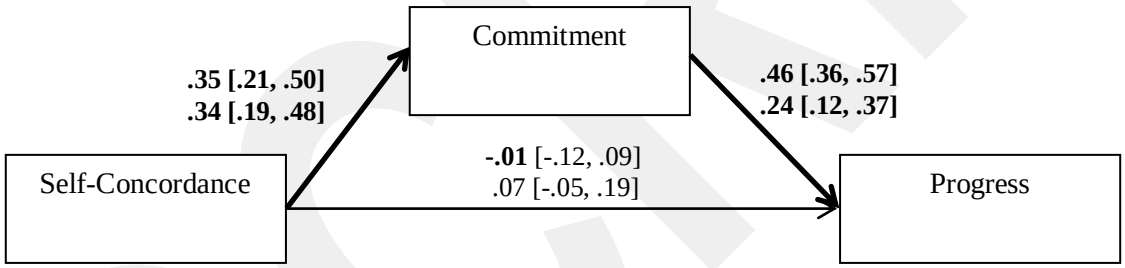


Table 2 shows results of direct effects of motivation on goal progress, which were not statistically significant.

Table 1 Direct effects on goal progress.

Direct effects	Estimate (SE)	95% CI
physical self-care	-.012 (.053)	[-.117; .093]
psychological self-care	.068 (.060)	[-.051; .186]

Hypothesis that goal commitment mediates relationship between self-concordance and goal progress was supported. Table 3 shows results of indirect effects using bootstrap method. In addition, to examine for significance of mediation effect the Sobel test was conducted. The results indicate full mediation for model of the physical and psychological self-care, respectively.

Table 2 Indirect effects through goal commitment on goal progress.

Indirects effect	Estimate (SE)	95% CI
physical self-care	**.163 (.038)**	**[.096; .248]**
psychological self-care	**.083 (.027**)	**[.041; .148]**

Note. Test for indirect effect in physical self-care (p < .001) and in psychological self-care (p = .003).

4. Discussion

The aim of this study was to investigate mediation role of goal commitment in the process of pursuing autonomously motivated goals. Goal commitment is usually conceptualized as moderator variable which moderates for example the relationship between goal difficulty and performance (Klein,

Wesson, Hollenbeck & Alge, 1999) or the relationship between goal progress and subjective well-being (Brunstein, 1993). According to Locke and Latham (1991) goal commitment can operate as a moderator of performance as well as a direct causal factor. In the present study commitment plays the different role. It was supported for mediating hypothesis and as expected, goal progress is a function of goal commitment. We did not notice presence of any similar research expect for Monzani et al. (2015). They tested the role of commitment and other personal goal dimensions in fostering goal progress and assessed mediational effect via commitment between expectancy and progress, and between value and progress. Mediational effect of commitment was found statistically significant (Monzani et al., 2015).

Despite of our primary focus on interrelations of variables, we broaden very limited research mainly in the field of psychological self-care. We verified the existence of mediation effect on two models – one for physical self-care goal and second for psychological self-care goal. Limitations of this study are self-reported measure of goal progress, which may not reflect objective reality and structured lists of goals instead of using the open questions that caused the participants did not have greater freedom of choice. On the other hand we tried to create an exhaustive list of goals which could ease the selection. There were included the most frequent goals people may have in the field of physical and psychological self-care.

For future self-care researches we recommend concentrate more on psychological aspects of self-care. Moreover, it would be beneficial to study self-care as self-regulatory process. The intention of this could be to help to improve ability to strategically regulate failures in self-care activities. The strength model of self-control provides useful basis for balancing negative consequences of ego depletion like for instance burnout or other pathological states. They are probably caused by similar reduction in capacity to regulate self-care activities, especially in helping professions (Baumeister, Vohs & Tice, 2007). Practitioners like mental health professionals are more vulnerable to distress and impairment. Carroll, Gilroy and Murra (1999) are dedicated to personal commitment to self-care. Therapist with high commitment to self-care regularly practice self-care strategies and believe that self-care is important protective factor to avoid to unethical treatment with client. They define self-care as the integration of physical, emotional, cognitive, play, and spiritual elements (Carroll, Gilroy & Murra, 1999).

5. Conclusion

The aim of the present study was to measure mediating effect of goal commitment in the relation between self-concordance and goal progress. The goal of the research was to study these relations is in the context of self-care goals. We hypothesised that people achieve more progress on self-concordant goals because of high commitment to those goals. In conclusion, results show indirect effect of self-concordance on goal progress through goal commitment. The most reported goal among participants was in the physical self-care the goal to improve physical fitness and in the psychological self-care the goal for autonomy and independence.

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SEXUALITY AS DIALECTICS SYNTHESIS: AN ANALYSIS FROM SOCIAL-HISTORICAL PSYCHOLOGY

Jeferson Montreozol[1], Edna Kahhale[2], & Inara Leão[3]
[1]*Coordenação de Pesquisa e Pós-Graduação, Faculdade Unigran Capital (Brazil)*
[2]*Programa de Pós-Graduação em Psicologia Clínica, Pontifícia Universidade Católica de São Paulo (Brazil)*
[3]*Programa de Pós-Graduação em Psicologia, Universidade Federal de Mato Grosso do Sul (Brazil)*

Abstract

While recent science, psychology brings with it theories that cast efforts to understand and explain phenomena and processes arising from the human and social sciences, and biological sciences and health. Meanwhile, the constitution of the human aspect shown urgencial for this science that has split the subject in body and mind, objectivity and subjectivity. Then bring the need to protect the materiality the reference for structuring a sexuality ruled on biological sex, and consider historicity and dialectics in an eminently social and historical understanding of the sexual basis. In view of the Psychology Historical-Cultural understand that sexuality is the synthesis of a dialectical process that brings in organic base (body), from which the subject develops a psychological structure initiated by socialization in their social group. Therefore, we consider the continued development of sexual identity, and not the fixity of that structure; the non-exclusive ownership of attitudes and behaviors male or female; developing a sexual identity that embraces both the social and historical aspects as well as the elements of consciousness and the unconscious subject (Higher Psychological Functions and mediators); the revalidation of the sphere of pleasure, as a possibility for directing the emotional aspects or even the emotional tone; and landmarks imposed by capitalist society to the development of sexual identity. This framework allows to understand the dialectical assumptions of contradiction and dynamism possible to work with the existence of a contradictory, multiple and pluridetermined reality, evidenced in the relationship between subject and object in the psychic and sexual development.

Keywords: *Sexuality, Synthesis, Dialectical, Social-Historical Psychology.*

1. Introduction

In order to understand sexuality as a dialectical synthesis, we take as an indicator the consideration of Garcia (2001, p.57), when he writes that "the sexual identity of each human being is constructed in the history of their relations, not being a mere biological determination, in some cases, faults that produce aberrations". We understand sexuality as the result of a complex process of development, which has in society the basic elements for the construction of a psychological identification of the sexual sphere.

This consideration is necessary because we understand that the construction of any sexual identity is permeated also by the ethical and moral values of a given society, which are apprehended by the subject and permeate its development. Thus, we highlight one of the essential characteristics for the understanding of the human being, which is its historical character (VIGOTSKI, 2004; LANE and SAWAIA, 1995), which implies in its development occurring under the determination of a series of factors, such as social, cultural and economic context in which he lives, and these factors suffer the conditions of the historical period in which they are circumscribed.

Therefore, it is as a result of this process that we visualize the construction of sexuality, where the biological organism is qualitatively overcome by the appropriation of social constructions. Ergo, it is a social relation, and specifically in education, that we find the references not only to the structuring of a sexuality based on biological sex, but also to a construction that advances in an eminently social and historical understanding of the sexual base: a dialectical synthesis.

2. The Sexuality as a human and social condition

To discuss human sexuality is to search for the most intimate and private aspects of man since his genesis. It is always possible to make a new analysis of the social, cultural and subjective dimensions that exist within the understanding of what is sexuality and, in this way, understand it as a dialectical synthesis.

It should be noted that in explaining sexual identity some issues need to be retaken. The first, and perhaps most significant of this article, is the understanding of sexuality through a larger aspect than is proposed by common sense when it links this human expression only to the sexual act itself. This is because sexuality is not only the relationship between two individuals, much less can be defined only by the sexual organs, the biology of human bodies.

Sexuality is a symbolic and historical process, which expresses to the constitution of the subject, how he lives and sees it, his intimacy, his meanings before social norms, moral, ethics, that is, his sexuality belonging to and coming from the social environment in which he lives (Kahhale, 2001). Nunes (2002) clarifies that the exclusive level of human sexuality is the psychosocial, since sexuality occurs through existing relationships in society.

According to the authors, we understand that social phenomena are directly linked to a culture, that is, they are correlated in the idealizations of what it is to be man or woman, and thus, in performing external activities, man attributes an interpretation through of the cultural meanings of the society in which it lives.

When we talk about meanings we must understand that there are social codes (signs), which are defined by Aguiar (2000) as conventional instruments of a social nature, the means of contact with the outside world and also with man himself and with his own conscience. Bakhtin (1992) clarifies that signs have an important role, because the word, as well as being the key to the understanding of consciousness and subjectivity, is also a privileged space of ideological creation, that is, the author differs from the token of the sign, since this second is changeable, alive and never neutral. Then, as Vygotsky (1996) points out the sign cannot be taken only as a tool because it is seen as a means of internal activity.

We understand that in interpreting the meanings of these signs already established historically, man constitutes senses and gives his own senses through his existences and experiences. In this way, we construct our mental understanding of what constitutes man or woman, using all these elements cited because they are the signifiers of this mental representation.

It is evident that in discussing human sexuality, we also understand that the historicity surrounding man as a social being is directly linked to his constitution. And, therefore, we consider that to construct a discussion about two important aspects that are imbued with the genesis of sexuality: sex and gender.

In the Portuguese language the word sex means "the set of characteristics that distinguish living beings in relation to their reproductive function, physical, organic, cellular, particular conformation that allows distinguishing male sex from female sex" (Ferreira, 2014, p. 698). Fundamentally, the biological factors are those that control human sexual development, from conception to birth, and also that enable reproduction after puberty. These are the main differences between male and female sex, and are mainly determined by the hormonal difference, having their maturation at puberty and reaching total functioning of the sexual and reproductive apparatus, besides contributing fundamentally to the development of sexual behaviors.

According to Canella (2004), sex should be considered in several aspects: the genetic, which is the biological difference that separates individuals by XX or XY and is determined by the presence of ovaries or testes respectively in female or male sex; later, the somatic sex, which shows the biological differences of both through internal (female) and external (male) genitals; legal sex, recognized at birth, validated in civil registry and legal documents. The author still emphasizes that secondary characters invigorate the identity acquired by creation, that is, cultural elements present in the environment in which the individual is inserted permeate and mediate their constitution, and contribute to the formatting of their identity. Or, in certain cases, such elements may generate conflicts of identity and non-acceptance of the biological sex present in the body, as occurs, for example, in transsexuality.

Another point to consider is the signifier of what the word sex represents to us. About this prism Montreozol (2011) clarifies that sex is a name given to what people learn and recognize as sexual things, for example, the medical-physiological descriptions of the genital apparatus, descriptions of bodily sensations, description of affective and loving feelings, It is all linguistic reality that cannot be shown and body support is the sole criterion of expression of these terms.

Thus, the role of language becomes important when discussing sex in its most different possibilities. And Social-Historical Psychology allows us this critical view on the construction of man, which brings us to the need to evaluate how the introduction of the signs present in our society make possible and mediate the constitution of a future sexual identity. In this discussion, it is possible to identify how we can approach and, at the same time, understand the feminine and masculine, and their social significations. To do so, we will resort to a second point within the constitution of human sexuality: the gender.

Nunes (2002) points out that we must consider the existence of this second dimension of sexuality: gender, being something exclusively human and deriving from man be a social subject, that is, that comes from deep social relations that influence the entire process of development of the species.

Born in the intense political and scientific debate of the 1960's and 1970's, the concept of gender accompanied the struggle of the feminist movement and gradually came to accompany social discourses and the humanities. Gender has come to be conceived not as an innate characteristic, but as the result of social and cultural forces, a social construction of the subject as male or female, not the natural male or female condition expressed in the genitals. And this implies that affective, loving, and sexual relationships do not constitute themselves as natural realities, but are constructed and developed through cultural processes.

Another understanding of gender is that of social sex or social gender, which represents one of the structuring and situational relationships of the individual in the world, and determines, throughout life, opportunities, choices, trajectories, experiences, places, interests (Nunes, 2002). Therefore, to understand that the historicity in which the subject is located goes beyond the biological characteristics and that these characteristics are not only related to the physiology of the sexual organs, it is to identify that throughout the social development the man assumes some peculiarities through the existing relations in his means. And these make possible its constitution, be it in the family nucleus, in the school, in the religion, in the interpersonal relationships, that is, in the historical culture inserted in this environment (Guedes, 2004).

Therefore, what becomes essential is not only the physiology present in the masculine or feminine body, but the symbolic representation that this physiology represents in a social environment; the representativeness of this sign, the meanings present within this cultural context and the human behaviors correlated to these signifiers.

It is interesting to note how there are still few productions on subjective issues related to gender within Social-Historical Psychology. This demonstrates the need to point out that an aspect initially seen as one of the basic functions of human beings and their survival - sexuality - has become part of a complex mechanism of expression of the social and symbolic relations of man. This has become one of the most powerful guides in the distribution of social roles, in the division of labor, in the inequality of relations and access to the resources and opportunities available in society (Barbosa, 1996).

The concept of gender, involving the social construction and historicity of sexuality, allows a breakthrough in the discussions about sexuality, since it shows the plurality of possible sexual identities and the understanding of these as well as narrow and purely biological visions, linked only to physical sex, thus promoting the overcoming of stigmatized and prejudiced conceptions that characterized the discussions about sexuality until the 1970's. Guedes (2004) points out that by abandoning the exclusively physiological precepts of the identity of the feminine and masculine genres, we have the possibility of understanding the diversity of sexual identities and the formation of this human sexuality without preconceptions or immediate judgments.

3. Sexuality: dialectical synthesis

We have argued that by studying sexuality from a social-historical perspective, we understand sexual development within a given society and social group. And we must remember that in the course of historical development, sexuality began to incorporate different possibilities of identification. However, psychological theories have presented difficulties in understanding and explaining these sexual identities, as well as psychic structure, with their correlated processes of identification and development; as well as in their social role, since social-anthropological definitions indicate an identity built on the social gender, not just sex. This is because as much as discussions have advanced in the understanding of sexuality, they end up restricted only to the concept of gender, and fail to encompass the whole range of continuous configurations that the process of sexual identity has in the human psyche.

Towards the knowledge generated by social-historical psychology, we understand identity as a process in continuous development, represented by the relationship between objectivity and subjectivity, that is, individual contents are constituted throughout the life of the subject, always guarding the relations that it maintains with the members of the social groups that it belongs, its presuppositions and, in front of this, its construction as subject.

Thus, sexuality also becomes a process in successive development, which is not considered by the main literatures on gender identity, since they treat the gender as responsible for the entire identity process. From this perspective, we must consider that the movement of the construction of sexuality by men in society finds greater resistance when they begin to seek sexual fulfillment not only by the authoritarianism of procreation and mainly aim at obtaining a pleasurable experience, a factor that has already been discussed since classical philosophy, but analyzed in depth since Freud (1927), when he affirmed that the determinant for our object choices was in the driving force of eroticism, not in our anatomical conformation.

This unprecedented revolution in the science of sexuality and western sexual ethics has contributed to our understanding that sexual identity, whatever it may be, is constructed through a psychic process, not confined exclusively to the biological aspect. Therefore, the sexual object is considered as contingent, because it is not necessary or essential, but depends on the circumstances, is not given by the biological nature, but by the psyche that is constituted by interpsychological and social relations. We understand then that the various differentiations in sexuality cease to be pathological formations to be accepted as resulting from a social-historical process, that is, there is no normal and natural heterosexuality and a sick and deviant homosexuality, but both are psychosocial constructions produced in each subject in their life history. "One cannot even speak of heterosexuality or homosexuality, but of singular sexual identities of singular individuals" (GARCIA, 2001, p. 68).

Sexuality is brought on the biological basis, specifically in the body, and from this the subject develops a process of identification, which, also, in the sexual aspect, is initiated by socialization in its social group. In this, the subject identifies, or not, with certain characteristics referenced socially for their anatomical sex. This process protects some reservations: (a) continuity, that is, the continuous development of a sexual identity, and not the fixity of this structure; (b) the non-exclusive appropriation of male and female attitudes and behavior; (c) the development of a gendered identity, a sexual identity that encompasses both social and historical aspects, as well as the constituent elements of the subject's consciousness; (d) the revalidation of the sphere of pleasure, as a possibility for directing the emotional aspects; and (e) denial by capitalist society itself to the development of some possibilities of sexual identification.

And this understanding is based on the epistemological principles of Dialectical Historical Materialism, particularly on the basis of Social-historical Psychological Theory. In this light, the social character is natural to man, and as much as we consider certain needs as biological, they are also mediated by society, ruled by social rules and conventions. Human existence itself becomes a social activity, determined by the context in which it occurs: "what I do for myself, I do for society and with the awareness of myself as a social being" (MARX 1993, 176).

However, much these social constructions are embodied, assimilated and come to be regarded as natural, eternal, immutable, they are not. All necessity, and the consequent satisfaction of it, are based on historical and social determinations. We have in the dialectic the possibility of understanding this reality as processual, and thus seeking truth in the internal movement of contradiction.

We understand then that contradiction underlies all existing relations in society: a process in which these relations (what is) contain in themselves the antithesis (the negation of what is), and that, in a qualitative leap, the synthesis is constructed. However, as much as it contains the elements of the two previous faces, the synthesis is not the mere sum of these; it is the new, not as the destruction of the two poles, but as an element with qualities distinct from those that originated it.

By maintaining the character of procedurality, the synthesis is readily configured as a new thesis which, in turn, will also bring in itself the negation (antithesis), restarting the process of constructing the new by incorporating / modifying the old one, always starting from the elements present in materiality.

Based on this principle, we can understand that the development of sexuality contains within itself the possibility of acceptance / negation of the exclusively biological character. Sexuality thus appears as a synthesis, a possibility of material representation of the negation of social-sexual constructions, and the subject only finds this possibility and the way of realizing it because society allows it. Such permission occurs because we then have the subject with a particular biological apparatus, but that develops an identity process that may or may not socially match with it. And this identity process is made possible because the cultural productions related to sexuality are ideal constructions, that is, we should fit into the conceptions of what it is to be a woman and what it is to be a man for society.

However, the idealistic constructions from which we appropriate ourselves are not what society regards as the correct ones, and consequently the synthesis cannot equal neither pole nor pole. The fact that one has characteristics that are not socially valued as feminine or masculine makes explicit the contradiction between the material base and the ideal constructions that the subject carries. The formulated synthesis is fundamentally different among all forms of sexual identity, since the material basis functions as a thesis, and the social sphere as antithesis.

In this way, we understand that any subject is born with a body, which is its material base, and by its activity it will appropriate the cultural constructions that will make it a human being. In this dialectical process, it surpasses its biological materiality, even though it does not cease to exist, constituting its own characteristics even in the face of social reality. Sexuality, moreover, is developed not as a copy of reality, but as a subjective synthesis: the sexual identity.

4. Conclusions

In the light of some final considerations, we consider it important to note some observations. The first, related to the character itself, gives us final considerations, since we do not understand this work as the end point of the discussions on sexuality in a Social-Historical perspective, on the contrary, here are some guiding elements for discussions that in the future need to be deepened and unfolded. The second, refers to the specificity of our theoretical approach, since any others could generate different thoughts and results.

By the dialectical understanding of reality, we take the subjects as representatives of aspects related to the social and psychological processes present in society, and which are crystallized in their characteristics due to the specificity of their insertion in the external reality or in the development of a determined process of identification.

This form of understanding of reality allowed us to apprehend sexuality as a social construction that maintains a dialectic relationship with consciousness, and is therefore not insurmountable. It is not phylogenetically determined, but constructed through the internalization that the subject makes of the sexual socialization and, therefore, depends on its activity. The central question that arises is the social and cultural character of sexuality; we visualize that sexuality is, like the individual consciousness, depending on the relation of the subject to the external world, without losing the social character, since it contains components related to the social-historical determinations in which this individual acts in groups which participates, which provide content for their development, and for, in addition, the development of their sexuality.

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PARENT CAREER BEHAVIOUR AND EMOTIONAL AUTONOMY IN ADOLESCENCE

Tatiana Konshina & Tatiana Sadovnikova
Faculty of Psychology, Lomonosov Moscow State University (Russia)

Abstract

The preliminary vocational self-determination is one of the most important developmental tasks in adolescence (Havighurst). Formation of emotional autonomy, as a characteristic of child-parental relationship, also tends to be an important age task (Steinberg, Silverberg). The parent career behaviour is an important factor as nowadays adolescents in Russia need to make first choices in vocational area whereas they have a low level of autonomy in their families. The study was aimed to explore the specificity of emotional autonomy development and perceived parental career behaviour in adolescence. 220 pupils from 14 to 17 years from Moscow schools (9th – 11th grades) participated in the research.
The relationship between perceived parent career behaviour and emotional autonomy level in adolescence was assessed. Correlation analyses revealed that autonomy formation relates to perceives parental career behaviours. The development of emotional autonomy in adolescence is negatively correlated with perceived parent career behaviour: more autonomous adolescents perceive their parents as less supporting and acting at their vocational self-determination area.

Keywords: *Parent career behaviour, emotional autonomy, child-parental relationship, adolescence.*

1. Introduction

The central new formation in adolescence is the formation of new level of self-conscience and the development of personality and vocational self-determination (Vygotsky, 1982; Elkonin, 1989; Pryazhnikov, 2013).

The idea of social-historical dependency of human psyche and its development in ontogenesis comes as one of the most important points in cultural-historical theory elaborated by L. S. Vygotsky. The principle of social situation of development (SSD) formulated by L. S. Vygotsky and gained development in works of D. B. Elkonin, O. A. Karabanova permits to concretize the mechanisms of interaction between a developing child and his social-cultural environment. In our study we discuss the parent-teenager relationship as a component of the child's SSD. There is the new Law of Education adopted three years ago in Russia. The reforms in educational system of modern Russia include the new rules in the features of final school exams and of entrance exams in higher education institutions.

The emotional autonomy development is an important task of age in adolescence (Vygotsky, Blos, Stern). It appears as emotional distancing from parents, changing the perception of parents, getting the individuality in the relationship with parents (Steinberg, Silverberg, 1986; Smollar, Younnis, 1987; McElhaney, Allen et al, 2009). The family generally plays a critical role in a child's professional development (Guerra and Braungart-Rieker,1999; Otto, 2000; Taylor and Hurris,2004) – the career decision-making seems to become a joint resolution in family and in the same time is strongly related to teenagers' emotional autonomy development. The perceived parent–adolescent relationships (especially parent career behaviour) associates with career maturity and self-efficacy in adolescence (Keller, Whiston, 2008; Roach, 2010). In Russian society the objective necessity of parental and family involvement into the area of decisions related to the professional future of the teenager explained by lack of teenage autonomy, the need to attract parental family resources (for example, paying for training courses; joining to orientation and discussions to optimal choice of education profiles and optimal choice of set of exams for future career education opportunities) and recorded in a number of recent works of leading experts in the field of occupational psychology (Klimov, 2004; Noskova, 2007; Pryazhnikov, 2015).

2. Objectives

The study was aimed to explore the specificity of emotional autonomy development and perceived parental career behaviour in adolescence. We analyzed the age dynamics and gender differences of adolescents' emotional autonomy development and their perception of perceived parent career behaviour (the parents' involvement to the area of planning and realizing the child's career development) in adolescence.

3. Methods

3.1. Sample

220 pupils (97 male, 123 female) from 14 to 17 years (average age =15,8) from Moscow schools (9th – 11th grades) participated in the research. Emotional Autonomy Scale (L.Steinberg, S.B.Silverberg, 1986), Parent Career Behaviour Checklist (B.Keller, S.Whiston, 2008) in authors' adaptation were used in the research. The results were statistically analyzed with IBM SPSS program.

3.2. Procedure

Emotional Autonomy Scale (EAS), developed by L. Steinberg, S. B. Silverberg at 1986, contains four components of emotional autonomy: two relatively more cognitive components, perceives parents as people and parental deidealization; and two relatively more affective components, nondependency on parents and individuation.

Parent Career Behaviour Checklist (PCBC), developed by B.Keller, S.Whiston at 2008, contains two scales – Action Scale and Support scale and shows teenager's perception of parent career behaviour. Original method offers one questionnaire with an opportunity to choose a member of family which participates more at the area of the career choice of adolescent. In our research pupils were offered to fulfil two questionnaires – about mother's and about father's involvement.

Both questionnaires were translated, validated and adopted by authors for Russian sample (Konshina T.M., 2016).

4. Discussion

The gender differences were analyzed by Spearman's rank correlation coefficient. Boys are more tended to percept mother's career behaviour as active (0.049; $p = 0.026$) and father's career behaviour as supportive (0.160; $p = 0.026$) and active (0.277; $p = 0.001$) than girls. At the same time, girls are more tended to deidealize their parents (-0.177; $p = 0.008$). These results can show that adolescents tended to deidealize their parents and can percept their parents as less involved and supportive at their child's career development area.

The results show also significant age differences: elder adolescents increasingly perceive their mothers as acting in their career development area (0.192; $p = 0.007$). It can be explained as a necessity of parents (and especially mother as main caregiver in the most Russian families) to be involved as their children are more close to graduate school, choose university, get ready and pass the exams.

The features of adolescents' emotional autonomy in association with their perception of parents' career behaviour were investigated using the Pearson correlation coefficient.

Parents *deidealization* (EAS) strongly negatively correlates with perceived by adolescents' mother's support (-0.490; $p = 0.000$), mother's activity (-0.462; $p = 0.000$), perceived father's support (-0.473; $p = 0.000$) and father's activity (-0.399; $p = 0.000$) in the parent's career behaviour (PCBC). Such results can mean that teenagers alienate from their parents when start to deidealize them and, therefore, teenagers can less percept their behaviour as involved and supportive figures.

Nondependency on parents (EAS) also strongly negatively correlates with perceived mother's support (-0.391; $p = 0.000$), mother's activity (-0.353; $p = 0.000$), perceived father's support (-0.357; $p = 0.000$) and father's activity (-0.296; $p = 0.000$) in the parent's career behaviour (PCBC). Such tendency can show that adolescents that feel more nondependent on parents start to make career decisions by themselves and don't allow parents to be very involved.

The analysis of the *individuation* scale (EAS) indicated significant negative correlations with perceived mother's support (-0.310; $p = 0.000$), mother's activity (-0.217; $p = 0.001$), perceived father's support (-0.236; $p = 0.001$) and father's activity (-0.234; $p = 0.001$) in the parent's career behaviour (PCBC). That also can show that adolescents which feel as individualities can be more confident in making their own career decisions and don't let parents to be responsible for their choices.

Perceives parents as people scale (EAS) is significantly negatively correlated just with perceived mother's support (-0.169; p = 0.012) (PCBC).

The average results of emotional autonomy investigation show strong negative correlation with perceived mother's support (-0.505; p = 0.000), mother's activity (-0.399; p = 0.001), perceived father's support (-0.416; p = 0.001) and father's activity (-0.347; p = 0.001) in the parent's career behavior (PCBC). Thus, the adolescents which feel more emotionally autonomous in the relations with their parents perceive their parents as less supporting and acting at their vocational self-determination area.

5. Conclusions

Our research revealed the features of emotional autonomy development and perceived parental career behaviour in adolescence. Peculiarities of emotional autonomy development and perceived parent career behaviour among pupils of different gender and age were found. Boys are more tended to percept mother's career behaviour as active and father's career behaviour as supportive and active than girls. Girls are more tended to deidealize their parents. Elder adolescents increasingly perceive their mothers as acting in their career development area,

Research concludes that perceived parent career behaviour is related to emotional autonomy level in adolescence. Teenagers which start deidealize them and can less percept their behaviour as involved and supportive. Adolescents that feel more nondependent on parents and individualized start to make career decisions by themselves and don't allow parents to be very involved. The adolescents which feel more emotionally autonomous perceive their parents as less supporting and acting at their vocational self-determination area.

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THE FACTOR OF ECONOMIC SECURITY OF PERSON IN THE REGULATING OF INSURANCE AND INVESTMENT POLICY

Olga Medyanik
Department of Political Psychology, St. Petersburg state University (Russia)

Abstract

Up to the present moment, the question of anticipation of threats of economic security of person (ESP) remains an open problem, as far as these threats cause economic and psychological damage to an individual. It is important to determine the possibilities of economic damage to person in advance and provide ongoing psychological monitoring to identify internal and external economic risks while forming of state fiscal policy. Insurance as a financial institution is not widespread, but objectively increases the number of citizens included in this process, generally with average or high-income level.
In Russia, the process of saving and insurance has specific psychological character. Taking this fact into account, we have developed 2 uniquely designed checklists: «The attitude of citizens to national insurance policy» and «Personal financial anxiety».
We have interviewed 53 clients of different insurance companies in Saint Petersburg. There are 31 women and 22 men among them, at the age of 25-45 years generally, with subjectively average or high-income level. The subject of our research is the characteristics of national insurance and investment policy in the citizens' consciousness, consistent with their personal financial anxiety. The substantive hypothesis is: the citizens with average and high level of financial anxiety are more intensively included in the insurance and investment policy process.
The findings of the survey «The attitude of citizens to national insurance policy» showed that for Russian citizens the state is a guarantor of financial protection. The government should bear the main financial risks in emergency situations (73.33%). Generally, one should blame the national policy for all financial problems (23%), but not blame oneself (56.6%). It is also obvious that there is a low level of financial literacy in Russia, 90.57% of respondents consider it to be true. The fatality index of citizens is quite high, as far as the citizens are more inclined to believe in fatality (84.78%), than to buy a certificate of insurance. The potential reason is the inadequacy and incompleteness of the information resources on products of insurance and investment services (63.05%). The development of insurance market is proceed due to the activity of insurance intermediaries (insurance agents), and the trust to these agents is very indicative in our research (82,6%). At the same time, Internet resources have no influence on making the decision to buy a certificate of insurance (6.52%).
According to the results of the survey «Personal financial anxiety», 43.18% of respondents feel relatively secure in current political and financial conditions in Russia, although the investment interest is quite low – the citizens are not ready to buy personal transport and real estate on credit (25.58%). Perhaps it is because of high tariff rates, or it can be caused by the long-standing unwillingness to live with encumbrance for a long time.
Financial anxiety becomes a key factor that influences on the life of Russians. There are quite high rates of destructive psychosomatic reactions, connected with the experiences of financial problems (30.23%) – they are insomnia (27.90%), muscle spasms (26.19%), rapid heartbeat (20.93), and panic moods (14.28%). The given research raises a question of searching the causes of manifestation of the various forms of ESP and possible methods of control and negotiation of financial anxiety by means of regulation of national economic policy.
In conclusion, it is necessary to underline the fact that in Russia the citizens' attitude to insurance and investment policy is still in the process of development. The financial assets, accumulated by citizens, are relatively small and short-dated, as far as there are no developed practice to save up money in advanced forms, based on market type of economy (insurance, security purchase), to make a correct calculation economic risks, and the average income level is relatively low. The citizens with high level and average level of anxiety are more intensively included in the process of insurance and investment, because the saving of personal estate and financial assets is a quite significant factor of psychological comfort and personal wellness of an individual. The state should provide a lot of work with the population during the implementation of investment and insurance policy, because a constant financial condition of citizens can become a motive of savings and their further transformation into investments that is quite necessary for the state.

Keywords: *Economic security of person, financial anxiety, insurance and investment policy, financial risks.*

THE BIOGRAPHY GAME – INTERCONNECTION AND EXCHANGE PROCESSES IN THE CONTEXT OF ADOLESCENT COMPUTER GAME USAGE

Florian Lippuner & Daniel Süss
ZHAW School of Health Professions, Zurich University of Applied Sciences (Switzerland)

Abstract

The presented study examines the interconnection and exchange processes between the realms of virtual game environments and the actual lifeworlds of adolescent players within their respective, individual biographies. The connection between the two is conceptualized by the term Biography Game.
The processes of structural interconnection are highly dynamic, varying in regards to the players' living situations and mental states. Furthermore, the data reveals interdependency, and therefore transfer processes, between players and computer games. There is no one-way relationship in regards to these effects. In terms of course and characteristic, every Biography Game is unique. Nevertheless, five general types of Biography Games can be identified: Early Biography Game, Late Biography Game, Situational Biography Game, Variable Biography Game, and Intense Biography Game.

Keywords: *Biography, Virtual Worlds, Media Literacy, Adolescence, Computer Game.*

1. Introduction

Empirical research with regards to computer game[1] usage still concentrates on possible negative effects in the realms of addiction and aggression, for example by means of cross-sectional and longitudinal studies (Anderson et al., 2010; Gentile et al., 2011; Gentile & Gentile, 2008). Thereby research is narrowed and just a few possible ways are used (Quandt, 2010, p.194-195).

Usually it is assumed that the passive reception scheme – known from televison consumption – can be transferred to computer game usage. However, the peculiarity of computer game usage is the (inter) activity of the player. He is not only a recipient, consumer and spectator, but himself stands in the centre of action.

The specific modes of usage do not arise accidentally, but are in fact associated with the personality and life situation of every individual player. A person's enthusiasm for a specific computer game often stems from a thematic closeness of the contents to her/his actual lifeworld (Fritz & Fehr, 1997).

The study examined these interconnection and exchange processes between the realms of virtual game environments and the actual lifeworlds of adolescent players within their respective, individual biographies. How do they change over the course of adolescence? How do adolescents view the connection between changes in their everyday life and the way they use computer games?

The connection between biography and computer game usage is conceptualized by the term *Biography Game*. The term was chosen to underline the various interdependencies between individual life contexts and situations on one side and virtual game worlds on the other side. Of course, *game* cannot be equated with *biography*, this would not suffice and do justice to the latter. Nevertheless, the term signalises the relationship between the different worlds.

Rather than delivering a snapshot of these relationships, the novelty of the presented study is its focus on the dynamic and long-term aspects of the interdependency between game and biography. The existence of such connections was already proven by other studies, at least punctually. For example, there is extensive research showing how adult players harmonise their computer game hobby with their occupational and/or familial life contexts (Götzenbrucker & Köhl, 2009; Grüninger, Quandt, & Wimmer, 2009; Herlyn & Meister, 2009). For the first time, this study traces the biographical overall picture of such processes for adolescents and young adults.

[1]The term *computer game* as used in this study includes games played on a personal computer as well as games played on consoles, handhelds, or smartphones. Ultimately it includes all computer-controlled games where players interact with objects displayed on a screen.

2. Theoretical Background

Fritz/Fehr (1997) presume that individual preferences are an important factor with regard to the fascination of digital games. If specific game titles are attractive for an adolescent person, the processes of structural interconnection occur. The computer game triggers something (feelings, cognitions, traits) in the player that is relevant or meaningful for his/her lifeworld.

Structural interconnection can take place on different levels: associations (similarity experiences), preferences and interests, personality traits or specific life situations and subjects (Fritz & Fehr, 2003, p.6-9).

Fritz/Fehr (1997, p.67) differentiate between parallel and compensatory structural interconnection. Parallel interconnection occurs if players refer to their essential life contexts and extend them while gaming. In contrast, the authors identify compensatory interconnection when games are selected that create opportunities which are desirable but not realisable for a player in real life contexts.

Besides the real world (reality) the following worlds exist: Dream world, mental world, world of play, world of media, and virtual world (virtuality). Computer games are part of the virtual world.

Unilateral effect models are inappropriate to answer questions about the reciprocal impact of virtual game worlds and other worlds. It seems to be fruitful to use the Transfer Theory. A *transfer* is a motional process between people's different worlds. Transfers always include transformations, or in other words: modifications of the transferred thoughts, emotions or scripts (Fritz, 1997, p.229f.).

According to this model, external stimuli as well as memorised content are allocated to the appropriate world by the player. These worlds differ with regards to stimulus processing and the allocation of meaning.

The main concern here is, what players bring to the virtual world on the one hand and what they take out to other contexts on the other hand. For Fritz it is important to pay attention to the *what*; there is a special need to observe its transformations in the process of transfer. If a player takes from his stay in the virtual world, for example behaviours, emotions or information to reality, he/she first has to match these meanings to the conditions of the targeted context (Wesener, 2004, p.188).

3. Objectives

The aim of this study was to investigate the connection and exchange between virtual game environments and other contexts of the lifeworld across the user's biography, and especially throughout adolescence. Youth means change, it is characterized by transitional phases and new beginnings (Schulenberg & Zarrett, 2006). The goal was to detect the connections between changes in the test persons' everyday life and their computer game usage (or vice versa) in the users own view – current and retrospective. Which game titles/game characters/genres did they prefer in which phase of life, and why? Which elements or thoughts are transferred to everyday life?

Another objective was to prove that within individual biographies both complementary and compensatory usage phases can occur. The actual life and/or socialization phase determines which of the both is predominant.

Finally, an aim of the study was to add new empirical findings to the media-psychological and educational discourse. Educationists and/or parents are helped in their understanding of how computer game usage is interconnected with the individual biographies of adolescents. Thereby, we provide an instrument to estimate problematic developments or situations of specific individuals as early as possible.

4. Methods

Processes of interconnection between biography and computer game usage are better measured by qualitative approaches than by standardised, quantitative methods. The latter capture mainly attitudes – and not the causes for those; the interpretative decision making processes prior to the answering behaviour remain concealed (Schütze, 1977).

Fundamental for the present research design is the Media Biographical Approach. This approach deals with media-determined constitution of the everyday life and the life story. It assumes that meaningful interpretations of media biographies are only possible by keeping in mind one's whole biography (Sander & Vollbrecht, 1989, p.163ff.).

According to the Media-Biographical Approach, in-depth interviews with twenty-six computer game users were conducted. The test persons were between 18 and 28 years old at the time of the interviews. Sociologically spoken they were *emerging adults* (Arnett, 2000), which means, that most of these young people were not part of the youth anymore but at the same time were not adults yet. This age group was chosen because its members are in a phase of psychological and occupational changes.

Further criteria for being part of the research cohort was experience with the use of computer or console games. Test persons should have had at least one phase in their lives in which they played regularly. Within this heterogeneous test group persons with no current computer game usage were found as well as semi-professional players. On average the test persons used computer games for 13 years at the point of the data collection.

The test persons stood at different points in their lives and possessed a broad span of graduations, actual employments and socio-economic statuses. All subjects lived in the german speaking part of Switzerland at the time of the study. They were recruited via online gaming platforms and LAN parties.

The interviews were not meant to be completely open. While the biographical part of the interview actually was narrative and driven by the interviewee, the second, computer game oriented part was based on a guideline and concrete questions by the interviewer. In fact, this guideline was set up as somewhat fixed concerning its contents but somewhat flexible in respect of the order of the asked questions.

The data collection was conducted between 2011 and 2013. The interviews took 109 minutes on average.

The interviews were transcribed. Afterwards categories were built and attached to specific text passages. Finally, the data was interpreted via Qualitative Content Analysis (Mayring, 2010; Schmidt, 2009).

5. Results

5.1. Structural interconnection

The results show how the processes of structural interconnection differ individually depending on time and content. These processes are highly dynamic, varying in regards to the players' living situations and mental states. These factors can have either a reinforcing or weakening effect on the intensity of computer game usage.

The data prove that compensatory usage motives and patterns usually occur during biographical stages of high tension, strain or stress. During less challenging and/or demanding periods of life, complementary or parallel interconnections are prevalent.

One of the most surprising findings of this study is the avoidance of computer game usage during particular phases of strain. Despite actually being regular or frequent players, several of the test persons named one or more stages in their lives where computer game usage was inappropriate. In fact, computer game usage was counterproductive at specific points in the observed biographies. A central explanatory approach for this phenomenon could be the assumption that different types of stress cause different usage patterns. We hypothesise that during work or school related stress phases computer games are more likely to be used for distraction and escapism. On the other hand, being exposed to psychological strain caused by personal conflicts or blows of fate, sometimes leads to the avoidance of computer games. Affected persons might invest all their resources into dealing with the acute problem. Also, such individuals do not want to expose themselves to additional pressure.

Additionally, it was shown that identity-related activities within computer games are usually carried out with the intent of taking up and reflecting actual self-related needs.

5.2. Transfers

The data reveals interdependency, and therefore transfer processes, between players and computer games. There is no one-way relationship in regards to these effects. The interviewees' framing competencies allow various transfer processes between the players‘ computer game usage and their individual biography.

Transfers mentioned by the interviewees can be grouped as followed: action related transfers, cognitive transfers, affective transfers, social-integrative transfers, media related transfers, and dream-related transfers.

Yet, different types of transfers occur in different frequencies. Some of them were rarely observed. In particular, action related transfers have been found to be nearly impossible. The results show how the framing competencies of the test persons prevent direct transfers on the level of physical action. Action related scripts in computer games are not simply copied and applied to real life.

However, various transfers between the mental world and virtual game worlds were documented. Here, computer game usage triggers a lot of different types of cognitive transfers, notably in the areas of knowledge and thinking. On the other hand, players transfer their personal skills and know-how into virtual game worlds.

Transfers can be conceived as either a positive or a negative experience. For example, those related to thrill, violence, moral, and social issues are commonly perceived as ambivalent experiences.

6. Biography Game typology

The concept of Biography Game is an opportunity to capture adolescent lifeworlds with regards to the connection between computer game usage and biographical events and phases.

In terms of course and characteristic, every Biography Game is unique. Nevertheless, when using a specific set of criteria (i.e. dynamics, structural interconnection, transfers, and dramaturgy), five general types of Biography Games can be identified:

Early Biography Game (3 persons): The Early Biography Game is characterised by patterns of intensive usage during early youth in combination with tight structural interconnection and various kinds of transfers. Later, across youth and into adulthood, this intensity decreased.

Late Biography Game (2 persons): The computer game related aspects of this type develops not before late adolescence respectively young adulthood. Before, computer game usage played a marginal part in the analyzed biographies.

Situational Biography Game (3 persons): Computer games are acceptable place holders in this type of Biography Game. Games are seen as resources of amusement that can be used depending on actual needs.

Variable Biography Game (12 persons): Here, the computer game usage is narrowly intertwined with the current lifeworld. Computer games are an elementary and important part of everyday life in this type. Actual usage patterns are subjected to fluctuations, particularly with regard to preferred contents and themes.

Intense Biography Game (6 persons): This type is characterised by high values on every single one of the four criteria. The Intense Biography Game contains two different groups of players: the excessive players and the competitive players. With regards to their intensity of computer game usage they have a lot in common. A big difference between these two groups can be observed in their motives for the intensity of computer game usage. Namely, excessive players are driven by compensation and escapism while competitive players are motivated by their game-related ambitions. These two player groups within the Intense Biography Game prove that the sole measurement of the intensity of computer game usage is not a valid criterion to evaluate if someone's computer game usage is problematic or not.

The Biography Game typology can be used by players to reflect their own computer game usage and its role in their actual lifeworlds. Into which of the five types would they classify themselves? Would their parents or teachers evaluate similarly? These reflections could be used in dialogues between students, educationists, parents, therapists et cetera.

7. Conclusion

This study has shown the dynamic network consisting of biography, computer game usage and wellbeing. Different using patterns occur within individual biographies depending on actual life phases and situations. By using a Media-Biographical Approach these processes were traced with regard to the lifeworlds of adolescents and young adults.

It was revealed, that there is no precise distinction between complementary players on the one hand and compensatory players on the other. Rather, adolescents interact with computer games in one way or another depending on their current motives and needs.

The overall picture of this study indicates that the breeding ground for the bonds between biography and computer game has to be seen in the processes of structural interconnection. For example, virtual game worlds can not be used for identity related processes before structural interconnection has established. The same applies to transfers: they can not appear unless the player allows them to happen based on the processes of structural interconnection.

Finally, framing competencies have both protective and enabling components. They help players to guard themselves from problematic transfers. On the other side, well developed framing competencies enable enriching transfers, in particular with regard to emotional, cognitive and social aspects. For a fruitful transfer of meanings and information from one world to another, players need a profound knowledge about the characteristics of the different worlds.

Computer games don't affect players just like that. They are not sucking players into virtual worlds and never let them out again. In fact, adolescent players turn their attention to computer games on purpose during specific life situations, for example, to deal with unsatisfactory events or life phases. The interviews have delivered evidence that intense compensatory usage patterns decrease automatically as soon as biographic conditions get back to normal.

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MEN'S GENDER IDENTITY AS THE FACTOR OF FATHERING IN RUSSIA

Tatiana Sadovnikova, PhD
Faculty of Psychology, Lomonosov Moscow State University (Russia)

Abstract

Gender identity is one of the central parameters of personality. The formation of gender identity is connected with the features of society. A few characteristics of modern Russian society were revealed (A. G. Asmolov, E. P. Belinskaya, O.A. Karabanova, T. D. Martsinkovskaya, N. N. Tolstykh): wide variety of life in different social groups; a high level of social uncertainty; influence of information technology. The features of contemporary adults' gender identifications are shown as a condition for creating their image and a condition for image of their sexual partners. The father mastering is also connected with the men's gender identity in the period of «emerging adulthood» (J. Arnett).
We approbated the method of multidimensional scaling (MMDS) for the gender identity investigation. The theoretical framework of the MMDS are the works of G. Kelly, expanded by others (Artem'eva, 1999; Mitina, Petrenko, 2000, 2010). The components of gender identity and gender stereotypes were revealed: the semantic space of gender representations was studied, analyzed and assessed. Men's gender identity as a factor of parenthood mastering was considered.
Firstly, we studied the specificity of gender stereotypes of contemporary young adults with a different gender identity (N =36). Projective technique «Draw the person» by Gudinaff-Harris in the author's adaptation, the modification of Bem Sex-Role Inventory (Dvoryanchikov, 2011), Nartova-Bochaver Inventory of Sovereignty of Psychological Space (2008) and the MMDS were used.
Secondly, we explored the features of the men's mastering the parent role depending on different types of masculine attitudes. 61 men aged from 30 to 42 years participated in the research. Bem Sex-Role Inventory (Rean, 1999), The Male Attitude Norms Inventory by R. Luyt (2005) (Kletsina, Ioffe, 2013), Caregiving and Breadwinning Reflected Appraisal Inventory by J. Pleck (Borisenko, 2015) were used.
The results confirm the study hypotheses: the semantic space of male and female gender identity representation during their entry into maturity has qualitative distinctions. There are significant differences in the estimation of feminine and masculine qualities for parent and sexual partner role images for men with a different gender identity**.**
The hypothesis of links between commitment of fathers to standard masculine attitudes and acceptance of the father's role by them was confirmed.
Similarities and differences in the parental identity of men with different types of men's standard attitudes were found. The study concludes that the person's system of *gender ima*ges – Ideal Men (Women) – Standard Men (Women) – Real Men (Women) -- is an important factor for developing the person's parenting in adulthood.

Keywords: *Development, parenting, gender identity, men's standard attitudes.*

1. Introduction

Gender identity is one of the central parameters of personality. The formation of gender identity is connected with the features of society. Global transformations of society in Post-Soviet Russia have affected the system of socialization institutes. A few characteristics of modern Russian society: wide variety of life in different social groups; a high level of social uncertainty; an influence by information technology were revealed (A.G. Asmolov, E.P. Belinskaya, O.A. Karabanova, T.D. Martsinkovskaya, N.N. Tolstykh, A.A. Rean, A.S. Tkhostov, T.V. Kornilova).

The modern cultural-historical theory, created by L.S. Vygotsky's and expended by his pupils and followers, integrates the ideas of Social Situation of Child's Development (SSD) (L.S. Vygotsky) and ideas of E.Erikson's Theory of Development. SSD is considered as a structure that includes the child's objective position in the system of social and interpersonal relations and the child's perception of the social expectations and requirements that set "Ideal Form of Development", defining the most optimal developmental trajectory in the historical and cultural context (Vygotsky, 1934/2003; Karabanova, 2002). E.Erikson's notion «the tasks of developmental stages in ontogenesis» was expanded and specified by

R. Havigherst (1953). Nowadays we consider the process of psychological development as a trajectory in the field of many opportunities and those different «ways» are determined by cultural and historical factors (D. Stern, A. G. Asmolov, O. A**.** Karabanova). During the period of adolescence and youth majority of the personality developmental tasks are looking for a sexual partner and spouse and the formation of identity, including the gender, spouse and parent identity.

Masculinity ideology describes «an individual's internalization of cultural belief systems and attitudes toward masculinity and men's roles» (Levant & Richmond, 2007). The gender role conflict impact a psychological well-being of a person. It is linked to a plethora of negative psychological, physical, and behavioral outcomes for men (O'Neil, 2008).

In this article we show that the features of contemporary adults' gender identifications are a condition for their image and a condition of image of their sexual partners. The father mastering is also connected with a men's gender identity in the period of «emerging adulthood» (Arnett, 2000).

2. Design

The purpose of the conducted investigation was to research the youth gender identity formation and how it influences men's parent mastering. We approbated the method of multidimensional scaling (MMDS) for the gender identity investigation. The theoretical framework of the MMDS are the works of G. Kelly, elaborated by others (Artem'eva, 1999; Mitina, Petrenko, 2000, 2010; Petrenko, 2005). Components of the gender identity and gender stereotypes were revealed: the semantic space of gender representations was studied, analyzed and assessed. The men's gender identity as a factor of parenthood mastering was considered.

3. Methods

Firstly, we studied the specificity of gender stereotypes of contemporary young adults with different gender identity aged from 20 to 29 (N =36; 20 female (55,6 %) and 16 male (44,4 %)). The projective technique «Draw the person» by Gudinaff-Harris in the author's adaptation, the modification of Bem Sex-Role Inventory – Masculinity and Femininity (M&F) (Dvoryanchikov, 2011), Nartova-Bochaver Inventory of Sovereignty of Psychological Space (2008) and the MMDS were used.

Secondly, we explored the features of the men's mastering the parent role depending on different types of masculine attitudes. 61 men, all of them are fathers, aged from 30 to 42 years participated in the research. Bem Sex-Role Inventory (Rean, 1999), The Male Attitude Norms Inventory (MANI) by R. Luyt (2005) (Kletsina, Ioffe, 2013), Caregiving and Breadwinning Reflected Appraisal Inventory by J. Pleck in Borisenko's version (2015) were used.

3.1. The psychosemantic research of the gender stereotypes of contemporary young adults with a different gender identity

For carrying out this research the polling matrix was made. It was based on the M & F questionnaire (Dvoryanchikov, 2011) including eight role positions: «I am Real», «I am Ideal», «The Standard Man», «The Standard Woman», «I am as seen by Men», «I am as seen by the Women », «Ideal Sexual Partner», «Real Sexual partner». Twenty two personal qualities (in the form of adjectives) as scales' descriptors which describe the subject within psychological space of Masculinity and Femininity were used.

We compared two images: «I am Real» and «I am Ideal». It has been established that these two images are in a bigger proximity for the male sample than for the female sample. Data processing was carried out by means of the factorial analysis of the method's main component with orthogonal rotation («varimax») separately on men's and women's samples.

Three most significant factors for men and four factors for women have been allocated. For male sample the first of the three factors explains 71% of the data general dispersion, other two factors explain 17% and 7% of the data general dispersion respectively. Proceeding from the maintenance of the qualities which entered each factor, factors for men's sample were called – Masculine Positive, Feminine Positive, Androgenic Bright. For the female sample the first from the four factors explains 56% of the data general dispersion, other three factors – 16%, 10% and 6% of the data general dispersion respectively. Proceeding from the maintenance of the qualities which entered each factor, factors for the female sample were called – Androgenic Neutral, Androgenic Bright, Masculine Positive, Parent. Among the existing semantic space men and women have one general space on which it is possible to make a comparative analysis – across the axes «Masculine Positive – Androgenic Bright».

First, female images have some bigger variability, bigger saturation, brightness, differentiation and inclusion in the behavioural arsenal of versatile gender qualities; second, men's images also have some rigidly fixed exclusively positive masculine qualities.

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3.2. Results of the research of the idea of male and female gender identity in the period of an early maturity

Within our research the results, confirming the general hypothesis of our work, that the semantic space of ideas of male and female gender identity with young men and girls during their entry into maturity has qualitative distinctions, have been received.

The first private hypothesis, that there is significant difference in the estimation of the feminine and masculine qualities for certain roles. The research has proved that for men «men's objects» in their semantic space masculine characteristics is expressed stronger, than the relation between feminine qualities of these objects.

Table 1. The attributes of men's role positions: importance of distinctions.

	Statistic criteria[a]				**Men**		**Women**	
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
	«I am Real»							
brisk	67,00	257,00	-2,42	0,02	3,08	0,641	2,42	0,692
benevolent	63,50	168,50	-2,69	0,01	2,93	0,475	3,5	0,618
	«Standard Men»							
	Significant distinctions aren't revealed							
	«I am Ideal»							
obstinate	50,50	186,50	-2,29	0,02	2,17	0,577	1,56	0,727
neat	72,50	177,50	-2,33	0,02	3,43	0,646	3,88	0,332
amiable	61,50	166,50	-2,54	0,01	3	0,877	3,71	0,47
magnanimous	51,50	156,50	-3,11	0,00	2,93	0,616	3,67	0,594
benevolent	80,50	185,50	-2,20	0,03	3,21	0,699	3,68	0,671
tender	56,00	161,00	-2,64	0,01	2,57	0,852	3,41	0,712
	«I am as seen by the Men »							
responsible	82,00	187,00	-2,07	0,04	3,07	0,829	3,63	0,597
neat	67,00	172,00	-2,73	0,01	3	0,555	3,58	0,507
affectionate	55,50	146,50	-2,26	0,02	2,31	0,63	3,00	0,894
tender	51,00	156,00	-2,90	0,00	2,14	0,535	2,94	0,827
	«I am as seen by the Women»							
affectionate	69,00	174,00	-1,91	0,06	2,86	0,663	3,38	0,806
benevolent	62,00	167,00	-2,33	0,02	3,14	0,535	3,63	0,619

It is established that – there is more links in цщьфтбы semantic space, than in men's: it reflects a big «flexibility», a possibility of change-over and adaptation of women in comparison with men.

Table 2. The attributes of women's role positions: importance of distinctions.

	«Standard Women»							
responsible	56,50	161,50	-2,62	0,01	3,14	0,535	**3,69**	0,479
	«Ideal Sexual Partner»							
brave	38,50	143,50	-3,45	0,00	2,64	0,842	**3,71**	0,588
responsible	59,50	164,50	-2,54	0,01	3,29	0,611	**3,81**	0,403
weak	52,50	188,50	-2,74	0,01	**2,07**	0,73	1,44	0,814
strong	34,50	125,50	-3,28	0,00	2,54	0,967	**3,69**	0,602
courageous	42,00	147,00	-3,07	0,00	2,43	0,852	**3,5**	0,816
independent	64,00	169,00	-2,18	0,03	3	0,784	**3,56**	0,727
strong-willed	46,50	151,50	-3,11	0,00	2,64	0,745	**3,59**	0,87

	«Real Sexual Partner»							
tolerant	49,00	127,00	-2,12	0,03	2,67	0,778	**3,33**	0,724
brave	53,50	144,50	-2,39	0,02	2,77	0,725	**3,44**	0,629
weak	36,00	156,00	-3,25	0,00	**2,46**	0,776	1,53	0,516
strong	30,00	121,00	-3,32	0,00	2,31	0,855	**3,4**	0,507
courageous	54,00	145,00	-2,11	0,03	2,54	0,877	**3,27**	0,799
affectionate	50,00	170,00	-2,32	0,02	**3,38**	0,506	2,67	0,9
benevolent	49,50	140,50	-2,41	0,02	2,92	0,76	**3,6**	0,507

The hypothesis, that in young people with different idea of male and female gender identity the level of a sovereignty of personal space qualitatively differs, was confirmed at the level of tendencies, and demands additional researches with a larger number of examinees.

3.3. The research of parent formation of men with different types of masculinity

According to the data obtained by Caregiving and Breadwinning Reflected Appraisal Inventory by J. Pleck adopted by Borisenko (2015) most of the examined fathers are implemented as breadwinners. The traditional role cast in the families with a child was revealed. An interesting and important result is a similarity of the structure of fatherly identity in a group of younger fathers (30-37) and in a group of more senior fathers (38-42).

At this stage of research three groups of fathers were singled out by using S. Bem's inventory. A mixed type group was not identified.: 24 individuals refer to the feminine type; 31 individuals refer to the masculine type; and 6 people refer to the androgyny type of the gender identity.

Significant differences ($p < 0,5$) on the scale «Adoption of impersonal sexuality» (MANI) was revealed between feminine and masculine gender type groups of fathers. Men of the masculine gender type group have the adoption of impersonal sexuality significantly higher than the men of the feminine gender type group. In other words, the men of this group have more instrumentally attitudes to woman. Age differences of men's normative masculine attitudes, according Kletsina – Ioffe 's questionnaire, were not revealed.

The method of the cluster analysis allowed to divide our sample into three groups of fathers with different attitude to male norms and of different gender identity. We used the scales of the MANI and the indicator of M & F by S. Bem in Dvoryanchikov's version: 1). the «masculine type» -- 33 sub. (54 %); 2). the «feminine type» -- 20 sub. (32,8 %); 3). the «super-masculine type» -- 7 sub. (11,5 %).

Men-fathers from the «masculine type» group identify themselves as a breadwinners much more significantly than men-fathers from the «feminine type» group ($p = 0.026$). Men-fathers from the «super-masculine» type group identify their role as a parent in caring about children from the point of view of their wifes much more significantly than men-fathers from the «masculine type» group ($p = 0.047$). Men-fathers from the «feminine type» group identify themselves as breadwinners much more significantly than men-fathers from the «super-masculine type» group ($p = 0.049$).

The hypothesis of links between commitment of fathers to standard masculine attitudes and acceptance of the father's role by them was confirmed.

4. Limitations

It is advisable to compare of man and woman on the subject matter. The size of the sampling is not big enough to generalize the conclusions to general sample. Another limitation of the research is the collecting the part of data through the network. So the sampling has it's own specific character.

5. Conclusions

The results confirm the study hypotheses: the semantic space of male and female gender identity representation during their entry into maturity has qualitative distinctions. There are significant differences in the estimation of feminine and masculine qualities for parent and sexual partner role images by the men of a different gender identity.

The hypothesis of links between commitment of fathers to standard masculine attitudes and acceptance of the father's role by them was confirmed.

Similarities and differences in the parental identity of men with different types of men's standard masculine attitudes were found. The study concludes that the person's system of *gender ima*ges – Ideal Men (Women) – Standard Men (Women) – Real Men (Women) -- is an important factor for developing the person's parenting in early adulthood.

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IMPLEMENTATING THE EVIDENCE-BASED TRIPLE P – POSITIVE PARENTING PROGRAM: DIVERSITY IN PRACTITIONERS' EXPERIENCES

Marie-Kim Côté & Marie-Hélène Gagné
School of Psychology, Laval University (Canada)

Abstract

Triple P is an evidence-based program (EBP) aimed at promoting positive parenting practices among parents of 0-12 year-old children. Numerous studies have shown empirical evidence of its efficacy for preventing child maltreatment, improving the parent-child relationship, and reducing emotional and behavioral problems among children. While much of the research on EBPs focuses on evaluating the quality and effects of programs, less attention has been paid to the quality of their implementation in real-world settings. However, implementation factors – especially those involving practitioners, such as self-efficacy and attitudes regarding the program – have an impact on program outcomes. Under a community-university partnership, Triple P is currently being implemented in two communities in the province of Quebec, Canada. One year after their initial training in the Triple P program, 38 practitioners representing a variety of disciplines and organizations participated in six focus groups. A thematic content analysis performed on their discourse showed diversity in their experiences with the program. Three distinct trajectories emerged from the practitioners' comments, namely the "conviction," "adaptation," and "divergence" trajectories. The first trajectory included discourses characterized by a conviction that the long-term and preventive benefits of Triple P would balance out the difficulties encountered in implementing it. The second trajectory included discourses characterized by an initial resistance or neutral stance toward the program, which then evolved into a positive, even enthusiastic, perspective once the latter had been tested and adapted within a supportive organization. Discourses in the last trajectory emphasized barriers to integrating Triple P into current practices, such as perceived incompatibility with intervention values or client needs, leading to low program use, low program self-efficacy and few perceived outcomes. These findings could help implementation teams better understand practitioners' needs so as to maximize implementation quality, program sustainability and ultimately, program outcomes for children and their parents.

Keywords: *Implementation, evidence-based program, parenting program, practitioners' perspectives, organizational factors.*

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1. Introduction

1.1. Context of Triple P Implementation in Quebec, Canada

Parenting is not always an easy road to travel. While many parents generally feel confident about their role and require only a few tips to help them along, others face difficulties with their children that, in some cases, can even lead to child maltreatment. To meet the different needs and intervention preferences of parents in the province of Quebec, Canada, the Partnership Chair in Child Maltreatment Prevention at Laval University set out to use a multi-level intervention strategy. Following a community needs, resources, and readiness assessment (Gagné, Drapeau & Clément, submitted) and a program differentiation analysis (Gagné, Richard & Dubé, 2015), the Triple P – Positive Parenting Program was chosen to be implemented and evaluated in two communities. Based on cognitive-behavioral and social learning theories, Triple P can be applied in various formats (e.g. group or individual) and includes five intervention levels of increasing intensity. This comprehensive and layered approach aims to respect the principle of sufficiency, meaning that minimally sufficient intervention should be provided to parents to help them solve their problems, thus fostering their autonomy, self-agency and resilience (Sanders, 2008).

Level 1 of the program consists of an information campaign that aims to destigmatize parenting issues and related help seeking. It is intended to reach all parents. In Quebec, multiple channels were used to promote positive parenting practices and provide information on the program (flyers distributed in children's school bags, creation of a website, etc.). Levels 2, 3, 4 and 5 of the program were delivered by 96 practitioners from various organizations who had undergone training in fall 2014 lasting between 2 and 5 days depending on the level pursued. Official experimentation began in January 2015. Level 2 was provided by practitioners from schools, child care services and non-government organizations. It took the form of three public seminars for parents interested in learning about child rearing practices. Parents

presenting specific concerns about their child could request a brief consultation or be referred to the next level. Level 3 involved an individual skills-training intervention that typically included three to four brief sessions (of up to 20-30 minutes each) provided by primary care workers from government and non-government agencies. These organizations also provided Level 4. Service providers were trained to use the group modality but in some cases decided to deliver the program content on an individual basis. The intervention at this level included five 2-hour group sessions and three individual telephone sessions. Level 4 is intended for parents who require active skills training and are facing multiple problems with their children. Parents at risk of child maltreatment can continue to the variant of Level 5 called *Pathways Triple P*, which focuses on anger management and parenting traps that can lead to abuse (Sanders, 2008). This level is provided in Quebec by child protection agencies.

1.2. Implementation Matters

With many studies and meta-analyses supporting its efficacy for preventing child maltreatment (Prinz, Sanders, Shapiro, Whitaker & Lutzker, 2009; 2016), increasing positive parenting practices and reducing emotional and behavioral problems among children (de Graaf, Speetjens, Smit, de Wolff & Tavecchio, 2008; Nowak & Heinrichs, 2008; Thomas & Zimmer-Gembeck, 2007), Triple P is considered to be an evidence-based program (EBP). Given their potential to reduce many public health issues, the use of EBPs is greatly encouraged by the scientific community and, increasingly, by decision-makers (American Psychological Association, Presidential Task Force Evidence-Based Practice, 2006). However, while the efficacy of EBPs has been widely documented, less attention has been paid to their implementation processes (Durlak & DuPre, 2008; Mildon & Shlonsky, 2011), despite the fact that the quality of a program's implementation is as important as the quality of the program itself when it comes to achieving the desired outcomes (Aarons, Hurlburt & Horwitz, 2011; Ogden et al., 2012).

Program implementation refers to all activities purposely performed to put program components into practice (Fixsen, Naoom, Blase, Friedman & Wallace, 2005), such as host setting capacity assessment, adaptations planning, staff training, field coordination, ongoing monitoring of interventions and sustainability support (Meyers, Durlak & Wandersman, 2012). These actions involve different parties, including community leaders, agency directors or supervisors, policy makers, funders and practitioners (Fixsen et al., 2005). The present study focuses on the implementation processes related to the latter group.

Indeed, several implementation factors related to practitioners can impact the real-world efficacy of EBPs. For example, positive attitudes toward new practices were found to be predictive of program adherence in a study where mental health practitioners were trained in cognitive-behavioral therapy. Specifically, practitioners for whom this therapy held intuitive appeal, and who presented a high degree of openness to experience and perceived fewer divergences between this innovation and their usual practices were more likely to deliver the therapy as designed, respecting its essential components (Beidas et al., 2012). Perceived self-efficacy to deliver a program, regarding both the program content and intervention process, has also been shown to influence program use, with practitioners being more likely to use a program when they feel competent to do so. The ability to see benefits for families is also linked to higher use of an EBP (Breitkreuz, McConnell, Savage & Hamilton, 2011; Turner, Nicholson & Sanders, 2011).

Organizational factors can also affect the degree to which EBPs will be integrated into the practices of employees. Perception of support from supervisors, directors and colleagues has been shown to influence program use by practitioners (Glisson et al., 2008; Sanders & Murphy-Brennan, 2010; Sanders, Prinz & Shapiro, 2009). Employers can provide support by finding solutions to logistical problems such as scheduling conflicts between the program and other obligations, reducing employees' workload while the program is being assimilated and providing supervision and answers to practitioners' questions with the aim of enhancing their clinical skills (Breitkreuz et al., 2011; Sanders et al., 2009; Turner et al., 2011). A favorable organizational climate set by employers and colleagues can also lead to more efficient EBP implementation. Indeed, in a study on Triple P, Sanders et al. (2009) found that a lack of recognition by colleagues was associated with lower use of the program. The program's compatibility with the work culture, mandate and client needs has also been shown to be important (Simpson, 2002).

1.3. Objectives

In light of these considerations, this study sought to draw up a portrait of practitioners' experiences during the implementation of the Triple P program one year after their initial training. More specifically, the study objectives were to: (1) describe the practitioners experiences with the program; (2) identify salient dimensions and turning points in their experiences; and lastly, (3) detect differences in their experiences and identify the elements that accounted for these differences.

2. Method

Trained practitioners were contacted in spring 2015 and invited to take part in a group interview. Most were selected randomly but, due to their small number, all practitioners who had received training

in Level 2 of the Triple P were recruited. Participants were divided into six focus groups (three in each experimental community) based on the level of Triple P in which they had been trained and the type of organization for which they worked. This distribution was intended to ensure that practitioners in the same group shared similar characteristics. The 2-hour group interviews took place in fall 2015, with 4 to 9 practitioners per group, for a total of 38 participants. The majority of participants were female (94.7%) and held an undergraduate degree (50%). Having, on average, 16.4 years of experience in the child care sector, they were mostly trained in social work (39.5%), psychoeducation (10.5%), special education (10.5%), early childhood education (10.5%) or nursing (7.8%).

A semi-structured interview guide was used to collect data. Approximately twenty questions using alternative wordings were used to identify the barriers and facilitators related to four themes: (1) reaching the parent clientele, (2) perceived outcomes for the workplace, families, communities and practitioners, (3) the program's implementation and integration into work practices, and (4) the availability, use and relevance of the support provided. With the participants' consent, the interviews were audio recorded and transcribed verbatim. A thematic content analysis was performed using NVivo software.

3. Findings

The results showed that, overall, most practitioners had a positive experience with the Triple P program. However, this was not the case for all practitioners. In fact, three distinct implementation trajectories emerged from the participants' discourses, showing a diversity of perspectives with regard to several themes, such as their initial receptivity to the project, their subsequent commitment, and the focus of their discourse. The main elements related to each trajectory are synthesized in the following sections.

3.1. Conviction Trajectory

In this trajectory, practitioners reported that they had decided to take part in this project due to their intrinsic motivation, such as a desire to broaden their skills and positively impact their community. Experience with the program strengthened their initial conviction regarding it. They felt that the investment was worth it in light of the perceived short and long-term benefits, such as positive reports from parents and the novel self-regulation approach to intervention. Their discourse was oriented toward the sustainability of the initiative, and they shared many ideas on how to increase the dissemination of the program and foster its deployment in other communities. While they showed great enthusiasm, they were also worried about burn out over the long term since only a few members of their respective organizations or equivalent organizations had been trained in Triple P. Some also mentioned that they had difficulty maintaining the Triple P approach in their own organizations, as they regularly had to convince their executive boards of the potential benefits of the program in the context of financial cutbacks.

3.2. Adaptation Trajectory

The practitioners in this trajectory had undertaken the Triple P training following a request from their organization. While some had adopted a neutral stance toward the program, others reported initial feelings of resistance and skepticism. They mentioned that they had experienced difficulties implementing the program in the early stages, especially with logistics and technical issues, but had received substantial help from their supervisors, colleagues and local coordinators to overcome these barriers. However, they had underestimated the time and effort required to assimilate and implement the program and wished they had received more a-priori information so as to be better prepared.

Following repeated use of the program, with more experience and higher levels of self-efficacy, these practitioners appeared to have successfully adapted the program to their own practices over time. They did not see the program's limitations as a problem (e.g. with parents facing other challenges such as conjugal issues), and said that they used Triple P as a basis from which to expand. Thus, once parents began mastering parenting strategies, practitioners could work with them on other problems using other appropriate (non-Triple P) interventions.

After experiencing several positive outcomes, such as increased work efficiency (through practical tools and the content structure), better communication with team members using a common language, and perceived beneficial changes in parents, these practitioners' initial position regarding the program evolved to a more positive, even enthusiastic stance.

3.3. Divergence Trajectory

Practitioners whose discourse pertained to this trajectory experienced difficulties integrating the program into their practices, and pointed to discrepancies such as:

- organizational expectations to use the program despite an insufficient adjustment in their workload to allow for this;

- the time required to deliver Triple P in its entirety versus the time limit set by the organization to achieve client case closure, in a context where practitioners were also expected to conduct other non-Triple P interventions;
- the type of intervention provided for at the level of the program in which they were trained versus the severity or nature of their clients' needs; and
- a disconnect between the Triple P approach and their professional values, with some practitioners feeling that Triple P was overly structured and rigid and that, by providing ready-made solutions, it did not empower parents.

Being severely critical of the program's limitations, the practitioners in this trajectory reported that they either stopped using Triple P, or continued trying to use it to meet their organization's expectations, but adapted it in a way that could threaten the integrity of the program and thus its efficacy. For instance, some practitioners reported using only the Triple P tools – such as the DVD or tip sheets – with parents without pursuing the rest of the intervention such as conducting structured sessions with them. Others tried to conduct the sessions, but repeatedly dropped the schedule agenda to discuss events that had occurred in the previous week. This low or distorted use appeared to have led to few perceived benefits and a sense that the investment was not really worth it.

4. Conclusion

It appears that the "conviction" trajectory mostly included practitioners who were trained at Level 2 and who were also part of the local implementation committee. With higher decision-making power, these practitioners appeared to be more engaged in ensuring the sustainability of the program and to be taking more action in this regard. They also had a more global vision of Triple P, focusing on its preventive potential and long-term benefits for the broader community, which is coherent with the universal scope of Level 2. To these practitioners, Triple P was perceived as an added value that was complementary to their professional work.

In contrast, the discourse of practitioners who intervened directly with parents – namely those trained at Levels 3, 4 and 5 of Triple P – mainly pertained to either the "adaptation" or "divergence" trajectories, and mostly focused on the facilitators and barriers to integrating Triple P into their daily practices. The degree of organizational support as well as the level of fit between the program characteristics and workplace characteristics appeared to have been decisive in terms of whether these practitioners belonged to one trajectory or the other. Individual factors may in fact have been influenced by organizational variables. For instance, in some cases, the insufficient time allowed for the program to be appropriated led to low self-efficacy and consequently unfavorable attitudes regarding the program.

The identification of three distinct trajectories relating to these practitioners' experiences sheds light on the dynamic, cyclical and multi-faceted nature of the implementation process, given that an initially negative position regarding a new EBP can become more positive over time when the appropriate organizational conditions are present. This diversity in practitioners' experiences should be taken into account by implementation teams. By addressing elements that differentiate positive and negative trajectories, such as issues related to targeting the right staff to deliver the program and the lack of realistic expectations regarding the investment required, decision-makers could enhance the quality and sustainability of this program and thus maximize the positive outcomes for children and families.

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VALUES AS A FACTOR IN STUDENTS' ATTITUDES TOWARD EXTREMISM

Olga Deyneka
Saint Petersburg State University, Saint Petersburg (Russia)

Abstract

The purpose of this study was empirical testing of correlation between the "weak signals" of propensity to extremism and characteristics of the system of value orientations of students. The exploratory research involved 126 students of mathematical specialties of universities in St. Petersburg and Minsk. It has been established that an uncritical attitude toward extremism is more characteristic of young people with a low significance of family values and high entertainment value (hedonistic orientation). In addition, we have solved the problem of construct validity of the base questionnaire using confirmatory factor analysis and structural equation modeling. The factorial matrix of the questionnaire "Psychological preconditions of extremism" includes "the factor of normative and value prerequisites for extremism", "radicalism in relation to the country's leadership and its information policy" and "factor of uncertainty / confidence in themselves and their future." The model has shown that male students are more prone to extremism statements and manifestation of extremist attitude than female students.

Keywords*: Value orientation, attitudes toward extremism, college students, confirmatory factor analysis, structural equation modeling.*

1. Introduction

The potential for the development of the society largely depends on what values, goals, beliefs and attitudes are inherent in youth. Values are considered as a backbone factor of any ethical system (White, Woten, 1986), as the inner core of the culture, a concentrated expression of the spiritual needs and interests of social communities (Zdravomyslov, 1986), a phenomenon that promotes the unification of individuals into a community and ensures harmony within it (Parsons, 1970).

Deformation of values and the meanings of life is one of the determining factors of the destructive and illegal behavior of youth. In contrast, the value factor can act as a kind of filter, limiting negative action, be included in the motivational vector of the individual's orientation, and therefore should be considered in the prevention of destructive attitudes and behavior, delinquency and crime.

As was pointed out by G. Lebon (Le Bon, 1974), the society experiences real revolutions and turmoil if they affect value orientations and beliefs of the people. Not surprisingly, S. Moscovici urged scientists to pay attention to the value aspects of social perceptions (Moscovici, 1993).

Extremism can appear not only on the activity-behavioral level, but also at a deeper culture and values "pre-activity" level, expressed in the form of attitudes, moods, ideas, points of view, beliefs and orientations. Scientists call such manifestations "latent" extremism (Vekhov, 2011; Schneider, 2014). As pointed out by I.V. Vekhov, latent or non-actualized extremism forms the basis of social tension, has a negative impact on the socialization of young people (Vekhov, 2011).

In our study (Deyneka, 2016) with the participation of students from four countries of the Eurasian Union (654 pers.), value aspects of social perceptions and attitudes were included in the diagnostic tools of studying the psychological prerequisites of extremism and radicalization among young people. The study allowed us to obtain empirical evidence that psychological markers (or "weak signals") of propensity for extremism were, on the one hand, a low value of human life and, on the other hand, a high value of material goods and false social value of national superiority.

On the contrary, it turned out, that an important value prerequisite for the rejection of political extremism was such a political value as patriotism (positive attitude towards your native land and a favorable image of your home state).

The Objective of this empirical study was to find the correlates of latent extremism and radicalism in the students' value system.

2. Method

The study was based on V.M. Myasishchev's theory of relations (Myasishchev, 1995) and on Moscovici's theory of social perceptions (Moscovici, 1993). By design, the work was a correlation study.

As a main methods, the "Psychological preconditions of extremism" (Deyneka, 2016) multifactorial scale questionnaire developed by us was used; it was supplemented by express techniques of determining the attitude to extremists and extremist organizations (ibid). In addition, the task of methodical testing the construct validity of the basic questionnaire using confirmatory factor analysis was also set.

The exploratory study involved 126 students of mathematical specialties from the universities of Minsk (68 pers.) and St. Petersburg (58 pers.). The total sample consisted of 42% female students and 58% male students; the average age of the respondents was 20,8 years old, (groups were balanced by age, but it wasn't possible to do the same for gender).

3. Results and Discussion

Analysis of secondary data related to extremists and extremist organizations confirmed the result previously obtained in the student groups (Deyneka, 2016), negative in general attitudes towards extremism (Table 1).

Table 1. Estimates of the extremists and extremist organizations in the total sample.

How would you describe the extremists?	**M**	**σ**
Courageous, sincere people who are fighting for justice	2,39	1,64
Criminals who understand what they are doing	4,42	1,88
Mistaken people, madmen	4,51	1,68
Adventurers thinking of their own benefit and glory	3,89	1,78
Desperate people driven by circumstances	3,70	1,82
Mercenaries, whose owners stay unknown	4,49	1,94
How do you treat extremist organizations?	**M**	**σ**
I fully support them, I'd join them myself	1,51	1,06
In some ways, I even support them, but would never become their member	2,46	1,77
I consider their slogans and methods not acceptable for me	5,18	1,94
I think they should be fought with by any means	4,70	1,78
I don't care	3,09	2,11

Note: a 7-point scale has been used

Analysis of the basic questionnaire data "Psychological prerequisites of extremism" also showed an overall positive picture of social notions of students about extremism as a negative socio-political phenomenon.

Comparative analysis of the questionnaire data (Table 2) showed a more pronounced request for absolute freedom of speech among the Belarus students than among the Russian ones (with $p < 0,001$), while demonstrating a smaller degree of awareness of color revolutions' threats (at $p < 0,01$).

Table 2. Statistically reliable differences in the manifestations of susceptibility to political extremism in the groups of respondents from Russia and Belarus.

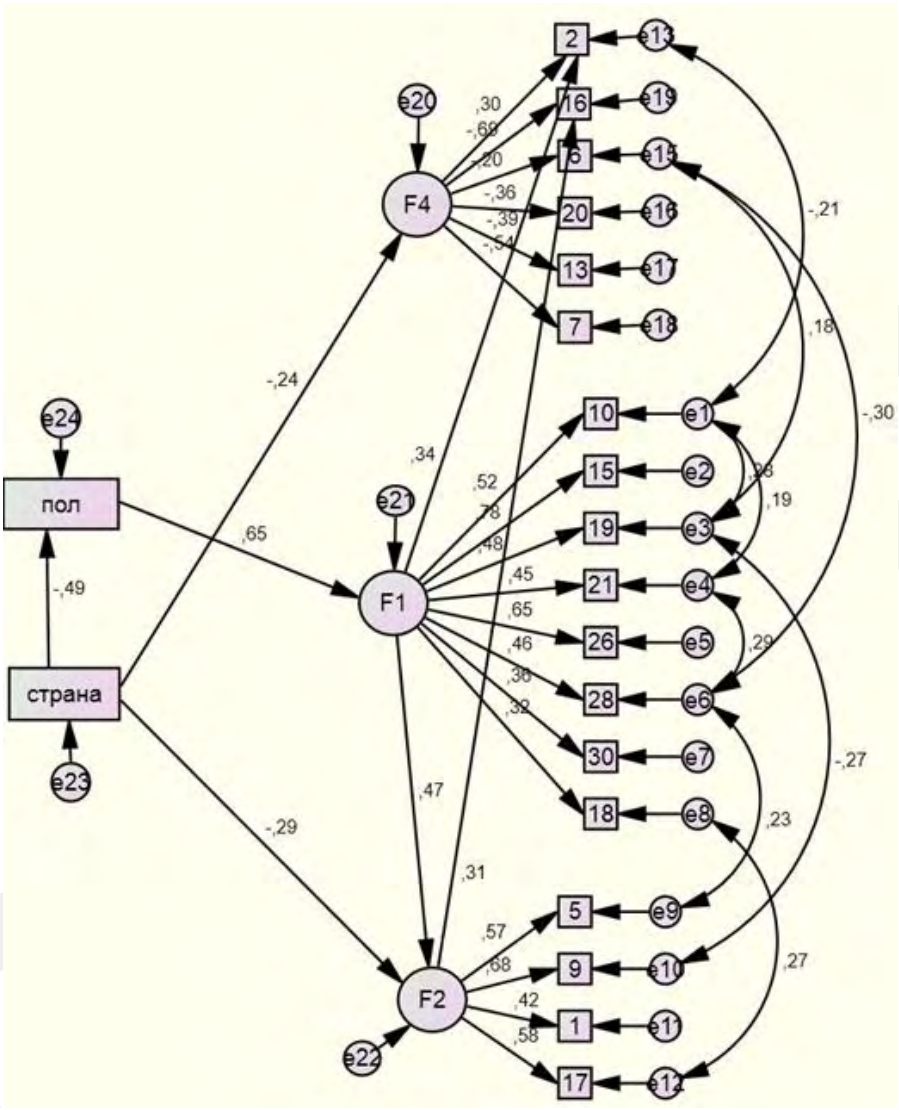
№	**Statement**	**Russia**		**Belarus**		**p**
		M	**σ**	**M**	**σ**	
5.	I believe that freedom of speech should not be limited absolutely.	3,90	2,00	**5,03**	1,44	,001***
9.	Any ideas should be freely spread in the media, even if they seem terrorist or extremist to someone.	2,33	1,39	**3,28**	1,55	,000***
12.	I am ready to take part in any political activities and events.	**3,25**	1,77	2,32	1,51	,002**
15.	I enjoy watching various fights and carnage.	2,00	1,48	3,09	1,81	,000***
17.	I absolutely disagree with the actions of our government and believe that they are leading to the decline and destruction of the country	3,21	1,30	**4,16**	1,60	,001***
26.	I am not a supporter of compliance with laws, rules and regulations.	2,07	1,24	**3,24**	1,63	,000**
30.	National superiority should be proved at any cost.	2,09	1,38	**2,70**	1,60	,014**
35.	There is no threat of coups, revolutions and / or the colored revolutions for the country	3,58	1,48	**4,39**	1,82	,009**

Note: ** - at $p < 0,01$; *** - at $p < 0,001$

The data of the questionnaire on latent extremism have been subject not only to explorative, but also confirmatory factor analysis. It showed that in the 5-factor model of exploratory factor analysis only three factors (F1, F2, F4) were significantly correlated with the variable "country", so the remaining two

factors (F3 and F5) have been excluded from the model. Figure 1 may serve an illustration of both the results of a factor analysis and the final structural equation modeling. First, let's focus on the interpretation of the three factors of the model.

Figure 1. The basic model of the influence of variables "country" and "gender" on the factors predisposing to extremism or extremist statements. Indicators of the model's suitability: CMIN = 173,086; df = 156; p =, 166; CMIN / DF = 1,110; CFI =, 881; RMSEA =0,30.



Factor F1, which we call the "**factor of normative value prerequisites for extremism**" includes such phenomena as: 1) aggression and its channeling; 2) low law-abidance, especially for the satisfaction of material interests; 3) value deformation of a radicalist type. To decrypt the content of factor F1, a number of statements with their numbers are given below.

The allegations related to aggression: №15 (I enjoy watching different fights and carnage); №10 (I could use force in response to an insult or humiliation); №19 (I do not condemn aggression as a response to the aggression of others).

The allegations related to low law-abidance or unlawful conduct: №26 (I am not a supporter of compliance with laws, rules and regulations); №21 (For good money I'm willing to perform work that is not quite legal); №28 (For the sake of earnings I would agree to do something that might blight my country (smuggling, disclosing classified information, etc)).

Statements, indicating value deformation: №30 (national superiority should be proved at any cost); №18 (Human life is not the most important value in this world).

Factor the F2, called by us the *"radicalism factor in relation to the information policy and the government of the country"* most of all load the statements: №9 (Any ideas should be freely spread in the mass media, even if they seem terrorist or extremist to someone); №5 (I believe that freedom of speech

should not be limited by absolutely anything); №17 (I absolutely disagree with the actions of our government and believe that they are leading the country to decline and destruction); №1 (I believe that the ends always justify the means). As pointed out by T. Gurr (Gurr, 1970), extremism shows a powerful desire of its defendants to achieve their goals following the principle "the ends justify the means." A wish to deny and to be categorical (radicalism), Schneider regards as essential traits of extremism (Schneider, 2014). The denial of any control over information is indicative of the lack of maturity of a person. This position prevents the awareness of information security threats to the nation (and person) and dangerous consequences of information wars.

Factor F4 or the *"factor of confidence /doubt in oneself and in the future"* most of all load the statements: №16 (I have clear plans for 5 years ahead); №7 (I feel my country needs me); №13 (effort, in my opinion, is the main factor of good earnings); №20 (I'm not afraid I'll be jobless after graduation); №6 to a lesser extent (It's important to maintain cultural traditions in society) and №2 with an opposite sign (I never take part in socially useful activities).

Signs of factor F4 with a negative sign (lack of confidence, lack of commitment, experiencing potential uselessness and pessimism concerning professional self-realization, inadequate notion of the "input-output" balance) create prerequisites for youth extremism. Encumbered by social infantilism, they contribute to the strengthening of irrational behavior (Deyneka, 2013).

Symptoms of all three factors, revealing "faint signals" of propensity to extremism or extremist statements, were significantly higher expressed in students from Belarus, which may be due to the fact that in the Minsk pilot sample there were more young men, than in the sample from St. Petersburg.

Therefore, using SEM (structural equation modeling) the following hypotheses were tested: 1) the gender of the respondents affects the degree of intensity of F1, F2 and F4; 2) differences between students from Belarus and Russia appear in the degree of intensity of F1, F2 and F4; 3) The gender of the subjects and the variable "country" both have an influence on the intensity of the F1, F2 and F4 values.

The empirical model check of the effect of variables "country" and "gender" on those tested for latent extremism showed that the original model requires adjustment, as part of the directional bonds was not statistically significant, and the ratio of $\chi 2$ / df is statistically significant. In the basic model, after adjustments, directional bonds were included, from the variable "country" to F2 (β = -0.29, p = 0.007) and F4 (β = -0.24, p = 0.087), as well as the indirect impact of the variable "country" to variable F1 (country-> gender: β = -0.49, p <0.001; gender> F1: β = 0.65, p <0.001). Figure 1 shows the final model.

It confirmed that the gender of the respondents influences the degree of intensity of F1 (aggression and its channeling, low law-abidance, especially for the satisfaction of material interests, values deformation of a radicalist type). Young men are more prone to extremist statements than girls. Indirect gender impact of the variable "country" on the first factor was revealed. The Belarusian sample contained more young men, which led to more marked tendency to extremist statements of students from Belarus. Social and cultural differences of latent extremism were manifested in the expression of signs the radicalism factor in relation to the country's leadership and its information policy among students of mathematical specialties from Belarus.

Correlation analysis of study data showed, that among those students that maximize the value of freedom, there were fewer people, who define extremists as criminals, and among those who value family above all there were less people, defining extremists as misguided individuals. The older the participants were, the more they rejected for themselves the slogans and methods of extremist organizations, considering them not acceptable.

The results of studies on the interrelationship of the system of values and "weak signals" of propensity to extremism allowed to reveal two cores, of opposing modalities and not indifferent to extremism, of terminal value orientations system, that have been expressed most prominently in students from Belarus.

From the standpoint of prevention of extremism the focus on happy family life proved quite positive. Students whose ideals or the meaning of life (five priority terminal values) contain such value as a "happy family life", rejected violence (p <0,01), aggression, revenge (p <0,001) and unnecessary risk for the sake of new experiences (p <0.01), they also expressed less desire to view scenes of slaughter and fights (p <0,05).

From the standpoint of prevention of extremism the focus on "entertainment" proved negative. Hedonistic orientation was a certain marker of predisposition to radical settings. Its priority is highly significantly correlated with disregard to social regulators as the laws and norms (p <0.01) and low law-abidance, as well as radical attitudes in ethnic relations (p <0.01), with a low value of human life (p < 0.05) and possibility of violence and aggressive revenge (p <0,05).

In the communitarian societies the market competition contradictions are alleviated by the experience and values of life in a collective (Kramnik, 2003). The role of community values in the prevention of illegal behavior was confirmed in the group of Belarus students. It turned out that to be

engaged in not entirely legitimate work for money are more willing those, whose value orientation "the happiness of others" is far in the periphery of the system of values.

Instrumental values also showed easily interpreted bonds with the 'weak signals' of propensity to extremism. The more important for the tested was the value of "high demands", the less they showed the setting for law-abiding behavior ($p < 0,01$) and the less susceptible to psychological violence in society they were.

The value of "strong will" showed a positive bond with manifestations of law-abidance, ethical principles of patriotism and identification with the country (disagreement even for big money to blight the country), as well as a negative perception of undue risk for the sake of new experiences. The value of "responsibility" is also highly and significantly correlates with the manifestations of ethical principles of a citizen.

The value of "courage in defending one's views" turned out to be associated with a more critical attitude toward the political system, the value of freedom of speech and willingness to show aggression in response to the aggression of others.

4. Conclusions

The deformation of the system of values enhances the susceptibility to extremist activity. A noncritical attitude toward extremism is more characteristic of young people with a low significance of family value and high entertainment value, combined with high demands.

Using confirmatory factor analysis and structural modeling method, we were able to create a shorter version of the questionnaire, eliminating the variable "country" and "gender", which allows to use the questionnaire "Psychological preconditions of extremism" among the Russian-speaking students of post-Soviet countries, taking into account gender differences.

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IMPLICIT NEGOTIATION BELIEFS, ACHIEVEMENT GOALS AND INTEGRATIVE NEGOTIATION BEHAVIORAL INTENTIONS

Gal Mozes[1], Noa Nelson[2], & Rachel Ben-ari[3]
[1]*Organizational Development, Amdocs (Israel)*
[2]*School of Economics and Management, Tel-aviv Jaffa College (Israel)*
[3]*Negotiation and Conflict Engagement Program, Bar-ilan University (Israel)*

Abstract

The skill of negotiation is essential in today's working environments. Integrative negotiation style, that includes such behaviors as information sharing, creating a positive atmosphere and exerting effort, leads to superior negotiation outcomes. Our study focused on the impact of negotiators' implicit beliefs on their inclination for integrative behavior.

Implicit beliefs are basic assumptions on human ability: according to the incremental belief, ability develops through effort and experience, while according to the entity belief ability is innate and fixed. "Incremental theorists" set mastery goals – challenging goals that allow learning, while "entity theorists" embrace performance goals – safer goals, to display ability and avoid failure. Incremental, compared with entity negotiation beliefs predict higher, more integrative outcomes and inclination for difficult negotiations. The current study is the first, to our knowledge, to test their effects on negotiation behavior.

In a cross-sectional study of 204 participants, we tested a model in which incremental beliefs, mediated by mastery goals, positively predicted integrative behavioral intentions, while entity beliefs, mediated by performance goals, negatively predicted integrative intentions. We manipulated advocacy (negotiating on behalf of a group vs. for oneself), to prime interdependent vs. independent mindsets. We expected the predictive value of the mediation paths to vary accordingly, because under an interdependent mindset, incremental beliefs tend to be more influential than entity beliefs, which are more influential under an independent mindset.

Indeed, among advocators, we found that incremental beliefs, mediated by mastery goals, positively associated with integrative behavioral intentions, while entity beliefs did not. Among negotiators for themselves, entity beliefs negatively associated with integrative intentions (though unmediated by goals), and incremental beliefs did not.

The study contributes to the scarce knowledge on implicit beliefs in negotiation, to the study of integrative behavior, and to understanding individually vs. socially motivated negotiators.

Keywords: *Implicit negotiation beliefs, achievement goals, integrative negotiation behavior.*

1. Introduction

In contemporary organizational life, with its emphasis on self-management and teamwork, negotiating and resolving potential conflict is essential. If parties discuss their interests, share information, create a positive atmosphere and put effort into exploring options they can craft more creative and mutually satisfactory agreements, increasing shared outcome (Butler, 1999; Chen & Kersten, 2010; Nelson, Shacham, & Ben-ari, 2015; Rahim, 1983). Hence the significance of integrative behavior's antecedents.

Implicit beliefs are basic assumptions that affect people's perceptions of themselves and of the world. Dweck (1999) researched implicit beliefs about human ability, and differentiated between those who believe that ability is innate and largely fixed ("entity theorists") and those who believe that ability can be materially developed through effort ("incremental theorists"). Incremental theorists cope better with challenges in different domains, because they view them as opportunities to get better, rather than as threatening proofs against their abilities. Kray & Haselhuhn (2007) first showed the same results for implicit negotiation beliefs. Incremental negotiators were more inclined to face challenging negotiations and achieved higher outcomes (Reif & Brodbeck, 2010). They coped better with roadblocks such as stereotype threat (Kray, Locke & Haselhuhn, 2010), and crafted more creative, integrative agreements (Wong, Haselhuhn, & Kray, 2012). Entity theorists were more morally detached, and accepted dishonest negotiation tactics (Tasa & Bell, 2015). This new wave of research suggests that implicit beliefs are

valuable predictors in mixed-interest interactions, but little is currently known about their associations with negotiation behavior (Kray & Haselhuhn, 2007). Our first objective was to establish these ssociations. The above findings suggest that incremental beliefs would positively predict integrative behavior, because they encourage more effort and positive feelings during challlenge, and relate to integrative solutions. Conversely, entity beliefs would negatively predict integrative behavior, because they relate to unfairness, negative reactions to challenge and disinclination for effort.

Implicit beliefs affect the goals that people set for themselves and those, in turn, direct their behavior (Dweck, 1992). Our second objective was to test whether achievement goals mediate the associations between implicit beliefs and integrative negotiation behavior. In different domains, negotiation included, incremental theorists tend to embrace mastery goals and entity theorists performance goals (Kray & Haselhuhn, 2007). The latter prefer situations that ensure good performance; they feel able when they succeed with little effort (displaying their innate ability), and judge their success using normative performance standards. Conversely, incremental theorists are willing to put effort into challenging tasks, where performance is not guaranteed, but they are likely to learn from. They feel able when they cope and gradually gain mastery. They judge their success by comparing to their own past performance (Ames & Archer, 1988; Dweck & Leggett, 1988). Mastery goals, in turn, associate with integrative negotiation behavior: exterting effort, caring for the other party, collaborating and sharing information, while performance goals direct individuals to comepte, withhold information and exert less effort (e.g., Poortvliet & Giebels, 2012; Tasa, Celani, & Bell, 2013).

Therefore, we tested a mediation model in which incremental beliefs, mediated by mastery goals, positively predicted integrative behavioral intentions (hypothesis 1a), while entity beliefs, mediated by performance goals, negatively predicted integrative intentions (1b). Our third objective was to explore the predictive strength of these paths among independently vs. interdependently minded negotiators (Ingerson, DeTienne, & Liljenquist, 2015). We manipulated advocacy, asking participants to think of negotiating on behalf of a group vs. negotiating for themselves, thus attempting to prime interdependent vs. independent mindsets (Mandel, 2003). Under an interdependent, more socially embedded mindset, people are more aware of the influence of situational factors and the possibility of change, therefore incremental beliefs tend to be more influential than entity beliefs. The latter were found to be more influential under an independent, autonomous mindset, that emphasizes individual attributes, tending to view them as fixed (Church et al., 2003; Kühnen, Hannover & Schubert, 2001). We therefore expected that the incremental beliefs' path be more predictive than the entity path in advocators (hypothesis 2a), and that the entity path be more predictive than the incremental in negotiators for themselves (2b).

2. Method

Participants. A "snowball" convenience sample of 204 adults participated in the study, 140 females and 64 males. Ages were between 22-65 (M=31.6, SD=5.9). All had at least 12 years of education.

Tools and procedure. A link to the study's questionnaires was disseminated through email and Facebook, with respondents forwarding and sharing it, to get a diverse sample. Materials stated that the research was on daily issues negotiations, and that participation was voluntary and anonymous. Questionnaires were in this order:

Implicit Negotiation Beliefs Scale. Kray & Haselhuhn's (2007) 7-item scale measures entity beliefs (e.g., "Everyone is a certain kind of negotiator and there is not much that can be done to really change that") and incremental beliefs (e.g., "In negotiations, experience is a great teacher"). To enhance reliability, we added items, representing both entity (e.g., "Negotiation abilities do not change over time") and incremental beliefs (e.g., "People become better negotiators over time"). The enhanced 12-item questionnaire on a 6-point Likert scale (1="strongly disagree", 6="strongly agree") yields two factors[1]: Entity Beliefs (α=0.81) and Incremental Beliefs (α= 0.81). We computed an average score for each.

Achievement Goals Scale. Janssen & Van Yperen's questionnaire (2004) measures achievement goals at work. We minimally changed its wording to apply them to negotiations. The 6-point Likert scale (1="strongly disagree", 6="strongly agree") items follow the sentence: "I feel successful in negotiation when I…", and measure either mastery goals (11 items, e.g., "acquire new knowledge or learn a new skill by trying hard"; a= 0.94), or performance goals (8 items, e.g., "I perform better than the other party", a= 0.89).

Integrative Negotiation Behavioral Tendencies Questionnaire- INBT-Q. In a series of pretests, the report of which is out of the current scope, we developed a 28-item questionnaire on a 6-point Likert scale (1="strongly disagree", 6="strongly agree"), which yielded five factors[2]: Effort (e.g., "Even when the negotiation is difficult, I'll continue to put effort in it", α=0.84), Information Sharing (e.g., "I'll share information, because that is a cornerstone of successful negotiation", α =0.86), Positive Atmosphere

[1]Based on a Factor Analysis with Varimax rotation. Factors explained 56% of the variance.
[2]Based on a Factor Analysis with Varimax rotation. Factors explained 60% of the variance.

("I will express positive emotions toward the other party", α =0.80), Negative Atmosphere ("I will not hesitate to complain and express frustration with the other party", α =0.72), and Positive Behaviors ("I will show trust in the other party", α =0.69). The entire scales' reliability was high (α = 0.87) and its factors strongly correlated with its mean value (r=0.68 – r=0.70; except the reverse Negative Atmosphere factor – r=-0.24). We therefore computed a mean integrative behavioral intentions' score.

Interdependence vs. independence – advocacy manipulation. Just before answering the INBT-Q, respondents read these instructions: "When people negotiate, sometimes they negotiate for themselves and other times they represent a group (e.g., employees, apartment complext tenants, or their peer students)". Following appeared one of two instructions: "You are required to think of a situation in which you would be negotiating for yourself" (independence), or "You are required to think of a situation in which you would be negotiating on behalf of a group" (interdependence).

3. Results

Table 1. Mean and SD values of research variables, by exp. group, gender and overall.

	Inc' beliefs	Entity beliefs	Mastery goals	Performance Goals	Int' behavior
Negotiators for self (*N*=99)	4.96 (.61)	2.39 (.61)	4.29 (.97)	3.68 (1.10)	4.52 (.47)
Advocators (*N*=105)	5.11 (.68)	2.35 (.82)	4.50 (1.02)	3.83 (1.03)	4.62 (.49)
Females (*N*=140)	5.00 (.68)	2.39 (.74)	4.45 (.98)	3.78 (1.06)	4.60 (.49)
Males (*N*=64)	5.11 (.57)	2.32 (.70)	4.27 (1.04)	3.71(1.07)	4.50 (.46)
Total (*N*=204)	5.04 (.65)	2.37 (.72)	4.40 (1.00)	3.76 (1.06)	4.57 (.48)

We did not find any significant differences in variables' means. Before testing the mediation models, we established the correlations between the variables (Baron & Kenny, 1986).

Table 2. Correlations between implicit beliefs, achievement goals and integrative intentions.

	Negotiators for self (*N*=99)				Advocators (*N*=105)			
	IB	EB	MG	PG	IB	EB	MG	PG
Entity beliefs	-.39***				-.46***			
Mastery goals	.26**	-.17			.39***	-.35***		
Performance goals	.10	-.09	.26**		.18	.10	.13	
Integrative Intentions	.13	-.21*	.12	-.15	.28**	-.26**	.34***	.06

*p<.05, **p<.01, ***p<.001; IB=Inc' beliefs, EB=Entity beliefs, MG=Mastery goals, PG=Performance goals.

Beliefs correlated with mastery goals: incremental beliefs positively, entity beliefs negatively; but not with performance goals. In advocators, integrative intentions correlated positively with incremental beliefs and mastery goals, and negatively with entity beliefs. In negotiators for themselves, integrative intentions correlated only with entity beliefs, negatively.

To test the hypothesized mediation paths, we conducted a hierarchical linear regression model in each group, predicting integrative intentions. We entered beliefs in the first step, and goals in the second.

Table 3. *Contributions (β) of beliefs and goals to integrative intentions.*

	Negotiators for self (*N*=99)		Advocators (*N*=105)	
	Step 1	*Step 2*	*Step 1*	*Step 2*
Incremental beliefs	.01	-.01	.22*	.06
Entity beliefs	-.28*	-.26*	-.22	-.06
Learning goals		.14		.52***
Performance goals		-.16		.03
R^2	.07	.12	.13**	.27***

*p<.05, **p<.01, ***p<.001

Among advocators, the model was significant. Incremental beliefs positively predicted integrative intentions, but their contribution became insignificant when mastery goals were entered, suggesting mediation by the latter, which a Sobel test confirmed (Z=2.26, p<.05). The negative contribution of entity beliefs, though not small, did not reach significance (it was possibly overshadowed by inceremntal beliefs' effect). Among negotiators for themselves, the model did not reach significance; entity beliefs only negatively predicted integrative intentions. Therefore, hypothesis 1a, that incremental beliefs, mediated by mastery goals, positively predict integrative intentions, was fully supported in advocators. Hypothesis 1b, that entity beliefs, mediated by performance goals, negatively predict integrative intentions, was partially supported in negotiators for themselves. Hypotheses 2a and 2b were supported; the inceremntal path was stronger in advocators, and the entity path stronger in negotiators for self.

4. Discussion

The study begins to fill a knowledge gap on the contributions of implicit negotiation beliefs and achievement goals to integrative behavior. We measured participants' incremental vs. entity negotiation beliefs, and their mastery vs. performance goals, which were expected to mediate beliefs' effects. Participants then imagined themselves either as advocators, negotiating on behalf of a group, or as negotiating for themselves, and then they reported their behavioral intentions: how likely they would be, during negotiations, to exert effort, share information, build trust with the other party and display positive feelings to create a positive atmosphere.

Previous literature showed that the incremental mindset encourages effort, based on the belief that deliberate behavior affects outcomes. In our study, incremental beliefs, mediated by mastery, learning goals, associated with participants' inclination to choose integrative behaviors, that are likely to enhance negotiation outcomes. The entity mindset was previously shown to induce feelings of intimidation and competition, and encourage negotiators to outperform rather their work with their opponents. In our study, the entity belief indeed discouraged integrative intentions.

Advocators and negotiators for themselves did not differ in their beliefs or goals. But whether participants were in the socially motivated, interdependent advocator mindset, or the individual, independent negotiator mindset, strongly affected the associations between beliefs or goals and integrative intentions. Negotiation scholars recently noted the scarce research on the unique interdependent mindset in negotiation (Gelfand, Major, Raver, Nishii & O'Brien, 2006; Ingerson et al., 2015), so our findings in this context also contribute to an under researched field.

The positive incremental mediation path was constrained to advocators, among whom the model was altogether more explanatory, while negotiators were only affected by their entity beliefs. As we reviewed in the introduction, the interdependent mindset enhances awareness of external factors and of the possibility of change, and probably heightens the availability of incremental beliefs. The independent mindset, focusing on the person as autonomous, more likely emphasizes entity beliefs. Both sets of beliefs and goals were primed in all our participants because they had just self-reported on them, and they did not differ in their reports. But when imagining advocacy, participants were more strongly affected by their incremental beliefs, suggesting their availability when reporting their integrative intentions (although their entity beliefs were not unavailable). When participants imagined negotiating for themselves, beliefs were altogether less influential, suggesting reduced availability, with the exception of moderate availability of entity beliefs.

Moreover, among negotiators for themselves, achievement goals had no effect, while mastery goals strongly affected advocators. To explain this finding, we propose that negotiating for oneself is a more daily task than advocating on behalf of a group. The former is therefore more mindless, while the latter requires more deliberate attention (Langer, Blank & Chanowitz, 1978). Such mindfulness had been previously associated with mastery goals and with the belief that exerting effort would enhance outcomes (Iskender, 2009; McCarthy, 2011), and our findings suggest the same pattern here.

5. Research Limitations

Having pointed out the study's contributions of new knowledge to under researched areas, we will also note its limitations. First, we asked participants to imagine a negotiation, and assessed their integrative behavioral intentions, rather than ask them to negotiate and assess actual negotiation behaviors. It's likely that when participants perform a task, it exposes and draws more out of them, than when they merely imagine it; therefore, their beliefs and achievement goals affect them more. This may partly explain why negotiators for themselves were so little affected by beliefs and goals in the study. Moreover, behavioral intentions do not always predict actual behavior, so future research should explore the contributions of implicit negotiation beliefs to actual integrative behavior.

Secondly, we did not measure participants' cognitive content, so the interpretations of our findings, presuming cognitive availability of beliefs, and a less or more mindful process, need to be directly tested with appropriate methods in future research.

Lastly, we focused on individual participants, while a negotiation is an interdependent interaction by its nature. Future research is needed to explore how the implicit negotiation beliefs of both parties affect their interaction and interdependent behaviors.

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LIFE VALUES, ENVIRONMENTAL ATTITUDES AND ENVIRONMENTAL BEHAVIORS OF EMPLOYEES: TURKISH SAMPLE

Nevin Kılıç[1,i], Çiğdem Vatansever[2], & Melek Astar[1]
[1]*Department of Psychology, Fatih Sultan Mehmet Vakıf University, Istanbul (Turkey)*
[2]*Department of Labour Economics and Industrial Relations, Namık Kemal University, Tekirdag (Turkey)*

Abstract

The main aim of this study is to investigate the relationships between general life values and 'green attitudes and behaviors' of employees and to control for sectoral differences in Turkey. The sample of study consisted of 835 employee, 212 of them working for public institutions and 623 of them working for private companies. Mean age was 31.9 (SD=9.2). The sample were grouped as first level employees (56 %), experts (20.4 %), middle line managers (13.4 %) and top managers (10.2 %). Employees were grouped according to the sectors as industry (22.3 %), service (35.3 %), technology (10.4 %) and the other (32 %) as well. In order to investigate environmental attitudes and behaviors two questionnaires have been used. One of them consists of 17 items, with two factors reflecting environmental attitudes called "protective attitudes" and " status quo attitudes". The other questionnaire consists of 23 items, with three factors reflecting environmental behaviors called "striving", "conservationist", and "activist". General life values were investigated with the short and adapted form of Schwartz's Portrait Values Questionnaire (PVQ; Schwartz et al., 2001). According to the results, there are significant differences between public and private sector employees in terms of environmental attitudes, behaviors, and some values. It has been found that protective attitudes toward environment and striving behaviors are positively correlated with universal values. Moreover, environmental striving behaviors were negatively predicted from power values. All results have been discussed in terms of contributions of companies and their employees to the environmental issues as stakeholders.

Keywords: *General life values, environmental attitudes, environmental behaviors, employees, sectors.*

1. Introduction

Environmental problems are becoming major issues in Turkey as in all over the world. These problems, called eco-system problems, are on the agenda with issues such as global warming, deforestation, destruction of species, pollution of water resources, etc. The adverse effects of the business world on environment and nature have been known since the 70's, but governments and organizations are not able to achieve necessary level of improvements about the issue. The transition process to the sustainable united world cannot be completed without the business world, which is considered as the world power today (Doğru, 2012). Moreover, companies and their employees are seen as the part of this problem both at the problem and the solution sides. In this sense, employees' attitudes and behaviors towards environmental protection is crucial to the transformation and sustainability of companies in line with environmental protection. In fact, these attitudes and behaviors constitute the 'ecological footprint' of the companies (Ones & Dilchert, 2012).

The most common organizational initiatives are; recycling, reduction of energy and other natural resource usage (SHRM, BSR, & Aurosoorya, 2011; Zibarras & Ballinger, 2011). Harris and Crane (2002) interpret these initiatives which companies have implemented for the benefit of the environment, as "greening of organizational culture". In the light of all these changes, it has been argued that many organizations have experienced a Green Renaissance reflected in their mission, strategies, practices and annual reports (Ones & Dilchert, 2012).

Although building a sustainability strategy is the responsibility of the General Manager and top management, Human Resource Management has an important role in the implementation of this strategy. Milliman and Clair (1996) developed one of the first models to rate the effects of human resource management on the outcomes and practices of the company towards the environment. These steps are

[i] Corresponding author: nkilic@fsm.edu.tr

similar to a typical organizational development study: (a) the organization must first develop a vision of the environment, (b) employees must be trained in the strategy and objectives associated with the environmental vision of the employer, (c) Incentive programs should be developed to identify and recognize activities that will benefit the environment. (d) incentive programs must be developed to identify and recognize activities that will benefit the environment.

Environmental positive outcomes in an enterprise will emerge with an improved understanding of the environmental orientation within the company by employees and an increase in the pro-environmental behaviors of employees (Paille, Chen, Boiral, & Jin, 2014). For this reason, it is necessary to understand what they do and how they contribute to sustainability in order to make their company more "green".

In line with this ideation, it is important to understand environmental attitudes and environmental behaviors of employees in relation to general life values. Because, life values have seen as bases of both attitudes and behaviors of people and have the capacity to motivate behaviors. There have been many studies about individual values in relation to environmental attitudes, beliefs and behaviors for many years. It is suggested that environmental attitudes and environmental behaviors are related to the values of people (eg. Karp, 1996; Schultz & Zelezný, 1999). Various studies have shown that values contribute to the explanation of various environmental attitudes and behaviors. Rokeach (1973) and Schwartz (1994) value scales have also been used to explain more specific environmental attitudes and beliefs (Schultz & Zelezny, 1999) as well as general environmental sensitivity (Stern & Dietz, 1994). Karp (1996) found that Schwarz's general life values have correlated with recycling behaviors, consumer behaviors, and political behaviors to protect the environment. Yet other studies have shown that values are related to "recycling behavior" (Stern & Dietz, 1994) and "willingness to act to protect the environment" (Dunlap et al., 1983). The study of Stern, Dietz, Abel, Guagnano and Kalof (1999) has shown that values are also contributing to the explanation of some non-activist environmentalist behaviors, such as consumer behavior, policy adoption and environmental citizenship, as well as explanation of significant activist behaviors.

On the other hand, it is stated that the sectors differ from each other in terms of the damage they give to the environment. Especially, industrial sectors are blamed for environmental hazards more than the other areas (MEGEP, 2006). So, the main aim of this study is to investigate the relationships between general life values and 'green attitudes and behaviors' of employees in Turkey. In addition, values, environmental attitudes and behaviors will be examined on the sectoral basis.

2. Method

2.1. Sample and Procedure

The present research used a cross-sectional survey. The instrument set was administered to 835 employees, selected through convenience sampling in Istanbul in Turkey. Participation was voluntary and data was collected between beginning of October and end of December in 2015. Participants signed a written informed consent form including the information that participation was voluntary and withdrawal at any time of the study was possible. The sample of study consists of 418 women and 417 men, 212 of them working for state and 623 of them working for private companies. Mean age was 31.9 (Range= 16-63; SD=9.2). The sample was grouped as first level employees (56 %), experts (20.4 %), middle line managers (13.4 %) and top managers (10.2 %). The sectors of employees were grouped as industry (22.3 %), service (35.3 %), technology (10.4 %) and the other (32 %).

2.2. Instruments

Green Attitudes and Green Behaviors Questionnaires: The questionnaires are 5-point likert type scales, have been developed by Topçu et al. (2015) and adapted by Kılıç and Vatansever (2017) are short versions reviewed for work-life. The attitude scale consists of 17 items, with two factors reflecting environmental attitudes called “protective attitudes” and “status quo attitudes”. The internal consistencies of subscales have been found as α=.83 and α=.75 respectively. Green behaviors questionnaire consists of 23 items, with three factors reflecting environmental behaviors called “strivor”, “conservationist”, and “activist”, with internal consistencies α=.90 for “strivor”, α=.81 for “conservationist”, and α=.82 for “activist”.

Schwartz’s Portrait Values Questionnaire: General life values were investigated with the short and adapted form of Schwartz’s Portrait Values Questionnaire (PVQ; Schwartz et al., 2001). It consists of 21 items, with reflecting ten general life values which can be organized in four higher-order groups, which are Openness to Change, Self-Transcendence, Conservatism and Self-Enhancement. The values represented under these groups are called as universalism, self-direction, security, power, benevolence, conformity, tradition, stimulation, hedonism and achievement and each of them has a central goal that is the underlying motivator. In each item of the scale, a profile describing a value in

Schwartz's model is defined and participants are asked to evaluate how similar this person is to them. Participants respond to the questions on a 5-point likert type scale. The scale had been adapted into Turkish and validated by Kuşdil & Kağıtçıbaşı (2000).

3. Results

3.1. Sector and Position Differences in Environmental Attitudes, Behaviors and Values of Employees

In this study, the main research question is whether there is a difference in green attitudes and green behaviors of employees according to the industry or sector they work. The sectors were asked in survey form as a list of 20 different work groups and then according to the analyses they are grouped under four categories: Industry (energy, chemistry, gas, metallurgy, textile etc.) services (finance, tourism, retail etc.), technology (information technology, communication etc.) and others.

Thus, the statistical analysis were conducted to see the differences among green attitudes, green behaviors and life values of employees work in different sectors in these four categories (Table 1). Another categorization was done to compare private or public ownership of the company affect these attitudes, values and behaviors (Table 2).

Table 1. The results of comparisons between sector groups by green attitudes, behaviors and values.

Variables		Sector Groups	N	Mean	SD	F/Welch	p
Behaviors	Striving	Industry	186	4.0581	0.9009	3.445[a]	0.017
		Services Technology	295	4.1948	0.7492		
		Others	87	4.2257	0.6964		
		Total	267	4.3089	0.7223		
			835	4.2040	0.7763		
Values	Power	Industry	186	3.8952	1.2416	4.722[b]	0.003
		Services Technology	295	3.8119	1.2783		
		Others	87	4.0690	1.1618		
		Total	267	3.5749	1.1740		
			835	3.7814	1.2332		
	Universalism	Industry	186	4.9319	1.1537	2.826[a]	0.038
		Services Technology	295	5.1209	0.9209		
		Others	87	5.1341	0.8648		
		Total	267	5.1935	0.8663		
			835	5.1034	0.9592		
Attitudes	Protective	Industry	186	3.8692	0.7923	2.854[b]	0.036
		Services Technology	295	4.0436	0.7005		
		Others	87	3.9373	0.6715		
		Total	267	4.0377	0.6960		
			835	3.9918	0.7201		
	Status-quo	Industry	186	2.7254	0.9726	4.813[a]	0.003
		Services Technology	295	2.6531	0.9556		
		Others	87	2.5498	0.9255		
		Total	267	2.4337	0.8144		
			835	2.5883	0.9193		

a:Welch; b:F

In terms of green attitudes the **conservationist** employees are highest in services and lowest in industry sector. On the other hand, the employees who prefer to **maintain status quo attitudes** are highest in industry and lowest in others category. When we look at the results for green behaviors, there is a significant difference between the employees **striving** behaviors. There is no difference between **green life-style** and **activist** behaviors in employees according to the sector they work. Accordingly, while **striving** for environment have received the highest scores in others group, the lowest scores in industry group. The results of these analyses are shown in Table 1.

It was also analyzed that, whether the general life values of the employees differ according to the sector they work in. According to the results, the employees in the industry category have the lowest **universalism** scores and the ones in the others category have the highest **power**. General life values do not differ on sectoral basis except these two.

When private sector and public sector were compared; **the power** and **universalism** and **striving** behaviors differ among sectors in private sector. On the other hand in public sector, **traditionalism** as a value and green life-style behaviors differ according to the sectors. In general, **universalism** varies according to the categories (industry, services etc.) in private sector employees. When the means are taken into consideration, it is seen that the **universalism** is the lowest in services and and highest in others category. In terms of **power,** the highest mean in the technology group in the private sector, and the lowest mean was observed in others category.

In the **striving** behaviors, the lowest mean is in the industries category in private sector, while the **green lifestyle behaviors** have the lowest means in public sector. In addition, **traditionalism** in the public sector has the highest average in services category, while the lowest is in technology category. The results of these analyses are shown in Table 2.

Table 2. Differences between sector groups in terms of state and private sector by green attitudes, behaviors and values.

Ownership	Variables	Sector Groups	N	Mean	SD	F/Welch	p
Private	Striving (green behavior)	Industry	172	4.0469	0.9122	3.756[a]	0.011
		Services Technology	217	4.1399	0.7909		
		Others	69	4.1686	0.7163		
		Total	165	4.3267	0.7057		
			623	4.1669	0.8028		
	Universalism (value)	Industry	172	4.9070	1.1782	3.144[a]	0.025
		Services Technology	217	5.0614	0.9944		
		Others	69	5.1256	0.9201		
		Total	165	5.2384	0.8303		
			623	5.0728	1.0073		
	Power (value)	Industry	172	3.9360	1.23140	5.325	0.001
		Services Technology	217	3.8456	1.25845		
		Others	69	4.1884	1.09175		
		Total	165	3.5515	1.19402		
			623	3.8307	1.22926		
Public	Traditionalism (value)	Industry	14	5.0714	0.9579	3.710[b]	0.012
		Services Technology	78	5.0769	1.0067		
		Others	18	5.2778	0.8782		
		Total	102	4.6275	1.1682		
			212	4.8774	1.0967		
	Conservationist (green behavior)	Industry	14	3.5102	1.2475	4.255[b]	0.006
		Services Technology	78	3.3190	0.8336		
		Others	18	3.6164	1.0225		
		Total	102	2.9731	0.9147		
			212	3.1905	0.9410		

a:Welch; b:F

Another comparison regarding the positions of employees revealed that there is no difference among green attitudes and green behaviors of employees, but there are significant differences among power and achievement values according to the positions of employees (p<.05). The results of the post-hoc Scheffe test revealed that the scores of power and achievement values of the employees in the managerial position (manager & power Mean= 4.20; manager & achievement Mean=4.71) were found to be higher than those of the expert (expert & power Mean= 3.85; expert & achievement Mean=4.51) and lower level employees (lower level & power Mean=3.58; lower level & achievement Mean= 4.43).

3.2. Prediction of Green Attitudes and Behaviors from Values

Hierarchical regression analyses have been conducted to predict green attitudes' and green behaviors' sub-dimensions from Schwartz' General Life Values. According to the findings, environmental protective attitudes are predicted by the universalism, security, conformity, self-direction, achievement, and benevolence values (R^2 = .52; $F_{(1,825)}$ = 146.65; p <.001). Among these, achievement value predicted environmental protective attitudes negatively (b=-.06; β=-.10; t=-3.74; *p<.001)*. The predictor variables of the status quo attitudes were subjected to stepwise regression analysis. The power value is predictively entered in the first step of the model. Then, security, traditionalism, universalism, conformity, benevolence and stimulation have predicted respectively the status quo attitudes (R^2 =.22; $F_{(1,824)}$ = 33.01; p < .01). Among these, security (b=-.18; β=-.21; t=-4.70; *p<.001)*, benevolence (b=-.14; β=-.15; t=-3.32; *p<.01)* and universalism (b=-.20; β=-.20; t=-4.13; *p<.001)* values predict the status quo attitudes negatively. Green behaviors are predicted by universalism in general. Striving behaviors are predicted by universalism, security, traditionalism, age, self-direction, power, conformity and benevolence respectively (R^2 = .55; $F_{(1,823)}$ = 126.86; p <.001). Among these, power value predicts striving behaviors negatively (b=-.05; β=-.08; t=-3.15; *p<.01).* Conservationist behaviors are predicted by universalism, traditionalism, safety, benevolence, achievement, age and conformity (R^2=.15; $F_{(1,824)}$=20.18; p<.01). Among these, security (b = -.18; β = -.20; t = -4,46; *p < .000)*, benevolence (b=-.13; β=-.15; t=-3.01; *p<.01)* and achievement (b=-.08; β=-.10; t=-2.73; *p<.01)* values predict the conservationist behaviors negatively. Activist behaviors are predicted by universalism, traditionalism, power and security (R^2=,16; $F_{(1,827)}$=38,55; p<,01). Among these, security predicts activist behaviors negatively (b=-.11; β=-.12; t=-2.78; *p<.01).*

4. Discussion

The results of the study showed that there are complicated relationships between environmental attitudes, environmental behaviors and the life values, especially in Turkish sample. Because, there are contradictory findings in terms of green attitudes, behaviors and the life values. These results can be explained by examining cultural differences in values. Regarding value studies across cultures, not the pan-cultural (etic), but the emic approaches have been considered for explaining some results (Smith & Smith, 2017). On the other hand, findings regarding sector differences can be held and analyzed in more detailed manner to make contributions about greening of companies both in public and private sectors, in line with the ideation that companies and their employees are stakeholders to construct environmental sustainability.

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EXAMINATION OF THE RELATIONSHIP BETWEEN EMOTIONAL STABILITY, PERSONALITY AND PROCRASTINATION TENDENCY ON WORKING WOMEN

Gaye Saltukoğlu[1], Melek Astar[1], & Arkun Tatar[2]
[1]*Department of Psychology, FSM Waqf University (Turkey)*
[2]*Department of Psychology, The University of Texas at Austin/Research Scholar, TX (USA)*

Abstract

Most of the studies have reported that the relationship between personality traits and procrastination are carried out on students and on academic procrastination, and the distribution of emotional stability scores on procrastination scores are parabolic. Accordingly, in this study the relationship between personality traits and procrastination, and the distribution of emotional stability factor scores on procrastination scores were examined on working women. In this study the Procrastination Scale and the Five Factor Personality Inventory Short Form were administered to 512 working women between the ages of 18 to 60 years. The correlation coefficients calculated between total scores of the Procrastination Scale and Factor scores were as follows: -0.17 for Extraversion, -0.37 for Agreeableness, -0.61 for Conscientiousness, 0.50 for Emotional Instability, and -0.28 for Openness to Experience. Factor scores of the Personality Inventory explained 0.57% of the variance of the procrastination scores. The factors of Conscientiousness and Emotional Instability made the largest contribution in predicting procrastination scores respectively. Except Extraversion factor scores, there were differences in four of the total factor scores between the groups, created according to procrastination scores. While the group scoring low in procrastination score received the highest score on Agreeableness, Conscientiousness and Openness to Experience Factors, the group scoring high in procrastination score, received the lowest factor total score. For the Emotional Instability Factor, the group scoring low in procrastination received the lowest; the group scoring high in procrastination received the highest factor score. No evidence was obtained about the parabolic distribution of Emotional Stability Factor on procrastination score. Results showed that there was a strong relationship between personality traits and procrastination level in working women. Although there is a strong relationship between emotional stability and procrastination, it is not clear in what way it is revealed.

Keywords: *Personality Trait, Procrastination, Neuroticism, Conscientiousness.*

1. Introduction

Generally, procrastination is defined as a trait or behavioral disposition to postpone or delay performing tasks or making decisions and indicated as a complex fact with its cognitive, emotional and behavioral components (Ferrari & Tice, 2000; Lay & Silverman, 1996; Steel, 2007; Watson, 2001). However, procrastination has been distinguished from postponing simple decisions (Anderson, 2003). The relationship between procrastination and, psychological and physiological well-being has been shown (Sirois, 2004, 2007; Sirois, Melia-Gordon, & Pychyl, 2003).

Causes of procrastination are collected under four headings, a) quality of a task, b) results, c) demographic variables and d) indivıdual differences (Steel, 2007). On the other hand, procrastination has been investigated in two basic directions, a) performance and achieving aims, b) relationship between procrastination and personality (Watson, 2001). Possible Environmental causes of procrastination, which are under the heading of task quality, have been reported as the timing of reward and punishment, and task aversiveness (Humphrey & Harbin, 2010; Jiao, DaRos-Voseles, Collins, & Onwuegbuzie, 2011; Solomon & Rothblum, 1984; Steel, 2007).

Procrastination shows the strongest relationship with conscientiousness factor and its facet of self-discipline of the five factor model (Díaz-Morales, Cohen, & Ferrari, 2008; Lay & Silverman, 1996; Lay, Kovacs, & Danto, 1998; Lee, Kelly, & Edwards, 2006). Procrastination shows a negative relationship with the facets of conscientiousness such as loyalty, healthiness, wealthiness and happiness

(Gröpel & Steel, 2008; Lay, Kovacs, & Danto, 1998). On the other hand, some personality traits such as poor impulse control, lack of persistence, lack of systematic study, inability to use time effectively have been distinguished and indicated as self-control (Steel, 2007).

Another personality trait related with procrastination is emotional stability (Dewitte & Schouwenburg, 2002; Lay & Silverman, 1996; Schouwenburg & Lay, 1995; Sirois, 2004; Watson, 2001). The correlation between procreation and emotional stability has been shown as a parabolic distribution, high emotional stability scores in both high and low procrastination levels (Díaz-Morales, Cohen, & Ferrari, 2008; Watson, 2001). Lack of energy and depressive mood, also connected with age, explains a significant amount of variance in procrastination (Gröpel & Steel, 2008). Under emotional stability factor, sub dimensions of anxiety, hostility, depression, impulsiveness and vulnerability are the ones related with procrastination (Dewitte & Schouwenburg, 2002; Watson, 2001).

In the frame of five factor model extraversion has also been found to be related with procreation (Díaz-Morales, Cohen, & Ferrari, 2008). Rebelliousness, hostility and disagreement as the sub dimensions of agreeableness factor have been considered as basic motives of procrastination. A relationship has not been shown between openness to experience factor of the five factor model and procrastination (Steel, 2007).

Most of the research on procrastination has been performed on students' academic performance (Gröpel & Steel, 2008; Martin, 2015; Van Eerde, 2003; Watson, 2001). In this study a different participant group, working women were taken and it was aimed to investigate the relationship between procrastination and personality traits in the frame of five factor model. Studies on students showed that the relationship between emotional stability and procrastination was a parabolic distribution (Díaz-Morales, Cohen, & Ferrari, 2008; Watson, 2001). In this study, it is also planned to test this distribution on the sample of working women.

2. Methods

2.1. Participants

The participants of the study were 512 women employees between ages 18-60 (mean=31.30±9.75). Among these 512 participants, 21 (4.10%) were primary school, 35 (6.84%) were middle school, 264 (51,56%) were high school and, 192 (37.50%) were university graduates; 272 (53.13%) of them were single, 208 (40.63%) were married, 18 (3.52%) were divorced, 14 (2.73%) were widowed; their ratings of economic status were as follows: 64 (12.50%) low, 360 (70.31%) middle, 88 (17.19%) high.

2.2. Instruments

The Procrastination Scale (PS) (Saltukoğlu & Tatar, 2014) and The Five Factor Personality Inventory-Short Form (Tatar, 2016) were used.

2.3. Procedure

Convenient sampling method was used and subjects indicated to participate in a scientific study voluntarily by completing the prepared form. The study was carried out in a period of 6 months.

2.4. Results

The internal consistency coefficient of PS was 0.93, internal consistency coefficients for the factors of 5FPI-SF ranged between 0.71 and 0.90. The correlation coefficients between PS and the factors of 5FPI-SF were as follows: -0.17 for E, -0.37 for A, -0.61 for C, 0.50 for EI and -0.28 for O. According to these result, the highest correlation coefficient was between PS and C factor of 5FPI-SF and the lowest correlation coefficient was between PS and E factor.

In order to predict PS total score by 5FPI-SF factor scores, multiple linear regression analysis was conducted and the results showed that the factors of E, C and EI significantly contributed to predict the total score of PS. On the other hand, A and O factor scores did not contribute significantly to predict PS total score. Thus, 5FPI-SF total scores and adjusted R-square value explained 0.57 of the variance of total PS score.

Besides, EI factor score distribution on PS total score was examined and the distribution of both scores did not show a pronounced parabolic feature.

The participants were categorized into three groups according to their procrastination total scores, groups were formed by distinguishing those one standard deviation above and below the mean. Statistically significant differences were found between the average total scores of 5FPI-SF factor scores of the three groups (Wilk's λ=0.55, $F_{10,1010} = 34.83$, $p < 0.001$, $\eta^2 = 0.26$). Agreeableness ($F_{2,509} = 47.68$,

$p < 0.001$, $\eta^2 = 0.16$), Conscieciousness ($F_{2,509} = 128.35$, $p < 0.001$, $\eta^2 = 0.34$), Emotional Instability ($F_{2,509} = 51.31$, $p < 0.001$, $\eta^2 = 0.17$) and Openness to Experience ($F_{2,509} = 21.91$, $p < 0.001$, $\eta^2 = 0.08$). There was not a significant difference between the groups just on the Extraversion factor.

When we examine the differences between groups, all four factor total scores showed differences between three groups. According to the results, the group that has low procrastination score has highest total factor score, whereas, the group that has high procrastination score has lowest total factor score on the factors of Agreeableness, Conscientiousness and Openness to Experience. For Emotional Instability factor, the group that has low procrastination score has also lowest total factor score, the group that has high procrastination score has highest total factor score. The middle group who has moderate procrastination scores has also moderate scores on total factor scores.

3. Discussion

In this study, the relationship between emotional stability, personality traits and procrastination were examined. Most of the previous studies on procrastination has been performed on students' academic performance (Gröpel & Steel, 2008; Martin, 2015; Van Eerde, 2003; Watson, 2001). Thus, in this study a different participant group, women employees were taken and it was aimed to investigate these relationships on a different sample (Di Fabio, 2006; Effert & Ferrari, 1989; Ferrari & Tice, 2000; Ferrari & Ware, 1992; Lay, Edwards, Parker, & Endler, 1989; Milgram & Tenne, 2000; Schouwenburg & Lay, 1995; Steel, Brothen, & Wambach, 2001).

In some other studies the relationship between emotional stability and procrastination has been defined as parabolic (Díaz-Morales, Cohen, & Ferrari, 2008; Watson, 2001). According to the analysis of variance results in this study, both distributions of total scores did not show a parabolic feature. Results of variance analysis reveal that in terms of PS score low group has lowest, middle group has moderate, high group has highest EI factor score. That is, in terms of PS score low and high groups have low total EI score, which means, it is not in the form of a reverse parabola. In other words, EI score averages of PS groups' scores are increasing in a sequential manner. This indicates that the distribution is linear.

The correlation coefficients between PS scores and factors of 5FPI-SF in general, are similar with the results of previous studies. The results of multiple linear regression analysis to predict PS score are also quite similar with the previous studies. Factor scores of C, E and EI enter the regression equation significantly in predicting PS total score. C factor makes the largest contribution to predict total PS score. Variance analysis results also show that those with low levels of procrastination have higher levels of A, C, and O levels.

An overall evaluation of the results of the relationship between procrastination and the factor structures of five factor personality model revealed largely similar results with the previous studies on student samples, there are differences as well (Dewitte & Schouwenburg, 2002; Díaz-Morales, Cohen, & Ferrari, 2008; Lay, Kovacs, & Danto, 1998; Lay & Silverman, 1996; Lee, Kelly, & Edwards, 2006; Schouwenburg & Lay, 1995; Sirois, 2004; Watson, 2001). In other words, while previous studies indicate that students with low and high levels of emotional instability show more tendency for procrastination, in this study as the level of emotional instability increased, procrastination level also increased in working women. Another difference, unlike the previous studies, differences were obtained in terms of level of O and there was no difference in terms of E in this study. These results show that this study needs to be repeated in a male group as well as in a larger sample. Another limitation of this study is that comparisons have not been made in terms of demographic variables such as age, marital status and education level (Gröpel & Steel, 2008; Ferrari, O'Callaghan, & Newbegin, 2005; Steel, 2007; Steel & Ferrari, 2013; Van Eerde, 2003). As a results eliminating deficiencies will provide a better understanding of the topic.

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"EVERYTHING CHANGES": LISTENING TO INDIVIDUALS BEREAVED THROUGH HOMICIDE

Filipa Alves-Costa, Catherine Hamilton-Giachritsis, & Sarah Halligan
Department of Psychology, University of Bath (United Kingdom)

Abstract

Grief can be defined as an almost universal response to the loss of a loved one, albeit a response that manifests in diverse ways. Approximately 45%-50% of individuals tend to respond resiliently to a non-violent death. When the death occurs in 'normal' circumstances (e.g., terminal illness; Bonanno & Kaltman, 2001), the grief responses symptoms typically decrease in one to two years, which represents a 'normal grieving process' (Bonanno & Mancini, 2008). However, bereavement distress when violent, sudden and traumatic circumstances are involved (e.g., homicide) seems to be a unique form of grief that can be particularly severe and persist for many years (e.g., Holland & Neimeyer, 2010). Limited attention has been given to this specific form of bereavement and relatively little is known about how people survive it. How do individuals describe their experience? Do individuals become resilient to the sudden and traumatic loss of a loved one? What does 'surviving' mean?
The purpose of this paper is to explore how individuals bereaved through homicide survive and describe their post loss experience and journey. Qualitative interviews were conducted with 21 participants and Thematic analysis selected to analyse the narratives collected. Four central themes emerged, namely: 1) unique experience, 2) sources of support, 3) coping mechanisms and 4) changed self and world. These narratives offer a deep understanding of the individual's experience and are likely to address some uncertainties or misperceptions related with outcomes, coping strategies and resilience after traumatic bereavement.

Keywords: *Homicide, bereavement, support, coping, changes.*

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ROLE OF PREVOLITIONAL PROCESSES IN ONLINE VIDEO GAMES PLAYING: TEST THE VALIDITY OF EXTENDED MODEL OF GOAL-DIRECTED MODEL

Bibiána Kováčová Holevová
Department of Psychology, Pavol Jozef Šafárik University in Košice (Slovakia)

Abstract

The aim of our study is to investigate the relationship between prevolitional processes and video games playing. A model of attitude, the Extended Model of Goal-directed Behavior, is tested with structural equation models to analyze the process that leads to video games playing. More specifically, the role of the goal underlying online video games playing is examined. Participants were 210 online video games players, who completed measures of Goal Desire, Attitude, Subjective Norms, Perceived Behavioral Control, Behavioral Desire, Anticipated Emotions, Intention to play and Intensity of online video games playing. The results showed that the model did not achieve a satisfactory fit. Although it was confirmed the contribution of Goal Desire on Behavioral Desire**,** the significant correlation between Goal Desire and online video games playing (behavior) suggests that the desire toward the goal one wants to achieve by playing online video games has not only an indirect association through the desire toward playing. It discussion potentially explanations are discussed.

Keywords: *Video games, Prevolitional processes, Extended Model of Goal-directed Behavior.*

1. Introduction

The central aim of this article is to investigate the relationship between prevolitional processes and online video games playing. A model of attitude, the Extended Model of Goal-directed Behavior (EMGB), was tested with structural equation models to analyze the process that leads to the online video games playing. More specifically, the role of the goal underlying online video games playing was examined. Although in online video games playing can be much habitual and automatic processes (Lee, LaRose, 2007) we concern in playing online video games which may result from deliberative processes. This allows us to benefit from some insights from models of attitude that consider behavior as planned and as determined largely by an intention to perform it.

The Theory of Planned Behavior (TPB) (Ajzen, 2002) is among the most known and widely adopted model of attitudes. Besides Intention, there are three fundamental constructs in the TPB: (1) the Attitude toward the behavior that corresponds to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question; (2) Subjective Norms (SN) which involve the perceived social pressure to perform or to not perform the behavior; and (3) Perceived Behavioral Control (PBC), defined as the perceived ease or difficulty of performing the behavior. According to the TPB, people act in accordance with their Intentions and Perceptions of Control over the Behavior, whereas Intentions in turn are influenced by Attitudes toward the behavior, SN, and PBC.

The application of such models of attitude does not take into account some factors that have been shown to be determinants. The Model of Goal-directed Behavior (MGB) and its extension, the EMGB (Perugini, Bagozzi, 2001, 2004a, b), expanded the TPB by incorporating affective, motivational, and automatic processes, and by proposing a different flow among constructs. In the EMGB, Intention to perform behavior is primarily motivated by the Desire to perform the behavior, defined as the personal motivation or wish to perform the action. Theoretically, the distinction between Intention and Behavioral Desire (BD) rests on the notion that desires are typically less doable, more abstract, less connected to actions, and more future-oriented than intentions (Perugini, Bagozzi, 2001, 2004a, b). For example, an individual could experience a strong desire to play online video games but not really intend to engage in that behavior. BD relies on reasons that make the behavior desirable; it arises from elements, such as

favorable evaluations of the behavior, perceptions of normative pressures, perceptions of control, or personal goals one wants to achieve, and is, therefore, assumed to reflect the effects of Attitude, SN, PBC, Anticipated Emotions (i.e., anticipated affective reactions to failure and success to perform the action) and Goal Desire (GD) and to mediate their influence on Intention (see Fig. 1). The inclusion of GD is based on the assumption that the desire to achieve a certain goal will influence the desire to perform a certain behavior that is subjectively felt to be instrumental for goal attainment. As a result, BD will be the proximal determinant of the Intention to perform the behavior in question, and GD will have an indirect effect on intention through BD (Perugini, Bagozzi, 2004a). An alternative model of attitude to the TPB, the EMGB, might provide some insights on how goals influence behavior

The EMGB has been shown to have better predictive power than the TPB (Perugini, Bagozzi, 2004b). Its predictive power has been demonstrated for different behaviors from various domains (e.g. Leone et al., 2004; Perugini, Bagozzi, 2001; Taylor, 2007), but there in no evidence about online video games playing. Playing online video games is very popular activity among young people. In Slovakia only 13% respondents have never played no video games and 26% boys and 8% girls played video games every day (Kováčová Holevová, 2011). With the extended internet, online video games becomes very popular. Therefore it is important research prevolitional processes that lead to play online games.

For that reason we applied the EMGB to examine the relationship between prevolitional processes and online video games playing. We aimed to determine the constructs that influence the Desire and the Intention to play online video games and to specifically consider the role of GD in playing online video games.

We hypothesized that the goal underlying the online video games playing does not influence it directly but indirectly, as the EMGB suggests, by increasing the desire toward the behavior that in turn influences the intention that determines the behavior. As a consequence, GD would not be a direct predictor of Behavior (H1), and in the EMGB, it would be a significant predictor of BD (H2).

2. Participants and procedure

210 participants, Slovak online video games players, from 14 to 35 years old (181 men, 29 women; Mean Age 20,1, Standard Deviation 5.7) completed measures of Goal Desire, Attitude, Subjective Norms, Perceived behavioral control, Behavioral desire, Anticipated Emotions, Intention to play and Intensity of online video games playing (Behavior). 51% of them were high school students, 18,6% were university students and 30,5% were employers. Almost 32% ot them were Counter Strike players, 19,5% World of Warcraft players and 10,5% League of Legends players. The participants were obtained through occasional and snowball selection

3. Measures

With the exception of Behavior, all the responses were on 5-point scales with 5 indicating greater agreement with the statement and, therefore, higher score on the construct.

Goal desire. To measure GD, participants were first asked, ‘‘What do you think would be the most likely reason why you would play online video games?’’ The desire toward this goal
was measured with three items (‘‘How strongly would you characterize your desire to reason Y?,’’ ‘‘How likely is your desire to reason Y?’’ and ‘‘The intensity of your desire to reason Y can be described as...’’).

Attitude. Participants were presented with the stem ‘‘I think that for me online video games playing is?’’ followed by nine bipolar scales (bad-good, negative-positive, unpleasant-pleasant, punishing-rewarding, unenjoyable-enjoyable, unsatisfying-satisfying, uncool-cool, useless-useful, harmful-harmless). Based on confirmatory factor analysis the last two bipolar scales (useless-useful, harmful-harmless) were eliminated.

Subjective norms. SN were assessed by three items (‘‘People who are important to me think I should play online video games,’’ ‘‘People who are important to me would approve of my online video games playing,’’ and ‘‘People who are important to me would be very happy if I play online vieo games’’).

Perceived behavioral control. PBC was assessed with five items (‘‘How much control do you have over online video games playing?,’’ ‘‘Whether I play online video games or not is completely up to me,’’ ‘‘For me to play online video games is easy,’’ ‘‘For me to play online video games is difficult,’’ and ‘‘If I wanted to, it would be easy for me to play online video games’’). The reliability of this measure was not satisfactory (Alpha was ,467). The first and last two items in the above list were not related with the others and were eliminated. A composite of the two remaining items was created.(item 3 was reversed, r=,64, p< .001)

Anticipated emotions. Positive Anticipated Emotions (PAE) were measured with five items. Participants indicated how delighted, proud, happy, pleased, and satisfied they would feel if they would succeed in playing online video games. Negative Anticipated Emotions (NAE) also were measured with five items. Participants indicated how disappointed, agitated, guilty, regretful, and frustrated they would feel if they would fail in playing online video games.

Behavioral desire. BD was measured by three items (‘‘How strongly would you characterize your desire to play online video games’’ ‘‘I desire to play online video games,’’ and ‘‘Online video games playing is something that I desire to do’’).

Intention. Intention was assessed by three items (‘‘I will play online video games,’’ ‘‘How likely is it that you will play online video games?,’’ and ‘‘I intend to play online video games’’).

Behavior. Participants completed the questions about what kind of online game and how long over the week they had played during the last half of year.

4. Results

Neither gender, nor age did not correlated with attitude, goal desire, subjective norms, positive or negative anticipated emotions, behavior desire, intention to play or online video games playing. Reasons for playing online video games includes the reasons (goals) participants listed for online video games playing. The first five goals reported by the participants were to have a fun (31,4%), avoid to be bored (18,1%), to be with friends (15,2%), relax (10%) and escape from worry (10%).

Predictors of Online video games playing was significantly correlated with Attitude, SN, PBC, PAE, BD, and Intention (Table 1). GD was correlated with the BD and intention, but also with online video games playing not supporting H1.

Table 1. Corelation among constructs online video games playing

	Attitude	GD	SN	PBC	PAE	NAE	BD	Intention
Attitude	(.81)							
GD	0,33**	(.85)						
SN	0,22**	0,19**	(.83)					
PBC	0,18**	0,16*	0,13*	(.64a)				
PAE	0,49**	0,48**	0,29**	0,14*	(.93)			
NAE	0,14*	0,32**	0,17*		0,40**	(.89)		
BD	0,49**	0,49**	0,25*		0,72**	0,46**	(.85)	
Intention	0,51*	0,42*	0,36*	0,20*	0,58**	0,25**	0,67*	(.79)
Playing	0,17*	0,32**			0,21**	0,29**	0,30*	0,32*

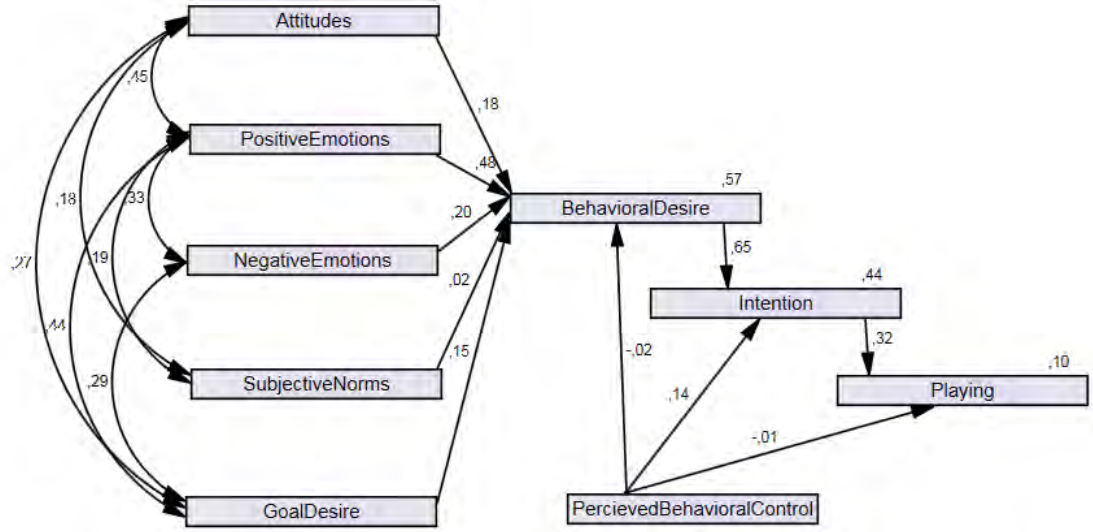
GD = Goal desire, SN = Subjective norms, PBC =Perceived behavioral control, PAE = Positive anticipated emotions, NAE =Negative anticipated emotions, BD =Behavioral desire.
Reliability indexes are indicated in brackets. (a) Only two items r, p<.01. N=210. * p<.05, **p<,01,

Tests of the EMGB Applied to Online video games playing. The EMGB was formally tested with structural equation models using Amos. A full structural equation model was used in order to investigate the goodness of fit for the EMGB. Goodness of fit was ascertained by examining the chi square, which should be nonsignificant. The comparative fit index (CFI), the normed fit index (NFI), and the root mean square error of approximation (RMSEA) were also used as indicators of goodness of fit. Values above.95 for both CFI and NFI and below.06 for the RMSEA can be considered satisfactory (Hu and Bentler, 1999). The standardized parameter estimates for the EMGB are reported in Figure 1.

Goodness of fit. The EMGB obtained an unacceptable fit $\chi 2(N=210) = 79{,}43$, $p < ,001$ (CFI = .891, NFI = .865, RMSEA = .123). The predictors accounted for 57% of the variance for BD, 44% for Intention, and 10% in online video games playing. The results showed that the model does not achieve a satisfactory fit.

Predictors of behavioral desire, intention, and behavior. BD was a function of Attitude (γ = .18), PAE (γ = .48), NAE (γ = .20) and GD (γ = .15), Therefore, GD was a significant predictor of BD, supporting H2. BD (β = .65) and PBC (γ = .14) predicted Intention. Finally, Intention predicted online video game playing (β = .32).

Figure 1. Parameters estimate for EMGB applied to online video games playing (N=210).



5. Discussion

This study was designed to examine the prevolitional processes of online video games playing and to investigate the goals underlying the behavior, and the role of those goals in the determination of BD and behavior. With structural equation modeling, we tested the goodness of fit of the EMGB model.

The fit wasn´t satisfactory and our hypothesis H1 was not supported: Although the contribution of GD on BD was significant (hypothesis H2 was supported), the correlation between GD and Behavior was significant too. The results suggest that the desire toward the goal one wants to achieve by playing online video games has not only an indirect association through the desire toward playing. The desire to have a fun or to avoid being bored through online video games (GD) not only predicts the desire to play online games (BD) but it has probably a more important role in intention or behavior. One explanation can be that among video games players, there is closely relationship between desire to play and intention to play online video games (that was supported with strong correlation between behavioral desire and intention among players, r = ,67, p p<,01) that mediated effect of goal desire on intention or even the behavior. The second explanation can be, that there is a direct effect of goal desire on playing. Habitual or automatic processes included in online video games playing may result that association between GD and playing occurred without considering intention or behavioral desire. This direct association between GD and playing should obviously be stronger among heavy players than among casual players, where connection between goal desire and playing has not been created (or is not very strong) and deliberative process are stronger determinants of behavior. For that reason moderating effect of playing experiences should be taken into account. These new paths would, however, be necessary to examine.

The results also reveal that SN and PBC did not play a critical role, whereas Attitude, PAE and NAE were significant predictors of one's desire to play online video games. The anticipation of the positive and negative feelings one would have if one would succeed or failed in online video games playing is associated with the desire to play. The significant contribution of PAE and NAE echoed the main reported goals underlying the behavior. Indeed, the anticipation of the delight, pride, happiness, pleasure, and satisfaction a person would feel if they succeeded in playing corresponds to the have a fun or to the avoid of being bored one aims to achieve by engaging in online video games playing. As Bagozzi et al. (1998) argued, emotions could be seen to function to produce action in order to promote the achievement of goals. Significant, but relative weak association between attitude and behavioral desire suggests, that there can be also another path. Although the EMGB generally assume that the effect of Attitude on Intention is mediated by BD. However, for some behaviors, the mediation by BD may not be complete (Leone et al., 2004) and is theoretically meaningful to allow a direct path from Attitude to Intention.

This study also sheds light on the role of PBC. The results of our study suggest that control does not play a role at the point of playing online video games but much earlier in the process—in the prevolitional stage—by influencing intention but not desire to play. This path, however, is weak and is questionable whether perceived behavioral control plays a role in prevolitional processes among online players. It should be also possible that perceived ease (or difficulty) of performing the behavior become a

significant predictor of online video games playing only among heavy players, who are familiar with online games and have much experiences.

We want emphasize that contributions of EMGB model consider only the deliberative path and treats online video games playing as a planned behavior. Habitual or automatic processes can also play a role in online video games playing and it can lead to omission fundamental path from goal desire to behavior through behavioral desire and intention. In our analysis we did not control for how long have players played their online game or what kind of game they preferred. In future studies it should be take account potentially significant effect of these moderators.

Our results confirm that goals play a role in playing and demonstrates that this role does not operate only indirectly through BD and Intention. Our results, however, does not allow any firm conclusion on causal relationship between constructs. Based on our results, it is necessary control for moderators (for example playing experiences) when trying confirm EMGB model or try to suggest new model for online video games playing.

6. Conclusions

In our study we examined the prevolitional processes of online video games playing. We concern on investigating the goals underlying the behavior (online video games playing), and the role of those goals in the determination of behavioral desire and behavior. 210 Slovak online video games players completed measures of 1. Goal Desire, 2. Attitude, 3. Subjective Norms, Anticipated 4. Positive and 5. Negative Emotions and 6. Perceived Behavioral Control (which based on the Extended Model of Goal-directed Behavior should motivate) 7. Behavioral Desire, 8. Intention to play and 9. Intensity of online video games playing (Behavior). With structural equation modeling, we tested the goodness of fit of the EMGB model. The fit was not satisfactory. Although the contribution of goal desire on behavioral desire was significant the correlation between goal desire and behavior (playing) was significant too. This results suggest that the desire toward the goal one wants to achieve by playing online video games has not only an indirect association through the desire toward playing.

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SEXUAL AROUSAL AS A FUNCTION OF STIMULUS MODE: STRENGTHENING PHALLOMETRIC ASSESSMENT

Richard J. Howes[1] & Sarah E. Howes[2]
[1]*Stony Mountain Institution, Winnipeg, MB (Canada)*
[2]*University of Manitoba, Winnipeg, MB (Canada)*

Abstract

Phallometric testing to measure sexual arousal in men has proven its value in terms of identifying deviant sexual preferences, though ethical concerns have resulted in a number of facilities opting to forego the use of visual stimuli in favour of audio stimuli. Anecdotal reports suggest that this has resulted in a substantially weakened ability to elicit sexual arousal, and in many cases participants in what might be described as 'phallometric lite' achieve arousal too low to be interpretable. This has compromised the ability of these facilities to provide objective evidence of deviant sexual arousal and thus contribute to identifying those at higher risk of sexual aggression. Providing empirical evidence of the relative strength of three different forms of sexual stimuli (i.e., audio, picture, video) to elicit sexual arousal was the purpose of this study, the goal being to determine whether or not audio stimuli have adequate power to induce interpretable levels of sexual arousal. Results suggest that the use of audio stimuli alone severely weakens the ability of phallometric assessment to generate meaningful levels of sexual arousal and participants with deviant sexual arousal profiles may thus escape identification.

Keywords*: Phallometric assessment, sexual offenders, rape, pedophilia, sexual arousal.*

1. Introduction

Phalllometric testing is a procedure whereby sexual arousal is measured by means of a mercury-in-rubber strain gauge placed around the penis so that circumferential change in response to various stimuli can be determined. The most common use of this procedure is with convicted sexual offenders where measurement of the extent to which they continue to be aroused by deviance can contribute to a decision about whether or not they should remain incarcerated because they represent an unacceptable risk to sexually reoffend. In short, phallometric assessment provides objective evidence that can helpfully influence decisions about the suitability of convicted sexual offenders for release to the community. Many researchers have cited this testing procedure as a reliable means to assess age and gender preferences and to provide an objective measure of the strength of a preference for coercive rather than consenting sexual activities (e.g., Bradford *et al*, 2010; Studer *et al*, 2002).

In a comprehensive study Meridian and Jones (2011) noted that "metaanalytic studies continue to point to the results of phallometric assessment as a valid predictor of future risk" (p. 163). As well, the worth of phallometric assessment in identifying paraphilias has been noted by many researchers (e.g., Bradford *et al*; Lalumiere *et al*, 2005), and it has even been viewed as an effective means to confront sexual offenders' denial (Kalmus & Beach, 2005; Perkins, 2007). It is, for example, difficult for a pedophile to argue that he is only sexually aroused by adults when there is strong phallometric testing evidence which reveals a preference for children. By no means is phallometric testing universally accepted, but as Meridian *et al* concluded, "Although the early enthusiasm for phallometric assessment has slightly faded since then [its introduction], no other assessment method has really challenged its place" (p. 160). Rice *et al* (2012) echoed this view when they concluded, "Regardless of the causes of anomalous sexual interests, it is clear that phallometric measurement remains the best available technique for their study" (p. 149). Lykins *et al* (2010) agreed with this view when they wrote that "Phallometric testing is widely considered the best psychophysiological procedure for assessing erotic preferences in men" (p. 42).

The value of phallometric assessment is most obviously compromised in cases where arousal is low, and it is widely accepted that circumferential change of less than 6 mm (i.e., 20% of the average circumferential change from flaccidity to full erection in males, based on a sample of 724 men, see

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Howes, 2002) is too low to be interpretable. This problem is rendered more common by the understandable reluctance of some clinicians to use visual pornography, and based on ethical concerns the use of audio stimuli has increased. Whether or not audio stimuli will prove adequate to elicit meaningful and interpretable sexual arousal is clearly an empirical question, and providing an answer to this question is the goal of this research.

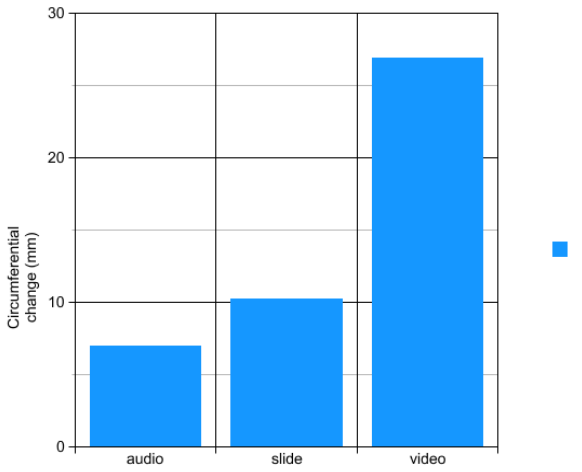
2. Method

Archival data from 142 federally-incarcerated offenders who participated in phallometric testing at Stony Mountain Institution, a Canadian federal penitentiary, were available for analysis. All participants signed a consent form prior to testing, a form which included their consent to view sexually explicit child and adult pornography. In approximately two-hour phallometric testing sessions all participants were individually presented with audio, picture, and video depictions of a number of sexual themes, though for the sake of brevity in this conference proceedings report only responses to three of these themes (i.e., consenting adult heterosexual, heterosexual pedophilia, and adult female rape) will be examined.

3. Results

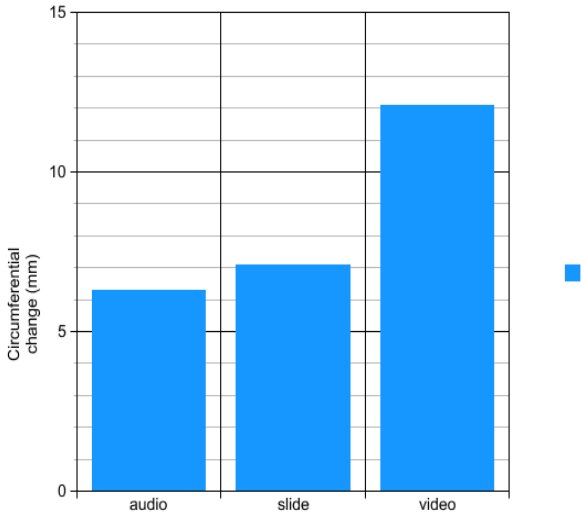
The circumferential change responses of 120 offenders were obtained to the theme of consenting adult heterosexual sexual activities as portrayed by audio, slide, and video stimuli (see figure 1).

Figure 1. Sexual arousal to consenting adult heterosexual stimuli.



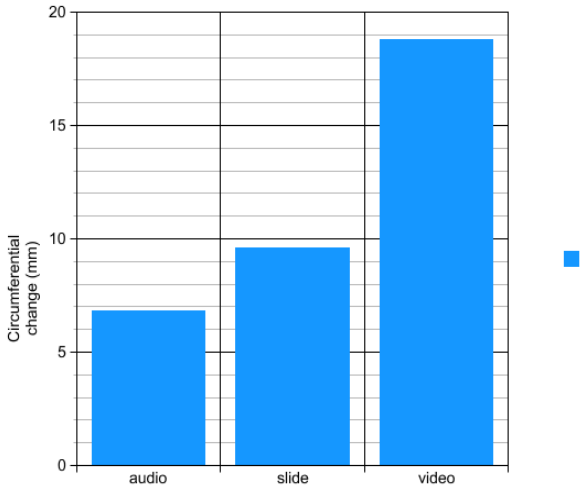
The circumferential change responses of 128 offenders were obtained to the theme of adult female rape as portrayed by audio, slide, and video stimuli (see figure 2).

Figure 2. Sexual arousal to adult female rape stimuli.



The circumferential change responses of 118 offenders were obtained to the theme of heterosexual pedophilia as portrayed by audio, slide, and video stimuli (see figure 3).

Figure 3. Sexual arousal to heterosexual pedophilia stimuli.



Each of the three sexual themes with three stimulus modes was tested using repeated measures (within-subjects) one-way ANOVAs, thus allowing for comparisons to be made of the same subjects under different conditions (see Table 1).

Table 1. ANOVA summary.

Source	SS	df	MS	*F*	*p*
consenting adult heterosexual	26600.74	2	13300.37	161.72	<.ooo1
adult female rape	2506.47	2	1253.24	25.30	<.ooo1
heterosexual pedophilia	9290.49	2	4645.25	62.94	<.0001

Pair-wise comparisons were then performed using Tukey HSD tests to determine the significance of the observed differences between the three stimulus modes for each of the sexual themes, and it was revealed that eight of the nine possible comparisons were significant beyond the .01 probability level.

The results also reveal that when using the criterion of 6 mm of circumferential change (i.e., approximately 20 PFE ((percent full erection)) based on published normative data identifying the average circumferential change to full erection being 32.6 mm with a standard deviation of 8.8 mm, see Howes, 2003) as the cut-off for excluding scores from interpretation it is observed that 56.6% of all offenders did not surpass this criterion score when data from only the audio stimuli were examined. Conversely, only 12.3% of all offenders did not surpass this criterion score when data from only the video stimuli were examined.

4. Discussion

The evidence clearly identifies audio stimuli as weak when it comes to eliciting sexual arousal to portrayals of both deviant and consenting sexual activities, whereas video stimuli elicit strong arousal to these same portrayals. Weak arousal translates into data which are in many cases too low to be meaningful or interpretable, and the opportunity to identify the presence or absence of deviant interests is lost. The desire to avoid using visual pornography during phallometric assessment, especially child pornography, is entirely understandable on ethical grounds, for the argument that visual pornography re-victimizes those forced or conscripted into creating it is not an anemic one. When this ethical concern so weakens the procedure that it loses much of its ability to identify dangerous sexual predators, however, then by allowing it to influence phallometric assessment protocols the protection of the community is being sacrificed. After all, when the principal goal of phallometric assessment is or should be to contribute to identifying high-risk sex offenders who represent an unacceptable risk of re-offending if released to the community then perhaps the principle of harm reduction needs to be afforded the greatest weight.

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GCRIS

TRANSNATIONAL ASPECT OF MIGRATION AS A FACTOR OF TERRORISM

Igor Medyanik
Department of Social Philosophy, St. Petersburg Herzen University (Russia)

Abstract

These days the most urgent problems all over the world are migration and terrorism. The threats of terrorism and migration were added as subjects. Universality of human rights has become the main theme of the mankind. On the one hand, universality is the top part of the law and a capitalist market institute, which was spread across the whole world. On the other hand it is a rising tide of interest in unique character of distinction, which is shown in a new nationalism or emphasizes ethnic and religious identities. Can the science help to understand the migration processes better? In scientific literature this question has become so urgent, and grows every day more and more, that develops into a problem. It is necessary to notice that these days the problems of migration increasingly assume economic aspects. That is why some researchers speaking about migration, mean its economic part only. In fact, it is one-sided view of a difficult issue. With all that, the analysis of the development process of global migratory communications allows to determine some peculiarities of this phenomenon. With the development of new opportunities of mass media this sphere has already been more or less realized. The area of new mass media is bigger than the whole world. Some people consider the area of new mass media to be false area, as far as it is spread in parallel with the reality and with the development of industry. Flows of capital, information and culture are the flow and the generation of real global territories. On the basis of this concept we can determine a special condition of being «here» and «there» simultaneously, for instance, when a person from Central Asia goes to Russia (or other country), to work and, actually, to live there for a long time. Such a person maintains close ties with his homeland, keeps communicating with his relatives and congeners by phone and over the Internet, remits money to his family and regularly comes back home for confirmation of his status of community member. Surveying this space entirely we can see that people appear in a two-way condition, when they become at the same time «us» and «them», «legal» and «illegal», «married» and «single», «poor» and «rich» etc, changing the statuses whenever necessary. In these conditions practice and identity take transnational nature, in other words, adjust to long distances and means of communication, to rhythms of shuttling movement, to changes of statuses and appearances.

Transnational focus of attention means the interest in what happens with a moving person at the moments of his life when he has not left his home yet or when he stopped travelling. Also not without interest are the surrounding people – they do not have their own experience of migration, but they take part in making decision on the trip, communicate with those who have left home earlier and adapt their lives to a new situation together. However, the sociology of law can analyze the peculiarities of their development within the global legal phenomena and transnational activity. During the search you will face the evolutionary process which is conducted not just in the legal framework, but relies on a much wider basis. Law is still only a part of the general development of society, it can be considered as a global process of education that prevails in a concrete form and within the certain meanings of legal concepts.

Nowadays there are more than 1000 terrorist organizations in the world, these organizations use terrorism to achieve their goals. At the same time 22 countries are covered by terrorism. Modern terrorism, let us call it «new», is a new wave, in comparison with the terrorism of the past. A new terrorism is global, it has independent sources of financing, it is well organized and conducts its activities through the use of mass media. There are different forms of terrorist activity, such as political, ideological and religious. The main reason of referring to terrorism is the interest of a terrorist in strengthening of his personal identity, which can be achieved by the terrorist's affiliation to a certain group of likeminded people. All over the world there is an increasing tendency of different types and forms of terror growing. It can also be self-affirmation, giving special heroic importance. In most cases terrorism is a consequence of an ideological absolutism, a belief to achieve the highest truth, salvation of the nation or even the whole mankind. Terrorist activities assume violent armed acts, however it would be wrong to explain its social influence with physical effect only (the death toll). The terrorists use psychological, emotional effects with the aim to terrify people and keep them in fear. This is the very mechanism using which terrorists try to make influence on the population. Terrorism is fear and horror, and it is the very weapon, with that horrification of a personality is conducted. In other words, terrorist attacks are always conducted with the aim to awake fear, shock in the government and the population. The social philosophy of terrorism has a mythological character. Terrorists have a high level of aggression, and they refuse the common human values. It is also clear that a group of terrorists consists of psychologically vulnerable people, whose feel themselves strong and self-confident only in a crowd of similar people. All these reasons can't but make us take the considered problem seriously and once again emphasize its importance. All these reasons can't but force to give careful consideration to the investigated problem and once again emphasize its importance.

Keywords: *Migration and terrorism, personal identity, new nationalism.*

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A STUDY ON THE COPING STYLES AND WELL BEING OF FEMALE PRISON INMATES IN ODISHA

Dr. Arjyalopa Mishra[1], Swagata Banerjee[2], & Anamika[2]
[1]*Assistant Professor of Management*
[2]*1st year BBA.LLB*
National Law University, Odisha (India)

Abstract

Over the last few decades' prison sociology has sought answers to questions pertaining to the social organization of the prison community but still studies on women offenders have been quite rare. The issues of women when it comes to crime and penalty has been excluded from the list of priorities in India leading to limitation in the development of crucial information and debate on the subject.
This study is an exploratory endeavour which has examined the various stressors in the prison environment faced by the under trial and convicted female inmates of Choudwar Central Jail, Odisha, India. It further explores the coping styles and adaptation in relation to various stressors. This study also attempts to observe the changes in prisoners' behaviour, cognitions and emotional adjustments as different variables in understanding the adaptation process. Overall it also attempts to measure the state of well-being experienced by the female inmates.
A variety of measures were taken in this study, in order to index a wide range of behaviour, cognitions and emotional states. Structured interviews based on observing current behaviour patterns were the principal instrument. It included questions dealing with time use, patterns of activities and chronic problems experienced. There were questions in context to other areas like contact with the outside and expectation of the release. Several instruments like Carver's COPE and Ryff's Psychological Well-Being Scales (PWB) in the form of questionnaires were also used to assess the emotional state. In addition to the data obtained directly from the subjects, institutional files providing information on disciplinary and medical events for each of the subject was also recorded.
Overall, the results suggest that inmate coping is a complex process as it includes a lot of variables. Moreover, history in prison sociology accounts narrow focus on socialization and there have also been serious methodological faults in prisonization studies and the results have been inconsistent and contradictory.
The findings of this study would also help in identifying and strengthening of positive coping strategies, thereby increasing their chances of being accepted upon the release into the society.

Keywords: *Incarceration, Prison adjustment, Coping, Well-being, Women prisoners.*

1. Research Objectives

The aim of the research was to study the effects of incarceration on women prisoners. Prison adaption being a difficult experience, might create cognitive thinking and execution of behavioural patterns that can be dysfunctional during imprisonment and post prison adjustments. Our study was an attempt to understand the coping styles to various stresses as well as focuses on their behavioural, cognitive and emotional well-being. To add further, it measures how women offenders adjust to the unique living environment of confinement along with their vulnerabilities.

2. Characteristics of Selection and Research Procedures

Since our focus was specifically on the women offenders, we interviewed 14 convicted women prisoners. In our study, we also included the 26 under trial women offenders. This study was based at Choudwar Central Jail, in the district of Cuttack, Odisha. The age ranged from 21 to 58. The survey has been conducted for a period of six months. In addition to the communication we had with the respondents, we also observed and recorded the behaviour patterns of women prisoners at large.

3. Research Methodology

To measure the coping styles of variable stresses and their state of well-being, the following tools of instrumentation were used:

1. Personal Data Sheet- A designed proforma to collect socio-demographic variable. It contains information about the age, marital status, educational status, nature of crime, duration of imprisonment, time-passed in jail, previous incarceration, family background, domicile, occupation of the subject.

2. The COPE Inventory- The Carver COPE inventory (Carver, Scheier, and Webintraub, 1989) is a widely used instrumentation to identify a particular coping style adopted by the respondents. The participants respond as per a 5-point ordinal scale format and are asked to evaluate a particular coping strategy. The reliability and validity of the 15 scales of COPE ranged from .37- .93.

3. Ryff's Psychological Well-being Scale- This is a conceptualised psychological well-being instrumentation consisting of six dimensions, namely, autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. The 42 item version of the Ryff (1989) scale has been used. The reliability and validity were r =.86 -.93.

4. Results

As per the results received according to the survey conducted at the Circle Jail of Chouduar, the general well-being of the convicted and the under trial prisoners were measured under three categories viz. Relationships, Mastery/Engagement, and Meaning and Purpose. It was observed that the well-being of the convicted female prisoners was 62, 72, 9 respectively. This means that the convicted prisoners had a score which was low for all the three scales. Similarly, for the under trials, the scores were 61, 75, 10 respectively. This means that the under trial prisoners also report low on relationships, meaning and purpose of life and average on mastery and engagement.

Figure 1. Line Graph showing the GWB of convicted Prisoners.

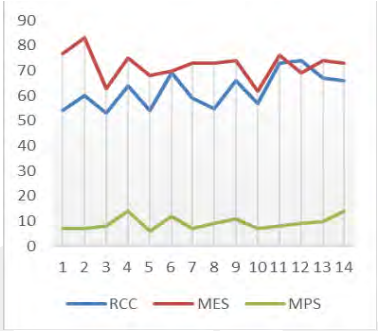
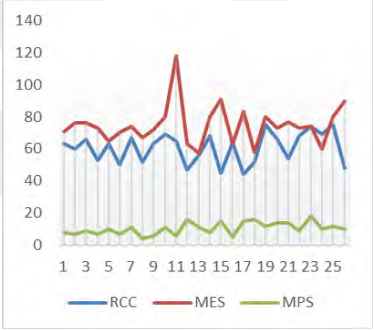


Figure 2. Line Graph showing the GWB of under trial Prisoners.



The following figures show the relation between different variables of the Ryff Instrumentation with regard to the convicted prisoners.

Figure 3. Shows relation between Mastery/ Engagement and Meaning and Purpose.

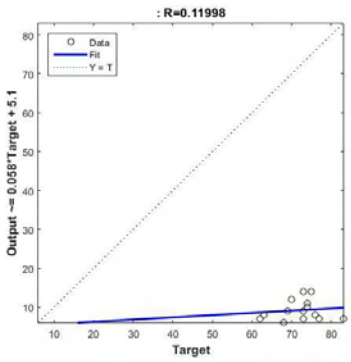


Figure 4. Shows relation between Relationships and Mastery/ Engagement.

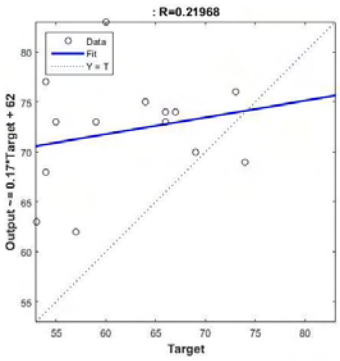
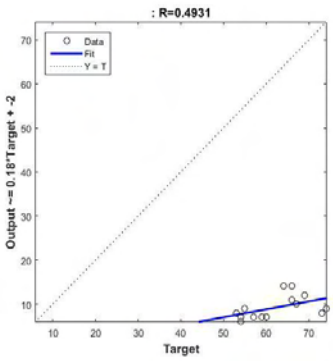


Figure 5. Shows Relation between Relationships and Meaning and Purpose.



The following correlation is with regard to the Convicted Prisoners:

Figure 6. Shows correlation between Active Coping and Mastery/ Engagement of the Ryff Scale.

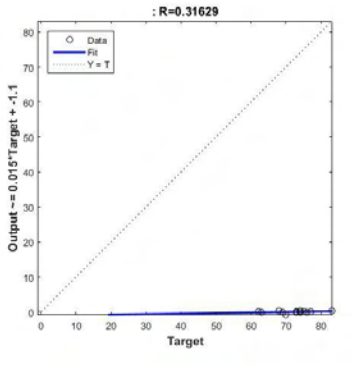


Figure 7. Shows correlation between Positive Reinterpretation and Growth and Meaning & Purpose of Life.

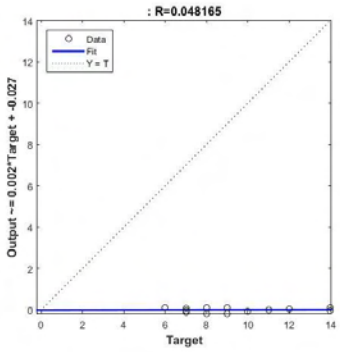
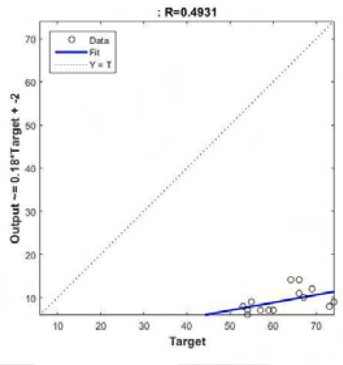


Figure 8. Shows correlation between Positive Reinterpretation and Growth and the Relationship Scale.



The following correlation is with regard to the under trial prisoners.

Figure 9. Shows correlation between Active Coping and Mastery/ Engagement of the Ryff Scale.

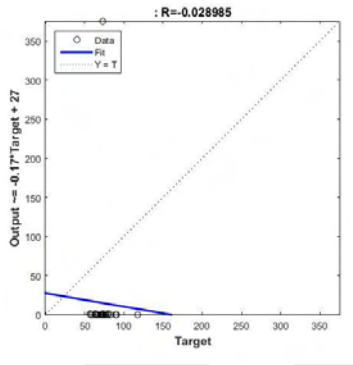


Figure 10. Shows correlation between Positive Reinterpretation and Growth and Meaning & Purpose of Life.

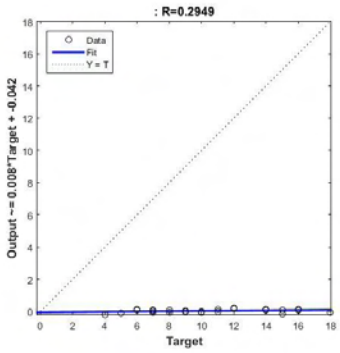
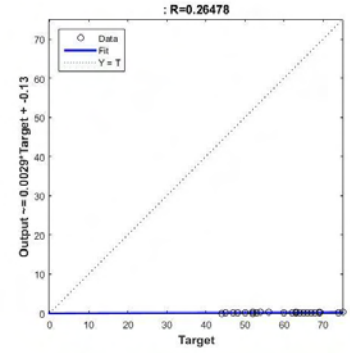


Figure 11. Shows correlation between Positive Reinterpretation and Growth and the Relationship Scale.



5. Summary and Conclusions

The present study was designed to explore the coping strategies and measure the wellbeing of the female prison inmates which included both the convicted and under trial prisoners. The study also correlates the use of coping strategies and its implications on the wellbeing of the prison inmates. The Cope scale identified the state of denial and humour maximum among the convicted prisoners. Religion too had a moderate impact on the coping strategies of the convicted inmates.

It was observed in the correlation of the Ryff instrumentation among the convicted prisoners that the relationship scale which constitutes of perceived support, respect and trust has a moderate impact on the engagement levels which includes self-efficacy, control over one's life thereby giving them a purpose of life. This requires an intervention in order to improve inmate's self-esteem for which counselling and psychiatric help is required. The Circle jail of Choudwar just has one psychiatrist addressing the issues of more than 1000 prison inmates which is a concern in itself.

The Cope and Ryff scale's correlation for the Convicted prisoners premeditate that positive reinterpretation and growth has a strong positive relationship with Meaning & Purpose of Life (0.31629). Active Coping and Mastery/Engagement has an extremely low correlation among each other (0.048165). Similarly, positive interpretation between the variable Positive Reinterpretation and Growth and the Relationship scale have extremely high correlation (0.4931).

The correlation of the Cope and the Ryff scales of the under trials predict that positive re-interpretation and growth have an ideal relationship with the Meaning and Purpose of Life variables of the Well Being Scale (0.2949). Similarly, Active Coping has a negative correlation with the Mastery and

Engagement variables of the Ryff Scale (-0.028985). Adding further, the positive reinterpretation and growth variables have a positive relation with the perceived support, respect and trust scale of well-being.

While comparing the correlation tables of the Under trials and the Convicted prisoners, it was found that the coping mechanism is relatively higher among the convicted prisoners in comparison to the under trials. The possible reason for the same can be that the Convicted Prisoners have been living for a longer time span compared to the under trials. Apart from the objectives of the study it was observed that the Circle Jail of Choudwar, Cuttack has a mismatch between prison capacity and the number of prisoners. Overcrowding was a major issue at the jail for which the prison administration has also sent its recommendation to the government. Lack of manpower and infrastructure are the other challenges being faced by the administration. Moreover, the most important drawback that was observed was that the female prisoners were not involved in any engaging activity for developing their coping abilities.

The self-report nature of both the measurements, limits its accuracy and applicability to certain points but a longer time was taken to interact especially with the convicted prison inmates added accuracy to the study. The present study could be enhanced further by covering a larger sample and correlating a lot of other variables and constructs.

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MOOD STATES PREDICTION BY STOCHASTIC PETRI NETS

Mani Mehraei
Department of Applied Mathematics and Computer Science, Eastern Mediterranean University, North Cyprus (Turkey)

Abstract

Mood states prediction is in the center of attention of various topics in several fields such as bipolar manic depression as a mood related disorder in psychology, impact of emotion on behavior in decision making, and virtual character development in artificial intelligence and artificial psychology. In this study, a Stochastic Petri nets model is created to predict mood states based on emotion interaction of an individual and his/her personality. The emotion interaction data are collected by a questionnaire containing several questions regarding random events and possible emotion states before and after the events for 108 individuals with various personality backgrounds. Simulation results in the Stochastic Petri nets model are recorded for all the individuals and compared with their expected mood states by running Chi-Square goodness of fit test with 95% confidence level. It has been observed that simulation results were suitable fit for more than 97% of total individuals. It demonstrates that Stochastic Petri nets can be applied as an appropriate graphical mathematical tool to model and predict mood states in individuals and virtual characters based on the field of study.

Keywords: *Mood prediction, emotion interaction, stochastic petri nets, decision making.*

1. Introduction

During last decades, there has been rapid growth to model and predict mood states of human beings. To model mood states can be beneficial for variety of topics from healthcare studies to even entertainment industries. In the field of psychology, reseachers attempted to model mood to find possible treatments for mood disorders such as depression and bipolar disorders (Daugherty *et al.*, 2009; Ortiz *et al.*, 2015). In the recent studies of artificial intelligence field, many researchers tried to model and predict mood to create lifelike virtual characters (Egges *et al.*, 2003; Kazemifard *et al.*, 2006; Gebhard, 2005; Kasap *et al.*, 2009) to be used in humanoid robots for the advantage of education, personal assistance, and healthcare, or to be used even in entertainment industry such as virtual charachters in video games.

The most well-known and basic modeling methods for predicting mood states are OCC (Ortony *et al.*, 1990), which demonstrates the way agents, events, and objects apprise based on personality (Egges *et al.*, 2003; Ortony *et al.*, 1990), and Pleasure-Arousal-Dominance (PAD) model (Mehrabian, 1996), which is constructed by Mehrabian to describe different emotion states by the mentioned independent Pleasure, Arousal, and Dominance traits. During last two decades, modeling methods which are the combination of OCC and PAD are developed to predict emotion and mood states more accurately such as ALMA and WASABI (Gebhard, 2005; Becker-Asano, 2014). It is shown that it is possible to exploit the mentioned modeling approaches and combine it with mathematical and statistical techniques to come up with novel methods techniques to create models to describe and predict mood states (Mehraei & Akcay, 2016; Pracana & Wang, 2016). The mentioned modeling methods could shed light on the matter, but yet there has not been an ideal model to be able to describe and predict mood states of individuals with different personality types.

In this study, a novel mathematical model is construced by Stochastic Petri nets to predict mood states of 108 individuals with different personality types based on OCC appraisal model, dimensional PAD independent traits, and ALMA's approach. The proposed model is validated by statistical methods to compare observed data with expected ones with 95% confidence level.

2. Methods

2.1. Sample

The sample in this study contained 108 volunteers, who were mostly students or employees at Eastern Mediterranean University. These individuals came from various countries with different backgrounds. The questionnaire, which was filled by these volunteers had three main sections. The first section contained questions to measure OCEAN main personality traits, which are Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism (Mehrabian, 1996). The second section included questions regarding random events and the possible emotional interaction before and after these events. For example, the potential significant emotion states for one, who is crying and the possible emotion traits after crying. Random events or actions in the questionnaire included but not limited to listening to music, shopping, sleeping, eating, doing sport, socializing, spending time with beloved ones, crying, fighting, gossiping, being alone, watching movies, and studying. For simplicity, volunteers could only choose between these possible emotion states: anger, admiration, dislike, disappointment, sadness, fear, gloating, hate, hope, joy, like, love, pity, pride, relief, resentment, and shame. In the final section, volunteers recorded their most significant emotion state among the mentioned possible ones, hour by hour for two weeks (Mehraei & Akcay, 2016; Pracana & Wang, 2016).

2.2. Stochastic Petri nets

A Petri net is a directed graph consisting of places, transitions, and arcs. Places, transitions, and arcs are illustrated by circles, boxes, and arrows, respectively. The places and transitions in a Petri net can be connected by directed arcs. However, two places and two transitions are not able to be connected by arcs. Arcs are identified by their weights. The places from which arcs run to a transition are called the input places of that transition, which are interpreted as preconditions of the model. The places which transitions are connected to them by direct arcs are called output places, which are interpreted as postconditions of the model. Transitions in a Petri net are responsible for changing the states of the model and they interpreted as actions or events. The distribution of the available data among places are called marking of a Petri net.

Classical Petri nets (Murata, 1989) were designed to analyze discrete-event system behavior. However, the concept was expanded with extensions such as continuity, hierarchy, fuzziness, and stochasticity. During last few decades, such extensions implemented in Petri nets to describe and analyze systems, especially in molecular biology and system biology (Matsuno *et al.*, 2003; Doi *et al.*, 2004; Matheu *et al.*, 2009; Mehraei *et al.*, 2016). A Petri net with stochasticity extension is called a Stochastic Petri nets (SPN). There are several systems such as biochemical systems, which are inherently behave stochastically (Heiner *et al.*, 2010). In models, which attempt to describe mood and emotion, stochastic noise should be considered in their behavioral properties. Therefore, SPN as a stochastic model is a suitable alternative to describe and analyze mood states.

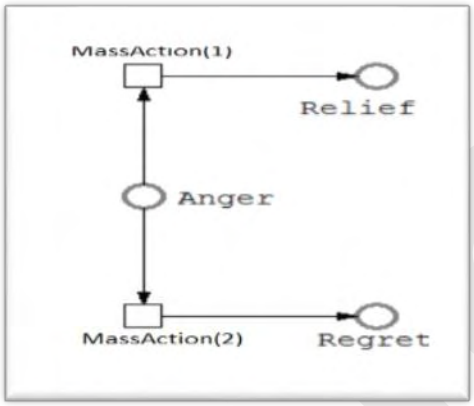
2.3. Creating the model

The proposed model in this study is conducted in terms of quantitative modeling with SPN on Snoopy platform (Heiner *et al.*, 2012). The model contains 17 continuous places as possible emotion states, and 3 continuous places as PAD independent mood traits. Emotion states can interact with each other through 48 stochastic transitions, connected by arcs. Emotion states can influence the mood states by 35 continuous transitions, connected with arcs. There are totally 404 arcs in this model. The structure of the SPN model is the same for all the individuals, but the behavior of the model is personalized. For example, the relative frequency of changing “anger” state to “regret” state differs from one person to another. Therefore, the process rates in the stochastic transitions of the proposed SPN model is estimated based on the probability of an individual emotion interactions. For simplicity, a part of such emotion interactions is illustrated in Figure 1. “Anger”, “Relief”, and “Regret” are represented as continuous places, and there are two transitions which can change “Anger” state into either “Relief” or “Regret” state. Based on the filled questionnaire by 108 volunteers, it is observed that the relative frequency of these events or actions (transitions) are significantly different for one individual to another. Therefore, personalizing the process rates of these individuals was essential. For example, the probability of changing “Anger” state to “Regret” state is considered twice bigger than changing “Anger” state to “Relief” state in a specific individual in Figure 1.

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The initial marking of three mood continuous places (PAD) for each of the individuals in the proposed SPN model can be defined by mapping from OCEAN personality traits to PAD space (Mehrabian, 1996; Gebhard, 2005). The possible values that these independent PAD traits can get are from -1 to 1. Since the marking of places in a Petri net cannot accept negative values, there had to be another mapping from -1 to the minimum value, and 1 to the maximum value that the proposed SPN model could possibly have for the marking of the places.

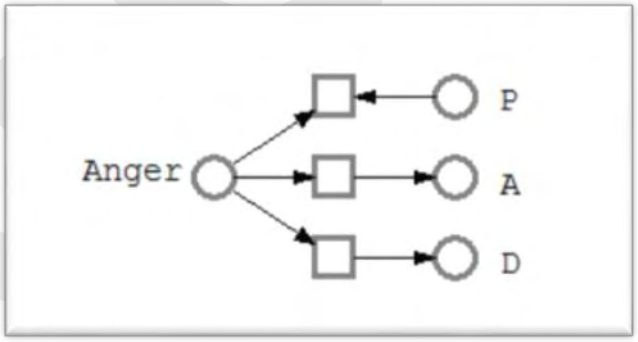
Figure 1. A part of emotion interactions in the proposed SPN model.



As it is mentioned in several studies, mood states can be updated by a function in terms of emotion and mood history (Mehrabian, 1996; Gebhard, 2005; Mehraei & Akcay, 2016; Pracana & Wang, 2016). Therefore, ALMA's approach is used for mapping from OCC emotion traits into PAD mood space in the proposed SPN model (Gebhard, 2005) to constantly update the mood states based on the previous emotion and mood states. So, there should be transitions in the SPN model which connects emotions traits to mood independents traits through arcs.

In the proposed SPN model, 35 continuous transitions are constructed to update three PAD mood continuous places based on the emotion and mood history. The process rates for these continuous transitions are the same for all the individuals since the mapping from OCC to PAD in ALMA's approach is defined the same for all individuals even for different personality types. For simplicity, a part of such transitions is illustrated in Figure 2. This figure shows that when an individual is angry, it negatively influences the pleasure mood trait, and positively influences arousal and dominance mood traits. The process rates are determined the way to have agreement with Alma's mapping from OCC emotion traits to PAD mood space.

Figure 2. A part mood updating in the proposed SPN model.



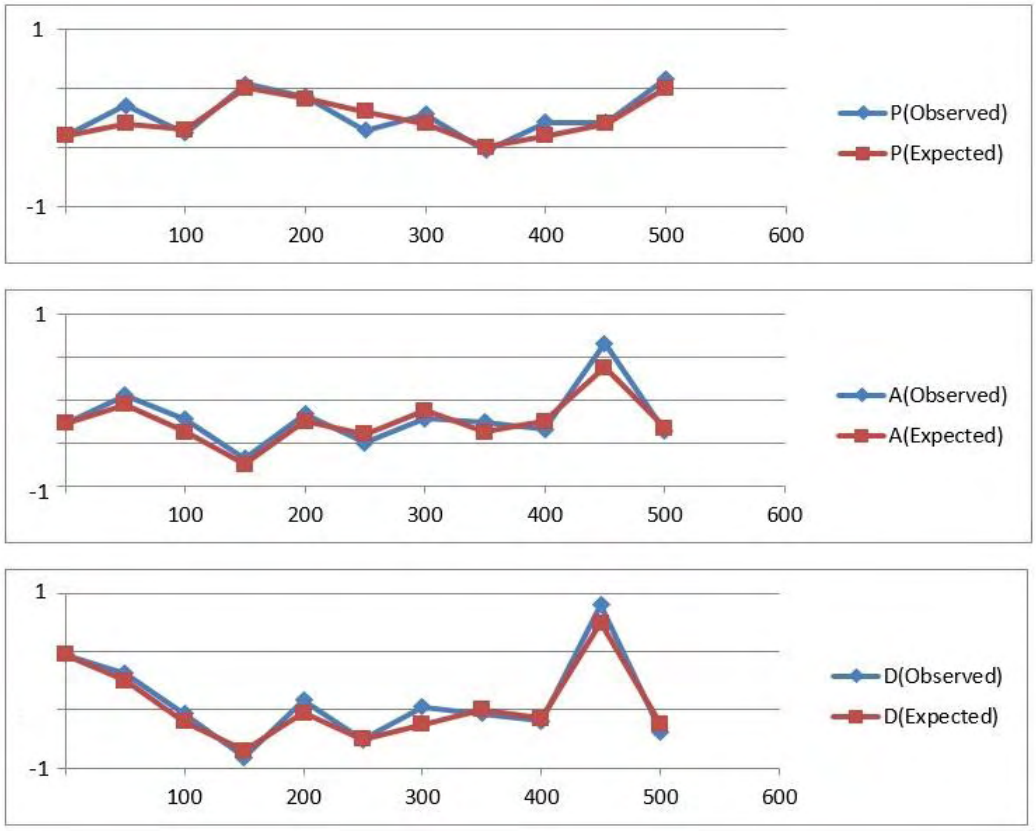
3. Discussion

3.1. Simulation results

The simulation results obtained by getting the average point of 38000 stochastic runs in the proposed SPN model on Snoopy platform (Heiner *et al.*, 2012). The reason to select such big number of simulation runs is explained in a study by Liu et al. (Liu *et al.*, 2016) based on the formula provided in a work by Sandmann and Maier (Sandmann *et al.*, 2008). Clearly, one might decrease the number of simulation runs by sacrificing the accuracy. In this study, coefficient of variation is calculated to be approximately equal to 1. Thus, based on the mentioned formula (Sandmann *et al.*, 2008), the confidence

level for the results obtained by the average of these 38000 stochastic runs is 95%. The SPN simulation results as observed values for Pleasure (P), Arousal (A), and Dominance (D) mood traits are illustrated in Figure 3. The interval upper bound point of Petri time is considered as 500 Petri time, and for simplicity the trends are represented at every 50 points for better comparison.

Figure 3. Simulation results for mood states prediction.



3.2. Model validation

The expected values for mood states are calculated based on the most significant emotion states of each volunteer hour by hour, which are recorded in the third section of the questionnaire, and the suggested formula for updating mood states in the previous related work (Mehraei & Akcay, 2016; Pracana & Wang, 2016). The expected mood state values are updated twice a day, and each day corresponds to 100 Petri time. The closest possible fit for ten points in a row for comparing observed and expected values for mood states are considered. The trends for both observed and expected values are illustrated in Figure 3.

Chi-Square goodness of fit test with 95% confidence level is applied to compare observed and expected values of mood states. It is observed that for 97.2% of cases, SPN simulation results are suitable fit for the expected mood state values for all Pleasure, Arousal, and Dominance mood traits with 0.05 as P-value.

4. Conclusion

This study demonstrates that SPN can be used as a mathematical tool to describe systems psychology. The proposed SPN model reveals that mood states can be predicted in short term by high accuracy to be used in various purposes. For example, this model can be used for the aim of healthcare to treat mood disorders, or designing human-like virtual characters in the field of artificial intelligence.

As future studies, we are planning to identify potential treatments for mood disorders such as depression, mania, and different types of bipolar disorders by using extended version of Stochastic Hybrid Functional Petri nets. This possible proposed mathematical model can be used to identify novel treatments as gene therapy, drug therapy, or psychotherapy for such specific patients.

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A NOVEL PROCEDURE TO DEVELOP ITEMS OF THE COGNITIVE REFLECTION TEST APPLYING PROCESS DISSOCIATION APPROACH

Tomas Maceina
Department of General Psychology, Vilnius university Faculty of Philosophy (Lithuania)

Abstract

Cognitive reflection test (CRT) is an instrument designed to measure person's ability to override intuitive decision-making. Although the CRT is a widely used measure, some of its psychometric characteristics have not been extensively investigated. A major limitation of the CRT is the absence of rigorous procedure to develop separate items. To the best of our knowledge, there is only one prerequisite CRT item must satisfy i.e. intuitive responses must be incorrect, whereas correct responses can only be reached after a more careful analysis. To support item's suitability for the CRT additional information can also be obtained by investigating relationships between performance on the CRT and analytic thinking tasks or measures of cognitive ability. However, to date there is no universal procedure to develop CRT items. Following dual-process theories of higher cognition that are default-interventionist in their structure (Kahneman & Frederick, 2002; Evans & Stanovich, 2013 b) we demonstrate that the automaticity-dominating process dissociation procedure can be successfully applied to develop separate CRT items. We argue that in order to develop one CRT item it must be pitted against "dummy" counterpart under three conditions:
Condition 1. "Dummy" item elicits obvious and correct answer regardless of the type of instruction given to a subject (i.e. one group is asked to make decision intuitively under time constrains, another – analytically without time constrains);
Condition 2. Target CRT item elicits two or more alternative answers. The correct counter-intuitive answer is more likely to be reached by the analytic group; the incorrect intuitive answer – by the intuitive group.
Condition 3. Target CRT item and "dummy" item must elicit *the same answer* to intuitive group.
To validate the suitability of the target item for the CRT all four hypotheses presented below must be satisfied.
Hypothesis 1. Intuitive group's performance on target CRT item is worse, compared to the performance on "dummy" counterpart.
Hypothesis 2. There is no difference between analytic group's performance on target CRT item and "dummy" counterpart.
Hypothesis 3. Intuitive group's performance on target CRT item is worse, compared to the performance of the analytic group.
Hypothesis 4. There is no difference between intuitive group's and analytic group's performance on "dummy" item.
This procedure is universal therefore it is not limited to the development of CRT items which are based only on formal logic. It can also be used to develop domain-specific CRT items.

Keywords: *Cognitive reflection, process dissociation, intuitive information processing.*

1. Theoretical background

1.1. Cognitive Reflection Test

Cognitive reflection test (CRT) is an instrument designed to measure person's ability to override intuitive decision-making. CRT items must satisfy one essential prerequisite, i.e. intuitive responses must be incorrect, whereas correct responses can only be reached after a more careful analysis. Original version of CRT consists of three items. Toplak, West and Stanovich (2014) recently proposed an expanded version of this instrument. There have also been attempts to make CRT structure more flexible by

developing verbal items in order to disentangle cognitive reflection from numeracy confound (Thomson & Oppenheimer, 2016). All these efforts are directed towards the creation of a broader item base.

Although the CRT is a widely used measure, some of its psychometric characteristics have not been extensively investigated. Namely, instrument's validity is only based on the fact that performance on the CRT is associated with performance on various analytic thinking tasks, e. g.: maximizing strategies on probabilistic prediction tasks (Koehler & James, 2010), avoiding the conjunction fallacy (Oechssler, Roider & Schmitz, 2009), belief bias in syllogistic reasoning (Toplak et al., 2014) or base-rate fallacy (Hoppe & Kusterer, 2011), etc. However, this information is not sufficient to estimate contributions of intuitive and reflective processes to the performance on CRT items. In other words, it is not clear whether **1)** incorrect responses stem from intuitive information processing and; **2)** correct responses are made only when analytic reasoning is initiated. To date there is no universal procedure to develop separate CRT items that would address this problem directly. We argue that following dual-process theories of higher cognition that are default-interventionist in their structure (Kahneman & Frederick, 2002; Evans & Stanovich, 2013 b) such procedure can be established using automaticity-dominating process dissociation procedure.

1.2. Dual-process perspective: architecture of higher cognition

Authors of different dual-process theories agree on the fact that the operation of human cognition is based on two types of information processing, i.e. intuitive (Type 1 processes) and analytical (Type 2 processes) (Sloman, 1996; Kahneman, 2003; Strack & Deutsch, 2004; Evans & Stanovich, 2013 a). The interaction of Type 1 and Type 2 processes is usually explained following either parallel-competitive or default-interventionist model (Evans, 2007).

Parallel-competitive model presuppose that dual processes operate in parallel, each having an influence on a final decision (reciprocal interaction between Type 1 and Type 2 processes only occurs if they generate different responses). However, Type 1 processes are generally faster than Type 2 processes. Moreover, it is doubtful that Type 2 processes would run every time there is a need to make a certain decision, because they require limited working memory resources. Thus, it is unlikely that human cognition would operate in a parallel-competitive fashion.

According to default-interventionist model, information processing cycle starts with intuition as there is no need to waste working memory resources on every possible situation requiring a decision. Type 2 processes may intervene only if default decision is erroneous. This architecture of human cognition is consistent with the defining features of Type 1 and Type 2 processes, i. e. Type 1 processes does not require working memory resources and can operate autonomously, whereas Type 2 processes require working memory resources for mental simulation (Evans & Stanovich, 2013 a).

1.3. Process dissociation procedure

The process dissociation procedure (PDP) is a method designed by Jacoby (1991) to obtain separate quantitative estimates of contributions of intuitive (Type 1) and analytical (Type 2) processes to the performance of a certain task. Originally, Jacoby (1991) developed PDP assuming the dominance of analytical Type 2 processes over intuitive Type 1 processes. Later on, PDP was modified to address cases where intuitive Type 1 processes dominate analytical thinking (Lindsay & Jacoby, 1994). Here we put emphasis on automaticity-dominating PDP as it is conceptually compatible with default-interventionist model.

Both, default-interventionist model and automaticity-dominating PDP, are hierarchical in nature and assume that Type 2 processes drive responses only if Type 1 processes fail. The first step that has to be taken in order to separate the contribution of intuitive and analytical processes is the preparation of two types of tasks (i.e. *compatible* and *incompatible* with Type 1 processing). CRT items are perfect for this as making correct responses on those items is incompatible with intuitive information processing. Thus, correct responses can only be reached after analytic reasoning is initiated. To control for intuitively correct responses "dummy" items (compatible with Type 1 processes) must be created and pitted against target CRT items. Second step requires to ensure experimental conditions that would lead subjects to make decisions either intuitively or analytically. Schroyens's, Schaeken's and Handley's (2003) study has shown that certain instructions to make decisions fast in intuitive manner in fact triggers Type 1 processes as the correct responses on incompatible tasks decreases.

Instruction for intuitive group:

"We are particularly interested in your initial evaluation of a problem. This means that we primarily want to have a look at ***the speed of your answers****. You have to* ***select as fast as possible the answer that you think is correct****"*

Instruction for rational group:

"We are particularly interested in the ***correctness of your evaluations of a problem****. Please think carefully and take your time to* ***select the answer you think is correct****. There will be no time restrictions, therefore you will have an unlimited amount of time to make your decisions"*

2. Design

Considering all of the above, in order to distinguish between Type 1 and Type 2 processes and to evaluate their occurrence in information processing cycle subject must be presented with tasks that are compatible (e.g. simple tasks, that are expected to be solved correctly both intuitively and analytically) and incompatible (e.g. complex tasks, that are expected to be solved correctly only analytically) with Type 1 processing. Therefore, to estimate contributions of intuitive and analytic processes to performance on a certain CRT item it is necessary to develop target CRT item and its "dummy" counterpart, which can be pitted against each other under these three conditions:

Condition 1. "Dummy" item elicits obvious and correct answer (compatible trial) regardless of the type of instruction given to a subject (i.e. one group is asked to make decision intuitively under time constrains, another – analytically without time constrains);

Condition 2. Target CRT item (incompatible trial) elicits two or more alternative answers. The correct counter-intuitive answer is more likely to be reached by the analytic group; the incorrect intuitive answer – by the intuitive group.

Condition 3. Target CRT item and "dummy" item must elicit *the same answer* to intuitive group.

Intuitive group is expected to give correct responses on the "dummy" but not target CRT item. Analytic group is expected to solve both "dummy" and target CRT item correctly (see Figure 1). To validate the suitability of the target item for the CRT all four hypotheses presented below must be satisfied:

Hypothesis 1. Intuitive group's performance on target CRT item is worse, compared to the performance on "dummy" counterpart.

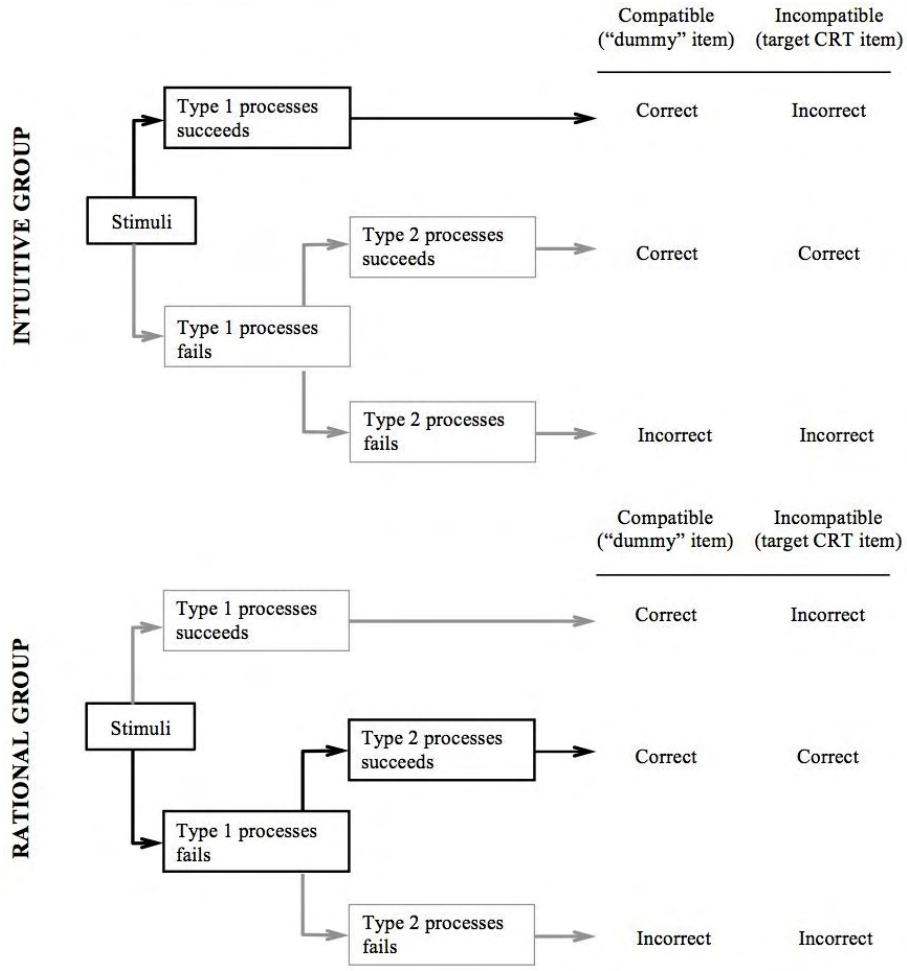
Hypothesis 2. There is no difference between analytic group's performance on target CRT item and "dummy" counterpart.

Hypothesis 3. Intuitive group's performance on target CRT item is worse, compared to the performance of the analytic group.

Hypothesis 4. There is no difference between intuitive group's and analytic group's performance on "dummy" item.

Two things need to be noted regarding deviations from expected patterns. First, if the absolute number of correct responses on compatible trials is low in intuitive or analytic group it may signal that "dummy" item is too difficult. Second, if the absolute number of correct responses on incompatible trials is low in rational group it may signal that target CRT item is too difficult or subjects does not have required knowledge to solve it.

Figure 1. Processing tree depicting automaticity-dominating PDP (Lindsay & Jacoby, 1994). Expected performance of experimental groups (path in bold on respective processing trees) on compatible and incompatible trials.



3. Conclusions

Information processing is cognitive activity that is highly related with the specific domains decisions are being made in. One of the most influential scientist in the field of information processing, whose ideas are still prevalent in contemporary cognitive psychology, Herbert A. Simon (1956), argued that the field of expertise is a fundamental criterion, which must be taken into consideration before conducting a research on decision making. Campitelli and Gobet (2010) wrote an excellent discussion on this issue regarding the specification of cognitive processes. The procedure we present in this paper is universal and can be used to develop CRT items specific to the domain of interest. Therefore, it opens the possibilities to expand the use of CRT and employ it as an instrument to measure cognitive reflection in a certain field of expertise. PDP can also be used to examine the suitability of already developed CRT items and refine them if needed.

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EFFECTS OF HYPNOTIC SUGGESTION ON DRM ILLUSION

Frédérique Robin[1] & Justine Bonamy[2]
[1]*Laboratoire de Psychologie des Pays de la Loire (LPPL) EA 4638, Nantes University (France)*
[2]*Master's student in Clinical Psychology, Nantes University (France)*

Abstract

The effects of hypnotic suggestion on DRM illusion (Roediger & McDermott, 1995) were investigated by comparing participants (with positive or negative attitudes toward hypnosis) in three conditions: (1) standard DRM, i.e. the control condition; (2) hypnotic suggestion before the learning phase; (3) hypnotic suggestion before the recognition test. In both hypnotic conditions, it was suggested to participants that they concentrate on the studied words during the encoding or retrieval phase in order to test whether a focused attention makes participants more resistant to false memory in a hypnosis context. The findings indicate that suggestion can at least partially overcome the automaticity associated with the DRM effect at encoding. The suggestion prompts the subject to focus cognitive processing on the studied words thus reducing the probability of activating the semantic associates during encoding. Introducing hypnosis into research on memory illusions might encourage its use as a tool to explore attentional mechanisms. Looking further ahead, research in this domain can enlighten our understanding of cognition and consciousness.

Keywords: *Suggestion, hypnosis, false memory, attention, source monitoring.*

1. Introduction

In the current study, we explored whether an individual's attitude toward hypnosis and hypnotic suggestion impacts false DRM memories (Roediger & McDermott, 1995). In the DRM paradigm, a series of word lists are provided, in which studied words are strongly and semantically associated with a thematic word (i.e. the critical lure) which is never presented and studied. The classic and robust result is that more than 50% of participants recall or recognize having studied the critical lure although it was never presented. For instance, after seeing and/or hearing a list of words like honey, hive, flower, forage, etc. most participants recall or recognize the critical lure "bee", which was never provided. The explanation is that critical lures semantically associated with the studied words are automatically activated in the memory during encoding. It follows that critical lures are falsely recalled and/or recognized. In the standard DRM paradigm, participants (young adults) benefit from warning instructions about the creation of false memories (Peters, Jelicic, Gorski, Sijstermans, Giesbrecht, & Merckelbach, 2008). When these instructions are given at encoding, they encourage participants to tag and reject the critical lures as "not studied" in the experiment, thus minimizing false recalls or recognition.

The belief that hypnosis improves memory performance is usually accompanied by a greater number of intrusions in the retrieval tests. Burgess and Kirsch (1999) showed that participants warned of the influence of hypnosis on memory produced twice as many intrusions in their recalls (45%) as those informed of the probability of creating false memories during and after a hypnotic state (17%). Positive suggestion strengthens expectations about the power of hypnosis on memory. Participants are relaxed and it is as if the memories emerge by themselves. Thus, decision criteria are more abstract, less precise and inevitably entail the retrieval of items that were not initially encoded.

To our knowledge, only two studies have explored the influence of warning instructions in a hypnosis context (Neuschatz, Lynn, Benoit, & Fite, 2002; Dasse, Elkins, & Weaver III, 2015, exp. 1). Overall, they showed that the level of false memories does not increase when participants are in a hypnotic state compared to a vigilant state. When warning instructions are provided before the retrieval test, they are ineffective in both conditions (hypnotic vs. vigilant state). In addition, the participants' expectations concerning the hypnosis effect on memory do not reduce false memories. However, given that relatively few studies have focused on hypnosis and DRM illusions, we believe that it is valuable and relevant to pursue this issue. Hence, the aim of the current study was to determine whether attitudes

toward hypnosis impact the production of intrusions in the DRM paradigm. In addition, we investigated whether a hypnotic suggestion requesting participants to focus their attention on the DRM lists was likely to alter the production of false memories.

Two groups were thus created on the basis of their attitudes toward hypnosis. Participants with positive or negative attitudes toward hypnosis were then randomly assigned to one of three conditions: 1) control; 2) hypnotic suggestion at encoding; 3) hypnotic suggestion at retrieval.

According to Burgess and Kirsch's (1999) findings, we expected a higher level of false memories for participants with a positive attitude toward hypnosis as their attentional control is reduced, particularly when they are hypnotized. Therefore, they should not be able to decide whether they really saw or heard the critical lure or whether it was merely inferred.

However, a growing body of research has shown that various forms of suggestion can affect the automatic process. Therefore, we can expect that false memories will decrease when the hypnotic suggestion invites participants to focus their attention on the studied words, thus inhibiting the activation of critical lures.

2. Method

2.1. Participants

Ninety participants (40 women and 50 men) with a mean age of 24.91 years (*SD* = 3.64) were included in this experiment. All were native French-speakers, educated to at least baccalaureate level and all working. They had never undergone psychotherapy or experienced hypnosis. Levels of depression and anxiety were controlled with the *State Trait Anxiety Inventory* (STAI; Spielberger, 1983, French version) and the *Beck Depression Inventory* (BDI-II; Beck et al., 1998, French version). Participants reported no history of any mental health problems including depression or anxiety.

2.2. Material

The DRM task was composed of ten lists of eight items strongly associated with a critical word (see Robin & Mahé, 2015) and using the same criteria as Roediger et al. (1995).

The recognition test contained sixty-four words presented in alphabetical order: thirty studied words, ten critical words, and twenty-four distractors (non-studied and not associated with the studied and critical words). Each word was presented with a scale of certainty from 1 (*No, I'm sure I didn't hear this word*) to 4 (*Yes, I'm sure I heard this word*).

To assess expectations about hypnosis, we employed the *Attitudes Toward Hypnosis Questionnaire* (ATHQ; Spanos, Brett, Menary, & Cross, 1987, French version). This test assesses 14 items (half corresponding to a positive attitude and the other half to a negative attitude) on a 7-point scale (ranging from 1 = *not at all true* to 7 = *very true*).

Proneness to fantasy was controlled *a posteriori* with the *Creative Experiences Questionnaire*, (CEQ; Merckelbach, Horselenberg, & Muris, 2001, French version). This contains 25 yes-no items related to imagination, fantasy, and daydreams. CEQ scores higher than 12 indicate high proneness to fantasy.

Absorption was assessed *a posteriori* with the *Tellegen Absorption Scale* (TAS; Tellegen & Atkinson, 1974, French version), which measures the participant's tendency to be absorbed in everyday activities. Individual scores correspond to the number of "true" responses for the 34 items.

2.3. Procedure

Participants were tested individually. After providing their informed consent, they completed the questionnaires (BDI, STAI, ATHQ, CEQ, TAS) whose presentation order was counterbalanced. One week later, participants selected on the basis of their hypnosis attitudes (45 with positive attitudes and 45 with negative attitudes) were randomly assigned to one of the three experimental conditions.

In the *control* condition, participants were asked to listen attentively to a series of ten lists of eight words. Words were presented at a rate of one word every 3 seconds. Then, participants carried out an incidental recognition test. For each word presented orally, they had to say whether it had been studied or not. When they were sure they had not heard the word, they responded orally "*no*" and when they were certain that they had, they responded "*yes*". They could qualify their answers in either sense by answering "*rather yes*" or "*rather no*".

In the *hypnosis-encoding* condition, before the presentation of lists, participants were hypnotized with a classic hypnotic induction followed by a suggestion inviting them to focus their attention on the words that they were going to hear. The DRM lists were presented in the same conditions as the control condition. After the presentation of the 10 lists, they completed the recognition test in an awake state.

In the *hypnosis-recognition* condition, the encoding phase proceeded in the same way as in the control condition. Then, participants completed the recognition test in a hypnotic state. The hypnotic suggestion invited them to focus on the word lists that they had just heard.

In the three conditions, participants were informed of the study's aim immediately after the recognition task.

3. Results

ANOVAs for accurate and false memories were performed separately. Mean accurate recognition and mean false recognition levels are displayed in Table 1.

Overall, it appears that the hypnotic suggestion provided at encoding significantly enhanced correct recognition levels of studied words (.88) and significantly decreased false recognition levels of critical lures (.56) and false recognition of distractors (.02) (F (2, 84) = 11.79, p < .0001; F (2, 84) = 21.37, p < .0001; F (2, 84) = 7.84, p = .0007, respectively). Participants with a positive attitude toward hypnosis falsely recognized more lures than those with a negative attitude, F (2, 84) = 11.79, p = .04. Nevertheless, this phenomenon was only significant for participants in the *hypnosis-recognition* condition (t (28) = 2.35, p =.02). There was no interaction between condition and attitude.

Many studies have examined the relationship between imagination, fantasy and false memory proneness (Merckelbach et al., 2001). Our data suggest that participants inclined to create false memories are those with higher CEQ scores. In fact, although levels of false memories rates were reduced in the *hypnosis-encoding* condition, they were still high (.56). All the participants obtained high CEQ scores (M = 20.72; SD = 4.30) independently of their attitude toward hypnosis (positive vs. negative). In addition, the degree of absorption measured by the TAS was low and not correlated with CEQ.

Table 1. Mean proportion of "old" responses (3-4) for studied words, critical lures and distractors in the three conditions related to attitude (positive vs. negative) toward hypnosis.

	Studied words	Critical lures Distractors
Control	.78	.78 .07
Positive	.80	.79 .08
Negative	.76	.76 .06
Hypnosis-encoding	**.88**	**.56 .02**
Positive	.86	.58 .03
Negative	.90	.53 .02
Hypnosis-recognition	.79	.82 .11
Positive	.81	.89 .10
Negative	.77	.75 .12

4. Discussion

Our findings show that the suggestion of focused attention seems to be effective when it does not mention false memories and/or the dangers of hypnosis. According to Wagstaff, Cole, Wheatcroft, Marshall and Barsby (2007), the current results show that focused attention probably leads to raising awareness and reducing confabulations although these are not precluded. Lastly, the current results are similar to those of Burgess et al. (1999) showing the impact of beliefs on the retrieval of memories. When a suggestion about the effectiveness of hypnosis or other similar techniques precedes the retrieval, participants overestimate their conviction about their responses. Generally, positive attitudes toward hypnosis are strongly correlated with high hypnotizability, which is itself characterized by a lack of attentional control and an openness to experience. However, the suggestion to focus attention on the studied words reinforces monitoring and the rejection of critical lures.

According to the *Activation Monitoring Theory* (Gallo, Roediger, & McDermott, 2001), we could suggest that hypnotic suggestion reduces associative processes and increases activation of the distinctive characteristics of the studied words. Thus, the nature or context of processing provides each word with distinctive characteristics and as the critical lure does not have such characteristics, it is easily identified as not studied. Another explanation, in accordance with Barnier, Dienes and Mitchell (2008) discrepancy-attribution theory of hypnotic illusions, is that the ease with which the critical word is activated in the memory is reduced, decreasing its plausibility and thus the certainty that it has been presented (Whittlesea, Masson, & Hughes, 2005). When the critical lure is incompatible with the

subject's inferences, it seems less familiar at retrieval and is rejected as "not studied". The degree of familiarity can thus modulate source attribution errors and false recognitions are likely to increase or decrease as a result of the ease or difficulty with which an event is activated in the memory.

To conclude, this experiment's aim is in line with a growing number of studies trying to understand better how some kind of suggestion can alter the automatic process, particularly for highly hypnotizable individuals (Campbell, Blinderman, Lifshitz, & Raz, in press; Kosslyn, Thompson, Costantini-Ferrando, Alpert, & Spiegel, 2000).

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DETECTING LIES FROM BEHAVIOURAL CLUES OF EMOTION, COGNITIVE LOAD, AND ATTEMPTS TO CONTROL BEHAVIOUR

Derek J. Gaudet & Lisa A. Best
Department of Psychology, University of New Brunswick
100 Tucker Park Road, Saint John, NB E2L 4L5 (Canada)

Abstract

Although the experiences accompanying deception are rarely measured, it is accepted that specific behaviours discriminate liars and truth-tellers. Different theories address how non-verbal behaviors betray lies: (1) the emotion-based approach relies on noverbal indicators of negative emotions associated with lying; (2) the cognitive load-based approach states that lying is demanding and results in nonverbal indicators of mental effort; and, (3) the attempted control-based approach proposes that people try harder to control their behaviour when they lie, resulting in a rigid demeanor. To date, researchers have not determined if the conscious experiences of discomfort, mental effort, and attempted control are experienced more strongly during lying or are associated with nonverbal displays. Our purpose was to evaluate these theories to determine the relation between experiences while lying and potential behavioural indicators. Sixty-one participants were video-recorded during two interviews (deception vs. truth telling) as they expressed opinions about a controversial social issue (e.g., abortion). After each interview, participants completed a questionnaire measuring discomfort, cognitive load, and attempted control associated with the interview. After data collection, 11 behavioural indicators were coded. Overall, higher discomfort, cognitive load, and attempted control were associated with deception and were correlated with certain behaviours proposed to be indicative of those states (i.e., blink-rate and gaze-aversion were positively correlated with discomfort while lying and response latency was positively correlated with cognitive load). This study provided direct evidence that people experience lie-telling differently than truth-telling and provided a link between behavioural indicators and expereiences of discomfort, cognitive load, and behavioural control.

Keywords: *Lie-detection, deception-clues, experiences while lying, evaluation of approaches.*

1. Introduction

Descriptions of how to detect deception based on the mere observation of behaviour dates back to 900 B.C. (Trovillo, 1939). The first scientific theories as to why behavior might betray a lie was developed by Ekman and Friesen (1969), who suggested two ways that behaviour can betray a lie. The first is through *deception clues,* which are behaviours suggestive of lying. Deception clues suggest when deception might be occurring, but do not provide information about the nature of the lie. The second way behavior betrays a lie is through *nonverbal leakage*. Leakage provides more precise information, ranging from how an individual is feeling, to more specific information pertaining to the content of their deception.

Theoretically, three explanations for the appearance of deception clues and nonverbal leakage have been proposed (Ekman, 1989; Vrij, 2008). First, it has been argued that lying causes emotional discomfort, brought on by the experience of either *detection apprehension* and/or *deception guilt* (Ekman, 1989). According to this approach, if an individual experiences an emotion in conflict with their message, detection is possible. Second, it has been suggested that lying requires more cognitive resources than telling the truth (Vrij, Fisher, Mann, & Leal, 2008) and the increased mental load may lead to behavioural indications of deception. Finally, nonverbal leakage and deception clues can occur due to efforts made to control behaviour. In this case, an individual may believe that their behaviour highlights deception and their attempts to prevent detection through increased behavioural control, results in deception clues because of their less naturalistic demeanor (Zuckerman et al., 1981).

Theories examining the sources of deception clues and nonverbal leakage are commonly used as post hoc explanations to elucidate why behaviour differs between veracity conditions. Theoretically, however, they are an a priori assumption about how deception is experienced. Despite considerable research on deception clues, only three studies (Caso, Gnisci, Vrij, & Mann, 2005; Vrij, Edward, & Bull, 2001; Vrij, Ennis, Farman, & Mann, 2010) were designed to specifically determine whether individuals experience deception differently from truth telling. Although these studies provided empirical support for the underlying theoretical assumptions, each had methodological issues associated with the types of lies that were told and the style of questioning that was used; each can cause both liars and truth-tellers to experience negative emotions (Vrij, Mann, & Fisher, 2006). Further, although several behaviours have been proposed as indicators of discomfort, cognitive load, and attempts to control behaviour, no study has linked them directly to those emotional and cognitive states.

The present study was designed to offer further evidence that deception is experienced differently from truth telling, and that the behaviours are, indeed, related to the emotional and cognitive states they are supposed to represent.

2. Method

2.1. Participants

Sixty-one undergraduate students (68.9% female, $Mean_{age}$ = 20.9 years) were recruited. All participants received 2 bonus marks towards their Introduction to Psychology course in return for their participation and, as an incentive, were entered into a draw for a 50-dollar gift card.

2.2. Materials

The Contentious Issues Opinions Survey. This survey contained 21 statements about contentious social issues (e. g., *"Abortion should be legal"*). Participants indicated on a seven point Likert scale, the extent to which they completely agreed (1) or completely disagreed (7) with each statement. They were then asked to indicate on a second seven point Likert scale whether the issue was very important (1) or completely unimportant (7) to them. Items that were rated closest to "very important" and showed the most polarization in opinion (response is closest to 1 or 7 on the scale) were used as the topic of discussion. This strategy ensured that the lies told in the study were personally relevant.

Experiences while deceptive/truthful questionnaire. This questionnaire consisted of 18 questions designed to measure the degree of discomfort (eight items; e.g., *"How tense did you feel during the interview?"*), duping delight (three items; e.g., *"To what extent di you find answering the questions enjoyable?"*), cognitive load (three items; e.g., *"How difficult was it to answer the interviewer's questions?"*), and attempts to control behavior (three items; *"To what extent did you think about your behavior during the interview?"*) and was completed following each interview condition (true opinion, false opinion). An additional question asked participants to rate how confident they were that the interviewer believed that they were truthful on a similar 1 (not very confident) to 7 (very confident) Likert scale. The average of each scale score represented the degree of discomfort, cognitive load, and attempted control reported by participants during deceptive and truthful interviews.

2.3. Procedure

When participants arrived at the laboratory they were informed that they would be participating in two brief video-recorded interviews. In one interview, they were instructed to lie and in the other, they were instructed to tell the truth. The order in which this occurred was provided to them prior to each interview. After providing consent, participants completed a brief demographics questionnaire and the Contentious Issues Opinions Survey. After the participant completed the survey, it was collected by a research assistant who determined which topic was most important to the participant. Participants were questioned about their opinion on the topic during the two subsequent interviews. Participants were told by a research assistant that the two interviewers would be trying to determine whether or not they were describing their opinion truthfully. Participants were also informed that if both interviewers believed their statements, their name would be entered into a draw for a chance to win one of four 50 dollar gift cards.

Each interview began with standardized irrelevant questions that resembled "small-talk" (e.g., questions concerning participants' degree programs and whether or not they are enjoying university life). This set of questions appeared prior to each interview. Following this, the interviewer asked the participant several scripted questions concerning their opinions on the chosen topic (e.g. , "*How do you feel about…?"*). When the interview concluded, each participant was asked to wait in their seat for the next interviewer, at which time they were asked to complete the experiences while deceptive/truthful questionnaire. They were asked to answer the questionnaire as accurately as possible. Participants were

given approximately five minutes to complete the questionnaire, and it was collected by a research assistant prior to the second interview. In the second interview, participants were asked to respond to the questions in the opposite fashion (i.e., deceptively or honestly) than they had done in the previous interview. Following the second interview, participants were again asked to fill out a questionnaire concerning how they felt during the interview. Following the experiment, all participants were debriefed and offered a means to acquire the results of the study if interested.

3. Results

3.1. Self-reported experiences while lying and truth telling

Scale scores for Discomfort, Cognitive Load, Attempts to Control Behaviour, and Excitement scale scores ranged from one (low levels) to seven (high levels). To determine whether self-reported Discomfort, Cognitive Load, Attempts to Control Behaviour, and Excitement differed between veracity conditions, a 2 (gender: male, female) x 2 (condition order) x 2 (veracity condition: truth, lie) mixed measures MANOVA was conducted with Discomfort, Cognitive Load, Attempts to Control Behaviour, and Excitement scales from experiences while lying/telling the truth post interview questionnaires serving as dependent variables. Gender and condition order were entered into the analysis as between-subject factors. Results of the analysis indicated that there were no statistically significant interactions between veracity condition and gender, F (4,53), p = .129, partial η^2 = .124, veracity condition and veracity condition order, F (4,52), p = .082, partial η^2 = .142. Further, no three-way interaction among those variables occurred, F (4,53), p =.763, partial η^2 = .034. There was a statistically significant main effect of veracity condition, F (4,52), p < .001, partial η^2 = .331. Tests of within-subjects contrasts revealed statistically significant differences between veracity conditions in self-reported Discomfort (p < .0001, partial η^2 = .252), Cognitive Load (p < .01, partial η^2 = .128) and Attempts to Control Behaviour (p < .001, partial η^2 = .236), but not Excitement (p = .075, partial η^2 = .055). When lying, participants reported experiencing more Discomfort, more Cognitive Load and more Attempts to Control Behaviour as compared to when they were truthful.

To examine associations between Discomfort, Cognitive Load, and Attempts to Control Behaviour while telling the truth and lying, Pearson's correlations were conducted between these variables. Several statistically significant relationships were found, which can be found in Table 1. Experiencing discomfort while lying was positively correlated with experiencing cognitive load while lying (r = .766, p < .001) and attempting to control behaviour (r = .691, p < .001). Additionally, experiencing cognitive load while lying was positively correlated with attempting to control behaviour while lying (r = .577, p < .001). An almost identical pattern emerged for experiences of anxiety, cognitive effort, and attempts to control behaviour while telling the truth (see Table 1). Feeling anxious while telling the truth was positively correlated with experiencing cognitive effort (r = .744, p < .001) and attempting to control behaviour (r = .492, p < .001). Again, experiencing cognitive effort was found to be positively correlated with attempting to control behaviour (r = .440, p < .001).

Table 1. Correlations Among Various Feelings While Lying and Telling the Truth.

	Lie Discomfort	Lie Cognitive Load	Lie Attempted Control	Truth Discomfort	Truth Cognitive Load	Truth Attempted Control
Lie Discomfort	-	**.766*** **	**.691*** **	*ns*	*ns*	*ns*
Lie Cognitive Load	**.766*** **	-	**.577*** **	*ns*	*ns*	*ns*
Lie Attempted Control	**.691*** **	**.577*** **	-	*ns*	*ns*	**.393** **
Truth Discomfort	*ns*	ns	ns	-	**.744*** **	**.492*** **
Truth Cognitive Load	*ns*	*ns*	*ns*	**.744** *	-	**.440*** **
Truth Attempted Control	*ns*	*ns*	**.393** **	**.492*** **	**.492*** **	-

*p<.05 **p<.01 ***p<.001

To determine whether cognitive and emotional experiences, as well as attempts to control behaviour, in one situation were related to those experienced during the other situation, (e.g., whether discomfort while lying was related to discomfort while telling the truth) correlations were conducted between truth/lie counterparts. Only attempts to control behaviour while lying was positively correlated with attempting to control behaviour while telling the truth (r = .393, p < .01).

3.2. Self-Reported Experiences and Behavioural Clues

To determine whether or not the behavioural clues displayed while lying were related to self-reported experiences while lying, three sets of Pearson's correlations were conducted. To assess role of emotion, behavioural clues theorized to be related to emotion (Illustrators adaptors, posture shifts, leg and foot movements, gaze aversion, response length, blinks, and closed posture) were correlated with scores on the Discomfort scale. Behavioural clues believed to be related to cognitive load (illustrators, adaptors, posture shifts, gaze aversion, leg and foot movements, response latency, and blinks) were correlated with the Cognitive load scale. Finally, behavioural clues believed to be related to attempted control (Illustrators, adaptors, posture shifts, gaze aversion, leg and foot movements, response length, lip presses, and smiling) were correlated with scores on the Attempts to Control Behaviour scale. Identical analyses were conducted to determine whether any of the behaviours displayed in the truth condition were related to experiences while telling the truth.

Significant relationships were found between behaviours and the experiences they are theorized to represent. Additionally, correlations were in the direction that would be expected by each of the theories. In the lie condition, illustrators (r = -.321, p < .05) and response length (r = - .281, p < .05) were negatively correlated with experiencing discomfort while lying. Gaze aversion (r = .287, p < .05) and blink rate (r = .267, p < .05) positively correlated with experiencing discomfort while lying. Illustrators (r = -.271, p < .05) were also negatively correlated with experiencing cognitive load. Leg and Foot movements (r = -.248, p = .058) were just above the statistical cut-off for significance, but in the direction predicted by the cognitive load approach. Gaze aversion (r = .397, p < .01) and response latency (r = .312, p < .05) were both positively correlated with experiencing cognitive load while lying. Engaging in leg and foot movements was found to be negatively correlated with attempting to control behaviour while lying (r = -.333, p < .05) while lip pressing was positively correlated with attempting to control behaviour while lying. No other behaviours were found to be significantly related to emotions, cognitive effort, or attempts to control behaviour. Only two significant correlations emerged from the truth condition. Again, response latency was positively correlated with experiencing cognitive load while telling the truth (r = .267, p < .05) and lip pressing was found to be positively correlated to attempting to control behaviour while telling the truth (r = .267, p < .05).

4. Discussion

Although nonverbal deception clues are contingent upon individuals experiencing lie-telling differently from truth-telling, researchers have largely ignored whether this is, in fact, the case. In the present study, participants reported experiencing more discomfort and cognitive load when they lied. Furthermore, they indicated that they tried harder to control their behaviour as a means to appear credible. The type of behaviour that emerges as a deception clue, at least partially depends on how an individual experiences lying, and this is why examination of experiences while telling different types of lies would likely benefit the field of lie-detection. If, for instance, a lie is not more cognitively demanding to construct than the truth, there is little reason to expect cognitive clues to be useful sources of deception clues and/or nonverbal leakage.

Another interesting finding in the present study was that the experience of discomfort and cognitive load while lying was not related to experiencing discomfort and cognitive load while telling the truth. A common issue in lie detection studies is that we cannot be certain whether an individual is uncomfortable because they are lying or because of the content of the message and the situation surrounding the interaction. Being questioned about your involvement in a murder, for instance, is likely to be stressful whether you are lying or telling the truth. In the laboratory, it is possible to have individuals tell comparable truths. The only variable manipulated between the conditions is whether or not the person is lying. Given that, overall, individuals in the present study experienced higher levels of discomfort and cognitive load while they lied, and that their experience of these in the truthful condition was not related to their experience of these in the deceptive condition, it is likely that the act of lying, in and of itself, was responsible for the increase. Attempts to control behaviour did demonstrate a cross condition relationship. This is likely because our participants were motivated to make a credible impression in both situations, and one way to accomplish this is by controlling any behaviour that could be misconstrued as a deception clue or leakage.

In the present study, the three aspects of deception seemed to be related to one another within each condition. The explanation for the positive correlations found between attempted control and each of the other experiences while lying or telling the truth is fairly straight forward. The only reason for an individual to attempt to control their behaviour is if they are experiencing some emotion or cognitive state that they believe is likely to give their lie away (Zuckerman et al. 1981). It follows that the more strongly they experience discomfort or cognitive load, the harder they will try to control behavioural indicators of those states. The relationship between discomfort and cognitive load is also not too difficult to explain, as cognitively complex tasks are likely to be more stressful than simpler tasks. The more cognitive load an individual experiences, the more uncomfortable they become. Likewise, one reason that Vrij and colleagues (2008) postulated that deception is more cognitively challenging than telling the truth is that individuals would have to monitor their nonverbal, verbal, and paraverbal behaviour to avoid getting caught while constructing their lie. The more discomfort they feel, the harder they try to control their behaviour, the less cognitive resources there are available for constructing a credible lie. There is a clear interplay between these three aspects of deception that should be examined more closely.

Finally, some behaviours emerged as clues not to deception, but to discomfort, cognitive load, and attempts to control behaviour. None of the existing literature has empirically linked these behaviours to the experience of discomfort, cognitive load, or attempts to control behaviour. Here it was demonstrated that at least some of the predictions made by the prominent lie detection approaches appear to have been supported. For instance, gaze aversion and response latency are both often considered to be behavioural indicators of cognitive load. Here, it was demonstrated that higher levels of cognitive load while lying were related to longer response latencies and more gaze aversion. Additionally, more gaze aversion, a higher blink rate, fewer illustrators, and a shorter response length, were associated with higher levels of discomfort while lying. And finally, more lip pressing (an indicator of attempting to control facial expression of emotion) and fewer leg and foot movements were associated with higher levels of attempted control. Although it would be a mistake to state that these underlying experiences "caused" the behaviours, the fact that they are related is evidence that they are at very least, clues of those states. Even if they are not clues of deception, they could tip off an observer to pay closer attention to the message that is being conveyed.

While researchers have spent the majority of lie-detection research examining the behaviours that might betray a lie, it may have been more fruitful to invest some of that effort into examining how the experience of lying differs from the experience of telling the truth. The behaviours themselves are not actually indicators of deception; but, rather, they are indicators of discomfort, cognitive load, and attempts to control behaviour. Determining how individuals experience deception differently from truth telling, and identifying which behaviours are likely to give those experiences away could very well lead to more accurate lie-detection methods.

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THE ROLE OF SEX HORMONES IN INDIVIDUAL DIFFERENCES IN COGNITIVE ABILITIES

Efrat Barel[1] **& Orna Tzischinsky**[2]
[1]*Department of Psychology*
[2]*Department of Behavioral Sciences*
The Max Stern Academic College of Emek Yezreel (Israel)

Abstract

The main objective of the present study was to investigate the role of sex hormones in individual differences in various cognitive abilities. Thirty-nine men and 41 women (not using oral contraceptives) were tested for sex hormones (testosterone, estrogen, and progesterone) and completed a battery of six cognitive tasks (including visuospatial, memory, and verbal tasks). Results showed significant sex differences on the mental rotation task, with men outperforming women. A positive correlation was found between testosterone and performance on the mental rotation task for the combined sample (men and women). Furthermore, a significant interaction between sex and estrogen on mental rotation task was found: in men, higher estrogen levels were associated with better performance on mental rotation task. Findings regarding between- and within-sex differences in cognition are discussed in light of activational effects of sex hormones.

Keywords: *Sex hormones, cognitive abilities, sex differences.*

1. Introduction

Sex differences in cognitive abilities have been widely studied in the psychological research literature. Although men and women were not found to exhibit differences in general intelligence (Collaer & Hines, 1995; Hines, 2004), sex differences were found in visuospatial abilities, favoring men, and in verbal abilities, favoring women (Halpern, 2012; Hines, 2004). Research focusing on visuospatial abilities found that men outperform women on mental rotation tasks, which produce the largest effect size of sex differences among other cognitive abilities (e.g., Burton & Henninger, 2013; Hines et al., 2003; Peters, Manning, & Reimer, 2007). Other visuospatial abilities in which men outperform women, although to a lesser extent, include navigation strategies and geographic orientation (e.g., Driscoll, Hamilton, Yeo, Brooks, & Sutherland, 2005; Iachini, Sergi, Ruggiero, & Gnisci, 2005; Parsons et al., 2004). Women have been found to outperform men in verbal abilities, especially verbal memory (e.g., Bleecker, Bolla-Wilson, Agnew, & Meyers, 1988; Kramer, Delis, & Daniel, 1988) and verbal fluency (e.g., Burton & Henninger, 2013; Weiss, Kemmlera, Deisenhammerb, Fleischhackera, & Delazer, 2003). In other areas, such as vocabulary, verbal reasoning, and line orientation (Kimura, 2002), the findings are inconsistent.

The underlying mechanism for these sex differences in cognitive abilities involves a complex interplay between biological and environmental factors. Among the biological factors identified, sex hormones have been suggested as a potentially important factor (Halpern, 2012). Empirical work on the effect of hormones on cognitive abilities during the postnatal period comes from three types of studies involving human participants: (a) the effects of hormone replacement on cognitive abilities in men and women; (b) links between normal hormone fluctuations and differences in cognitive abilities; and (c) the relationship between individual differences in hormone levels and cognitive abilities (Halari et al., 2005). Results of the last one are inconsistent. Studies examining the relationship between testosterone (T) and spatial ability showed mixed results. Some studies demonstrated a positive relationship between T and spatial abilities in men (e.g., Christansen, 1993; Silverman, Kastuk, Choi, & Phillips, 1999), others found a negative relationship (e.g., Gouchie, & Kimura, 1991), or a curvilinear one (Moffat & Hampson, 1996; Neave, Menaged, & Weightman, 1999), and still others did not find any effect (Janowsky, Chavez, Zamboni, & Orwoll, 1998; Halari et al., 2005). In women, a positive relationship between T and spatial

abilities was documented (Gouchie, & Kimura, 1991), but another study did not support this finding (Halari et al., 2005). In women, a positive relationship between estrogen (E) and verbal memory was found (Drake et al., 2000), but other studies did not find such a relationship for verbal memory (Halari et al., 2005; Henderson et al., 2013) or for other verbal abilities (Halari et al., 2005). One study documented a positive relationship between progesterone (P) and verbal memory (Henderson et al., 2013), but another study did not find any association between P and any verbal, spatial, or memory tasks (Halari et al., 2005).

The objective of the present study was to uncover the role of sex hormones in cognitive abilities. Cognitive abilities were assessed through the use cognitive measures, including visuospatial tasks (mental rotation, localization, form completion), which are identified with male superiority, and verbal fluency and memory tasks (serial sounds and serial digits), which are identified with female superiority.

Our main hypotheses were:

a. Men outperform women on visuospatial tasks (mental rotation, localization, form completion), and women outperform men on verbal and memory tasks (verbal fluency, serial sounds, serial digits).

b. There is a positive correlation between T and performance on visuospatial tasks.

c. T, E, and P correlate differentially with performance on cognitive abilities tasks in men and women.

2. Methods

2.1. Participants

Eighty healthy undergraduate students from various departments (behavioral sciences, social sciences, economics, and management information systems) at college in the north of Israel participated in the study. Forty-one of the participants were female (mean age 25.32 ± 3.18) and thirty-nine were male (mean age 26.21 ± 2.08). All participants were right-handed according to their subjective reports. None of the women were currently using oral contraceptives, and all women were tested between day 10 and 14 of their menstrual cycles (follicular phase), as determined based on self-reports.

2.2. Measures

Cognitive test battery -Six types of tasks were presented to the participants: three verbal and three visuospatial cognitive tasks (Gordon & Harness, 1977): *Serial sounds; Serial digits; Verbal fluency; Mental rotation; Localization; Form completion.*

Endogenous hormone levels. Levels of estrogen, testosterone, and progesterone were measured. Because of circadian variations in hormones, all participants were tested at the same time of day (08:00-08:30 am).Venous blood samples were taken (10 ml) at the beginning of the session. One blood sample was taken from each participant. Samples were batch tested in duplicates for T, E, and P levels using TSTO, eE2, and PEGE kits (Siemmens Healthcare Diagnostics Inc., Tarrytown, NY, USA) in an ADVIA Centaur XP system. This technique uses a sandwich immunoassay and direct chemiluminescent technology in a random access apparatus.

3. Results

3.1. Hypothesis a: Sex differences in cognitive abilities

Men outperformed women on the mental rotation task ($t(78) = 2.88$, $p < .01$), but on the rest of the cognitive ability tests, sex difference failed to reach statistical significance.

3.2. Hypothesis b: Hormones and cognitive abilities (for the full sample)

A positive correlation was found between T and performance on the mental rotation task ($r_p = .38$, $p < .01$), and on the form completion task ($r_p = .22$, $p < .05$), Higher T levels correlating with higher performance on mental rotation and form completion tasks. Another positive correlation was found between E levels and performance on the fluency task ($r_p = .23$, $p < .05$), higher E levels correlating with higher performance on fluency tasks. After Bonferroni corrections for multiple comparisons, however, only the correlation between T and mental rotation remained significant.

3.3. Hypothesis c: Hormones and cognitive abilities (for each sex)

A hierarchical multiple regression analysis was conducted with the following variables as predictors: hormone levels (T, E, or P) entered in step 1, sex (coded as a dummy variable, with men = 0 and women = 1) in step 2, and the interaction between hormone levels and sex (T×sex, E×sex, P×sex) in

step 3 (Table 1). The cognitive ability tasks were used as dependent variables in the models for T, E, and P separately.

For circulating T levels, the addition of the interaction of T with sex did not significantly improve the fit in cognitive abilities. Therefore, the relations between T and performance on the mental rotation and on the form completion tasks were the same for men and women: high T levels were associated with high performance in these two tasks.

For circulating E levels, a statistically significant E×sex interaction was found for the mental rotation task. Simple slope analyses (Hayes, 2013) revealed that E was positively associated with mental rotation for men ($b = 0.03$, $t(38) = 2.46$, $p < .05$), and that the slope was not significant for women ($b = 0.00$, $t(40) = 0.25$, $p > .05$). We also found that the addition of the interaction of sex with E did not significantly improve the fit for verbal fluency. Therefore, the relation between E and performance on verbal fluency was the same for men and women: high E levels were associated with high performance in verbal fluency.

For circulating P levels, we did not find a statistically significant sex×P interaction for the various cognitive ability tasks.

4. Discussion

In the present study, men outperformed women on the mental rotation task. Earlier findings suggest that of all visuospatial tasks, this task is best for differentiating between the sexes (e.g., Burton & Henninger, 2013; Hines et al., 2003; Peters, Manning, & Reimer, 2007). All sex differences on all other cognitive ability tests failed to reach significance.

In the search for relationships between sex hormones and cognitive abilities, the correlation between T and mental rotation was significant. Higher levels of T were associated with higher performance on mental rotation. This finding supports previous evidence regarding the relationship between T and mental rotation (Christansen, 1993; Silverman, Kastuk, Choi, & Phillips, 1999), but contradicts evidence from other studies (Janowsky, Chavez, Zamboni, & Orwoll, 1998; Halari et al., 2005).

Examining the role of E in explaining individual differences in cognitive abilities, we found a significant interaction between E and sex in the mental rotation task. Decomposing the interaction effect revealed a significant simple slope for men but not for women. Higher levels of E were associated with better performance in mental rotation in men. Although E is identified as a female hormone, it is produced also in males and synthesized by aromatization of the circulating T (de Ronde, Pols, Van Leeuwen, & De Jong, 2003). Non-human studies have suggested that aromatase may be involved in neuroprotection. Data from experimental studies, including the administration of an aromatase inhibitor, or E administration in rodents, suggest that aromatization of E from T has neuroprotective effects (Azcoitia et al., 2001). Human studies have shown that E administration improved spatial performance in the block design task among elderly men (for example, Cherrier et al., 2004; for a review, see Martin, Wittert, & Burns, 2007). Although previous studies have emphasized the role of T in understanding individual differences in spatial abilities, the present findings suggest that E may play a key role in spatial performance in men. Nevertheless, because of the small *N* in the present study, further replications of this finding are needed.

The present study has some limitations. First, because of the small *N,* caution should be exercised in interpreting and generalizing the results. Second, the schedule chosen for both men and women was based on certain premise regarding the best time for data collection. For women, the follicular stage of the menstrual cycle was chosen for sampling based on the assumption that E levels at highest. Other studies, however, chose different phases, for example, the luteal phase, in order to measure higher P levels (for example, Schultheiss, & Zimni, 2015). Because both E and P are relevant to the present study, the chosen phase allowed only a partial examination of the total variation. Furthermore, for all participants sampling took place between 08:00-08:30 am, in order to measure individual variations in T levels in men. To deepen our understanding of the role of sex hormones in individual differences in cognitive abilities, it is necessary to broaden the sampling schedules across the time of day for men, and across the menstrual cycle for women, and to control for women using oral contraceptives.

Table 1. Multiple regression models of sex hormone × sex interactions predicting cognitive abilities (N=80).

	β	***b***	SEB	95% CI	R^2	Δ R^2	*F*
Mental rotation							
T×Sex	5.45	1.11	1.03	[-.94, 3.17]	.12	.01	.28
E×Sex	2.29	.03	.02	[.00, .07]	.12	**.05***	4.36
P×Sex	2.29	.74	.63	[-.52, 1.99]	.13	.02	1.37
Localization $_{log10}$							
T×Sex	-2.85	-.03	.05	[-.11, .06]	.03	.00	.32
E×Sex	-.98	-.00	.00	[-.00, .00]	.02	.01	.72
P×Sex	-.68	-.01	.03	[-.06, .05]	.03	.00	.07
Form completion							
T×Sex	.51	.10	1.03	[-1.94, 2.15]	.05	.00	.10
E×Sex	1.61	.02	.02	[-.01, .06]	.08	.03	2.01
P×Sex	1.04	.26	.66	[-1.05, 1.57]	.05	.00	.16
Verbal fluency							
T×Sex	5.92	1.21	1.02	[-.83, 3.25]	.06	.02	1.41
E×Sex	.51	.01	.02	[-.03, .04]	.06	.00	.20
P×Sex	-.36	-.09	.66	[-1.40, 1.22]	.04	.00	.02
Serial sounds							
T×Sex	3.91	.80	1.04	[-1.27, 2.87]	.02	.01	.59
E×Sex	1.40	.02	.02	[-.01, .06]	.04	.02	1.49
P×Sex	-1.08	-.27	.66	[-1.58, 1.04]	.04	.00	.17
Serial digits $_{log10}$							
T×Sex	2.26	.04	.08	[-.13, .20]	.03	.00	.20
E×Sex	1.02	.00	.00	[-.00, .00]	.04	.01	.76
P×Sex	.87	.02	.05	[-.09, .12]	.04	.00	.11

** P < .05*

Note: CI, confidence interval (95% confidence intervals of unstandardized regression coefficients); T = testosterone; E = estrogen; P = progesterone; the localization score is higher for poorer performance; Localization $_{log10}$ = log transformed localization; Serial digits$_{log10}$ = log transformed serial digits; all other cognitive ability tasks were standardized

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THE IMPACT OF SPATIOTEMPORAL ATTENTION ON THE NEGATIVE COMPATIBILITY EFFECT

Yongchun Wang, Yonghui Wang, Saisai Hu, & An Cao
School of Psychology, Shaanxi Normal University, Xi'an 710062, and
Shaanxi Provincial Key Laboratory of Behavior & Cognitive Neuroscience, Xi'an 710062 (China)

Abstract

The current study investigated the necessity of spatiotemporal attention in the negative compatibility effect (NCE) using altered masked prime paradigms in two experiments. Experiment 1 was designed to ascertain whether temporal attention modulates NCE by manipulating a temporal window of attention. The time of the target occurrence (fixed or variable) was manipulated in this experiment. When the target occurrence was fixed, a temporal window of attention will be opened because the subjects can predict the target occurrence as long as they focus their temporal attention on the prime (i.e., the start of the narrow time window). However, when the target occurrence was variable, a temporal window of attention will not be opened because the subjects cannot easily predict the target occurrence despite attention was paid to the prime. The results showed significant NCE in the fixed-target condition, whereas no significant CE (compatibility effect) in the variable-target condition. Experiment 2 was designed to ascertain whether spatial attention modulates NCE by manipulating a spatial attentional cue of the prime. Cued condition (i.e., the cue and the prime were presented in the same location) and uncued condition (i.e., the cue and the prime were presented in different locations) were performed in this experiment. The results showed significant NCE in the cued condition, whereas the NCE in the uncued condition was not significant. Moreover, the NCE in the cued condition was significantly larger than that in the uncued condition. These results indicated that spatiotemporal attention plays a necessary role in triggering NCE. The findings suggested that the influence of unconsciousness to our behavior is modulated by attention.

Keywords: *Negative compatibility effect, temporal attention, temporal window, spatial attention, spatial cue.*

1. Introduction

The negative compatibility effect (NCE), which was first reported by Eimer and Schlaghecken (1998), refers to the counterintuitive phenomenon in which responses to the target are faster (and more accurate) when a target is preceded by an incompatible prime (i.e., cueing an opposite response to the target) and slower (and less accurate) when a target is preceded by a compatible prime (i.e., cueing the same response as the target). The electrophysiological results of their study showed a specific sequence of movement-related lateralized readiness potential (LRP) modulations. Approximately 200 ms following prime onset, the LRP showed an initial tendency to prepare the response indicated by the prime, and approximately 350ms following prime onset, the LRP signal reversed, resulting in an inhibited primed response and a disinhibited opposite response. Therefore, the NCE reflects a low-level process of inhibitory visuomotor control.

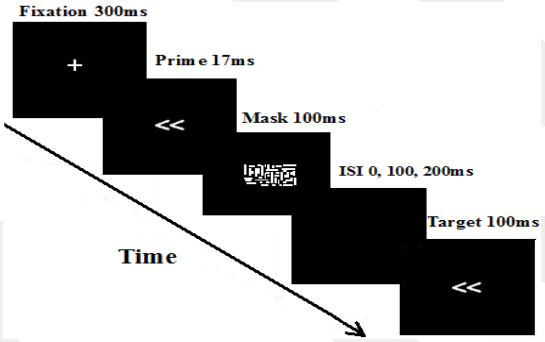
Eimer and Schlaghecken (1998) thought that self-inhibition leads to NCE. They proposed that motor activation by a subliminal prime is automatic and produces an inhibition that counteracts the initial activation (Eimer & Schlaghecken 1998, 2002; Schlaghecken & Eimer 2002). As some research showed that NCE is observed when the prime-related sensory evidence is immediately prohibited by the mask (e.g., Eimer & Schlaghecken 2002; Schlaghecken & Eimer 2002). Thus, they deemed that NCE is only observed with effectively masked subliminal primes, whereas unmasked or ineffectively masked supraliminal primes result in positive compatibility effect (i.e., PCE, which indicates that reactions to the targets are faster when preceded by compatible primes and delayed when preceded by incompatible primes; Eimer & Schlaghecken, 2002). Overall, NCE was often thought as a subliminal and automatic process.

However, the masked priming may have obtained attentional resources in the typical NCE task. Almost all research regarding NCE fixed the time of the target occurrence, this manipulation would enable subjects to focus their temporal attention on a narrow time window to predict the appearance of a target, and thus the masked prime should obtain temporal attention (see Naccache et al., 2002). Additionally, in the typical NCE paradigm, the location of the prime was attended (e.g., Eimer & Schlaghecken 1998, 2002; Schlaghecken & Eimer, 2002) and thus the prime should obtain spatial attention. Schlaghecken and Eimer (2000) found PCE when the primes were presented in peripheral vision. Therefore, we hypothesized that spatial attention and temporal attention play an important role in triggering NCE.

2. Experiment 1

The aim of this experiment was to investigate whether temporal attention modulates NCE. The time of the target occurrence (fixed or variable) and prime/target compatibility (compatible or incompatible) were manipulated in the experiment. If our hypothesis was true, we predicted that NCE would appear in the fixed-target condition because subjects focused their temporal attention on a narrow time window, the primes that occurred at the beginning of the attentional window benefit from this temporal attention. However, no NCE would appear in the variable-target condition because subjects could not focus their attention on a specific time window and thus the primes obtain less temporal attention in this condition than in the fixed-target condition.

Figure 1. Schematic representation of the trial procedure in Experiment 1.



2.1. Method

2.1.1. Participants. A total of 20 college students (7 males) whose ages ranged from 18 to 26 (mean age = 24.15 years) were compensated to participate in the experiment. All of the participants were right handed and had normal or corrected-to-normal vision.

2.2.2. Procedure. The experimental procedure is shown in Fig.1. The primary task (the NCE task) consisted of two conditions (3 blocks per condition): the fixed-target and variable-target conditions. In the fixed-target condition, the mask-target ISIs (0, 100 or 200 ms) were blocked (60 trials per block), whereas in the variable-target condition, the three ISIs were randomized within each block (60 trials per block). Compatibility was equiprobable and randomized within each block. The sequence of the ISIs in the fixed-target condition was randomized for each participant. The sequence of the fixed-target and variable-target conditions was also randomized for each participant. The inter-trial-interval (ITI) was randomized within 1,300-1,500 ms to eliminate the effects of expectancy. The secondary task was a forced-choice (FC) task that was designed to assess prime visibility. It consisted of 40 trials. The trial arrangement was similar to that of the primary task, except that no target was presented. The participants were instructed to react to the primes in the same manner that they reacted to the targets in the primary task. They were informed that all responses should be provided after mask presentation and were encouraged to guess if they could not clearly identify the prime.

2.2. Results

Performance on the FC task was 52.4%, it was not differ significantly from chance (50%), [t (19) = 1.18, p = .25]. For the primary task, the response times (RTs) for correct responses and the error rates were analyzed. In the fixed-target condition, concerning the RTs, significant difference was observed among ISI conditions [F (1.72, 32.60)^{g} = 4.59, p = .022, MSE = 3368.24, η^2 = .19]. The main effect of

compatibility [F (1, 19) = 1.54, p = .23, MSE = 344.01] was not significant. The interaction of two factors was marginally significant [F (1.57, 29.78)^g = 2.72, p = .093, MSE = 503.61, η^2 = .13]. Additional paired t-tests compared the compatible and incompatible trials for each ISI condition separately and confirmed significant NCE when the ISI was 0 ms [t (19) = 3.16, p = .005, SE = 4.04], showing that the mean RT for incompatible trials (mean = 456 ms) was shorter than that for compatible trials (mean = 468 ms), But no significant CE when the ISI was 100 or 200 ms [ts (19) < 1.35, ps > .19]. Regarding arcsine-transformed error rates, the main effect of compatibility was marginally significant [F (1, 19) = 3.18, p = .091, MSE = 55.89, η^2 = .14], showing that participants made fewer errors for compatible trials (mean = 2.78%) than for incompatible trials (mean = 4.72%). There was no other significant effect (see Table 1).

Table 1. Mean response times (RT, milliseconds) and error rates (ER, %) as a function of the target occurrence (fix vs. random) and mask-target ISI (0, 100, 200 ms) condition for compatible and incompatible trials in Experiment 1. The CE is calculated by the mean RTs or ERs of compatible trials minus those of incompatible trials.

Target	Fix target						Random target					
ISI	0		100		200		0		100		200	
	RT	ER	RT	ER	RT	ER	RT	ER	RT	ER	RT	ER
Compatible	468	3.33	454	2.98	423	2.46	491	2.83	446	2.00	409	5.83
Incompatible	456	3.86	447	5.61	430	5.44	498	2.83	467	4.33	430	9.50
CE	-12*	0.53	-7	2.63	7	2.98	7	0	21**	2.33	21**	3.67

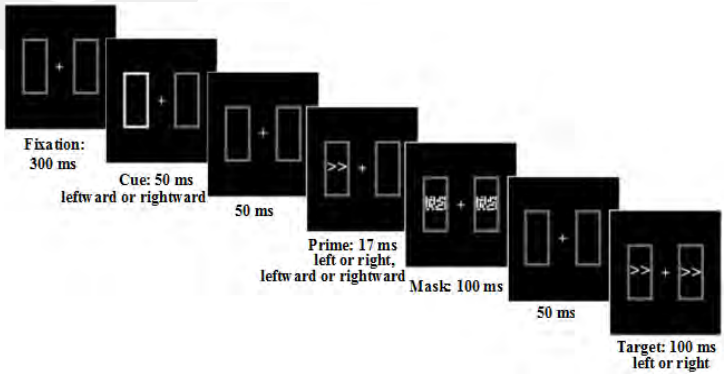
Note: $^*p < 0.05$, $^{**}p < 0.01$

In the variable-target condition, in RTs, significant difference was observed among ISI conditions [F (1.50, 28.53)^g = 235.72, p < .001, MSE = 317.91, η^2 = .93] as well as between the compatible and incompatible trials [F (1, 19) = 33.04, p < .001, MSE = 242.13, η^2 = .64], showing that the mean RT for compatible trials (mean = 449ms) was shorter than that for incompatible trials (mean = 465ms). The two-way interaction between ISI and compatibility was not significant [F (1.96, 37.30)^g = 2.41, p = .11, MSE = 301.47]. Arcsine-transformed error rates mirrored the RTs results, significant difference was observed among ISI conditions [F (1.70, 32.22)^g = 17.50, p < .001, MSE = 51.18, η^2 = .48] as well as between the compatible and incompatible trials [F (1, 19) = 5.17, p = .035, MSE = 36.86, η^2 = .21], showing that participants made fewer errors for compatible trials (mean = 3.56%) than for incompatible trials (mean = 5.56%). The two-way interaction between ISI and compatibility was not significant [F (1.68, 31.87)^g = .833, p = .43, MSE = 38.68].

3. Experiment 2

The aim of this experiment was to investigate whether spatial attention modulates NCE using a mixed paradigm involving the NCE task and cueing paradigm. We manipulated spatial attention to the primes with a pre-cueing procedure (Fig. 2), which required the cue and prime to be presented randomly in one of two rectangles, whereas the mask and target to be presented in both of the two rectangles. Thus, cued condition (i.e., the cue and the prime were presented in the same rectangle) and uncued condition (i.e., the cue and the prime were presented in different rectangles) were included in this experiment. If spatial attention affected NCE in the unconscious condition, we predicted that NCE in the cued condition would be larger than that in the uncued condition, because attention was much more at the cued location than that at the uncued location (e.g., Egly, Driver & Rafal, 1994).

Figure 2. Schematic representation of the trial procedure in Experiment 2. Example display for vertical rectangles.



3.1. Method

3.1.1. Participants. A total of 20 college students (6 males) whose ages ranged from 17 to 25 (mean age = 21.15 years) were compensated to participate in the experiment. All of the participants were right handed and had normal or corrected-to-normal vision.

3.1.2. Procedure. The experimental procedure was shown in Fig. 2. The experiment consisted of 4 blocks with 64 trials per block. Cueing, compatibility and rectangular orientation were equiprobable and randomized within each block. The FC task occurred following the primary task of the experiment and consisted of 2 blocks with 64 trials per block. Cueing and rectangular orientation were equiprobable and randomized within each block.

3.2. Results

Performance on the FC task was assessed. *T*-tests showed that neither the cued trials nor the uncued trials allowed the primes to differ significantly from chance in the horizontal condition (mean accuracy 47.5% and 50% for cued and uncued trials, respectively, all were [*t*s (19) < .98 and *p*s > .34]) and vertical condition (mean accuracy 51.7% and 48.3% for cued and uncued trials, respectively, all were [*t*s (19) < 1.15 and *p*s > .26]). In the primary task, concerning the RTs, a significant difference was observed between the rectangular orientations [F (1, 19) = 9.67, p = .006, MSE = 385.23, η_p^2 = .34], showing that the mean RT for vertical orientation trials (mean = 453 ms) was shorter than that for horizontal orientation trials (mean = 463 ms). And the main effect of compatibility was significant [F (1, 19) = 15.39, p = .001, MSE = 132.83, η_p^2 = .45]. The two-way interaction between cueing and compatibility was significant [F (1, 19) = 5.79, p = .027, MSE = 61.20, η_p^2 = .23]. No other significant effect was observed (all Fs < 1.28, all *p*s >.27). Additionally, we examined the interaction between cueing and compatibility regardless of orientation. Paired *t*-tests confirmed a significant NCE in the cued condition [t (39) = 4.34, p < .001, SE = 2.33], showing that the mean RT for incompatible trials (mean = 452 ms) was shorter than that for compatible trials (mean = 462 ms). However, the NCE in the uncued condition was not significant [t (39) = 1.83, p = .074, SE = 2.28]. Moreover, the NCEs of cued and uncued conditions were compared, and the result confirmed a significant difference [t (39) = 2.09, p = .043, SE = 2.92], showing that the NCE in cued condition (-10 ms) was significantly larger than that in uncued condition (-4 ms). For the arcsine-transformed error rates, the two-way interaction between compatibility and orientation was significant [F (1, 19) = 7.69, p = .012, MSE = 13.00, η_p^2 = .29]. Additionally, we examined the interaction between compatibility and orientation. But there was no significant difference in either horizontal or vertical orientation condition [*t*s < 1.60, *p*s > .12]. No other significant effect was observed (all Fs < .35, all *p*s >.56).

Table 2. Mean RT (milliseconds) and ER (%) as a function of orientation (horizontal vs. vertical) and cueing (cued vs. uncued) condition for compatible and incompatible trials in Experiment 2.

Orientation	Horizontal				Vertical			
Cueing	Cued condition		Uncued condition		Cued condition		Uncued condition	
	RT	ER	RT	ER	RT	ER	RT	ER
Compatible	465	1.72	467	1.72	459	2.66	455	2.66
Incompatible	457	1.88	461	2.50	446	2.19	452	1.72
CE	-8*	0.16	-6	0.78	-13**	-0.47	-3	-0.94

*Note: *p < 0.05, **p < 0.01*

4. Conclusion and discussions

The current study demonstrated the impact of spatiotemporal attention on NCE with two experiments. In Experiment 1, significant NCE was observed when the ISI was 0 ms, whereas there was no significant NCE when the ISI was 100 ms or 200 ms in the fixed-target condition, which likely occurs because the ISI was so long that inhibition reduced. As shown in several research (e.g., Lingnau & Vorberg, 2005), the inhibition increased and then decreased with an increasing mask-target ISI. Moreover, there was no significant NCE in the random-target condition. These findings indicated that temporal attention plays an important role in triggering NCE. In Experiment 2, significant NCE was observed in the cued condition, whereas the NCE in the uncued condition was not significant. Moreover, the NCE in the cued condition was significantly larger than that in the uncued condition. These findings indicated that spatial attention also plays an important role in NCE.

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GCRIS

THE ROLE OF ATTENTIONAL RESOURCES IN EXPLAINING SEX DIFFERENCES IN OBJECT LOCATION MEMORY

Efrat Barel
Department of Psychology
The Max Stern Academic College of Emek Yezreel (Israel)

Abstract

Sex differences in object location memory have been widely studied, with mixed results. The role of attention in mediating the female advantage in object location memory has not been clearly understood yet. Two experiments, involving 181 participants and using an actual object array, were conducted in the present study to examine two learning conditions: incidental and intentional. In each experiment participants were randomly assigned to divided vs. full attention conditions. The study also examined memorizing location-maintained and location-exchanged objects. In both experiments, in both incidental and intentional learning conditions, women outperformed men in memorizing location-exchanged objects in the full but not in the divided attention condition. These findings confirm and extend previous ones concerning the conditions under which the female advantage in the detection of change in an array of objects occurs. The findings are discussed within an evolutionary conceptual framework.

Keywords: *Sex differences, object location memory, attention.*

1. Introduction

For decades, psychology has been focusing on sex differences in spatial abilities. Men tend to outperform women on mental rotation, line orientation, and spatial navigation (e.g., Burton & Henninger, 2013; Collaer, Reimers, & Manning, 2007; Moffat, Hampson, & Hatzipantelis, 1998), whereas women were found to outperform men on object location memory tasks (Eals & Silverman, 1994; Silverman & Eals, 1992). Silverman and Eals (1992) have proposed an evolutionary approach to sex differences in various spatial abilities concerning a sex-based division of labor. Empirical findings provide support for this evolutionary hypothesis. Silverman, Choi, and Peters (2007) assessed the universality of male and female specializations in spatial abilities across different ethnic groups and countries. In all ethnic groups and countries, men scored higher than women on mental rotation task, whereas in all ethnic groups and in 35 of the 40 countries that have been assessed, women scored higher on object location memory.

Women's advantage in object location memory was replicated under various conditions. In a meta-analysis, Voyer, Postma, Brake, and Imperato-McGinley (2007) found sex differences in favor of women on most tests of object location memory, and further studies provided support for this finding across various formats (e.g., paper and pencil tests, actual setting, naturalistic and computerized arrays; Hassan & Rahman, 2007; Neave et al., 2005; Spiers, Sakamoto, Elliot, & Baumann, 2008).

Attention plays a key role in memory. Attentional resources are essential for encoding and retrieving information effectively (Craik, 1983). In various memory tasks, divided attention during incidental or intentional encoding reduced performance (e.g., Mulligan, 1998; Parkin & Russo, 1990; Szymanski & MacLeod, 1996). Few studies have examined sex differences in diverse memory tasks (verbal memory, face recognition) under conditions of full and divided attention, and the studied that did so, produced mixed results. Although women outperformed men in memory tasks, the role of attention in this enhancement has not been fully proven (Herlitz et al., 1997; Palmer, Brewer, & Horry, 2013; Secer & Yilmazogullari, 2016). Because attentional resources are crucial for memory tasks, the present study explored sex differences in two experiments: the first one includes object location memory task in an actual setting, with *incidental learning* in one out of two conditions: *divided* or *full attention*; the second one resembles the first, except that all participants engaged in *intentional learning*. The research design was intended to mimic conditions of multiple tasks and of incidental and intentional learning as they are assumed to have been experienced in foraging societies.

2. Methods

2.1. Participants

One hundred and eighty one students from a college in the north of Israel One participated in the study. One hundred participants participated in Experiment 1 (incidental learning), and 81 participants participated in Experiment 2 (intentional learning). In Experiment 1, 50 of the participants were female (mean age 25.14 ± 1.94) and 50 were male (mean age 27.20 ± 7.47). In Experiment 2, 40 of the participants were female (mean age 25.38 ± 4.77) and 41 were male (mean age 26.63 ± 4.28). Participants were recruited through advertisements at the college, and received course credit for their participation. Participants were randomly assigned to one of two conditions (full vs. divided attention).

2.2. Materials and Procedure

The study included 27 physical objects based on those used in the Eals and Silverman (1994) study. The stimulus room was arranged as a student office. In Experiment 1, in the full attention condition, participants were asked to wait in the stimulus room for several minutes. The experimenter returned to the room after two minutes, after which participants were taken to a room next door. Participants were shown a card with a picture of the stimulus room in which 14 of the objects were in different locations, and were given 60 seconds in which to mark the unchanged objects and to circle the ones whose position had changed. In the divided attention condition, participants were asked to wait in the stimulus room and were instructed to complete a distraction task: a series of simple verbal arithmetic task (e.g., 18/3-5, 14-3-1) as fast and as accurately as they could in a time frame of two minutes, after which they were taken to the next room as in the full attention condition. A manipulation check indicated that participants were not suspicious about the purpose of the experiment. The design and all the materials were identical to experiment 1, except that in experiment 2 used *intentional* learning. In the stimulus room, participants were given two minutes to "try to memorize as many objects in the room as possible, and their approximate locations" (Eals & Silvermn, p. 100, 1994).

3. Results

3.1. Experiment 1 – main results

Two-way analysis of variance was also conducted with condition (full attention, divided attention) and sex (male, female) as independent variables on location-exchanged objects (see Table 1). A significant main effect for condition was found [F (1, 96) = 68.19, $p < .001$; $\eta^2_p = .42$]: participants in the full attention condition scored higher than did participants in the divided attention condition. A significant main effect was found also for sex [F (1, 96) = 17.05, $p < .001$; $\eta^2_p = .15$], women scoring higher than men. There was a significant interaction between condition and sex [F (1, 96) = 10.37, $p < .01$; $\eta^2_p = .10$]: women scored higher than men did on the full attention condition ($p < .001$), but no sex difference was found on the divided attention condition *(*$p = .46$).

3.2. Experiment 2 – main results

Two-way analysis of variance was conducted with condition (full attention, divided attention) and sex (male, female) as independent variables on location-exchanged objects (See Table 2). A significant main effect for condition was found [F (1, 77) = 155.86, $p < .001$; $\eta^2_p = .67$]: participants in the full attention condition scored higher than did participants in the divided attention condition. No significant main effect was found for sex [F (1, 77) = 1.13, $p = .291$ $\eta^2_p = .01$]. There was a significant interaction between condition and sex [F (1, 77) = 6.12, $p < .05$; $\eta^2_p = .07$]: women scored higher than did men on the full attention condition ($p < .05$), but no sex difference was found on the divided attention condition *(*$p = .30$).

4. Discussion

In both experiments, involving incidental and intentional learning, women outperformed men in the full attention condition, but in the divided attention condition both women and men showed equally diminished performance. The present study sought to learn the extent of the female advantage in unconscious processing, by exploring sex differences in conditions of divided attention in each experiment. The cause for the absence of this effect may be sought in the nature of the distraction task. It is possible that the dual verbal requirement, involving both the memory and the distraction task, placed a competitive demand on resources, and the distraction task, which had more noticeable features, diluted the attentional resources allocated for the memory task.

The present study demonstrated that the female advantage is not limited to the incidental learning condition, but is manifest also in the intentional learning condition. Previous findings showing the female advantage in conditions of incidental learning have raised the possibility that sex differences in object location memory are due to an automatic attentional style (e.g., Honda & Nihei, 2009). The present study demonstrates that women still excel when given explicit instruction to memorize objects in a physical array. In further analyses on the entire dataset for the full attention condition, women did not differ in their performance in incidental vs. intentional learning ($p > .05$), whereas men showed better performance in intentional than in incidental learning condition ($p < .01$). The absence of difference between women in both encoding conditions may strengthen the suggestion that in conditions in which no competitive distractions are imposed, women encode features of the environment automatically, even without conscious attention. The attentional focus in the intentional learning condition has no beneficiary outcomes for women, suggesting that in the intentional condition as well, the underlying mechanism is attention driven. It is possible that for men the process of object location memory involves another mechanism. Ecuyer-Dab & Robert (2007) suggested the existence of a facilitating (attention focusing) mechanism in men. To uncover the underlying mechanisms of sex differences in object location memory, it is proposed to examine these differences as a multi-component process, in which spatial components, together with attentional and perceptual abilities, play a key role in understanding sex differences in object location memory.

Table 1. Means and standard deviations for conditions of full and divided attention in memorizing location-exchanged objects in incidental learning.

	Men (N=50)		*Women (N=50)*	
	Mean	*SD*	*Mean*	*SD*
Full Attention	6.24	2.95	9.80	2.78
Divided Attention	3.80	1.89	4.24	1.85

Table 2. Means and standard deviations for conditions of full and divided attention in memorizing location-exchanged objects in intentional learning.

	Men (N=41)		*Women (N=40)*	
	Mean	*SD*	*Mean*	*SD*
Full Attention	9.06	2.02	10.67	1.23
Divided Attention	4.52	2.08	3.88	2.20

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IDENTIFYING VISITORS' FOCUS OF INTEREST DURING THE APPRECIATION OF CONTEMPORARY ART[1]

Anne-Marie Émond, Dominic Marin, & Joao Pedro Pais Mendonca
Département de didactique, Université de Montréal (Canada)

Abstract

Unlike traditional art, contemporary art is no longer primarily based on canonical principles of beauty, but more on principles of communication. This has the effect of prompting viewers to question, partially, their contemplative attitude and become actors in a creative process. The aim of our research program is to access and understand the actual experience of an individual exploring contemporary art in a museum context. Specifically, this research aims to identify visitors' different focus of interest in their art appreciation process. Our study is based on the analysis of adult visitors' verbalizations while exploring contemporary art in a museum context. The data was collected using the Thinking Aloud method. This approach is one where visitors are asked to articulate ideas, thoughts they may have as they tour the galleries. The verbal comments of 84 participants, age 18 to 70 years old that possess different levels of education and museum frequentation, were recorded by an accompanying person. Their voice recorded comments were transcribed and analyzed with the aid of computer-assisted qualitative data analysis software tools.
Our findings place visitors' self-awareness as the most prominent focus of interest while exploring an artwork. The attainment of knowledge concerning self-awareness has proven to be necessary in the development of life skills such as empathy, mood management and motivation. Thus, a museum visit, specifically the exploration of contemporary art, has the potential to contribute to the quality of life and the well-being of visitors but more research is needed in order to better understand the impact of the self in art appreciation.

Keywords: *Adult visitors; art museum; focus of interest; art appreciation; contemporary art.*

1. Rationale of the research

As with earlier artistic trends, contemporary art has a number of distinctive characteristics which compel us to adopt a fresh perspective (Camara, 2011). In fact, unlike traditional or classical art, contemporary art is no longer based on canonic principles of beauty, but more on a principle of communication (Hanquinet, Roose and Savage, 2014). This has the effect of obliging visitors, when faced with contemporary artworks on display in a museum, to abandon their contemplative attitude and become genuine actors in a creative process (Simon, 2010). Another particularity of contemporary art is the plurality of creative modes, so that in addition to traditional methods of creation, such as sculpture and painting, there are creative approaches employing an entire range of new and varied materials and procedures (Audet, 2012).

While this might appear insignificant, these specific traits seem to have far-reaching consequences, since they indicate that contemporary art provokes real uneasiness in some adult visitors (Ustinov, 2007). Various scholars have concluded that this discomfort leads many to abandon, indeed shun outright this entire artistic trend, as well as the institutions associated with it (Lacerte, 2007). Inspired by an earlier research conducted by the Research Group on Museums and Adult Education of the University of Montreal where it was demonstrated that adult museum visitors spend 38% of their time speaking about themselves while exploring museum objects (Dufresne-Tassé and Lefebvre, 1996) we sought to explore if the self is a focus of interest present in visitors' contemporary art appreciation, as this knowledge could inform us on adult visitors' appreciation of this art form. The aim of our research is to access and understand the actual experience of an individual exploring contemporary art in a museum context. Specifically, this study aims to identify visitors' different focus of interest in addition to the artwork itself, that contribute to their art appreciation.

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2. The choice of participants

When we refer to art museum visitors, we make reference to a specific type of visitor whom we have identified as adult visitors with no particular knowledge of art in general, whose level of education range from less than twelve years of education to post-secondary education. We seek to understand the art appreciation of this type of visitor, since they represent over 70% of the population inclined to frequent museums (Hill Strategies, 2014). We collected the data of 84 adults aged 18 to 70 years old with various habits of museum's frequentation.

3. Procedure for collecting data

Ericsson and Simon's 1993 updating of a method to collect individuals' comments at the very time when they are crystallizing has opened up a number of new possibilities. Labelled *Thinking Aloud* and adapted to visits to exhibitions in the 1990s by Dufresne-Tassé and her team, this method consists of recording what the visitor says at the very time of the visit. Visitors, not having to worry about explaining or justifying their comments, have only to say aloud whatever comes to mind (Dufresne-Tassé et al., 1998; Émond, 2011; Ericsson and Simon, 1993). This method has been subjected to numerous tests and adjustments so as to significantly reduce its impact on the functioning of the visitor and may, thus, be employed with confidence. Visitors' verbalizations of their art appreciation are transcribed and this is called a "discourse". Here is an example of a fragment of a visitor's discourse:

> Well... I like these two less, they are definitely gallery pieces, not something I could look at for a long time, there is nothing happening in them... heum... I don't like the idea of an impending storm, heum... there is sameness about it, I would not spend too much time look at these paintings, they're big. That's it... Heum... this is the next yes? is there something missing here?... a painting missing hein? This one, strange, this is obviously by a German, euhm... but it looks very African, I'm not much into primitive art, but... it's quite interesting, heum... very primitive, I think there is more than the lion hunting, there is a man with his foot on somebody's back, so... perhaps there is slavering there, somebody chasing somebody else, is a passing interest, again it's a gallery piece not something... I would never hang it home. V19

4. Treatment of data

Each of the 84 visitors' verbal discourses were recorded to allow for their transcription by freelance secretaries. With the goal of ensuring homogeneity and, above all, of reflecting the visitors' comments, as well as those of the interveners accompanying them (research assistants), as accurately as possible, detailed instructions were given to the person responsible for the transcription.

Through the discourse analyses with the help of the QDA Miner qualitative data analysis software, we were looking to identify visitors' different focus of interest. The focus of interest being a mental act, that is to say the operation performed by the visitor in order to create sense of his/her experience and relates to a specific item. That item is either an object, person, situation or an abstract reality. This is what the visitor focuses his attention on.

5. Results

The analyses revealed four different focus of interest in visitors' discourses while looking at contemporary art in a museum context. Beside the artwork itself, visitors' focus of interest are the *visitor* himself, the *museography*, the museum as an *institution* and *other*. The *visitor* being the person that participates to the research and visits the art museum exhibits. The *museography* represents the context created by the museum's professionals to highlight an object or set of objects. Thus, a room or group of rooms, the museum itself, the atmosphere that emerges, lighting, layout, presentation of the artworks are all part of the museography. The focus of interest is the *institution* that represents the museum as a public institution open to all. As for the last focus of interest *other* represents circumstances camped in time and space outside the museum experience. *Table 1* presents the total number of focus of interest identified in visitors' discourses.

Table 1. Visitors' focus of interest.

Visitors' focus of interest	Number	Percentage
Visitor	2439	44%
Museography	2138	39%
Other	709	13%
Institution	233	4%
TOTAL	5519	100%

5.1. The *visitor* as a focus of interest

In the context of this paper, we will concentrate our presentation on one of the focus of interest identified, that is, the focus on the visitor himself as he alone represents 44% of all the focus of interest verbalized by our visitors. Precisely, when the focus of interest is the *visitor* we are able to identify five sub-focus. We identified what we called the *visitor-visitor*, that is when the research participant refers to himself during his/her visit; the *visitor-artist*, when the visitor makes connections between the artist who created the artwork and himself; the *visitor-researcher* when the visitor makes connections between himself and the experimenter that accompanies him/her during the exploration of the artworks; the *visitor-other*, when the visitor evokes another person who is not present in the museum to better express elements about him/herself and lastly the *visitor-staff*, that is the visitor makes connections between a person or persons employed by the museum such as security guards. *Table 2* presents specifically the components of the focus of interest centred on *visitors*.

Table 2. Visitor's specific focus on interest.

Visitors' specific focus of interest	Number	Percentage
Visitor-Visitor	1394	57%
Visitor-Artist	403	17%
Visitor-Researcher	329	14%
Visitor-Other	279	11%
Visitor-Museum Staff	34	1%
TOTAL	2439	100%

5.2. Examples of the focus of interest *visitor-visitor*

In the visitors' discourses, 1394 segments were identified as comments that concerned the visitor him/herself and this, in different aspects. This focus of interest representing 57% of all the focus of interest associated with the visitor, we chose to present in *Table 3* a few examples.

Table 3. Examples in visitors' discourses of the focus of interest visitor-visitor.

Visitors' discourses representing the focus of interest *visitor-visitor*
Well, deep down I realize that I am perhaps not very contemporary, not of my time V103
Sure.. You see that confirms. I like paintings better, I am more really that type…painting or sculpture, I like materials, natural materials more than photos. It's confirmed. V31
I think…that's it. I'm starting to discover myself! V59
I would not like to have this in my living room. Something violent. V92
I think I'm a very superficial person. I have trouble to see the "deep' and everything there is. V86
I can spend hours in a museum in silence. V102
I am very pragmatic. I really need to see things. V68
Must believe that I am attracted by the noise, a strong feeling on my skin. V60
I am less philosophical. I am more concrete. So when I go to see something philosophical, you have to ... first, I have to be in the mood of being philosophical that day, then two, I have to take the trouble to understand the symbols. Because it's not instantaneous that. I am not someone who will instantly see in a canvas, that means symbols. I am not like that. I am more concrete. V32

6. Discussion

These results indicate that it would be useful to intervene so as to discern the various sources of the sub-focus of interest *visitor-visitor* in the museum context of contemporary art exhibits. In this research, we identified the importance of the visitor focusing on him/herself during the art exploration. When we place the visitor at the centre of his or her museum experience the concept of self is unavoidable. In early psychological literature, "self" is defined as an individual aware of his or her

centrality and a number of elements that contribute to the coalescence of his or her identity (Munn, 1946). More specifically, "Self-awareness' refers to the capacity to become the object of one's own attention. It occurs when an organism focuses not on the external environment, but on the internal milieu; it becomes a reflective observer, processing self-information" (Morin, 2005, p. 359). Self-information is the result of an individual's process of self-observation, of learning about different aspects of him/herself. In the context of this research, results indicate the importance of a visitors' focus of interest on him/herself, that is in the manifestation of a person's verbalizations of self-information while he/she is exploring contemporary artworks. Thus, the type of awareness that we summarily identified is an awareness described by Natsoulas (1997) as being immediate as opposed to retroactive. Morin (2005) associates this with self-awareness.

In future research, studying the emergence of visitors' self-awareness will contribute to the wave of research conducted by Barrett (2000), Hooper-Greenhill (2000), Garoian (2001), McLean (1999), Reese (2003), Roberts (1997) and Wallach (1998), who have all sought to develop alternative museum educational practices focused on visitors. From this perspective, scholars such as Degain and Benharkate (2009) mentioned visitors' self-awareness as one of the benefits that a museum visitor could enjoy, but they did not supply any empirical support. We consider further study of visitors' self-awareness an important component in the development of innovative museum educational programs especially concerning contemporary art exhibits. Acknowledging the importance of the self in a museum experience and identifying the type of self-awareness visitors verbalize during their interactions with contemporary artworks, we believe will have promising implications for museum education practices. This will inform museum professionals on how visitors behave and interact with contemporary artworks and how those interactions might contribute to evolving visitors' self-awareness as a source of pleasure. In order to achieve this objective, a conceptual framework is needed to study more closely the manifestations of visitors' self-awareness.

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EAT PROPERLY; DON'T BE A PIG: MAKING INFERENCES THROUGH TWO DISPLAY MODES, TEXT VS IMAGE

Geoffrey Ventalon[1], Charles Tijus[1], Maria José Escalona Cuaresma[2], & Francisco José Domínguez Mayo[2]
[1]*Department of Psychology, University Paris 8 (France)*
[2]*Department of Web Engineering, University of Sevilla (Spain)*

Abstract

This study evaluates the effect of display mode, text versus image, to produce metaphorical inferences. People from two European countries, France and Spain were invited to participate. About texts, participants should read a short story of fives sentences. The latter referred to a conceptual property of an animal (e.g. "smart" is a conceptual property of the fox). After that, they should compare the main protagonist to an animal among twelve suggested. About images, participants should look at a picture referred to a conceptual property of an animal. After that, they should compare the main protagonist to an animal among twelve suggested. Participants should choose either name of animals either portrait of animals depending on the experimental phase. There were four phases: Text-Name (TN), Text-Portrait (TP), Image-Name (IN) and Image-Portrait (IP). Results show that correct response rate was higher for texts in both countries but higher for native French. Fixation times were higher for texts for both countries but higher for native French. There was no difference in response time even if native Spanish were faster. These results may be because French scholars have created experimental material. Therefore, French people could find conceptual properties easier.

Keywords: *Inference, text, image, property, animal.*

1. Introduction

People used to describe others with animal names because both human and animal share physical properties or conceptual properties (Robin Hart., & Long Jr, 2011). For example, somebody can be considered as a bear because he is hairy or he can be considered as a fox because he is smart. Therefore, people used a metaphor such as: "This man is a bear" or "this man is a fox." Considering the sentence: "This man is a bear," the latter is composed of a vehicle (e.g. bear) which qualify a topic (e.g. this man). To understand this sentence, people need to attribute a property of the bear to the man. Property attribution depends on the context, the culture, the familiarity and the general knowledge. People needs to make an inference to be able to understand the situation well. An inference is a production of novel information which is not given by the environment (Tijus, 2001). This study examines the capacity of people from two countries, France, and Spain, to infer a conceptual property related to a behavior depending on the display mode. The two display modes used were text and image. Each situation described in the text and depicted in the image referred to a conceptual property of an animal. For example, a text, and an image referred to a conceptual property of the bear and a text and an image referred to a conceptual property of the fox, etc.

The goal of this study was to put forward a cultural effect comparing performances of native French and native Spanish. Moreover, metaphorical inferences were made depending on a text and an image to know if there is an effect of the display mode. Analyses focused on correct response rate, fixation time and response time. A response was correct when there was a congruence in the selection of the animal with the corresponding text and image. For instance, when the text related to the fox appeared and that the participant chose the fox. Our predictions were that correct response rate should be better for texts and higher for French people because the material was created asking French people. Fixation time should be faster for pictures and response time should be faster for texts.

2. Method

2.1. Participants

48 participants were invited for the experiment. 24 native French students in psychology from the University of Paris 8 (10 males and 14 females, mean age: 20.75, SD: 1.89) and 24 native Spanish students in web engineering from the University of Sevilla (15 males and 9 females, mean age: 20.13, SD: 1.30). Every participant has no prior knowledge in the linguistic field.

2.2. Materials

A MacBook Pro has been used, and a javascript software has been created for this experiment. Besides, twelve animals from the study of Pudelko, Hamilton, Legros and Tijus (1999) have been selected to create the entire following experimental material:

Twelve experimental short stories of five sentences. The latter referred to a conceptual property of an animal.

Twelve experimental images. The latter referred to a conceptual property of an animal.

Twelve names of animals. The ant, the fox, the magpie, the monkey, the pig, the raven, the saint bernard, the shark, the sheep, the snake, the tiger, and the turkey.

Twelve portraits of animals. The ant, the fox, the magpie, the monkey, the pig, the raven, the saint bernard, the shark, the sheep, the snake, the tiger, and the turkey.

2.3. Procedure

Participants were informed that they participate in an experiment about text and image comprehension. The experiment was divided into four phases:

One phase consisted of reading a short text of five sentences. The text put forward a conceptual property of the main protagonist. After the reading, the participant should push the space bar, and twelve names of animal appeared. They should choose the one they thought congruent with the text read previously. They should do that twelve times (e.g. one text referred to a conceptual property of one animal). This phase is called Text-Name (TN).

The second phase consisted of looking at an image. The image put forward a conceptual property of the main protagonist. After that, the participant should push the space bar, and twelve portraits of animal appeared. They should choose the one they thought congruent with the text read previously. They should do that twelve times (e.g. one image referred to a conceptual property of one animal). This phase is called Image-Portrait (IP)

The third phase begins in the same way one as the first. However, instead of choosing names of animals, participants should choose a portrait of animals. This phase is called Text-Portrait (TP).

The fourth phase begins in the same way as the second. However, instead of choosing portraits of animals, participants should choose names of animals. This phase is called Image-Name (IN). Participants tested every phase, and the order of presentation of all phases was counterbalanced.

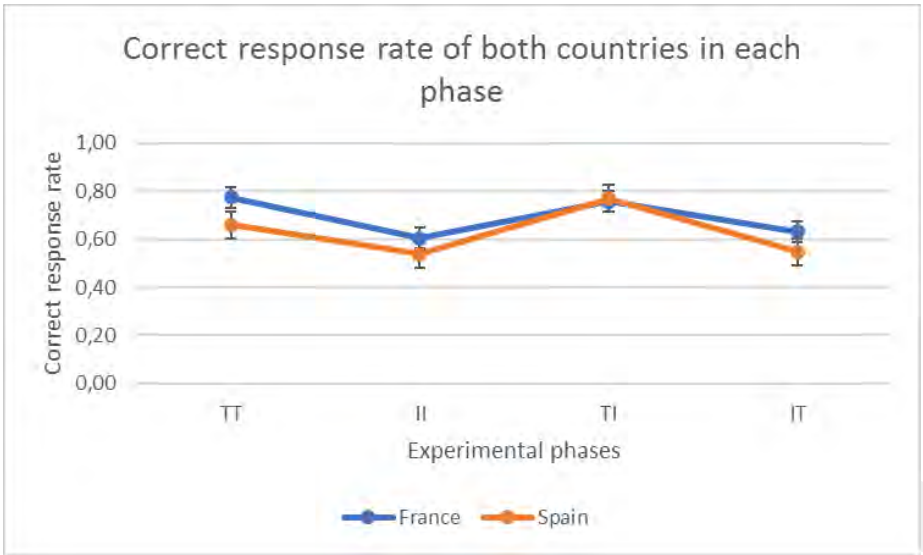
2.4. Results

Analyses focused on correct response rate, fixation time and response time. Analyses have been realized with native French only, with native Spanish only, and with both countries.

In the experimental protocol, twelve texts and twelve images have been created referring to a conceptual property of each of the twelve animals. (e.g. A text and an image referring to the fox, a text and an image referring to the shark, a text and an image referring to the monkey, etc.). Therefore, a response was correct if people could find the congruence between a text or an image and the referred name of animal or portrait of an animal. Performances of French are better for texts $F(3, 23) = 10.41$, $p < .01$ as well as Spanish $F(3, 23) = 11.16$, $p < .01$. Considering France vs. Spain, results showed that correct response rate was higher for French $F(7, 47) = 7, 82$, $p < .01$. (Figure 1)

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Figure 1. Correct response rate of both countries depending on the experimental phase.

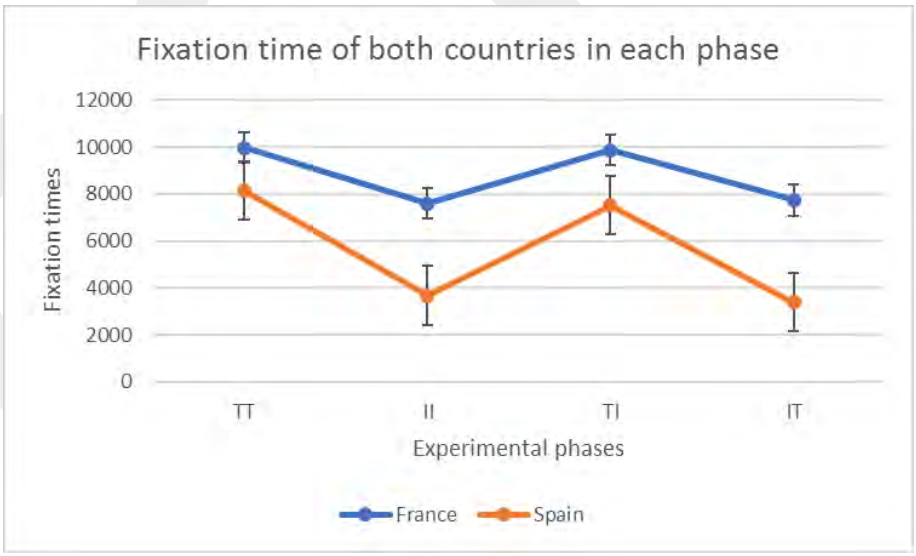


Our hypothesis suggested that correct response rate should be higher for native French because native French people have created the experimental material. Then, the initial hypothesis was validated.

An internal clock inside the JavaScript software estimated fixation time. It started when participants pushed the space bar after reading the instructions or after giving the answer to the previous stimulus. Fixation time ended when participants pushed the space bar to choose a name of an animal or a portrait of an animal.

Fixation time was shorter when Spanish look at a picture $F(3, 23) = 28{,}88$, $p < .01$ as well as French $F(3, 23) = 2.98$, $p < .01$. We believed that we obtained these results because reading a text take more time than looking at a picture. Considering France vs. Spain, results showed that fixation time was shorter for Spanish $F(7, 47) = 43{,}38$, $p < .01$. (Figure 2)

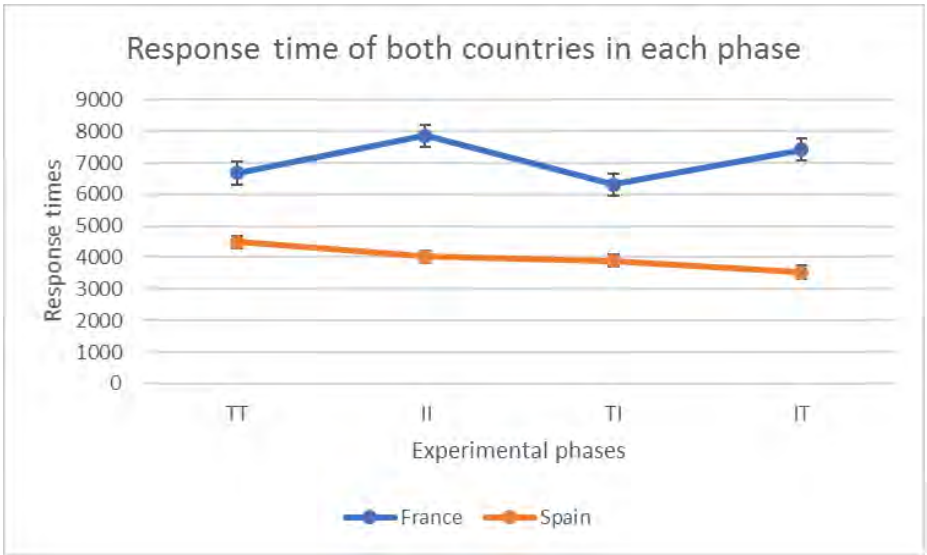
Figure 2. Fixation time of both countries depending on the experimental phase.



An internal clock inside the javascript software estimated response time. It started when the screen with twelve names of animals or twelve portraits of animals appeared. It ended when the participant chose an animal.

No significant difference of response time was found for Spain $F(3, 23) = 1.70$, $p > .01$ and for French too $F(3, 23) = 0.99$, $p > .01$. However, Spain answered faster $F(7, 47) = 54.24$, $p < .01$.

Figure 3. Response time of both countries depending on the experimental phase.



3. Discussion and conclusion

This experiment was focused on the capacity of people to produce metaphorical inference. Participants read a short story of five sentences illustrating the main protagonist, or they looked at an image depicted a scene with the main protagonist. In both cases, participants were asked to choose the corresponding animal referred to the previous situation. Participants should find which animal was the best representation of the situation.

This experiment tried to put forward differences between native French and native Spanish in metaphorical inference depending on two display modes: text vs. image. Even if studies have shown that when considering people from closed countries, differences are limited (Van Mulken, Le Pair & Forceville, 2011; De Carlos, 2012), we believed that considering a human to an animal is unique for each country. Another experiment could be realized including materials created by native Spanish. Native French could test this material, and we may find a cultural effect.

This study focused on correct response rate, fixation time and response time. About correct response rate, results showed that performances of native French were better than native Spanish. An effect of display mode could be noted for both countries. The correct response rate was higher for texts than for pictures. About fixation time, there was longer for native Spanish. There was also an effect of the display mode because fixation time was longer for texts for both countries. However, no effect has been noted for response time even if native Spanish answered faster.

These results could be explained because of the creation of the experimental material. Indeed, Pudelko et al. (1999) have asked 30 native French scholars to build their materials. We used their findings to build twelve short stories and twelve images.

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A CONCEPTION OF CREATIVITY TYPOLOGY: METHODOLOGICAL APPROACH

Diana Bogoyavlenskaya[1] & Liubov Kotlyarova[2]
[1]*Laboratory of giftedness, Psychological Institute of Russian Academy of Education (Russia)*
[2]*Institute of Innovative Management, National Research Nuclear University (NRNU "MEPhI") (Russia)*

Abstract

The original approach to building up a creativity typology is described. The Creative Field method allows defining stimulus-productive, creative and heuristic types of creativity. The conditions of carrying out the experiment using this method are described.
Further the results of the research aimed at defining creativity types of young specialists working in the sphere of high tech industrial production are presented. The correlations between the creativity type and motivational profiles are shown.

Keywords: *Creativity, Typology, Analysis Unit, The Creative Field Method, Motivational Profile.*

1. Introduction

The concept of creativity is one of scientific paradoxes. It still has not received a whole clarification in the scientific literature. That is why genial discoveries advancing contemporary science for ages and a solving a new problem by a schoolboy are still considered in the same plane. To creativity belongs building up a scientific theory along with solving a puzzle. Experimental research of creativity leaving the concept of cognition as reproductive process within the framework of associationism and reaching its understanding as productivity in gestalt-psychology could not move further. An insight providing solving problem situations could appeal to intellect only. Such methodological approach made intellect equal with creativity. That led to the situation when creative abilities were diagnosed using tests with a set of tasks, actualizing intellectual operations. The tendency was strengthened by the requirements of psychometric paradigm, which Stern defined with maximum clearance: "The need of measurement leads to narrowing of a concept" (Stern, 1997). Thus, understanding the concept of creativity was based on a technique of measuring certain elements. This fact underlined the tendency which Vygotsky named "element-wise analysis", underlining that "on the way of identification of the whole with an element, a problem is not solved, it is just passed over" (Vygotsky, 1982, p. 13).

A crucial factor that defined the direction of research of creativity was Vygotsky's methodological directive on two ways of scientific development: the direct way of complication of a structure and its functions and the opposite way coming out of a theoretical definition of a higher form. The direct way comes to describing a psychic phenomenon, basing on concrete empirically established by any possible way characteristics. Due to the absence of exact criteria for the highest form all the forms can be considered as having equal significance. We can see it nowadays when we accept that there is a variety of concepts of giftedness and creativity. To such concepts belong: the insight (Wertheimer, 1945), the divergent thinking (Guilford, 1959), association by similarity (James, 1950). The modern researcher Kudriavtsev (2015) uses the concept of "potentiation" (Schelling's term) as a growth of child's abilities.

The opposite way is based on a theoretical definition of a higher form reflecting the essence of the under study phenomenon. However, the analysis of the highest form is important for identifying the simplest form, which according to Aristotle reflects the essence of analysis (analysis unit). In his appeal to psychology willing to study complex phenomena Vygotsky proposes to change methods of resolution to methods of analysis that isolates units. Such approach, in his opinion, provides finally the way of understanding of creativity nature not by its product, but by its mechanism. Galton has come closer to the point than the others as he mentions devotion to a cause as a characteristic feature of gifted persons (Ilyin, 2009).

The objective of studying the action losing a form of response demands designing a new model of experiment, opposite to the methods built by the "stimulus-reaction" principle, "a challenge by our self-will" (Chelpanov, 1999).

Only on the way of realization of Vygotsky's methodological principles it became possible to define the mechanism of creation of new forms. It is on the way of defining and theoretical justifying the highest form of creativity where we consider creativity phenomena, losing the form of response. These are "porism" (a term introduced by ancient Greeks) as an unforeseen going out into "not-specified" and types of discoveries described by Claparède (2007) and by Hadamard (1945). Those are discoveries that are not connected with solving of given tasks, but unexpected discovery of a new fact. For studying this kind of creativity a new type of experimental model had to be built up. In its turn, this new model allowed us to introduce a new psycho-diagnostics method for convenience called The Creative Field. An experiment using this method allowed identifying the creativity analysis unit, which is the ability of a person to develop the performed activity by one's initiative. Basing on this creativity analysis unit first creativity typology was built up, i.e. the differentiation of the whole heterogeneous phenomenology of creativity was carried out (Bogoyavlenskaya, 2009).

2. The Creative Field Method and Creativity Typology

The estimation of personal potential within a certain time period requires space for following train of thought outside the limitations of solution of the initial problem. A new experimental model should be represented by the activity which is variable, but in a different way comparing with tests including a set of various tasks. It has to be homogeneous and to have differences at the same time. The system of problems of the same type meets these requirements. They are solved the same way, but differ by a certain parameter. Thus, we can watch the process of mastering an activity and at the first stage estimate mental abilities of a testee by characteristics of one's educability and all its indexes (rate of advancing, level of generality, consciousness, independence). In our opinion, that allows overcoming imperfection of testing, defining intellect more completely and more precisely.

The next stage of the experiment allows following the process after mastering activity and identifying the phenomenon of creativity itself as the going out the limitations of given situation. Since the system of single-type problems has a range of common patterns, it provides building up a two-layer model of activity. The first, surface layer is the given activity consisting of solving of certain problems. The second, subsurface layer (masked by the first layer and not obvious for a testee) is the activity of defining hidden patterns, included into system of problems. The discovering of those is not needed for direct problem solving, thus, the space for observing the activity development process is created.

The Creative Field method supposes compliance with three principles: (1) absence of outer and inner evaluative stimuli; (2) absence of limitations restricting the activity in whole and (3) the experiment should be repeatable.

The realization of this technique is possible only on the assumption of fulfilment of the principles in their unity as well as by individual testing, whereas by group (mass) testing as Chelpanov stated in the beginning of the last century "the individuality of each testee is lost, originality of mental process running in his mind is concealed. Facts to be essential for conclusions are wasted" (Chelpanov, 1999, p.368).

The technique of the Creative Field allows marking out various levels of performance and differentiating the whole complex and heterogeneous phenomenology of creativity. This concept provides designing of typology of creativity according to cognition levels.

The activities stimulated by outer factors (including high level of performance) belong to the first type called "**stimulus-productive".** The cognition process of this level focuses on the certain situation and is performed on the level of single, according to the philosophical classification. The major part of mankind belongs to this type.

The activity that is developed by the person's initiative belongs to the second type – **heuristic**. This is the level of art and laws discovering, which was referred by Rubinstein (1935) as "explosion of layers of things in existence". This is the cognitive process on the level of special. It is **gift** that is characterized that way in the philosophic literature.

The last level – the **creative** one – is characterized not only by discovering new patterns, but by their theoretical proving as well. It is the level of building up theories and defining new problems. The cognitive process is performed on the level of the whole. Such process provides cognition of the essence of an object. Furthermore, having known the essence of a phenomenon, one can predict qualitative leaps in its development and this characterizes the prognostic abilities of a subject. According to philosophers, it is this ability that more than anything defines a genius who predicts future on hundreds of years ahead.

Thus, high indexes on the first (stimulus-productive) level prove just high intellectual abilities of a subject. Last two levels (heuristic and creative) identify creative abilities, i.e. depth of cognition. The necessity of marking two levels explains using the term "creative", which in this context is an alternative of understanding of creativity as divergent productivity.

Alongside with that the ability to develop activity by one's initiative can be explained just by the characteristics of intellect. It is a quality of integrated personality, reflecting the interaction of cognitive and emotional spheres in their unity, where abstraction of one of the sides is impossible as they are inseparable. That alloy of capabilities and personality possesses a quality of generality, i.e. belongs to the whole as to the unity and corresponds to the methodological requirements to the analysis unit of the creativity.

The validity of the Creative Field method is proved in several cycles of research supervised by Diana B. Bogoyavlenskaya using relevant techniques oriented to various age ranges (Bogoyavlenskaya & Bogoyavlenskaya, 2013). In the same time an issue of the characteristics of motivational sphere of adults belonging to various creativity types (defined by the Creative Field technique) remains little-studied.

3. Research Aim, Objectives and Design

The aim of the current research is studying motivational characteristics reflecting main personality orientations (consuming and productive) in groups, defined by the Creative Field method.

For reaching this aim the following objectives are settled: (1) marking out the typological groups by the Creative Field method; (2) defining the typology of motivational structure in each group.

The Creative Field method is described above.

For studying motivational structure the Milman's technique the Diagnostics of Personal Motivational Structure (further on - DPMS) is used (Milman, 2005). According to the author's conception the motivational scales reflect the main personal orientations – consuming and productive.

The DPMS technique includes seven motivational scales, reflecting: whole-life motivation (concerning the whole sphere of life activity); working (learning) motivation; "ideal" state of the motive understood by the author as "a level of a drive to act"; real state – the degree of satisfaction of a certain motive at present as well as efforts applied for reaching satisfaction of this motive.

The whole personal motivational picture is reflected in a personal motivational profile representing in quantitative or graphical form the correlations between various motivational scales registered by a psycho-diagnostic method. A character of motivational profile (MP) can be defined according to the profiles typology. After defining the characteristics of motivational sphere of each testee, his/her motivational profile can be attributed to one of the following types: progressive, regressive, expressive, impulsive, flat or combined.

The research was carried out in 2016. The research sample consisted of young specialists of an industrial enterprise (N=41, age between 23 and 30 years), oriented at high results of the production activity and carrier growth.

The obtained data were processed by mathematics and statistics methods; the comparative analysis was applied.

4. Research Results

Let us consider the results obtained by using of the Creative Field method.

According to the results obtained by using this method three groups of participants are defined, corresponding to three creativity types: the group of the stimulus-productive type (SP), the group of the heuristic type (H) and the group of the creative type (C).

The following distribution according to the creativity type is obtained: stimulus-productive type – 68.2% (the SP-group), heuristic type – 14.6 % (the H- group), creative – 7.3% (the Cr-group). A part of the participants (9.9 %) could not follow the whole course of the research.

The next objective of the research is defining motivational profile type in the groups of stimulus-productive, heuristic and creative type. At first, the motivational profile type of every participant is defined, and then the distribution (percentage) of motivational profiles in each group is described.

In the SP-group (the stimulus-productive creativity type) the following distribution of motivational profiles types is found out: progressive – 12.3 %, regressive – 9.7 %, expressive – 61.0 %, impulsive – 7.3 %, flat – 0 %, progressive-expressive (combined) – 9.7%, progressive-impulsive – 0 %, regressive-impulsive – 0 %, and regressive-expressive – 0 %. The expressive type dominates in this group which is related to self-affirmation in the society, developed ambition, eccentricity, constant rising of aspiration level.

In the H-group (the heuristic creativity type) the following distribution of motivational profiles types is found out: progressive – 53.6 %, regressive – 7.3 %, expressive – 12.1 %, impulsive – 4.8 %, flat – 0 %, progressive-expressive – 12.6%, progressive-impulsive – 4.8 %, regressive-impulsive – 4.8 %, and regressive-expressive – 0 %. In accordance with Milman's ideas, this type of profile positively correlates "with successful working activity. Most often this type of the MP is met among creative people. At the same time, this kind of profile is typical for a socially-oriented person and that fact can be included into a concept of creative and productive orientation of a person" (Milman, 2005, p. 42).

In the Cr-group (the creative type) which includes only two participants a single type of motivational profile dominates – the progressive-expressive one.

5. Conclusion

The obtained results proved the validity of the Creative Field method, which allows defining three creativity levels: stimulus-productive, heuristic and creative.

In the course of the research in the sample consisting of young engineers, working in the sphere of industrial production, stable correlations between creativity types and characteristics of motivational orientation are found out. It is shown that the specialists with the creative and heuristic types have pronounced productive motivation, aimed at development of the activity by one's initiative and that defines its creative character.

In the group of stimulus-productive type the expressive type of motivational profile dominates, which corresponds to the tendency of self-affirmation in the society.

The defined patterns are used in routine of the human resource management for solving tasks of forming personnel reserve for providing activity of an enterprise at the stage of its decommissioning.

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A THERAPIST'S STRUGGLE TO ESTABLISH THE PSYCHOANALYTIC FRAME

Sevilay Sitrava
Department of Psychology, Postgraduate Researcher, University of Exeter (United Kingdom)

Abstract

This paper concerns an aspect of my psychoanalytic psychotherapy work with D, who was 20 years old when I started working with him at the very beginning of my clinical practice. I continued seeing him once a week with for two years until the psychotherapy ended prematurely. During the first year, we tried to establish a framework for the therapy. The psychoanalytic frame is the basis, which allows for, and facilitates the functions of psychoanalytic work (Quinodoz, 2006). Winnicott (1955) describes the setting as the totality of all the details regarding the management of the therapeutic process. This frame provides the environment for the patient in which they can freely verbalize their inner conflicts and emotional disturbances, which can then be understood and worked through with the therapist within the boundaries (Bleger, 1967; Viderman, 1979; Quinodoz, 1992). By the establishment and maintenance of the frame, boundaries are set within which the transference occurs. Freud (1911) discussed the boundary between thought and action from the point of view of the differences between the pleasure principle and the principle of reality. The frame distinguishes the verbal and nonverbal materials and within the established frame, the boundaries between thoughts and actions are important. The therapist interprets the emotions and thoughts of the patient through verbalization, and the patient is expected to work through these therapeutic materials within the frame. If patients cannot manage to verbalize their disturbances, they may show their feelings by acting out towards the frame. At that point, the psychotherapist should be aware of this, and work on this acting out within the frame.
I will focus on two of the material settings of this frame; fixed session day and time; and the psychic element of free association. My main focus in this paper is on D's acting-out towards the time elements of the frame, and the free association. I will explain how they were, or were not worked through, and what I encountered as an inexperienced therapist.

Keywords: *Psychoanalytic Frame, Acting-Out, Psychoanalytic Psychotherapy, Free Association.*

1. Introduction

This paper concerns an aspect of my psychoanalytic psychotherapy work with D, who was 20 years old when I started working with him at the very beginning of my clinical practice. I continued seeing him once a week with for two years until the psychotherapy ended prematurely. During the first year, we tried to establish a framework for the therapy. I will focus on two of the material settings of this frame; fixed session day and time; and the psychic element of free association. My main focus in this paper is on D's acting-out towards the time elements of the frame, and the free association. I will explain how they were, or were not worked through, and what I encountered as an inexperienced therapist. Furthermore, I will comment on the effectiveness of writing a single case research paper with respect to the patient and myself, as therapist.

2. Background

D was one of the first five patients that I worked with at the very beginning of my master's degree studies in Clinical Psychology. He was 20 years old, but seemed to be younger at first sight because of his physical appearance. He was quite thin and seemed to be physically weak. He applied for psychotherapy because he had been suffering from obsession compulsion and body dysmorphic disorders for over three years, and comprised spending his time thinking about himself, his relationships with others, and his physical appearance. Moreover, he lacked self-confidence, self-esteem; and he defined

himself as lonely and anxious unable to make new friends at university and not having had a romantic relationship for the past two years. According to D, the reason for the lack of a romantic relationship was his physical appearance. This belief had led him to have a rhinoplasty operation three months before he applied for psychotherapy. After the surgery, he had expected his life to change, but nothing happened. So, he decided to go to a psychotherapist and 'learn' the appropriate behaviours he should display towards girls in order to have a romantic relationship.

D was an only child. His mother was an accountant in a company and his father was a literature teacher. He defined his mother as a dominant, chattering woman. D told me that his mother always wanted him to do everything in the way that she wanted. He defined his relationship with his mother as very intimate. He told me that his mother knew everything about his life. Although they generally argued about D's choice of girls in terms of romantic relationships, D told me that he always took notice of his mother's ideas because she was older and more experienced than he was. Yet, sometimes, this kind of relationship with his mother bothered him, since he felt a lack of freedom and he gave me the following example. One evening, he was lying on his bed in his bedroom with the door shut, suddenly his mother entered the room without knocking, and tried to make D get up and talk to her about his problems, but he was sleepy and found this conversation boring and intrusive. He explained that although his mother lacked certain boundaries, he loved her very much and considered her to be his life coach. D was his mother's narcissistic extension and he was trying to behave in the way she desired. This had an impact on any potential romantic relationship; D explained that he felt paralysed when he met a girl and since his 'life coach' was not with him to tell him what to do and what not to do. Therefore, he needed to 'learn' the appropriate behaviours towards girls when D was apart from his mother. This attitude underpinned his expectation of me, his therapist.

While D had a lot to say about his mother, he said very little about his father. He told me that his father was an introverted, calm, and quiet person and they had a shallow relationship. His father was like an invisible man. They did not share anything except watching and talking about the football matches. His father had a very limited idea regarding the issues in D's life, therefore when D had problems; his mother was the one and only person from whom he could seek help.

3. Issues Related with the Frame

There are various concepts that explain the psychoanalytic state such as; free association, transference, frequency of sessions and setting. The psychoanalytic frame is the basis, which allows for, and facilitates the functions of psychoanalytic work (Quinodoz, 2006). Winnicott (1955) describes the setting as the totality of all the details regarding the management of the therapeutic process. For the existence of psychoanalysis and/or psychoanalytic psychotherapy, and the effectiveness of this type of treatment, the psychoanalytic frame is essential. This frame provides the environment for the patient in which they can freely verbalize their inner conflicts and emotional disturbances, which can then be understood and worked through with the therapist within the boundaries (Bleger, 1967; Viderman, 1979; Quinodoz, 1992). By the establishment and maintenance of the frame, boundaries are set within which the transference occurs. These boundaries provide an environment in which the patient is free to talk about everything, rather than displaying them non-verbally. Freud (1911) discussed the boundary between thought and action from the point of view of the differences between the pleasure principle and the principle of reality. The frame distinguishes the verbal and nonverbal materials and within the established frame, the boundaries between thoughts and actions are important. The therapist interprets the emotions and thoughts of the patient through verbalization, and the patient is expected to work through these therapeutic materials within the frame. If patients cannot manage to verbalize their disturbances, they may show their feelings by acting out towards the frame.

From the beginning of my clinical practice, I had a crystal clear idea about establishing and maintaining the psychoanalytic frame. My clinical practice and my own psychoanalysis process taught me that the frame was one of the main factors in psychoanalytic psychotherapy. Therefore, I easily internalized the frame and worked in accordance with it but for D, the rules of the therapist constituted the frame and these should be followed, but could also be violated. He was used to obeying the rules within the relationship with his mother. His mother had strict rules for D, and for him to attain the feeling of being cared for and loved, he had only one resource; his mother. Thus, he could not disobey his mother's rules. Although he sometimes complained about his mother's behaviour, D was used to having no boundaries within his intimate relationship with his mother, thus, when he faced a boundary, for example, with a girl, he felt rejected and unloved.

In the consulting room, this situation occurred since D considered the frame to be my rules. He was partially compliant with the frame but another side of him violated these rules, as in the way he had behaved with his mother. An illustration of this behavioural pattern is given in the following example. Two months after the psychotherapy process began, D asked for a change in the frequency of the sessions. The frame regarding the frequency of the sessions was once a week, yet D wanted to come to sessions every two weeks. When he verbalized this desire, I tried to maintain the weekly sessions, and understand the request of D in a therapeutic way. Yet, he was never satisfied with this, and he responded by not appearing at the next weekly session. I assumed that he was experiencing strong feelings such as refusal; abandonment, and anger; just as he underwent with his mother. This behavioural pattern occurred from time to time during the first year of therapy. In one session, he requested a change in the frame of the therapy, without working on this desire; he did not attend the next session or sometimes two consecutive sessions. After these missed sessions, he would arrive on time or earlier, and explained his reasons for his absence. His excuses were mostly related to being sick, and being unable to talk. Other reasons were that he had a guest and he could not inform me because he had been unable to top-up his mobile phone. When I tried to work through the reasons for his absence, he resisted discussing them. He insisted that he had not been able to attend the session for the given reasons. Although I tried to work through his absences with the frame, I did not succeed.

My inexperience as a clinician resulted in my strong feelings towards the irregularity of the frequency of sessions since I felt that I was not able to manage to establish the frame properly, and could not work through this material in an adequate and effective way. Then, I realized that this was a maternal projection on me, his therapist. As described earlier, D's mother suddenly entered his room intrusively without knocking the door and she insisted on convincing D to tell her his troubles in life. Yet, D could not argue with his mother regarding his issues because of his mother's intrusive attitudes. The same pattern occurred in the consulting room. He projected onto me of the mother who does not respect his boundaries and who invades his bedroom-mind without warning, demanding to know about his troubles. D's relationship with his mother was sufficiently symbiotic to be able to create boundaries for D and mother. If he felt a boundary within the relationship with his mother, his obsessions rose, and therefore he had strong feelings. The same pattern also happened in the therapy process. D gave being sick as the reason for not coming to his sessions and this sounded like an excuse a young child would give. He was not grown up enough to take responsibility for the contract, he had agreed with his therapist. His request for a different frequency of sessions was refused and the therapist's 'rule' was valid. Therefore, he experienced the boundaries in the relationship within which he was free to verbalize his thoughts, feelings, desires, fantasies, and dreams. To combine free association and boundaries was too difficult for him.

D was not very successful in free association in the psychotherapy process. While talking to me, D spent much of his time thinking about what to say. He was aware of this and also told me that he was very cautious about the words he used. He had two reasons for this; first, he did not want me to misunderstand him; second, he was trying to find the 'correct' responses. His way of speaking did not allow him to regress and associate freely, and moreover, his extreme self-control did not allow his unconscious representations to emerge. Since D's mother was the one who created a set of rules in her relationship with D, he did not feel free to talk about anything, only what his mother wanted him to. Generally, it seemed that he may have felt stuck in the middle of strong feelings, and could not escape. An example of this occurred towards the eighth month of the psychotherapy process. In the session, D was talking about his old friends and his high school years. Suddenly he directly asked me the name of my high school. While I was trying to understand the meaning this question had for him, he insisted on asking the same question again and again. I did not answer him, and he became furious with me. His voice grew louder, and he complained about the one-sided relationship type he was experiencing with me. He declared that he was the person, who was always talking about himself, but I said nothing about myself and he needed to hear something from me. He wondered about whether when I was at his age, I experienced the kinds of issues that he suffered from. He was interested in what was happening to others, to me, rather than himself, thus, it was too difficult for him to regress and associate freely. His demand for me to name my school seems like a role reversal in which D projected onto me his experience of being on the receiving end of the mother's intrusive demands and he enacted the role, suddenly intruding into my bedroom-mind.

He wanted to be close to me and mutually share problems; otherwise, he would be afraid of being weak and engulfed. Since I did not tell him about myself, he became very angry with me. Instead of explaining his strong feelings, he demonstrated them by missing the next session. His anger resonated with me in relation to the frame in terms of the element of payment for the sessions. The rules of the

university determined that patients did not pay for the therapy sessions held in Psychological Counselling Centre of the university. This was a contradiction with the ideal components of psychoanalytic frame. As Bleger (1967) commented the psychoanalytic frame consists of constants and variables, such as the role of the psychoanalyst, time elements, setting, and money. One of the other variables of the psychoanalytic frame was the psychoanalytic contract, agreed with the therapist and patient. This agreement should be based on mutual exchange of money and time (Grinberg, Langer, Liberman, & De Rodrigué, 1967). Yet, in this case parts of the agreement had been determined by another authority and caused a problematic situation, I found myself feeling anger towards the university authority since in addition to my rules, there were those of another authority in that consulting room. I was sharing the same feeling with D. He requested a change in the frame, but my rules were valid. I wanted a change in the frame, but the university's rules were valid. While I was writing this paper, I realized that I partially held the university authority to account for not being able to work with D properly. I found myself thinking that if the patient had even made a small payment this would have imposed a sanction on him. This may show my identification with the feelings D projected onto me about the rules. He was angry with me, and he projected onto me being the intrusive mother, not allowing him to have a private zone. Regarding fees, I might have been angry with the university authority and projected onto authority being intrusive, and not allowing me to do my job properly. Since these projected feelings were too difficult to handle, I might have projected these feelings onto the university authority.

In the first ten months of the therapeutic process with D, he did not often engage in physical exercise. While we were working through his irregularity in attending the sessions and his unwillingness to engage in free association, he began thinking about his gym attendance. Going to gym was a concrete example for him, and therefore he was able to find the way to verbalize his feelings. When he exercised, he felt relaxed, more comfortable, and self-confident thus, in the sessions we could work through his inner conflicts with the help of his interest in sport. At the end of the first year of therapy, he had internalized the time elements of the frame being punctual and rarely missing sessions. If he needed to cancel a session, he obeyed the rules of cancellation. Although he still had some problems regarding free association, but was slowly managing to do it. The premature end of the sessions with D was because I had completed my master's degree, and my work in the university psychological counselling centre had ended. I told D my last day of work in the university six months before leaving, thus worked through the related issues. I suggested D that I could continue to work with him in private practice, although he very much wanted to continue working with me he did not accept because he would not pay for the therapy. He did not want to 'give' more things.

4. Reflections

These strong feelings, which emerged in both the patient and myself made the psychotherapy process with D difficult. Since I was an inexperienced clinician and the frame was already internalized with me, I considered D to be a rebellious patient with his difficult questions and trying to drive me into a corner. He questioned my working style, which made me feel angry and trapped. Although he complained that we did not share anything, we did share some strong feelings but could not verbalize these to each other. In the process of writing about this case for this paper, I realized many more things regarding the patient and myself. For me, the frame was one of the accepted aspects of the therapy and there was no need to argue about it. Yet, with this paper, I recognized that there was not just one frame. As Bleger (1967) noted, psychoanalysts, and I would add psychotherapists, have an inner frame, but they cannot ignore the patient's frame that they unconsciously bring with them to the first session. The psychoanalytic contract should be undertaken with the frames of both parties. If not, as in my case reported here, the frame becomes a particular and difficult issue, which influences the first year of the therapy process. These negative situations became a valuable experience about which I was able to write a paper many years later. Writing this single case research paper prompted me to explore papers concerning existing research, theories, and other articles regarding the notion of frame. Since single case research papers are related to how psychotherapists work with their patients, I could read about the ways that other therapists worked through these issues. Although there is supervision, their own psychoanalysis, and peer supervision, single case research methodology allows the therapist to consider the case from a different perspective combining the researcher and clinician aspects of the therapist.

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POSTERS

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SCIENCE OF PSYCHOLOGY: SCIENCE OF THE BREATH

Marianna Masiorski, B Psych Hons MAPS
Psychology in Stillness (Australia)

Abstract

Psychology is originally known to be the study of the breath or Soul. Breathing techniques are common in evidence based psychological and medical practice, however, most techniques seem to be adapted from yoga/spiritual teachings. Studies however appear to focus on the biological/physiological changes that breathing techniques effect rather than the spiritual/Soulful components. One perspective suggests that connection with Soul may also influence physiological markers of health and well-being and suggests that developing connection with Soul may be the primary focus of utilising a specific gentle breath meditation. The gentle breath meditation may deliver different health outcomes to conventional breathing techniques, based on the primary purpose being connection with Soul. Further investigation of the gentle breath meditation is required in order to understand its efficacy as an evidence based psychological and medication treatment protocol.

Keywords: *Breathing techniques, breathing and yoga, spirituality.*

1. Introduction

This preliminary study considers human health and well-being, including psychological wellness through the application of the root science of psychology. Psychology, by its Ancient Greek definition, "psuke" meaning *breath or soul* and, "logos" meaning *logic or reason* (Carlson, Buskist and Martin 1997; Edwards 2005), is the science of the breath or soul. While a large body of research exists and which is framed by a paradigm of the biological aspects of breath, (Tiwari and Baldwin 2012; Valenza et al 2014), psychological research in the area of and which is framed by a spiritual or Soulful basis of breath maybe more scarce.

Consideration of breath in psychological therapy is common practice, such as controlled breathing, visualisation or relaxation techniques and other cognitive behaviour therapies, (Priyamvada 2009; Weymouth 2007), however it appears that breathing techniques used in conventional psychological therapies are largely taken or adapted from spiritual teachings and practices, however, it is biology rather than spirituality in relation to breath that appears to be most studied. Research articles and clinical application of breathing and relaxation techniques focus on the biomechanics and physiology of the body and on the idea that changing the physiology of the body via changing or controlling the breath effects a more relaxed and calm physical and emotional/psychological state, (Valenza et al 2014; Boyes 2016; Weymouth 2007), and it appears that most breathing techniques are conducted with this aim.

Other studies refer to spiritual factors. Dhurva et al (2012), states that yoga, (including breath techniques), refers to a *"spiritual practice that begins by strengthening the union of mind and body and aims towards spiritual evolution".* Weymouth (2007), considers the breath, *"complex and multidimensional...and vital area of investigation"* and Sulmasy (2002) suggests that spiritual factors are important in the mediation of psychological and medical illness and disease.

Rather than beginning with biology, this study considers psychological well-being from the starting point of spiritual or Soulful connection or relationship and that breath, physiological, emotional and spiritual factors have an interrelated and multidimensional influence on human psychological functioning. (Weymouth 2007, Dhruva et al 2012).

The Gentle Breath Meditation is a breathing technique that is based on the understanding that spiritual and biological components play an equal role in psychological functioning. The gentle breath meditation is a form of breathing exercise that is founded on the understanding that human beings are a Spiritual or Soulful being with a physical body (Benhayon 1999). The intention of the gentle breath meditation is different to that of conventional breathing exercises in that its aim is to support or build a sense of connection with self and body rather than primarily achieving relaxation, altered states or stress

or anxiety reduction. It is suggested that other health benefits, such as relaxation, insight, healing or reduction of symptoms are attained secondary to establishing this connection. Further, it is suggested that all components; breath, biology and spirituality have interrelated effects on each other and on human psychological function.

Utilising a breathing technique for the primary purpose of supporting inner connection may have mediating effects on psychological or medical illness that is different from conventional breathing exercises.

2. Aim

To review publically available literature regarding breath and breathing techniques utilised in medicine and psychology. This study investigates the theoretical underpinnings of breathing techniques as utilised in psychological and medical treatment and examines the reasons proposed for their effectiveness. Specifically, conventional breathing techniques differ to the gentle breath meditation in that the primary purpose of conventional breathing techniques is to achieve a relaxed or moderated psychological or emotional state while the primary focus of the gentle breath meditation is to support connection with self.

3. Method

A literature search was conducted of online databases through the Australian Psychological Society Members section including Proquest, providing access to Medline, Medical Database and Psychology database. Searches with key words "breathing and yoga" produced 2887 results, Search with Key words "spirituality" produced 1735 results. Other academic articles sourced via Google searches, utilising keywords; breathing techniques in psychology, spirituality and psychology resulted in a number of articles being accessed.

4. Results

The review of the literature suggests that the purpose of utilising breathing techniques in conventional psychological and medical therapy is primarily to reduce symptoms of mental and medical illness such as stress, anxiety, depression, phobia, cardio-pulmonary disorders, cancer.

It appears that evidence based psychology is largely based on what can be proven biologically and a large number of articles can be found with regard to the biological, physiological, biomechanical, neurological and neurochemical components of breath and the theoretical link between this and psychological and emotional state.

It can appear that scientific investigation starts and ends with the biological factors and specific mental and physical illnesses have been said to improve through the use of breathing techniques based on biological/neurological changes. (Tiwari and Baldwin 2012). However, most studies of the effect of breathing techniques on psychological and medical conditions appear to be based in yogic, therefore spiritual teachings or practice (Tiwari and Baldwin 2012), yet do not primarily consider spiritual factors in effecting therapeutic change.

Breathing techniques in yoga and other spiritual practices aim to develop Soulful awareness or evolution. It is suggested that the primary benefit or purpose of breathing techniques may in fact be connection with Soul with secondary benefits being observed as a result of developing this connection or relationship.

An interesting result suggests that psychology, as Edwards (2005), states, *"is originally and essentially concerned with the breath, energy, consciousness, soul or spirit of life that leaves a person at death and continues on some other form".* From this, a different perspective or starting point for investigation is suggested, that is, can we give primary consideration to what exists in *"other form"*, and investigate the influence of this (Soul or Spirit), on health and well-being? Given that most studies and clinical application of breath are based upon some form of spiritual teaching or practice, could Soulful connection be the key to health and well-being and could it be this that too influences and effects biological markers of health?

Benhayon (2006) proposes that there is a difference between the Soul and Spirit and that health and well-being begins with a connection or relationship with our Soul. Further, the gentle breath technique merely offers the opportunity to connect with oneself "within" and that health benefits are experienced second to this connection. It is suggested that intentions and aims of most breathing and meditation techniques, (to "relax", or to achieve some altered state), may ultimately be damaging to health and "spiritual" evolution.

A review of anecdotal evidence suggests that health outcomes may indeed differ utilising a model of health and well-being that begins with connection and relationship with Soul and that the benefit of the gentle breath mediation is that this technique offers support in connection and relationship with ones inner most nature.

Further investigation of this model is required and a randomised controlled trial of the difference between standard breathing techniques and the gentle breath meditation is suggested.

5. Conclusion

A large number of studies focus on the biological/physiological markers in relation to breath and breathing techniques. Given, however, that it appears that most conventional use of breathing techniques are based on spiritual teachings and practices, it is concluded that further investigation of the role that Soul/Spirit may have in health and well-being is strongly suggested. The potential for the gentle breath meditation to be utilised as an adjunct effective psychological treatment protocol is considered worthy of further examination based on the theory that Soul/Spirit has the capacity to also effect physiological change.

While a review of psychological literature presents preliminary hypothesis, study of the technique through a randomised controlled trial is strongly suggested as it appears that the gentle breath meditation may deliver results different from those achieved through other forms of breathing, visualisation or relaxation technique.

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QUALITY OF LIFE, ANXIETY AND DEPRESSION IN PATIENTS WITH CHRONIC PAIN WHO ARE RECEIVING AMBULATORY CARE

Aline Cristina Antonechen[1], Maribel Pelaez Dóro[2], & Iris Miyake Okumura[2]
Hospital das Clínicas de Ribeirão Preto (Brazil)
[2]Complexo Hospital de Clínicas da Universidade Federal do Paraná (Brazil)

Abstract

Pain is presented as one of the main symptoms in cancer patients and when it extends for a long and continuous period, it may bring up negative consequences on quality of life and be related with anxiety and depression disorders. In this context, the present work had the objective to verify quality of life, anxiety and depression in patients who suffer from chronic pain and are clinically assisted at the Ambulatory of Haemato-Oncology and Chemotherapy of the Clinical Hospital from Federal University of Paraná (HC-UFPR). Therefore, the following instruments were used: social demographic questionnaire; Hospital Anxiety and Depression Scale; and the World Health Organization Quality of Life short form questionnaire (WHOQOL-bref). The criteria for recruiting patients were: chronic pain defined as pain complain for 30 days or more, independently of its etiology and with intensity higher than 4 pointed on the Visual Analogue Scale (VAS). 52 patients were interviewed and it was observed that, regarding quality of life, 40% (n=21) obtained less than 50% on physical domain, 13% (n=7) on psychological and social relations, and 8% (n=4) on environment. The prevalence of anxiety and depression were, respectively, 46% and 28%. These findings are compatible with previous studies, which measured these variables with oncological patients and with those who suffered from chronic pain. Thus, pain interferes in quality of life and in the incidence of anxious and depressive symptoms. It cannot be considered only a biological aspect, so integrate and multidimensional care is needed.

Keywords: *Chronic pain, quality of life, anxiety, depression, cancer.*

1. Introduction

Pain is defined by International Association for the Study of Pain (IASP) as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (International Association for the Study of Pain [IASP], 1994/2012). One of the criteria used to classify it is its duration, considered acute when it is brief and chronic when prolonged. This last one can affect many life dimensions reflecting on quality of life injuries and relate to humor disorders (Hennemann-Krause, 2012).

According to World Health Organization (WHO), quality of life is defined as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (World Health Organization [WHO], 1997).

In spite of the available treatment, living with a disease such as cancer imposes several tough periods which include pain, stress, anxiety and other symptoms that impact on quality of life (Carvalho et al., 2008). Pain presents as a predictor of fundamental influence in this perception, being a emotional risk factor considered in the patient's treatment. Thus, comprehending how this symptom interferes in different aspects of life may contribute to a practice that takes into account the real demand brought up by the patient. These demands are also influenced by mood disorders that can affect the individual, for example, depression and anxiety.

In consultation to the DSM-5, depressive disorder is characterized by some symptoms such as depressed humor; loss of interest in activities previously considered to be pleasant; diminished energy; loss or gain of weight; insomnia or hypersomnia; feeling of guilt or uselessness (American Psychiatric Association [APA], 2014). While on anxiety disorder there is excessive preoccupation in most of the days for at least six months; hard control of the preoccupation; physical symptoms that this concern might

cause suffering; and is not associated to the use of substances or other mental disorders. The etiology of theses clinical situations is multifaced and can be associated to biological, psychosocial and genetic factors.

In oncological patients, depression is mainly related to the clinical status worsening and low quality of life. The feeling of anxiety arises by means of alterations, necessities and adaptation to a new life context and the fear of death.

2. Method

This is a quantitative, transversal, prospective and randomized clinical research. Data collection was made through the approach of the first five patients that came to the Ambulatory of Haemato-Oncology and Chemotherapy of Clinical Hospital from Federal University of Paraná (HC-UFPR), located in the south of Brazil. The patients were invited and interviewed at the waiting room.

The following inclusion criteria were used: age equal or superior 18 years old; correspond to chronic pain criteria; be a patient from that ambulatory; present cognitive condition to comprehend the content of the questionnaires; and accept and sign the Consent Term.

The Normative Ordinance 1083 of the Ministry of Health (Ministry of Health of Brazil, 2012) was used to define chronic pain, set as pain with duration equal or superior than 30 days, with intensity higher that 4 measured by the Visual Analogue Scale (VAS) and /or in use of pain control medication included in the Analgesic Scale of WHO.

Data collection was done by using the following instruments: social demographic questionnaire; Hospital Anxiety and Depression Scale (HAD); and the World Health Organization Quality of Life short form questionnaire (WHOQOL-bref).

A total of 208 approaches were made and 52 fit in the inclusion criteria of the study. The main reasons for the exclusion of participants were: not feeling pain, have already been approached and pain intensity pointed lower than 4 at the VAS.

3. Results

From the 52 participants, 79% (n=41) were female and the mean age was 54,8 years old. The mean time of pain was 90 months and the mean intensity measured by VAS scored 7 points. Pain was associated to cancer in 31% (n=16) of the cases. The patients who were taking medication to control pain represented 88% (n=46) of the sample.

Regarding quality of life, 40% (n=21) obtained percentage lower than 50% in physical domain, 13% (n=7) in psychological domain and social relations, and 8% (n=4) in environment domain. On the other hand, there were results higher than 80% in physical domain among 13% (n=7) of the participants, 33% (n=17) in psychological domain, 38% (n=20) in social relations domain and 36% (n=19) in environment domain.

At last, signs of possible depression were presented in 15% (n=8) of the participants and probable depression in 15% (n=8). 20% (n=10) presented both anxiety and depression disorders.

4. Discussion

According to previous data, pain presents more prevalence and intensity among women. There are studies that point this difference and correlate it to diverse biopsychosocial factors (Vieira, Garcia, Silva, Araújo, Jansen & Bertrand, 2012, Nogueira & Casetto, 2006, Palmeira, Ashmawi, Oliveira Junior & Posso, 2011), such as actual financial and social cultural matters.

Regarding quality of life, it was considered good in the studied group, since over half of the participants obtained punctuation higher than 50% among the analyzed domains. The most prejudiced domain was the physical one, in which is possible to infer that age could have been an influencing factor because 44% (n=23) of the interviewed people were at least 60 older. In psychological domain, age was also an interfering aspect due to social representation of aging widespread in contemporary occidental society. Some studies cite that de cognitive declination in those who were in advanced age is related to external factors, rather than the aging itself (Schneider & Irigaray, 2008).

Considering depression, possible or probable percentages (28%) found in this study were considered as the expected parameters for the individuals with medical diseases, which is 15% to 61% of

the population. One hypothesis is that depressive disorder increases the tendency of the patient's introspective isolation, which puts into a position of attentive vigil in relation to the signs and pain symptoms, as well as more sensitive and willing to pain exacerbation (Pimenta, Koizumi & Teixeira, 2000).

Lastly, anxiety was found in almost half of the studied population (46% of the participants), but did not present significant relation to the quality of life domains nor the duration of pain. When comparing the prevalence of this disorder in patients with medical diseases, this number is above the average, considered between 18% and 35.1% of the patients. The fear of what is about to come generates feelings of anguish that are not always identified, and sometimes can be somatized through corporal sensations like pain (Camon, 2012).

5. Conclusion

Through the patient's reports it was possible to conclude that chronic pain influenced in quality of life and anxiety and depression symptoms, which showed that this sensation interfered not only the biological system, but also psychic, social and spiritual aspects of the individual. Therefore, it is necessary to be attentive to the integral care of the patient. Understanding how pain is perceived and the place it occupies in the patient's life can help in the search of solutions and treatments. Thus, it is important to offer a qualified listening capable of comprehending beliefs, values, meanings and significances connected to pain, according to the patient's perception. It is part of the health professional's competence to embrace experienced suffering and help the person in the process of self knowledge and elaboration to overcome biopsychosocial and spiritual difficulties.

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EFFECTIVENESS OF EMOTIONALLY FOCUSED COUPLE THERAPY FOR ADOPTIVE COUPLES IN TAIWAN

Sung-Hsien Sun & Wan-Chieh Huang
Department of Psychology and Counseling, National Taipei University of Education (Taiwan)

Abstract

The idea of carrying on one's ancestral line in Chinese culture has motivated some infertile Taiwanese couples to adopt. In Taiwan, security of the adoptive couples is an important focus of evaluation as the adopted child will have a safe family environment. Emotionally focused couples therapy (EFT) is based on the adult attachment theory to re-establish the security. This study investigated the effectiveness of EFT and the cultural characteristics of Taiwanese adoptive couples. A 40-year-old couple currently undergoing institutional evaluation participated in this study. EFT was provided to the couple six times throughout this study. Interpersonal process recall was also used after the therapy sessions where they recalled the effects of the therapy. Content analysis was used to analyze the transcripts of the therapy sessions and interviews. The results were as follows. Therapeutic effects: 1. Therapist's empathic reflection helped the couple rediscover their partner's kindness. 2. The couple was willing to correct their negative cycles and make an effort to change. 3. Helped the couple face the pain caused by infertility. 4. After the husband was willing to express his attachment need, the wife was willing to make more effort and sacrifices. Characteristics of Taiwanese adoptive couples: 1. infertility causes pain and only an adopted child would make the family "whole." 2. The quality of marital relationships is heavily influenced by the husband's family. 3. Gratitude and sacrifice are often important sources of emotional connections in ethnic Chinese marriages. The cultural compatibility of EFT was also investigated.

Keywords: *Adoptive couples, adult attachment, cultural compatibility, emotionally focused couple therapy, therapeutic effectiveness.*

1. Introduction and Research Objectives

In 2012, Taiwan introduced amendments to the Protection of Children and Youths Welfare and Rights Act which stipulate that the adoption of non-blood-related children may only happen through the matching process provided by an adoption agency (excluding adoption by close relative and adoption by stepparents). Adoption in Taiwan, which was formerly negotiated and carried out between individuals privately, became prohibited. All adoptive couples and families needed to be assessed by qualified institutions and undergo related preparation courses in order to complete the matching and adoption procedure. This undoubtedly provided assurance for both parties and ensured that adopted children and infants receive good care.

Adoption often implies that a couple is infertile. In Chinese culture, marriage is seen not as a matter concerning only two people but as a process of two families becoming one big family. Chinese culture emphasizes that “There are three ways to be unfilial, of which having no sons is the worst.” Therefore, adoption in Taiwan also involves the responsibility of filial piety. Due to the problem of infertility, marriage is no longer a matter concerning only two people as the husband is caught between his wife and parents (Yang, 2002; Sun & Chin, 1996). This can destabilize the affectional bond in the marital relationship and worsen the situation (Lin, Tsai, and Kang, 2006). If such couples decide to stop infertility treatment and commit to adoption, they can contact the relevant institutions. These institutions are also responsible for the related assessments and providing educational courses. Apart from general physical and psychological assessment of financial ability, these institutions often pay particular attention to the function of marital relationship and their ability to take of raising a child (Wang, 2002).

In Taiwan, the assessment of marital quality becomes an important task for adoptive couples. This includes their management of issues related to infertility and their in-laws, which is important for determining whether couples are prepared for adoption. The better the marital function of the couple, the more able to provide children with security attachment, as well as psychological care.

In recent years, Emotionally Focused Couple Therapy (EFT) has developed rapidly. It is mainly based on the adult attachment theory, emotional regulation theory, and systematic approach. This therapy model was first proposed by Greenberg and Johnson (1985). Johnson (2004) further developed therapeutic strategies for this approach. The therapy integrates intrapsychic and interpersonal orientations to expand couple's emotional and interaction experience by helping them reproduce emotional interaction and create new interaction based on sense of security and comfort. This study used EFT in the counseling of adoptive couples in Taiwan, to help them address complicated issues in adoption and promote and strengthen the affectional bond in their relationship. EFT has been robustly developing in Taiwan. The main author of this study studied the effects of using EFT in psychological educational group in Taiwan (Sun & Liu, 2015). EFT can help adoptive couples develop a better ability to provide the adopted child with psychological care and security attachment.

Thus, this study aimed to apply EFT to the marital counseling of adoptive couples and conduct post-therapy interviews based on interpersonal process recall (IPR) (Kagan, 1980) in order to examine the effectiveness of EFT and characteristics of Chinese culture. Research objectives were as follows: 1. Investigate a couple's perception of the effects of EFT on their marital relationship; 2. Investigate characteristics of Chinese culture with regard to security attachment in marriages in Taiwan.

2. Methods

The participants in this study were an adoptive couple aged over 40 assigned by a legitimate Taiwanese adoption agency. The couple had been evaluated by social workers recommended that the couple undergoes marital therapy in order to address the issues of infertility and tension in their relationship. The couple had been married for over six years, with the husband coming from a conventional and conservative family. The husband also bore the responsibility of carrying on the ancestral line. They already underwent infertility therapy for many years. Therefore, the couple decided to adopt a child through an agency, which, however, was not fully approved by the husband's family. During this time, the couple's families found themselves in many conflicts and misunderstandings due to issues regarding the wife's infertility and their in-laws. The husband's father stopped talking to the wife and the husband found himself in a dilemma. According to the EFT framework, this couple developed a negative interactional cycle (Johnson, 2004), in which the husband was seen as a withdrawer, whereas the wife often was associated with a pursuer.

The main author of this study conducted six 90-minute sessions of EFT counseling for the participating couple and applied IPR by inviting the couple for post-therapy qualitative interview so that they could recall the EFT effect. In order to avoid other counseling processes, the IPR interview was conducted separately for each partner and by the second author of this study rather than the counselor. Each post-therapy interview was approximately 60 minutes long. This study performed content analyses, and classified textual data according to meaning units, categories, and themes (Liang, Zhuang, & Wu, 2012). This study was conducted only after being assessed for its credibility in Taiwan by the Humanities and Social Sciences Research Ethics Committee.

3. Results: Effects of EFT for Adoptive Couple

This chapter discusses the effect of EFT counseling on an adoptive couple based on post-therapy IPR interviews and the couple's responses and dialogue during counseling sessions.

1. Experiential affectional bond and kindness translation: Both partners considered the emphatic responses given by therapists to be the most effective. They described this as 'translation-like' behavior which helped them to understand and experience each other's kindness through EFT 'translation', considering that normally they were unable to express their affectional bond or emotional experiences.

2. Reduction of the negative cycle: The couple suggested that EFT was effective in that they became more conscious of the negative interactional cycle in their marital relationship. Even at home, after counseling sessions, partners found that they were better able to avoid the negative cycle once it occurred and were willing to change together.

3. No more additional pain – helping the couple address their pain caused by the infertility issue: Particularly in Chinese culture, it is difficult for children to offend and to change the attitudes and preconceptions of the older generation, and parents normally have more influence than their children. They felt that the counseling could not solve the old issue that is their in-laws but the kindness translation of each other's behavior during counseling process reduced the negative cycle and provided them more psychological space to face unsolvable family issues.

4. The withdrawer (husband) was more willing to share his attachment needs, while the party under pursuer (wife) was more willing to contribute. The couple said that the most impressive aspect of the therapy was that under the therapist's help, the husband was able to reveal the guilt he had felt for many years because his wife had agreed to marry him and spend her whole life with him despite knowing about his family. He knew that his wife bore all of it because of her feelings toward him. Due to the negative cycle, the couple did not share their attachment needs and feelings with each other for a long time. When the husband agreed to share them, his wife also regained her readiness to support him, becoming more able to solve problems together with her husband. 'Sacrifice' became the main motivation for improving marital quality.

4. Discussion: Features of Chinese Culture in Taiwanese Adoptive Couples

This chapter draws from the aforementioned results to discuss cultural issues surrounding EFT counseling of adoptive couples in Taiwan, including suitability of EFT for Chinese marital counseling and characteristics of Chinese adoptive parents and marital relationships.

1. Suitability of EFT for Chinese marital counseling: With regard to Chinese culture, EFT responses satisfied attachment and deep-level emotional needs of the couple. Emotional exchange between Chinese partners is often based on one's imagination and more introverted method of expression and there is more guessing of one another's feelings than direct communication.

2. Marital relationship and the issue of infertility in Chinese culture: Taiwan is deeply affected by Chinese culture. Men have filial obligations and must meet the expectations of Chinese families' as 'sons.' At the same time, they must also meet expectations in their roles as 'husbands.' Thus, married men are often trapped between two sides. Apart from meeting her husband's expectations of his 'wife,' a woman must also be a good 'daughter-in-law.' Therefore, when a husband cannot be a 'good husband' while being a 'good son,' conflicts easily occur in the marital relationship. When a wife fails to be a 'good daughter-in-law' and does not receive support from her husband, she can easily develop feelings of helplessness and frustration. In Taiwan, marital quality is particularly susceptible to the influence of the husband's family and the issue of in-laws is an important reason for unstable marriages. Apart from a couple's inability to have their own child, infertility also means that they cannot meet their families' expectations. The husband sees himself as an unfilial son, while the wife sees herself as a bad daughter-in-law. Infertility brings pain not only to the marital relationship but also to the entire family.

3. The key to establishing a sense of security in a Chinese marital relationship – gratitude and sacrifice: The issues of infertility and in-laws are normally dilemmas. However, after her husband expressed his feeling of guilt, the wife was willing to make sacrifices and go through thick and thin with him. This sacrifice established a sense of security in the relationship. After the wife expressed her feelings of loneliness and sadness in marriage, the husband expressed willingness to protect her for her whole life, which became his way of maintaining a sense of security in their marriage.

Examination of EFT counseling in this study was limited to one couple, making it difficult to derive conclusions. It is suggested that future studies use the same method and increase the number of adoptive couples participating in EFT counseling in order to better examine adoptive couples and EFT suitability in the context of Chinese culture.

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THE EVIDENCE BASE FOR COGNITIVE BEHAVIOURAL THERAPY IN IRRITABLE BOWEL SYNDROME: WHERE NEXT?

Daan De Coster
King's College NHS Trust (United Kingdom)

Abstract

Background: Irritable bowel syndrome (IBS) is a common functional bowel syndrome defined by pain with an abnormal bowel habit. Psychological interventions endorsed in guidelines for IBS frequently focus on cognitive behavioural therapy (CBT). AIM: to examine the evidence base underlying the recommendations for CBT in IBS. *Methods*: A systematic search of MEDLINE and EMBASE was performed for randomised controlled trials (RCTs) and systematic reviews in English. *Results*: 25 trials were suitable for inclusion out of 168 search results. Most trials had a high risk of bias, with lack of blinding, unspecified statistical power calculations, a low number of participants, compounded by likely publication bias. 1) The trials that compared CBT versus placebo showed significant improvements in symptoms scores and quality of life. 2) For trials comparing CBT versus standard therapy: an RCT of 105 patients found no difference in symptom frequency, whereas two smaller trials found significant improvements in pain, symptoms or quality of life, with mixed long-term persistence. Regarding specific therapies, a trial of 144 patients randomised to either mebeverine or additional CBT found that although effective at first, the impact of CBT on symptoms waned after 6 months and was not cost-effective. 3) In RCTs comparing CBT with other psychological therapies, CBT seemed favourable over stress management, individual education and discussion forums but there were mixed results compared to group psychoeducation, mindfulness and relaxation training. *Conclusion*: Although CBT seems better than placebo, more high quality research is needed to show cost-effectiveness over other treatments.

Keywords: *Irritable bowel syndrome, cognitive behavioural therapy, CBT, IBS, review.*

1. Introduction

Irritable Bowel Syndrome (IBS) is a common (Canavan, West, & Card, 2014) functional bowel condition characterised by abdominal pain with an abnormal bowel habit. Its diagnosis is defined using Manning (Manning, Thompson, Heaton, & Morris, 1978) or ROME IV (Lacy et al., 2016) criteria. Cognitive Behavioural Therapy (CBT) is often recommended as a psychological therapy for IBS in treatment guidelines (Ford et al., 2014) (National Institute for Health and Care Excellence [NICE], 2015).

2. Methods

The author searched EMBASE and MEDLINE for peer-reviewed human randomised controlled trials (RCTs) and meta-analyses on IBS and CBT (search current as of 23/09/16).

3. Results

We found 168 search results: 29 were duplicates, 114 were excluded, and 25 were included.

4. Discussion

4.1. CBT vs. placebo

Blanchard et al. (2007) compared group-based CBT (n=120) versus a symptom and stress monitoring group (n=44), finding it statistically superior on GI symptoms, abdominal pain, bowel regularity and quality of life. Smaller trials had positive findings (Ljotsson et al., 2011), (Lackner et al., 2008, 2010), (Bonnert e al., 2016), (Sanders, Blanchard, & Sykes, 2007), (Greene & Blanchard, 1994), (Tkachuk, Graff, Martin, & Bernstein, 2003), (Vollmer & Blanchard, 1998) or were not adequately reported (Everitt et al., 2013).

4.2. CBT with standard therapy vs standard therapy alone

Some trials used a "treatment as usual" control arm. Boyce (Boyce, Talley, Balaam, Koloski, & Truman, 2003) found no difference. Some trials found the CBT effect only persisted partially beyond

3 months (Oerlemans, van Oda, Herremans, Spreeuwenberg, & van Sandra, 2011), others 8 months (Moss-Morris, McAlpine, Didsbury, & Spence, 2010).

4.2.1. CBT + medication vs medication alone. A CBT - mebeverine vs. mebeverine trial (Kennedy et al., 2005, 2006) found the former led to significant reductions in symptoms scores, with the effect lasting 6 months, but waning after that, without cost-effectiveness (McCrone et al., 2008)

A smaller trial (Mahvi-Shirazi, Fathi-Ashtiani, Rasoolzade-Tabatabaei, & Amini, 2012) found CBT + medication group improved mental health.

4.3. CBT alone vs standard therapy

A small paper (Moss-Morris & Chilcot, 2013) showed CBT to significantly positively affect illness perception.

4.4. CBT vs. other psychological therapies

A well-powered study (Jang et al., 2014) found CBT had significant better effects on bowel symptoms over time than psychoeducation. Others vs. group psychoeducation (Blanchard et al., 2007) and vs. internet-delivered stress management (Ljótsson et al., 2011), found no significant effects on symptoms. There were further smaller trials on mindfulness (Zomorodi, Abdi, & Tabatabaee, 2014), relaxation training (Craske et al., 2011) and internet support forums (Andersson et al., 2011).

5. Conclusions

Most trials were at a high risk of bias, with lack of blinding, unspecified statistical power calculations, low numbers of participants, and likely publication bias. More research is needed.

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PSYCHOMETRIC CHARACTERISTICS OF THE BULGARIAN VERSION OF THE TORONTO ALEXITHYMIA SCALE (TAS-20)

Kiril Bozgunov[1], Vencislav Popov[1,2], Elena Psederska[1], Georgi Vasilev[1], Dimitar Nedelchev[1], & Jasmin Vassileva[3]

[1]*Bulgarian Addictions Institute, Sofia 1336 (Bulgaria)*
[2]*Department of Psychology, Carnegie Mellon University, Pittsburgh, PA 15213 (USA)*
[3]*Department of Psychiatry, Virginia Commonwealth University, Richmond, VA 23284 (USA)*

Abstract

This study evaluates the psychometric properties of the Bulgarian version of the most widely used scale for assessing alexithymia, a central construct related to deficits in emotional processing and self-regulation. There are no research studies of alexithymia in Bulgaria, nor adaptations of standardized assessment instruments. The Toronto Alexithymia scale (TAS-20) is a 20-item self-report measure commonly used for indexing alexithymia. The Bulgarian translation of TAS-20 was completed by 176 participants, 82 of whom met lifetime criteria for heroin or amphetamine dependence, who were in protracted abstinence. Exploratory factor analyses revealed that the current sample is best described by two-factor structure of the instruments where the first factor reflects *difficulties identifying and describing feelings* and the second factor describes *externally oriented thinking*. The internal consistency of the total scale score (α = .86) and the first factor (α = .89) were satisfactory. The Cronbach's alpha of the second factor – *externally oriented thinking* was acceptable (α = 0.69). The correlation between the two factors was low (r = .16). Future studies on TAS-20 in the Bulgarian population are needed.

Keywords: *Alexithymia; Toronto Alexithymia Scale; Factor analysis.*

1. Introduction

Alexithymia is a specific multidimensional personality constellation of cognitive and affective deficits in emotional processing and self-regulation. The alexithymia construct is generally defined as characterized by four distinct features: (1) difficulties identifying feelings and inability to differentiate between feelings and bodily sensations, (2) difficulties verbalizing and describing subjective feelings to others, (3) diminished symbolic and imaginative activity and marked reduction/absence of fantasy life and (4) externally oriented thinking style (Sifneos, 1973).

Alexithymia has long been associated with increased risk of development of variety of mental and psychosomatic disorders including substance use disorders (Haviland, Shaw, MacMurray, & Cummings 1988), eating disorders (Cochrane, Brewerton, Wilson, & Hodges, 1993), etc.

In the past few decades the construct of alexithymia has gained increasing scientific interest due to its relations to various psychiatric disorders and its predictive ability regarding the outcome of different therapeutic interventions (Ogrodniczuk, Piper, & Joyce, 2011).

There is a variety of self-assessment methods for examining alexithymia. Among these are Schalling-Sifneos Personality Scale (SSPS; Apfel & Sifneos, 1979), Alexithymia Provoked Response Questionnaire (APRQ; Krystal, Giller, & Cicchetti, 1986), Beth Israel Hospital Psychosomatic Questionnaire (BIQ; Sifneos, 1973), which failed to demonstrate adequate reliability and validity estimates.

Toronto Alexithymia Scale -20 (Bagby, Parker, & Taylor, 1994a; Bagby, Tylor & Parker, 1994b) is the most widely used instrument to measure alexithymia, which demonstrates adequate validity and reliability and has been cross-validated in various languages and cultures (e.g. Italian (Bressi et al., 1996), Japanese (Komaki et al., 2003), etc.).

The term alexithymia is not widely recognized or used in the Bulgarian psychological literature. There are no research studies of alexithymia in Bulgaria, nor adaptations of standardized assessment instruments.

The main goal of the current study is to assess the factorial structure and the psychometric properties of the Bulgarian version of the TAS-20.

2. Methods

2.1. Participants and Procedures

Participants included 176 individuals (121 males, 55 females), between the ages of 18 to 50 (M= 27) who participated in a larger study (2009-2015), focusing on impulsivity among Bulgarian stimulant and opiate users. From these, 82 participants had a lifetime history of substance dependence (SD): 25 participants had a history of heroin addiction (20 males, 5 females), 27 had a history of amphetamine addiction (18 males, 9 females), 29 had a history of addiction to multiple substances (i.e. polysubstance addiction) (24 males, 5 females), and 94 participants had no lifetime or current history of addiction to any substance (58 males, 36 females). The majority of the participants from the SD groups were in a protracted abstinence (i.e. DSM-IV full sustained remission for more than one year) – on average 1.49 years for the amphetamine group and 3.66 years for the heroin group. Abstinence from alcohol and drug use at the time of testing was verified by Breathalyzer test and urine toxicology screen. All participants had to meet the following inclusion criteria: (1) have a minimum of 8th grade education; (2) be able to read and write in Bulgarian; (3) have an IQ higher than 75, (4) have no history of psychosis or TBI w/ LOC >30 min; (5) be HIV-seronegative as verified by rapid HIV screening test.

2.2. Measures

The *Toronto Alexithymia Scale- 20* (TAS-20) was administered as part of a larger research battery including clinical interviews, self-assessment questionnaires and neurocognitive tasks. The TAS-20 consists of 20 items that are rated on a 5-degree Likert scale, where some of the items are reversed. The original scale demonstrates three-factor structure, which is consistent with the theoretical definition of the construct: (F1) difficulties in identifying feelings, (F2) difficulties in describing feelings, (F3) externally oriented style of thinking. For the purpose of the study TAS- 20 was translated in Bulgarian using translation/back-translation procedures.

3. Results

Analyses were completed through R (R Core Team, 2014) and the packets *psych* (Revelle, 2015) and *lavaan* (Rosseel, 2012). The KMO[1] criteria revealed that the data were suitable for factoring with EFA (0.82). Two and three-factor models were tested. All 20 items were subjected to principal axis factoring with oblimin rotation and polychoric correlation matrix. Only the items with a factor score above 0.3 were chosen from the initial EFA's to form subscales. Three items were excluded due to low factor loadings. The two-factor model (presented in Table 1) (*difficulty identifying and describing feelings (DIDF); externally oriented thinking (EOT)*) described better the structure of the data. In the three-factor model the factor '*difficulty identifying and describing feelings*' was divided in two separate factors as in the original scale[9] but in our sample this distinction was not entirely successful. Each of the two factors contained one item, that was theoretically supposed to belong to the other. Similar to other studies (Meganck, Vanheule, & Desmet, 2008; Loas et al., 2001) we found that the DIDF factor correlated weakly with the EOT factor ($r = .16$, $p = .038$).

Our data indicated that the Bulgarian version of the TAS-20 had adequate internal consistency regarding total scale ($\alpha = .86$) and factor 1 *DIDF* ($\alpha = .89$) and acceptable internal consistency regarding factor 2 *EOT* ($\alpha = .69$). It should be noted that the EOT subscale consisted of only 5 items and Cronbach's alpha is traditionally affected by the number of items. No significant gender differences were observed. No significant group differences were observed except for F2 *externally oriented thinking*, where controls scored higher than substance dependent individuals (SDI).

The total TAS-20 score correlated positively with measures of anxiety, depression, aggression and impulsivity, which was theoretically expected. Both factors demonstrated independent patterns of relationships with different measures of internalizing and externalizing psychopathology, where F1 was moderately and positively associated with aggression (r=.49), psychopathy (r= .28), trait anxiety (r=.49), depression (r=.49) and impulsivity (r= .49) whereas F2 was negatively related to sensation seeking (r= .26), estimated IQ (r= -.27) and years of education (r= -,30).

[1]The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was well above the 0.50 minimally accepted level.

Table 1. Factor Loadings from the exploratory factor analysis of TAS-20. Two-factor solution.

Item		F1	F2
Difficulty identifying and describing feelings			
3.	I have physical sensations that even doctors don't understand.	**0.52**	0.04
13.	I don't know what's going on inside me.	**0.75**	0.04
11.	I find it hard to describe how I feel about people.	**0.68**	0.15
14.	I often don't know why I am angry.	**0.63**	0.00
1.	I am often confused about what emotion I am feeling.	**0.62**	-0.24
7.	I am often puzzled by sensations in my body.	**0.55**	0.03
6.	When I am upset, I don't know if I am sad, frightened, or angry.	**0.63**	-0.12
2.	It is difficult for me to find the right words for my feelings.	**0.73**	-0.01
9.	I have feelings that I can't quite identify.	**0.71**	-0.12
4.	I am able to describe my feelings easily.*	**0.32**	0.14
12.	People tell me to describe my feelings more.	**0.57**	0.17
17.	It is difficult for me to reveal my innermost feelings, even to close friends.	**0.40**	**0.32**
Externally oriented thinking			
15.	I prefer talking to people about their daily activities rather than their feelings.	0.28	**0.34**
18.	I can feel close to someone, even in moments of silence.*	-0.04	**0.46**
19.	I find examination of my feelings useful in solving personal problems.*	-0.07	**0.69**
10.	Being in touch with emotions is essential.*	0.00	**0.49**
5.	I prefer to analyze problems rather than just describe them.*	0.10	**0.50**
8.	I prefer to just let things happen rather than to understand why they turned out that way.	-	-
16.	I prefer to watch "light" entertainment shows rather than psychological dramas.	-	-
20.	Looking for hidden meanings in movies or plays distracts from their enjoyment.	-	-

***** Indicates items that are reverse-scored

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AN EXAMINATION OF PARENTING STYLES AND EARLY MALADAPTIVE SCHEMAS ON PSYCHOLOGICAL SYMPTOMS

Burcu Kömürcü & Serel Akdur
Faculty of Languages History and Geography, Ankara University (Turkey)

Abstract

This study was designed to examine the relationship between early maladaptive schemas (EMSs), perceived parenting styles, psychological symptoms in Turkish university students. The sample of the study consisted of 348 undergraduate students (268 female and 80 male), ages ranging 18-26. EMSs were assessed by "Young Schema Questionnaire- Short Form 3", perceived parenting styles were evaluated by "The Turkish versions of the Young Parenting Inventory", and psychological symptoms were determined by "The Symptom Assessment-45 Questionnaire". The hierarchical multiple regression analyses revealed that perceived parenting styles and schema domains have predictive power on psychological symptoms. These variables were inserted into the equation in three blocks; perceived maternal parenting styles, perceived paternal parenting styles and schema domains, respectively. Perceived maternal pessimistic/worried, overprotective/anxious, overpermissive/boundless parenting styles and perceived paternal belittling/criticizing and normative parenting styles predicted psychological symptoms. Furthermore, disconnection & rejection, impaired autonomy & performance, and overvigilance & inhibition domains predicted psychological symptoms. All these variables explained %55 of the total variance. The results, limitations and directions for future studies were discussed in consideration of literature.

Keywords: *Early maladaptive schemas, parenting styles, psychological symptoms.*

1. Introduction

Early maladaptive schemas is defined as "a broad, pervasive theme or pattern, comprises of memories, emotions, cognitions and bodily sensations, regarding oneself and one's relationship with others, developed during childhood and adolescence, elaborated throughout one's lifetime and dysfunctional to a significant degree" (Young, Klosko, & Weishaar, 2003, p.7).In Young's model, EMSs are mostly related to the maladaptive childhood experiences, in particular with parents (Young, 1999; Young et al., 2003). Young (1999) proposed that there were 18 different EMSs under 5 schema domains. These domains are disconnection & rejection, impaired autonomy & performance, impaired limits, other directedness and overvigilance & inhibition. Although Schema Theory was developed for patients with chronic psychological problems and personality disorders, preliminary researches on EMSs suggested that EMSs have an important role on psychological problems as mood and anxiety disorders. These researches showed that higher scores on schema domains are related to psychological symptoms, with little specifity (e.g., Calvete, Orue, & Hankin 2013; Fischer, Smout, & Delfabbro, 2016).

Schema Theory proposes a relationship between perceived parenting styles and EMSs, which are also related to psychopathology (Young, 1999). Thus, the aim of the present study was to examine the relationships between perceived parenting styles, schema domains and psychological symptoms in Turkish university students.

2. Methods

2.1. Participants

The study sample is consisted of 348 Turkish college students in Ankara (268 female and 80 male), aged from 18 to 26 (M= 21.42; SD= 1.89).

2.2. Measures

Young Schema Questionnaire-Short Form 3 (YSQ-SF3, Young, 1999) which has five schema domains was used to determine EMSs. Young Parenting Inventory (YPI, Young, 1994) was used to evaluate participants' perceived maternal and paternal parenting styles. The reliability and validity study of YPI had showed ten common factor structures for both mother and father forms of the inventory in Turkish sample (Soygüt, Çakır & Karaosmanoğlu, 2008). The Symptom Assessment-45 Questionnaire

(SA-45, Maruish, 2004) consists of nine symptom domain scales, namely anxiety, depression, interpersonal sensitivity, hostility, obsessive-compulsive, psychoticism, paranoid ideation, somatization, and phobic anxiety. In the present study, psychological symptoms were assessed by Global Symptom Index score of SA-45. The Turkish adaptation studies of these instruments have shown adequate reliability and validity properties.

2.3. Statistical Analyses

The data set analyzed by SPSS 21.00. Firstly, descriptive statistics of the study were conducted. Further, the relationship between EMSs, parenting styles and psychological symptoms were examined via the hierarchical multiple regression analyses.

3. Results

The hierarchical multiple regression analyses was calculated to assess the perceived parenting styles and EMSs to predict levels of psychological symptoms. Preliminary analyses were performed to ensure normality, linearity, multicollinearity and homoscedasticity. The hierarchical multiple regression analyses revealed that perceived parenting styles and EMSs have predictive power on psychological symptoms. Perceived maternal parenting styles values were entered to Step 1 and explained 20% of the variance in psychological symptoms ($F_{1, 344} = 28.97$, $p < .001$). At Step 2, entry of perceived paternal parenting styles values contributed 6% additional variance ($F_{1, 342} = 25.04$, $p < .001$).Perceived maternal pessimistic/worried, overprotective/anxious, overpermissive/boundless parenting styles and perceived paternal belittling/criticizing and normative parenting styles predicted psychological symptoms.Schema domain measures significantly contributed to the equation ($F_{1, 339} = 54.72$, $p < .001$). In the final model, disconnection & rejection ($\beta = .43$, $p < .001$), impaired autonomy & performance ($\beta = .17$, $p < .01$), and overvigilance & inhibition ($\beta = .13$, $p < .05$) domains are statistically significant. All these variables explained 55% of the total variance (see Table 1).

Table 1. The Summary of Regression Model.

Variables	R	R^2	Adjusted R^2	β	*t*	F Change	Df	F
Step 1 (Maternal Parenting Styles)								
Pessimistic/Worried	.36	.13	.13	.03	.81	51.82	1-346	51.82***
Overprotective/Anxious	.42	.18	.17	.08	1.87	19.71	1-345	37.16***
Overpermissive/Boundless	.45	.20	.20	-.003	-.06	10.53	1-344	28.97***
Step 2 (Paternal Parenting Styles)								
Belittling/Criticizing	.50	.25	.25	.07	1.56	24.15	1-343	29.23***
Normative	.52	.27	.26	.03	.58	6.42	1-342	25.04***
Step 3 (Schema Domains)								
Disconnection & Rejection	.73	.54	.53	.43	7.32***	196.38	1-341	65.51***
Impaired Autonomy & Performance	.75	.56	.55	.17	3.26**	15.63	1-340	60.80***
Overvigilance & Inhibition	.75	.56	.55	.13	2.44*	5.97	1-339	54.72***

** p<.05, ** p<.01,*** p<.001

4. Discussion

The present study examined the predictive power of perceived parenting styles and EMSs on psychological symptoms. The results showed that the increase in disconnection & rejection, impaired autonomy & performance, and overvigilance & inhibition domain scores related to the increase in psychological symptoms. Researchers propose that disconnection & rejection domain is a robust predictor depression among all domains of EMSs (Eberhart, Auerbach, Bigda-Peyton, & Abela, 2011; Roelofs, Lee, Ruijten, & Lobbestael, 2011), and the impaired autonomy & performance domain has predictive power on depression, as well (Calvete et al., 2013; Renner, Lobbestael, Peeters, Arntz, & Huibers, 2012). In addition, the disconnection/rejection and other-directedness domains are predictor of social anxiety (Calvete, 2014). The impaired autonomy & performance domain is correlated with OCD symptom dimensions (Kim, Lee, & Lee, 2014). Stopa, Thorne, Waters, & Preston, (2001) found that EMSs were significantly correlated with the symptoms of phobic anxiety. In this respect, the results of our study related to the schema domains consistent with the literature.

In this study, the results showed that the increase in perceived maternal pessimistic/worried, overprotective/anxious parenting styles and perceived paternal belittling/criticizing and normative parenting styles predicted the increase in psychological symptoms. Another study in Turkish sample,

disconnection & rejection domain mediated the relationship between perceived maternal rejection during childhood and anxiety (Sarıtaş-Atalar & Gençöz, 2015). A variety of studies showed the relationship between maladaptive parenting and EMSs (such as, Lumley & Harkness, 2007; Thimm, 2010). In addition, our findings consistent with the literature due to EMSs have been found to be associated with psychopathology (Young et al, 2003).On the other hand, another finding of our study was the increase in perceived overpermissive/boundless maternal parenting style was related to the decrease in psychological symptoms. According to Sheffield, Waller, Emanuelli, Murray, & Meyer (2005), there are likely to be complex interactions between actual parenting behaviour, perceived parenting behaviour and the later psychopathology, and also there will be effects of recall bias. Another explanation of this finding, it might be thought that an overpermissive/boundless maternal parenting style could not be perceived as "boundless" due to Turkey's collectivistic society, it could be perceived a functional maternal behavior.There are some limitations of the present study. First, the study was conducted on a limited number of undergraduate sample and secondly, assessments were limited to self-reports. In conclusion, still replication of these results from different samples would help to confirm whether these findings apply to individuals with clinically significant problems and to evaluate the clinical assessment for interventions.

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ANALYSIS OF MORAL DISENGAGEMENT OF ADOLESCENTS WHO ARE ABUSED BY THEIR COUPLES

Isabel Cuadrado-Gordillo & Inmaculada Fernández-Antelo
Department of Psychology and Anthropology, University of Extremadura (Spain)

Abstract

Recent studies on dating violence between adolescents have revealed that it has a high prevalence. Dating violence has been found to be influenced by many variables such as country, culture, sex and type of violence. Studies show that individuals' ability to label or recognize experiences of violence as abuse are influenced by several factors such as general attitudes toward violence, childhood abuse experiences, feelings of guilt, victims' perceived fear, and defenses that minimize and justify abusive or violent behaviors to protect the positive aspects of the relationship. This study examine the relationships between the mechanisms of moral disengagement and adolescent dating violence. The relationship between moral reasoning and action is mediated by moral disengagement: a self-regulatory process that enables moral agency, and helps individuals reduce the tension created when enacted behaviours do not match personal standards and moral norms. The sample consisted of 638 adolescents aged between 15 and 18. The instruments used for the collection of data were two questionnaires: Dating Violence Questionnaire (CUVINO) and Bandura' questionnaire "The Mechanisms of Moral Disengagement". The results attest that adolescents who feeling trapped in their relationships maintained higher levels of moral disengagement. Also, the results show a relationship between moral disengagement mechanisms and dating violence depending on sex (males).

Keywords: *Dating, moral disengagement, adolescence, violence, victimization.*

1. Introduction

Violence in adolescent dating relationships is a phenomenon that has been studied in the literature for the last several decades. However, attention paid to teenage dating violence has been considerably lower than that paid to gender violence. Studies on dating violence between adolescents have revealed that it has a high prevalence and show that individuals' ability to label or recognize experiences of violence as abuse are influenced by several factors such as general attitudes toward violence, childhood abuse experiences, feelings of guilt, victims' perceived fear, and defenses that minimize and justify abusive or violent behaviors to protect the positive aspects of the relationship. This study examine the relationships between the mechanisms of moral disengagement and adolescent dating violence.

In the process of relation between adolescents, they monitor their conduct in certain conditions, judge it in relation to their moral standards and perceived circumstances, and regulate their actions by the consequences they apply themselves (Bandura, 2002). However, people with apparently normal moral standards sometimes behave reprehensibly towards others, and disengage from their normal moral standards (Bandura, 1999). According to theory of moral disengagement, this self-regulatory process can fail when moral disengagement mechanisms disable the cognitive links between transgressive behavior and the self-sanctioning that should prevent it. Moral disengagement concentrates on cognitively restructuring inhumane conduct into a benevolent conduct by using up to eight mechanisms, namely moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion of possible consequences, the attribution of blame, and dehumanisation (Bandura, Barbarnelli, Caprara, Pastorelli, and Regalia, 2001).

2. Method

The sample consisted of 638 adolescents aged between 15 and 18.

The instrument used for data acquisition was two questionnaires. The first: CUVINO (Dating Violence Questionnaire, Rodríguez-Franco et al., 2010). This instrument was developed to assess the victimization of adolescents and youth in their dating relationships. The CUVINO is composed of 42 behavioral items describing situations of abuse that may occur in dating relationships. It is responded on a Likert scale from 0 to 4 according to the frequency with which each item has been experienced (0=never, 1=sometimes, 2=often, 3=usually, 4=almost always). Total values range between 0 and 168 points; a score of 0 means no abuse by participants' boyfriend or girlfriend and scores ranging from 1 to 168 indicate the presence and the seriousness of victimization. The 42 items are clustered into eight factors that represent eight forms of abuse in dating relationships: Detachment, Humiliation, Sexual Abuse, Coercion, Physical Abuse, Gender-based Violence, Emotional Punishment and Instrumental Violence. In our study, alpha values ranged between .52 – in the Instrumental Violence factor – and .80 – in the Humiliation factor. The remaining factors had the following reliability: Detachment (.77), Sexual Abuse (.72), Coercion (.71), Physical Abuse (.70), Gender-based Violence (.69) and Emotional Punishment (.63). In the validation of the instrument with young Spanish-speaking youth, Rodríguez-Franco et al. (2010) reported reliability values ranging between .58 and .80 for the individual factors (seven factors with alpha values ≥ .67) and a reliability greater than .90 for the entire instrument.

The second instrument: The Mechanisms of Moral Disengagement Questionnaire (Bandura, Barbaranelli, Caprara & Pastorelli, 1996), is a scale which contains 32 items with each of the 8 moral disengagement mechanisms represented by 4 items (α from .79 to .87): Diffusion of responsibility, displacement of responsibility, euphemistic labeling, advantageous comparison, distortion of consequences, dehumanization of victim, attribution of blame and moral justification. Participants rate their degree of acceptance of moral exonerations for transgressive conduct using a 5 point likert scale ranging from Strongly Disagree to Strongly Agree. Scores can range from 32 – 170, with higher scores signifying high levels of moral disengagement and lower scores signifying lower levels of moral disengagement.

3. Results

The distribution of sample of adolescents that feeling abused, afraid and trapped in their relationship is the following:

Table 1. Feeling abused, afraid and trapped in the relationship (Frecuency).

	Abused	**Afraid**	**Trapped**
Men	14	25	56
Women	13	22	57
Total	**27**	**47**	**113**

Results shown that abused adolescents adopted greatly diffusion and displacement of responsibility and less the attribution of blame and dehumanization of victim whereas afraid adolescents used greatly distortion of consequences and euphemistic labeling and less the dehumanization of victim. Finally, trapped adolescents maximize distortion of consequences and minimize the moral justification.

Table 2. Mean scores of moral disengagement mechanisms by roles.

Mechanisms of Moral Disengagement	**Abused**	**Afraid**	**Trapped**
	Mean (sd)	Mean (sd)	Mean (sd)
Diffusion of responsibility	2.79 (.69)	2.34 (.65)	2.67 (.71)
Displacement of responsibility	2.58 (.63)	2.61 (.59)	2.88 (.68)
Euphemistic labeling	2.54 (.72)	2.68 (.64)	2.49 (.66)
Advantageous comparison	2.24 (.63)	2.55 (.73)	2.42 (.59)
Distortion of consequences	2.18 (.65)	2.94 (.71)	3.01 (.67)
Dehumanization of victim	2.01 (.58)	2.14 (.61)	2.26 (.56)
Attribution of blame	1.95 (.62)	2.20 (.58)	2.31 (.57)
Moral justification	2.07 (.65)	2.42 (.64)	2.16 (.63)

Regarding gender differences, men score higher in all mechanisms of moral disengagement. However, these differences are not statistically significant.

Table 3. Mean scores of moral disengagement mechanisms by sex.

Mechanisms of Moral Disengagement	Men	Women
	Mean (sd)	Mean (sd)
Diffusion of responsibility	2.64 (.72)	2.45 (.65)
Displacement of responsibility	2.71 (.68)	2.52 (.64)
Euphemistic labeling	2.53 (.69)	2.36 (.67)
Advantageous comparison	2.48 (.66)	2.39 (.59)
Distortion of consequences	2.87 (.59)	2.35 (.72)
Dehumanization of victim	2.31 (.74)	2.12 (.62)
Attribution of blame	2.36 (.68)	2.13 (.58)
Moral justification	2.18 (.65)	2.09 (.63)

4. Discussion and Conclusions

Using the mechanisms of moral justification and advantageous comparison, the adolescents may justify acts of aggression and violence (Caroli & Sagone, 2014). When victims justify the violent facet of their interactions and do not classify them as abusive situations, they usually resort to explanations related to the attribution of a playful and fun character. These violent forms of relating are interpreted as patterns of behaviour that have become massively extended among the adolescent population, and have become accepted as a normalized and harmless way of communicating with other adolescents. Self-regulation and refraining from committing acts of violence is due, in part, to the fact that people cannot easily escape the moral standards that they apply to themselves (Anderson & Bushman, 2002).

By using the mechanisms of displacement and diffusion of responsibility, the adolescents who feeling abused, afraid or trapped become passive, and do not see themselves as being the responsible agent of their actions. Self-censure will not be activated if the consequences of a person's actions are distorted. It seems likely that a high sense of personal responsibility is a weak restrainer of aggressive conduct when the aggressor does not see the harm their actions inflict on others.

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THE ROLE OF PERSONALITY ON SELF-REPORTED DIFFICULTIES IN EXECUTIVE FUNCTION

Daniel Adrover-Roig, Raúl López-Penadés, Victor Sanchez-Azanza, Lucía Buil-Legaz, & Eva Aguilar-Mediavilla

Department of Applied Pedagogy and Educational Psychology, Universitat de les Illes Balears, (Spain)

Abstract

The self-assessment of executive functions (EF) is a commonly established practice in neuropsychological settings. However, little is known regarding which aspects of EF are targeted through these subjective measures and to what extent these are influenced by other variables. Recently, Buchanan (2016) showed that self-reported problems in EF by means of the Webexec and DEX were correlated directly with neuroticism and inversely with conscientiousness. The aim of the present study was to replicate Buchanan's findings by using a self-report test of EF, the Behavioral Rating Inventory of Executive Function (BRIEF) and four objective measures of EF. Two hundred participants between 19 and 44 years of age were administered the NEO-FFI five factor personality questionnaire (Costa & McRae, 1992) and four computerized tasks of EF based on the Psychology Experiment Building Language (PEBL; Mueller & Piper, 2014) that tapped the core components of EF (inhibition, updating, and set shifting). Overall, self-reported problems in EF did not show high correlations with objective measures of EF (all *r*s <.15). Only high scores in conscientiousness were correlated with a larger post-error slowing in the flanker task (r = .23**). However, BRIEF scores strongly correlated with high scores in neuroticism (r = .45***) and with low scores in conscientiousness (r = -.71***) of the NEO-FFI. Furthermore, regression analyses showed that conscientiousness accounted for a 51% of BRIEF scores while neuroticism only captured a 3.8% of its variance. Therefore, it does not seem adequate to evaluate EF through verbal reports, since these capture mainly personality traits.

Keywords: *Cognitive control, personality, subjective measures, dysexecutive, assessment.*

1. Introduction

Self-assessed problems in executive functioning (EF) can be considered as an everyday practice in neuropsychological settings. Following the results obtained through this evaluation, several programs and actions might be considered to specifically enhance EF. However, it has been recently noted that verbal self-reported measures of EF might be tapping personality traits rather tan EF (Buchanan, 2016). Buchanan's (2016) study evaluated self-reported measures of EF by using the Webexec (Buchanan et al., 2010) and the Dysexecutive Questionnaire (DEX; Wilson, Alderman, Burgess, Emslie, & Evans, 1996) together with two objective measures of memory span, namely digits forward and digits backwards (Weschler, 2008), and a measure of cognitive flexibility by means of the Trail Making Test (Reitan, 1955). The purpose of the present study was to replicate Buchanan's results by using another measure of self-assessed difficulties in EF, along with several measures of computerized tasks tapping on the main EF components (Miyake et al., 2000).

2. Methods

Two hundred participants (49 men) between 19 and 44 years of age (M = 22.05, SD = 4.49) with 1 to 6 years of university education (M = 2.23, SD = 1.08) were administered the NEO-FFI personality questionnaire (Costa & McRae, 1992), the adult version of the Behavioral Rating Inventory of Executive Function (BRIEF; Gioia, Isquith, Guy, & Kenworthy, 2000) and four computerized tasks of EF (interference control/motor inhibition, viso-spatial working memory and task-set shifting) using the Psychology Experiment Building Language (PEBL; Mueller & Piper, 2014). The computerized tasks of EF included a Flanker task, a Stop Signal task, a Corsi Blocks task and a Feature Switching task.

3. Results

In general, self-reported problems in EF did not significantly correlate with computerized measures of EF. Only high scores in conscientiousness correlated both with a larger post-error slowing effect in the Flanker task (r = .23**) and also with a larger number of correct trials in the Stop SigNal task (r = .14*). In addition, high scores in neuroticism were related to both a larger number of inhibition errors in the Stop Signal task (r = .13*) and to a larger number of errors in the Feature Switching task (3 features predictable; r =.14*). Interestingly, difficulties in executive control, as assesed by means of BRIEF scores, were strongly correlated with measures of personality, particularly with the dimensions of neuroticism and conscientiousness. Specifically, BRIEF scores (difficulties in the General Executive Component, GEC) correlated with high scores in neuroticism (r = .45***) and with low scores in conscientiousness (r = -.71***) of the NEO-FFI. Also, a hierarchical regression model with BRIEF score (GEC) as the predicted variable with both personality scores and objective measures of EF as predictors was conducted. The model was significant (F = 185.65; p <.0001), and BRIEF score (GEC) was only prdicted by conscientiousness, ΔR^2 = .51, and neuroticism, ΔR^2 = .038 (both p values for β = <.0001). Therefore, the largest amount of explained variance was mainly capitalized by conscientiousness (51%), followed by neuroticism (3.8%).

4. Discussion

Self-reported problems in EF were strongly related to two personality traits, namely high neuroticism and mainly low conscientiousness. Thus, we do not recommend to evaluate EF through verbal reports, since these capitalize mainly on personality traits. The reported correlation pattern mirrors that found by Buchanan (2016) with even stronger correlations for conscientiousness (r = .52 in Buchanan's, r = .71 in the present study). Therefore, EF might be better captured by the administration of reliable objective measures of executive control. We show that objective measures of EF and self-reported difficulties in EF are mainly unrelated by using a wider set of computerized tasks to that administered in Buchanan (2016). However, given that the sample was composed by healthy young university students, low variances of this rather homogeneous sample might have prevented correlations between BRIEF scores and objective measures of EF to emerge. Despite this limitation, we believe that it does not seem adequate to evaluate EF verbally, since this evaluation method only captures specific dimensions of personality and in particular, conscientiousness.

5. Conclusions

The present work extends previous notions that outcomes in computerized tasks of EF share very little in common with self-assessed difficulties in EF, which are mainly related to personality.

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RELATIONSHIP EXPERIENCE: AN EVALUATION IN TERMS OF EARLY MALADAPTIVE SCHEMAS

Büşra Aslan & Gülşen Kaynar
Faculty of Languages History and Geography, Ankara University (Turkey)

Abstract

Objective: A maladaptive schema is defined as a negative perception of oneself, others, and the environment, which is pervasive and gives meaning to each experience. When we consider that schemas contain negative beliefs about oneself and others, we can make predictions about how different schemas may relate to experiences in romantic relationship. With respect to these, the aim of the present study is to examine the relationships between early maladaptive schemas, experiences in close relationships and loneliness.
Method: The sample of the study consisted of 104 undergraduate students, 63 females and 43 males. The variables were assessed by Young Schema Questionnaire- Short Form 3 (YSQ), Experiences in Close Relationships Inventory- Revised (ECRI-R) and UCLA Loneliness Scale.
Results: In statistical analysis, multiple regression analysis was made. The avoidance style, subscale of ECRI-R was predicted by disconnection/rejection and other-directedness, the subscales of YSQ. The anxiety style, subscale of ECRI-R was predicted by disconnection/rejection, the subscale of YSQ, age and relationship status
Conclusion: The results of this study discussed in the light of the relevant literature.

Keywords: *Early maladaptive schemas, experiences in close relationships.*

1. Introduction

Young has proposed in Schema Therapy that early maladaptive schemas (EMS) are developed by unmet needs during childhood. EMS's are defined as 'self-defeating emotional and cognitive patterns that begin early in our development and repeat throughout life' (Young, Klosko & Weishaar, 2003, p. 7). Attachment Theory (Bowlby, 1969) also suggests that repeated patterns of interaction with the caregivers result in general representations of a person about the self and others, defined as internal working models by Bowlby. In this respect, EMS are similar to internal working models. However, EMS may be specific cognitive components of internal working models (Simard, Moss & Pascuzzo, 2011). It is considered that both of these conceptions, serve as structures for processing of experiences involving the self and others, can explain many aspects of romantic relationships. Based on Attachment Theory, Hazan and Shaver (1987) have suggested that attachment styles, developed during childhood, may influence adult attachment in romantic relationship. In other words, Hazan and Shaver conceptualized romantic love as an attachment process. Few studies have provided support for relations between EMS and attachment styles (McLean, Bailey & Lumley, 2014; Simard, Moss & Pascuzzo, 2011) but there are limited number studies that investigated relations between EMS and attachment in adult romantic relationships (experiences in close relationships).

Because of the limited number of studies that have investigated the link between EMS and romantic attachment, the main objective of the current study is to examine associations between EMS and adult romantic attachment in Turkish individuals.

2. Methods

2.1. Participants

The study sample is consisted of 104 participants (63 female and 41 male), aged from 16 to 51 (M= 27.46; SD= 6.30).

2.2. Measures

Young Schema Questionnaire-Short Form 3 (YSQ-SF3, Young, 1999) which has five schema domains was used to determine EMSs. University of California Los Angeles (UCLA) Loneliness Scale (Russell, Peplau and Ferguson, 1978) was used to evaluate participants' interpersonal relationships. The

Experiences in Close Relationships Questionnaire was developed by Fraley, Waller, and Brennan (2000). ECR-R is a 36- item 7-point Likert type self-report measure of adult attachment. More specifically, it measures adult attachment within the context of romantic relationships. The Turkish adaptation studies of these instruments have shown adequate reliability and validity properties.

2.3. Statistical Analyses

The data set analyzed by SPSS 21.00. Firstly, descriptive statistics of the study were conducted. Further, the relationship between EMSs, experiences in close relationships and loneliness were examined via the multiple regression analyses.

3. Results

The multiple regression analyses was calculated to assess demographic variables and EMSs to predict levels of avoidance. The multiple regression analyses revealed that disconnection/rejection and other-directedness schema domains have predictive power on avoidance style. Disconnection/rejection schema domain explained 30% of the variance in avoidance ($F_{1, 102} = 44.11$, $p < .001$). Other-directedness contributed 2% of additional variance ($F_{2, 101} = 24.90$, $p < .001$). These two variables explained 32% of the total variance (see Table 1).

Table 1. Variables predict avoidance style.

Variables	R	R^2	Adjusted R^2	β	*t*	F Change	Df	F
Disconnection/rejection	.55	.30	.30	.45	4.76	44.11	1-102	44.11***
Oher-directedness	.58	.33	.32	.20	2.06	4.28	2-101	24.90***

** p<.05, ** p<.01,*** p<.001

The multiple regression analyses was calculated to assess demographic variables and EMSs to predict levels of anxiety style. The multiple regression analyses revealed that disconnection/rejection schema domain, age and relationship status have predictive power on anxiety style. Disconnection/rejection explained 24% of the variance in anxiety style ($F_{1, 102} = 33.02$, $p < .001$). Age contributed 6% of additional variance ($F_{2, 101} = 22.69$, $p < .001$). Also, relationship status contributed 2% of the variance ($F_{3, 10o} = 16.90$, $p < .001$). These three variables explained 32% of the total variance (see Table 2).

Table 2. Variables predict anxiety style.

Variables	R	R^2	Adjusted R^2	β	*t*	F Change	Df	F
Disconnection/rejection	.50	.24	.24	.42	4.94	33.02	1-102	33.02***
Age	.56	.31	.30	-.24	-2.87	9.59	2-101	22.69***
Relationship status	.58	.34	.32	.17	1.99	3.97	3-100	16. 90***

** p<.05, ** p<.01,*** p<.001

4. Discussion

In this study, we examined the relationship between EMS and adult attachment in romantic relationships. We hypothesized that higher scores on EMS and demographic variables (age, relationship status) would predict higher scores on adult attachment in romantic relationship (avoidance style and anxiety style). This hypothesis was partially confirmed because only two of five schema domain predicted both of avoidance and anxiety styles in multiple regression analysis; but many schema domains correlated with avoidance and anxiety styles in correlation analysis. The reason of that may be an overlapping between schema domains assessed with the YSQ. The results of current study showed that both of avoidance and anxiety style was predicted by disconnection/rejection. Avoidance style involves aspects such as not being comfortably proximity with the partner or not sharing thoughts and feelings. In anxiety style, there is worry about being abandoned by the partner or anger as a result of partner's less care (Brennan, Clark & Shaver, 1998). Disconnection/rejection, consisting of EMS such as emotional deprivation, emotional inhibition, mistrust/abuse, social isolation, and defectiveness, is defined as the expectation that one's needs such as security and acceptance will not be met (Young et al., 2003). On one hand, the adults with schemas such as mistrust/abuse or defectiveness schemas may avoid close relations for fear of being rejected or abused. On the other hand if the individuals with these schemas can not avoid close relations, they may feel intense anxiety about being abandoned and want to merge with the partner. Thus, these findings in our study is consistent with the idea that Disconnection/Rejection domain includes schemas which are developed through unmet need for "secure attachments to others". The limited number

of studies that investigated relation between attachment and EMS is consistent with our results, showing correlation between disconnection/rejection schemas and insecure adult attachment (Bosmans, Braet & Van Vlierberghe, 2010; McLean, Bailey & Lumley, 2014; Simard, Moss & Pascuzzo, 2011). Also the results of our study are supported by the model, proposed by Young and Gluhoski (1997). According to that, eleven EMS's such as defectiveness, emotional deprivation lead to unsatisfactory relationships.

Also, the results of current study showed that avoidance style was predicted by other directedness and anxiety style was predicted by age and relationship status. In terms of avoidance, other directedness, consisting of EMS such as approval seeking, subjugation and self sacrifice is defined as schemas that are concerned with the excessive focus on the desires of others at the expense of one's own needs (Roelofs, Onckels & Muris, 2013). Major characteristic of avoidant style is the avoidance of intimacy (Feeney and Noller), other directed individuals may focus only desires of others, they may avoid deep and satisfying relationships.ierIn terms of anxiety, age has an important role in romantic attachment by providing safety and intimacy to partners over the years. Consistent with the idea, there are findings indicating that relationship length increased marital satisfaction or adjustment in Turkey (Büyükşahin & Hovardaoğlu, 2007; Yiğit & Çelik, 2016). Moreover, relationship status also predicted anxiety style. Having a romantic relationship reduces anxiety style. It can be thought that having a romantic relationship may be a protective factor for anxious style. Consequently, the present findings can guide treatment of conflicts in close relationships and attachment problems, showing importance of EMS.

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SIBLINGS' GRAPHIC REPRESENTATIONS THE OF A FAMILY MEMBER WITH AUTISM SPECTRUM DISORDER: AN EXPLORATORY STUDY

Georgette Goupil, Nathalie Poirier, & Julien Morand
Department of Psychology, Université du Québec à Montréal (Canada)

Abstract

Considering the consequences of the autism spectrum disorder (ASD) on family life, the perceptions of young siblings of children with ASD merits deeper understanding. The aim of this research was to evaluate young sibling's representations of children with ASD using drawings and interviews. Results revealed that these children perceive their brother or sister with ASD as a full participant in the family's daily activities. However, they perceive several characteristics and consequences of ASD in the social interactions of their siblings who have ASD.

Keywords: *Autism Spectrum disorder, Siblings, Graphic Representations.*

1. Introduction

The prevalence of the autism spectrum disorder (ASD) is estimated at 1% (American Psychiatric Association, 2013) or higher (Centers for Disease Control, 2014). Studies about children with ASD and their siblings present mixed findings including both positive and negative effects of the disorder on the family. The positive consequences are associated with the development of humanistic values, while the negative effects include behavioral problems or limited parents' attention to the typically-developing child (Vallée-Ouimet, & Poirier, 2014). Research on siblings is often based on the perceptions of parents and teachers. Furthermore, studies conducted with children are mostly based on interviews or psychometric questionnaires. The interview process has several advantages, but it also has limitations (Sattler, 2006), which relate to the young children's capacities in describing their feeling and attitudes. Drawing offers an alternative way to know the child's perceptions. Drawing is also part of the child's regular activities.

2. Objective

This study aims to use drawing in order to get an understanding of how siblings of children with ASD perceive their relationship with their brother or sister.

3. Method

3.1. Participants

Eight girls aged from 6 to 12 (Mean age: 9 years, SD: 1,6) with a sibling with ASD participated in this study. The siblings with ASD were four boys and four girls aged between 5 and 12 (Mean age: 8,5 years, SD: 2,8). Three siblings with ASD attended school in a regular classroom, four attended special school programs and one was home schooled.

3.2. Instruments and procedure

A questionnaire was used to collect information about the family and their siblings. We asked children to draw three different situations: 1) Their family engaging in an activity of their choice; 2) The sibling playing with his brother or sister with ASD; 3) His brother or sister with ASD playing on the school playground. We chose these three situations to gather perceptions on different dimensions: relationships in the family, personal relationships (situation of play) and perceptions in a social setting with peers.

Following the three drawings, we questioned the children in order to obtain information about the characters and situations represented in the drawings. The following table presents these questions.

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Table 1. Questions about the children's drawings.

Drawing	Questions
Family activity	Can you identify who those people are ; how old are they? Can you tell me what's going on in your drawing? What is each person doing? Do they talk? What are they talking about? What objects or animals are presents?
Playing with brother or sister	What game are you playing in the drawing? How did this game begin? How will the game end? How does your brother / sister act during the game?
Playground	Can you identify the people on your drawing; who are they? Can you tell me what's going on in your drawing? What is each person doing? What objects are present?

4. Analysis

Ionescu and Lachance's (2000) rating method was partly used to analyze the drawings with behavioral categories allowing the description of drawings. The content of the child interviews after the drawings were also analyzed.

5. Results

According to preliminary results, all of the siblings' graphic representations portrayed the whole family. The child with ASD was always present. The activities portrayed were diversified: walking in a park, swimming, eating ice cream, having a meal and dancing.

When asked to picture themselves playing with their brother or sister with ASD. Siblings identified different activities: playing with "Legos or Shopkins", biking, swimming, running and dancing. One child drew herself running in a hallway to allow his brother with ASD to relieve his "excess energy". For some children, these activities were done regularly. One sister reported dancing daily with her sister before supper.

When asked to imagine their sibling with ASD on the playground. Two drawings presented the child with ASD alone. In three drawings, interactions with peers were less evident than in the second drawing, as the child with ASD is represented practicing a solitary activity. However, three children were clearly represented as having interactions with peers: playing soccer, Battleship and tag game.

When talking about their interactions with their brother or sister, the majority of the siblings clearly stated differences or particularities relating to ASD. For example, a child reported that her brother often "plays in his head'', forgetting to interact with his environment. Another reported being "sad and desperate" (words used by the child) as an emotion produced by the isolation of her sister with ASD on the school playground.

These preliminary results indicate that the participants perceived their siblings with ASD as full members of the family. All of them also reported playing with their sibling and some consider the ASD characteristics in the choice of the game. Additionally, most of the participants are aware of differences caused by ASD.

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VALIDITY AND ACCURACY FOR THE TCT- DP IN DIFFERENT SCHOOL LEVELS

Sara Ibérico Nogueira[1], Maria Leonor Almeida[2], & Tiago Souza Lima[3]
[1]*Universidade Lusófona de Humanidades e Tecnologias (Portugal)*
[2]*ISG- Business School (Portugal)*
[3] *University of Fortaleza / Federal University of Ceará (Brazil)*

Abstract

The Test for Creative Thinking-Drawing Production (TCT-DP, Urban & Jellen, 1986) is one of the most used instruments for the assessment of creative potential. Based on a previous study with an undergraduate sample, a two-factor model exhibited good and acceptable indices of fit, which suggests the importance of both non-conventional and conventional thinking for the creative process. This study aims to test the factor structure of the TCT-DP in a sample of Portuguese students. Take part in this study a sample of 2.263 students, most part of them are female (51,5%), from different school cycles: 1. 1st and 2nd grade (N=331; M=6.82; SD=0.57), 2. 3rd and 4th grade (N=472; M=8.85; SD=0.71), 3. 5th and 6th grade (N=454; M=11.02 SD =1.04), 4. 7th, 8th and 9th grade (N=550; M=13.4; SD =1.18), and 5. 10th, 11th and 12th grade (N=456; M = 16,7; DP = 1,27). A one-factor and two-factor models are tested for each sample. The results of the CFA analysis indicate a marginal fit for the two-factor solution. Indices of RMSEA and GFI are above the cut-off recommended in literature, although CFI is below the recommended values. However, the two-factor model had better fit-indices compared with the one-factor solution in all samples. The comparison of the models with one and two factors thru $\Delta\chi^2$ index indicated significant differences between the two models. Cronbach's alfa ranged from .57 to .70 for factor 1, and from .48 to .57 for factor 2. Although these results are contrasting, it can indicate that the TCT-DP is best represented by a two-factor structure.

Keywords*: TCT-DP, Factorial structure, School levels.*

1. Introduction

For the purpose of this paper, creativity is conceptualized by the comprehensive model of Jellen and Urban (1986). This model draws attention to six (three cognitive type, three personal type) components that influence each other and are responsible for creative performance. According to Urban and Jellen (1996), the definition of creativity, implies the emergence of an original product (or idea) that is a response to a problem to which the individual is sensitive. This process involves exploration and extended perception of the information, an association and unusual combination of the information given and imagined, a composition and synthesis in a solution in a gestalt form, which is presented and communicated to other individuals.

The scientific and technological transformations we have been seeing in the last 100 years, demand new perspectives and different points of reference, willing to foster creativity, because only the most innovative solutions will be successful. Therefore, school and teachers, have a large responsibility when it comes to developing this skill. Akyo and Sali (2015) show that teachers with higher levels of creativity use more flexible and elaborate styles of teaching, giving space for abstract thinking and fostering higher creativity levels in their students. With more developed competences, such as critical and divergent thinking skills, the students seem to be more prepared for the job market and more able to adapt with flexibility to any unexpected situation (Pishghadam, Nejad, & Shayesteh, 2012). In order to promote creativity in schools, it is fundamental to have appropriate instruments to evaluate creativity. In this sense, the present study aims to contribute with the validity and accuracy studies for the TCT- DP in different school cycles of schooling.

Urban and Jellen (1996) have referred several psychometric studies conducted by themselves or in collaboration with other authors who identified good internal consistency levels for the TCT-DP (Cronbach's alpha values greater than .87), high levels of interrater reliability (.95, on average, between

trained raters), and parallel forms reliability (between .64 and .77). Other authors have demonstrated good internal consistency levels (.85, .75 and .74) in studies with adult Portuguese workers (Almeida & Ibérico Nogueira, 2009; Ibérico Nogueira & Almeida, 2010a; Ibérico Nogueira, Almeida, & Rocha, 2012). In terms of discriminant validity, one can note the recent study of Karwowski and Gralewski (2013) that used the TCT-DP to evaluate creative abilities and the Raven's Progressive Matrices (RPM) to measure intelligence in a sample of 921 middle and high-school students. Overall, the results indicated a positive correlation (.24) in which creative abilities were predicted by the RPM score. Ibérico Nogueira, Almeida, and Ribeiro (2011) identified a moderate correlation (.557) between the results of the TCT-DP and the Raven's Coloured Progressive Matrices in a sample of 287 children with a mean age of 8 years.

2. Method

2.1. Sample

Take part in this study a sample of 2.263 students, most part of them are female (51,5%), from different school cycles: 1. 1st and 2nd grade (N=331; M=6.82; SD =0.57), 2. 3rd and 4th grade (N=472; M=8.85; SD=0.71), 3. 5th and 6th grade (N=454; M=11.02 SD =1.04), 4. 7th, 8th and 9th grade (N=550; M=13.4; SD =1.18), and 5. 10th, 11th and 12th grade (N=456; M = 16,7; DP = 1,27).

2.2. Instruments

Participants were recruited according to a convenience method. The school directors and the parents were contacted and signed the informed consent forms. The instruments were a) a brief socio-demographic questionnaire (about gender, age and school year) and b) the TCT-DP - Test for Creative Thinking - Drawing Production (Urban & Jellen, 1996), theoretically supported by the componential model of creativity (Urban, 2004). This instrument asks for an elaboration of a drawing from six fragments and aims to evaluate the creative potential, considering personality dimensions, such as composition, elaboration, gestalt, breaking limits, risk-taking, unconventionality, humor and affectivity, which allows a broader assessment, beyond the divergent thinking one, usually considered (Cropley, 2000). The TCT-DP, widely regarded as *culture-fair* and has a broad spectrum of potential applications, while allowing the assessment of different age, gender, social and economic groups.

2.3. Statistical analysis

AMOS 18 software was used to perform confirmatory factor analyses aiming to test the construct validity of the scale. The estimation method used was the Maximum Likelihood Estimation (MLE) using the variance-covariance matrix, and the missing cases were replaced by the mean. First, we test a two-factor solution identified in previous study. Additionally, the fit of a one-factor solution was also tested. The following indices were used to test the general fit of the models. The ratio of chi-square to degrees of freedom (χ^2/df), with values between 2 and 3 indicating indicates an acceptable fit, the goodness of fit index (GFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA), with values approximately .95, .95 and .06 or better, respectively, indicates a good fit (Byrne, 2010; Garson, 2013). Values greater than .90 for the GFI and CFI and lower than .08 for the RMSEA also indicate an acceptable fit. Additionally, the χ^2 difference ($\Delta\chi^2$) between the models and the expected cross-validation index (ECVI) were employed to assess significant improvement over competing models. Significant values of $\Delta\chi^2$ and lower ECVI values reflect the model with a better fit (Brown, 2006).

3. Results

First, an initial analysis with the total sample was conducted, the fit indices for the two-factor solution were as follows: χ^2 (64) = 1438.2, $p < .001$, χ^2 /*df* = 22.4, *GFI* = .90, *CFI* = .58, RMSEA [CI 95%] = .097 [.093 - .102], ECVI = 0.66. The model was re-specified after examining the modification indices, correlated errors between items 10 and 9 are added to the fit model. The fit indices were as follows: χ^2 (63) = 1311.1, $p < .001$, χ^2 /*df* = 20.8, *GFI* = .91, *CFI* = .62, RMSEA [CI 95%] = .094 [.089 - .098], ECVI = 0.60. Fit indices showed that the re-specified model resulted in a significant improvement of fit, compared to the originally unmodified model, $\Delta\chi^2$ (1) = 127.1, $p < .001$, and the EVCI is smaller in the re-specified model. In function of the correlation between Factors 1 and 2 (r = 0.54), a one-factor solution was tested. The one-factor model had poor fit indices compared with the two factors solution: χ^2 (65) = 1582.8, $p < .001$, χ^2 /*df* = 24.3, *GFI* = .89, *CFI* = .54, RMSEA [CI 95%] = .102 [.097 - .106], ECVI = 0.72. Moreover, the comparison of the models with one and two factors thru $\Delta\chi^2$ index indicated that the two-factor model had a better fit, $\Delta\chi^2$ (1) = 144.6; $p < .001$.

4. Discussion

Consistent with previous studies (Ibérico Nogueira, Almeida, & Lima, 2017, accepted), the results of the single-group CFA analysis indicate an acceptable fit for the two-factor solution. RMSEA and GFI are above the cut-off recommended in literature, although CFI is below the recommended values. Although these results are contrasting, it can indicate that the TCT-DP is best represented by a two-factor structure.

5. Conclusion

Considering the importance of promoting the creative way of thinking, in our schools, there seems to be urgent to develop an adequate creativity assessment instrument. With a reliable assessment instrument, the diagnosis about the creative thinking will allow a better way of an intervention planning.
The TCT-DP, by its figurative nature, has the advantages of being primarily culture-fair and easy to administer to the general population. The present study represents a contribution for the factorial structure of the TCT-DP.

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FACTORS ASSOCIATED WITH SELF-DESTRUCTIVE BEHAVIOUR AMONG SCHOOL PUPILS

Anna Janovska, Olga Orosová, & Beata Gajdošová
Department of Educational Psychology and Psychology of Health,
P. J. Safarik University in Kosice (Slovakia)

Abstract

Background: Adolescence is the period in which self-harming behaviours such as running away from home, intention of harming oneself and suicide attempts are initiated and may escalate. Many of the difficulties during adolescence are associated with significant changes in the psychological and social development of adolescents.
Aim: Explore the relationship between self-destructive behaviour (represented by running away from home, intention of harming oneself, suicide attempts) and parental monitoring, self-control, satisfaction with oneself, support from parents, teachers and friends.
Methods: A representative sample of 854 (56.8 % female) primary school pupils (age M=12.72 years, SD=0.67 years) was collected within the project aimed at school-based universal prevention. The respondents completed the Self-Control Scale, Resilience and Youth Development scale and were also asked questions related to parental monitoring, satisfaction with oneself as well if they had ever run away from home, thought of harming themselves or attempted suicide. Binary logistic regression was used to analyze the pupils' data.
Findings: The self-destructive behaviour of primary school pupils was positively significantly associated with self-control ($p<0.001$), satisfaction with oneself ($p<0.001$) and parental monitoring ($p=0,014$). The data did not confirm the significance of supportive relationships with parents, teachers and friends in predicting self-harming forms of adolescent behaviour.
Conclusions: The study contributes to the understanding of the reasons behind self-destructive behaviour among adolescents and confirmed the importance of parental monitoring, self-control and satisfaction with oneself in predicting such forms of self-harming. The results may help in understanding the mechanisms that lead to self-destructive behaviour and may be useful in prevention programmes.

Keywords: *Self-destructive behaviour, parental monitoring, satisfaction with oneself, self-control, adolescents.*

1. Introduction

Adolescence is the period in which self-harming behaviours including running away from home, intention of harming oneself and suicide attempts are initiated and may escalate. Many of the adversities and difficulties during adolescence are associated with significant changes in the psychological and social development of young girls and boys (Oshio et al., 2003). Various problems in adolescence often lead to desires to escape from reality and tend to promote self-destructive behaviour or opposition towards a perceived unsatisfactory family environment. Running away from home, self-harming behaviour and suicide attempts during adolescence are high risk behaviours for safety and health and these forms of problem behaviour have severe consequences (Kokkevi et al., 2014). Approximately 20 % of European school adolescents have reported self-destructive thoughts and/or behaviours (Cheng et al., 2009; Toro et al., 2009 in Cruz et al. 2013). Suicide is one of the leading causes of death among young people (WHO, 2006).

Self-liking and self-control seem to be relevant factors linked to problem behaviour of early adolescents. Low levels of self-control have been associated with behavioural problems (Finkenauer, Engels, & Baumeister, 2005). Some studies have reported a negative correlation between problem behaviour and satisfaction with oneself (Donnellan et al., 2005). A number of studies have supported the assumption that the parental monitoring of children's activities and friends are related to problem behaviour. Parental interest reduces the behavioural and emotional problems of young people (Finkenauer, Engels, & Baumeister, 2005). Parental control includes parental behaviours toward the child with the intention of directing the child's behaviour in a manner acceptable by the parent (Barnes et al., 2006). Wills, Mariani, and Filer (1996 in Barnes et al., 2006, p. 1085) have stated that "support from parents is the glue that bonds adolescents to mainstream institutions and builds self-control."

Self-destructive behaviour of adolescents is a complex and multifactorial phenomenon but until now there has been no empirical evidence that parental control is a relevant predictor of such behaviour (Wong, Man, & Leung, 2002 in Cruz et al. 2013). On the other hand, Kokkevi et al. (2014) found that suicide attempts and running away from home had some common correlates including parental monitoring and emotional and behavioural problems. The factor which seems to be negatively associated to the tendency of harming oneself is self-esteem (Cruz et al., 2013).

2. Objectives

This study aimed to explore the relationship between self-destructive behaviour (represented by running away from home, intention of harming oneself, suicide attempts) and parental monitoring, self-control, satisfaction with oneself, support from parents, teachers and friends.

3. Methods

3.1. Sample

The research sample consisted of 854 early adolescents (56.8% girls, Mean age=12.72; SD=0.67) from a stratified random sample consisting of pupils in 60 primary schools from Slovakia. The data was collected within a project aimed at school-based universal prevention.

3.2. Measures

The dependent variable (consisting of answers to questions concerning running away from home, intention of harming oneself and suicide attempts) was measured using items from the ESPAD Questionnaire 2007 (http://www.espad.org/Uploads/Documents/ESPAD_Questionnaire_2007.pdf). The variable was dichotomized: 0 = no self-destructive behaviour occurred; 1 = some type of self-destructive behaviour occurred one or more times.

Questions about parental monitoring (Hibell, 2012) consisted of questions concerning rules at home as well as information about where and who their children spend their free time with (available answers ranged from 1=never to 4=almost always). The scale of parental monitoring consisted of 4 items.

The Self-Control Scale (Finkenauser, Engels, & Baumeister, 2005) consisted of 11 items and respondents could answer on a five-point scale (1 = never, 5 = always). A higher score indicated a higher level of self-control.

Satisfaction with oneself was measured using items from the ESPAD too. A higher score represented a higher level of satisfaction. Support from parents, teachers and friends was measured by the Resilience and Youth Development Module (Furlong, Ritchey, & Brennan, 2009). A higher score represented a higher level of support.

3.3. Statistical analysis

A binary logistic regression model was used for the data analysis. The model consisted of six independent variables (satisfaction with oneself, self-control, supportive relationships at home, school, friends, parental monitoring,) and self-destructive behaviour (dichotomized) as the dependent variable.

4. Results

About 22 % of adolescents in the research sample reported running away from home and/or self-destructive thoughts and/or suicidal attempts. The self-destructive behaviour of the primary school pupils was positively significantly associated to self-control ($p < .001$), satisfaction with oneself ($p < .001$) and parental monitoring ($p = .014$). The data did not confirm the significance of a supportive relationship with parents, teachers and friends in predicting self-harming forms of adolescent behaviour (Table 1).

Table 1. Regression model for self-destructive behaviour among Slovak adolescents.

Model (R^2= .137)	B	Exp (B)	Sig.	Exp (B)	95% C.I.for EXP(B)	
					Lower	Upper
Gender	-.363	.696	.104	.696	.449	1.077
Satisfaction with oneself	-.360	1.434	**<0.001**	1.434	1.198	1.717
Self-control	-.057	.945	**<0.001**	.945	.917	.973
SR - home	-.058	.944	.163	.944	.870	1.024
SR - school	-.008	.992	.842	.992	.913	1.077
SR - friends	.027	1.028	.484	1.028	.952	1.109
Parental monitoring	-.073	.930	**.014**	.930	.886	.977
Constant	.924	2.519	.221	2.519		

Note: SR - supportive relation

5. Discussion and conclusion

Self–control, satisfaction with oneself and parental monitoring seem to be important factors associated with self-destructive behavior of adolescents. The probability of running away from home, intention of harming oneself and suicide attempts was lower in adolescents with a higher level of self-control and satisfaction with oneself. The same held for students monitored by their parents more strongly.

The results are consistent with some previous research (Cruz et al., 2013; Donnellan et al., 2005; Finkenauer, Engels, & Baumeister, 2005; Kelly et al., 2012).

The study contributes to the understanding of the reasons for self-destructive behaviour among adolescents and confirms the importance of parental monitoring, self-control and satisfaction with oneself in predicting such forms of self-harming among adolescents. The results may help in understanding the mechanisms that lead to self-destructive behaviour and may be useful in prevention programmes.

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PSYCHOTHERAPEUTIC SUPPORT FOR BREAST CANCER PATIENTS: STRUCTURED PALLIATIVE CARE THERAPY VERSUS ACCEPTANCE AND COMMITMENT THERAPY

Arunima Datta[2], Prathama Guha Chaudhuri[1], & Ashis Mukhopadhyay[3]
[1]*Department of Psychiatry Institute of Psychiatry (India)*
[2]*Department of Psychooncology, Netaji Subhas Chandra Bose Cancer Research Institute (India)*
[3]*Department of Oncology, Netaji Subhas Chandra Bose Cancer Research Institute (India)*

Abstract

Palliative care therapy (PT) is known to improve quality of life in breast cancer patients. However not much research is available on the effects of Acceptance & Commitment therapy (ACT), a newer form of psychotherapy based on humanistic principles, in these patients. In this study conducted at a tertiary centre in Eastern India we compared the effects of PT and ACT on 129 patients of breast cancer in the follow up phase of the disease. The psychological variables assessed were quality of life, meaning of life and acceptance level. At the end of 4 sessions spread over 2 months, PT showed significantly more improvement in terms of quality of life and meaning of life than ACT.

Keywords: *Breast cancer, Acceptance and Commitment Therapy, Palliative Care, Meaning of life.*

1. Introduction

Psychotherapeutic support is known to improve quality of life in breast cancer patients. Several factors are have been proposed that act to protect cancer patients from depression, including a greater acceptance of the present situation and, according to humanistic theories of psychotherapy, perceived meaning of life. Acceptance and commitment therapy (ACT) is one of the newer forms (third wave) of psychotherapy that addresses these issues.

2. Design

A prospective, follow-up study with the overall aim to examine the effectiveness of psychological intervention on breast cancer patients, with emphasis on comparing ACT with standard palliative care therapy (PT).

3. Objectives

In the present study we have examined the comparative efficacy of structured ACT and palliative care therapy (PT) among breast cancer patients in the follow-up phase of the disease. The psychological variables measured were psychological well being, meaning of life and acceptance level.

4. Method

4.1. Patient Selection

A total of 146 consecutive breast cancer patients undergoing chemotherapy were invited to participate in the study between July and September 2016 at Netaji Subhas Chandra Bose Caner Research Institute, Kolkata. The study was introduced as a training session and people who were interested in participating in the research were enrolled. After applying exclusion and inclusion criteria 129 patients were randomly assigned to receive PT or ACT. (Figure-1).

4.2. Measure

Quality of Life questionnaire European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire for breast cancer patients (EORTC QoL-BR23) questionnaire is a measure of quality of life among cancer patients (Montazeri et.al., 2008).

Meaning of life questionnaire The Meaning in Life Questionnaire assesses two dimensions of meaning in life using 10 items rated on a seven-point scale from "Absolutely True" to "Absolutely Untrue." The MLQ has excellent reliability, test-retest stability, stable factor structure, and convergence among informants. (Steger et al., 2006 & Datta et.al., 2015).

Acceptance and Action Questionnaire - II (AAQ-II) The AAQ-II was developed in order to establish an internally consistent measure of ACT's model of mental health and behavioral effectiveness. (Hayes et al 2006 &Datta et.al., 2015).

4.3. Intervention

Acceptance and Commitment Therapy

The time period of total intervention was about 2 months. 4 sessions lasting 60min were administered to patients individually. Psychological baseline assessment was done before giving ACT and reassessed on 2months follow-up after giving ACT. Please refer to Fig 2 for details.

Palliative Care

Palliative care therapy was applied in 4 sessions and each session had taken 40-45 minutes with 15 days interval. Please refer to Fig 2 for details.

4.4. Procedure

129 breast cancer patients undergoing chemotherapy and willing to undergo psychotherapy with no past history of psychiatric illness were randomly assigned to receive ACT or PT. Assessment of meaning of life, quality of life and acceptance level were done pre and post intervention (4 session over 2 months) using validated tools.This was approved by the Ethical Committee of our Institute, which follow the guidelines given by the Indian Council of Medical Research (ICMR).

4.5. Statistical analysis

Student t test was applied to compare the effect acceptance, quality of life and meaning of life.

5. Result

A total of 129 patients were enrolled in the study. Most of the patients were married and came from low socieoeconomic status, rural areas and nuclear families.

PT was significantly more effective than ACT in improving scores on both meaning of life and quality of life. Acceptance levels improved significantly in both groups (Table-1). This study also replicated our finding from a previous comparison study of PT and ACT, showing that individuals with lower psychological flexibility respond more favourably to PT. (Datta et al 2015)

6. Discussion

This comparative study observed potentiality and utility of two different types of psychotherapy among breast cancer patients. The psychotherapeutic interventions were introduced as 'training sessions' as majority of patients who were from rural areas and low socioeconomic stata were likely to associate psychological treatment with the stigma of mental illness. ACT did not fare as well as it would have been expected, possibly beccause the concepts were not familiar to them, and they did not have the requisite psychological flexibility. Another reason could be the short duration of therapy.

7. Conclusion

Palliative care therapy is more effective intervention in comparison to Acceptance & Commitment therapy among breast cancer patients in eastern India.

Figure 1. Study Design.

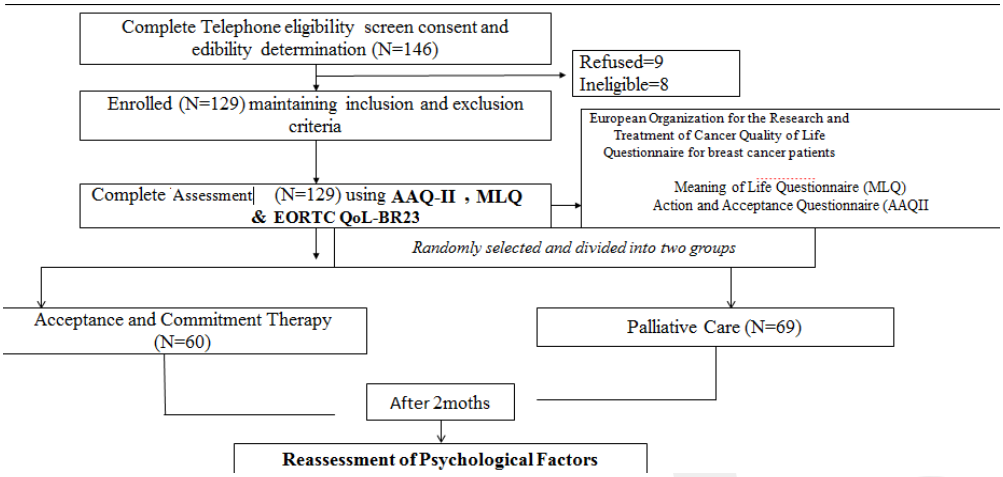


Figure 2. Therapy session.

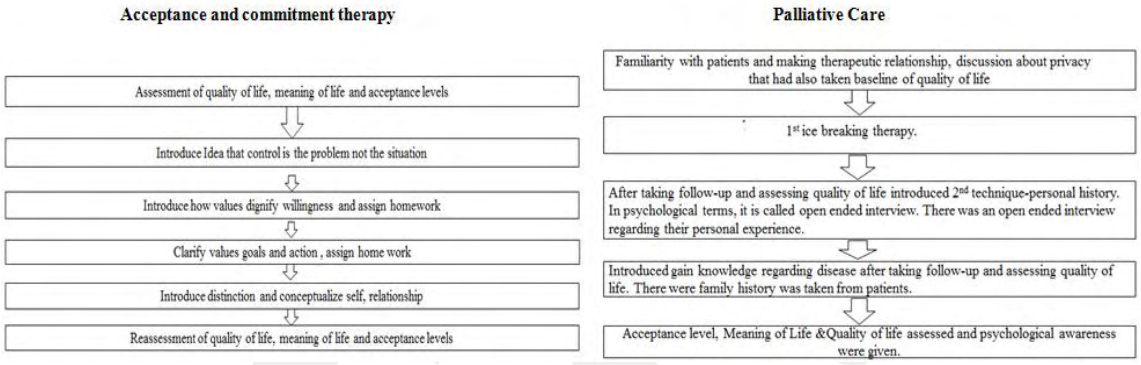


Table 1. Outcome of before and after psychological intervention.

Psychological Intervention	*QoL*			*MLQ*			*AAQ*		
	Before giving psychological intervention	After giving psychological intervention	95% Confidence Interval of Difference	Before giving psychological intervention	After giving psychological intervention	95% Confidence Interval of Difference	Before giving psychological intervention	After giving psychological intervention	95% Confidence Interval of Difference
Acceptance and Commitment Therapy	49.27±3.67	48.21±0.23	(17.43-19.03)	29.42±1.79	30.42±2.71	(10.9-13.98)	28±1.5	31.82±1.59	(20.00-27.43)*
Palliative Care Therapy	52.09±1.93	33.64±5.85	(15.23-17.68)**	30±2.52	34.28±2.31	(12.03-16.68)*	25±0.07	33.81±2.11	(.007-1.78)*

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SOCIAL RELATIONSHIPS OF TEENAGERS WITH HIGH-FUNCTIONING AUTISM SPECTRUM DISORDER

Ariane Leroux-Boudreault & Nathalie Poirier
Department of psychology, University of Quebec in Montreal (Canada)

Abstract

Teenagers with an ASD have difficulties creating and maintaining friendly relationships with students of the same age (Laugeson, Frankel, Mogil, & Dilon, 2009). They may be the victims of bullying due to a lack of social skills and small or non-existent social circles (Martlew & Hodson, 1991). Fourteen high-functioning 6th graders (2 girls and 12 boys) with an ASD who were integrated in a regular classroom were selected to be part of the sample. Semi-structured interviews were administered (60 questions). Several themes were explored, including relationships. For this part of the study, frequencies were used to measure the number of friends they have in and outside of school. Open questions were also included to identify the activities they have with their friends and to establish their perception of bullying. The aim of this study is to explore teenagers with an ASD's social relations, more specifically about friendships, social activities and bullying. Results show that teenagers with high-functioning autism have on average 7.1 friends in school (∑: 4.99) but that they only see on average 1.8 friends outside the school (∑: 2.68). They are also more likely to be victims of bullying. Despite the fact that they function at high levels, certain concepts such as friendship and intimidation remain unclear to some participants. Even though they can clearly identify the definition of these concepts, they lack the ability to recognize them in their everyday life.

Keywords: *Autism spectrum disorder, adolescence, friendship, bullying, social activities.*

1. Introduction

Adolescents with an ASD struggle to create and maintain friendships with students of the same age (Laugeson, Frankel, Mogil, & Dillon, 2009). The emotional maturity of adolescents with an ASD is significantly lower than that of their peers, which also hampers the development and maintenance of relationships with their peers (Myles & Adreon, 2001). Some authors argue that individuals with an ASD are conscious of their social weaknesses and express their preoccupation towards establishing and maintaining friendships (Church et al., 2000). A study by Church and his collaborators (2000) also reveal that, contrary to popular belief, it is false to assume that all adolescents with an ASD prefer avoiding interactions with their peers despite enjoying solitary moments. Nonetheless, it seems difficult for them to develop friendships. Indeed, according to Orsmond, Krauss and Seltzer (2004), 46% of adolescents with an ASD living in the United States do not have friends while their typically developing classmates have an average of 3.6 friends (Gross, 2004). Lasgaard and his collaborators similarly conclude this; their findings show that 21% of boys with an ASD always or often feel alone (Lasgaard, Nielsen, Eriksen, & Goossens, 2010). Although people with an ASD report having at least one friend, the social ties are less stress in regards to security, companionship and helpfulness (Bauminger & Kasari, 2000). In this regard, a Quebec-based study revealed that youth with an ASD report having an average of three friends, but that they do not meet with these friends outside of school (Poirier & Vallée-Ouimet, 2015). The lack of social skills, i.e. the behaviors that are learned and that are socially acceptable to establish positive relations with others (Walker, Colvin, & Ramsey, 1995), impede the desire to interact with others. Adolescents with an ASD are, therefore, more inclined to engage in solitary activities and to spend less time interacting (Symes & Humphrey, 2010). However, Dann (2011) mentions that adolescents with an ASD of the same sex and presenting the same degree of severity could develop a reciprocal friendship.

Aside from the difficulties associated with interpersonal relations that adolescents with an ASD face, intimidation also represents a reality of their school life. Indeed, an American study showed that 10.6% of typically-developing adolescents (6^{th} to 10^{th} grade) state being a victim of intimidation while 13% claim to be the intimidator. Among this youth, 6.3% state being both a victim and an intimidator (Espelage, 2002).

These students notably risk being the target of intimidation and mockery due to their limited amount of friends and lack of social abilities (Martlew & Hodson, 1991, cited in Van Roekel, Scholte, & Didden, 2010). In fact, 30% of students with an ASD are subject to intimidation more than once per month (Van Roekel et al., 2010). A study among teachers by Van Roekel and colleagues (2010) indicated that bullying among young people with an ASD would be more frequent than actually reported. Due to their difficulties in social communication, adolescents with an ASD do not always express nor necessarily understand situations of intimidation. Moreover, such situations are not always revealed by adolescents with an ASD given that this depends greatly on their interpretation of the act. Indeed, if their understanding of intimidation solely includes acts of physical violence, it is probable that acts of verbal violence may not be reported (Plimley & Bowen, 2006).

2. Objective

The objective of this research is to describe ASD adolescent's perspective of their social reality.

3. Methods

This study is part of a doctoral research project that compared the perception of students with ASD regarding their transition to high school compared to that of their typically-developing pears. For the purpose of the present poster, only the cumulated responses of ASD students are presented. In total, 14 ASD sixth graders (12 boys and 2 girls) of an average age of 12.35 (SD = 5.43 months) (1 asperger; 2 autistic; 2 ASD; 3 PDD-NS; 6 PDD) were recruited in this study.

The results presented are extracted from a portion of the semi-structured interview that was composed of 60 open-ended and closed-ended questions, which was validated by three ASD experts. It was further validated through qualitative analysis and pre-experimentation with two typically-developing adolescents. Moreover, the interview was conducted among two ASD students in order to ensure proper comprehensiveness. Considering that they demonstrated a good understanding of the questions, their responses were integrated to the research findings.

The findings from these semi-structured interviews were grouped in frequencies and averages. Therefore, no verbatim were transcribed. In addition, each theme named by the participants were listed and recorded in frequencies.

4. Discussion and conclusion

When the adolescents of the study were questioned regarding their social relations, they responded having on average 7.1 friends (SD: 4.99). In fact, one participant revealed that 18 people, notably all students from his class, were his friends. The other participants of the study claim to have 0 to 14 friends in school. The majority of respondents (n = 9) believe that it is important to have friends: "I have a lot of friends. I have good relationships." One participant wished to have more friends: "Otherwise I will be all alone and that's lonely. I would be bored to death." For others (n = 2), it is not important to have friends: "It is really not important, but it is good to have friends." Two other respondents reveal that they are indifferent in this regard.

The notion of friendship does not always seem clear to adolescents with ASD: "I do not know if I really have friends." The concept of having friends and classmates is not well understood: "Everyone in my class is my friend." All the participants, except for one, report having friends at school. In fact, there exists a notable difference among the majority of participants between the number of people considered to be friends (friends in school) and the number of friends met outside of school. Indeed, respondents state seeing on average 1.8 friends (SD: 2.61) outside of school grounds.

When questioned on their notion of intimidation, participants claimed that intimidation consists "being bothered, made fun of and laughed at". More than half (n = 8) of participants mentioned having been victims of intimidation: "I thought it was funny, but when I learned what it was, I did not like it." For some, mockery ceased after an intervention by a school employee. For others, harassment was present for longer periods. Inversely, six participants claim to not have been victims of mockery. Although, for some, it is difficult to differentiate intimidation from other isolated acts of mockery.

In light of the given results, the adolescents of the sample note having more friends than others adolescents with an ASD. While Orsmond, Krauss and Seltzer (2004) reveal that 46% of adolescentes with ASD have no friends, only one participant of this sample confirm not having any friends. The adolescentes claim have on average more friends than what is reported in Gross' study (2004). It is important to nuance this result given that one participant named all the students of his class to be his friends. This result is also more elevated than the average number of friends reported by Poirier et Vallée-Ouimet (2015). Indeed, the authors of this Quebec-based study reveal that only half of participants saw their friends outside of school, while the present study showed that to be true in one third of participants. However, if it is considered that friends are people one sees outside of school, the average number of friends that participants have diminishes et closely approximates results from Gross (2004) and Poirier et Vallée-Ouimet (2015). Only one participant said to have a dozen friends outside of school. This can be explained by the fact that they participated in extracurricular activities. The large number of friends seen in school can be explained by the fact that respondents of this present study are students with ASD of low severity, which can facilitate social relations with other peers. Given that they are integrated in an ordinary classroom setting, this allows them to be in contact with more youth of their age. Also, almost half of recruited participants attended a school which offered services to ASD students. This implies that, in school, there are specialized classes for students with ASD and opportunities to integrate a regular classroom setting. Hence, it is possible to believe that teachers as well as other students are more sensitive to ASD students' condition. All these factors can explain the high average of friends in school.

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TRAIT EMOTIONAL INTELLIGENCE CONSTRUCT AND INCREMENTAL VALIDITY IN THE SLOVAK CONDITIONS[1]

Lada Kaliská & Eva Sollarova
Department of Psychology, Faculty of Education, Matej Bel University in Banska Bystrica (Slovakia)

Abstract

The study analyzed construct (convergent and discriminant) and incremental validity of trait emotional intelligence (EI) by the Slovak version of Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF) created by K.V. Petrides (2001). The research sample consisted of 307 high school students (average age: 17.7 /SD=.46/). The validation tools: Ten-Item Personality Inventory – TIPI (Gosling, 2003), Type D-personality – DS14 (Denollet, 2005), and State-Trait Anxiety Inventory – STAI (adapted by Ruisel et al., 1980) were used to examine trait EI construct and incremental validity by correlation and regression analysis. Results proved that high trait EI is positively correlated to emotional stability and extraversion ($.385^{***} \leq r \leq .415^{***}$; convergent validity) and negatively correlated to trait anxiety and type D-personality ($-.665^{***} \leq r \leq -.638^{***}$; discriminant validity). Trait EI significantly predicts trait anxiety over and above personality factors of Big Five and negative affect-related variable of trait D-personality ($F_{change}(1,217)=28.557^{***}$, $R^2_{adj.} =.636$, $R^2_{change} =.047$) supporting clear evidence of incremental validity of trait EI also in the Slovak conditions.

Keywords: *Trait emotional intelligence; construct validity; incremental validity; TEIQue-SF.*

1. Introduction

The psychological construct of emotional intelligence (EI) has a short history (since 1990s). One of its predecessors can be seen in Gardner's theory of multiple intelligences (1993) and the other in Thorndike's social intelligence (1920). Though there is still a great discussion referring to its scientific meaningfulness, for the term intelligence should be reserved only for cognitive abilities. These controversies have contributed to the formation of 3 approaches to EI investigation. The first approach presents EI as ability measurable by maximum performance tests, with Mayer and Salovey as its main representatives. The second approach links EI with personality traits and abilities (so-called mixed models of EI, Neubauer's, Freudenthaler's, Bar-On's and Goleman's models) and then the concept of trait EI is formed as the third EI model type, where EI can be measured by self-report measures and is defined as a personality trait closely connected to one´s emotional functioning assessing how people perceive their own emotional abilities and emotional dispositions (the Cooper's, Sawaf's, Weisinger's, Higg's and Dulewicz's models or Petrides' model).

Trait EI, investigated in this study, is explained by its author, K. V. Petrides, as a constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies (Petrides, Pita & Kokkinaki, 2007). The model consists of 15 facets (13 of them forming 4 factors: emotionality, sociability, well-being and self-control and 2 independent facets stand by themselves) forming the global level of trait EI (more detailed characteristics of the factors in Petrides, 2007; Kaliská & Nábělková, 2015). Petrides also created questionnaires to measure trait EI (Trait Emotional Intelligence Questionnaire - TEIQue) for three developmental stages (children, adolescents, and adults) of two forms (short and long form). In Slovakia, satisfactory psychometric properties of full and short forms of Slovak TEIQue versions were evidenced (Kaliská, & Nábělková, 2015;, and others). For short forms of TEIQue, created from the original full versions, the author recommends to assess only the global level of trait EI.

Ever since the beginning of EI research, construct, criterion and incremental validity have been verified in numerous studies in the UK (e.g. Petrides, Pérey-Gonzáles, & Furnham, 2007) where trait EI is related to measures of rumination, life satisfaction, depression, dysfunctional attitudes, and coping and most relationships remained statistically significant even after controlling for Big Five variance; then trait EI predicted depression, anxiety, and social support as well as future state affectivity and emotional reactivity in neutral and stressful situations; and proved the incremental validity to predict emotional reactivity over and above social desirability, alexithymia, and the Five-factor model of personality.

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A complex review and meta-analysis were conducted to examine the incremental validity of TEIQue by 24 articles reporting 114 incremental validity analyses (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016) proving that TEIQue explains incremental variance in criteria pertaining to different areas of functioning, beyond higher order personality dimensions and other emotion-related variables.

2. Objective

We concentrated on the investigation of construct (convergent and discriminant) and incremental validity of trait EI in regard to trait anxiety, type D-personality as a distressed personality type consisting of negative affectivity (the tendency to experience negative emotions) and social inhibition (the tendency to inhibit self-expression in social interaction) and Big Five personality factors (extraversion, agreeableness, conscientiousness, emotional stability, openness to experience). Three hypotheses were stated: trait EI will correlate positively with emotional stability and extraversion (H1); trait EI will be correlated negatively with trait anxiety and type D-personality (H2); trait EI will predict trait anxiety over and above type D-personality and personality factors of Big Five theory also in the Slovak conditions.

3. Methods

3.1. Research sample

Our research was carried out by convenience sampling including 307 adolescents, high school students (2 grammar schools, 2 vocational high schools, 2 sport grammar schools) in the age from 16 to 19-year-old (average age: 17.7 /SD=.46/). There were 199 (64.8%) girls and 108 (35.2%) boys.

3.2. Research methods

Trait EI was assessed by the short Slovak version of the *TEIQue-SF* (*Trait Emotional Intelligence Questionnaire-Short Form*) created by K.V. Petrides (2001). The instrument consists of 30 items answered by a seven-point Likert scale (1 – completely disagree to 7 – completely agree). Reliability estimate in the sense of inner consistency (for the whole sample: α=.83; .83 for females; .81 for males/) reaches highly acceptable values. To operationalize the trait EI validity we used *Ten-Item Personality Inventory* (TIPI; Gosling, Rentfrew, & Swann, 2003), *The type D-personality* (DS14; Denollet, 2005; /for the whole sample: α=.87; .87 for females; .88 for males/), and *The State-Trait Anxiety Inventory* to measure trait anxiety (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983 adapted in Slovakia by Ruisel et al., 1980; /for the whole sample: α=.89; .90 for females; .88 for males/).

4. Results

Statistical analysis of skewness and kurtosis proves the normal distribution of the analyzed variables therefore the relation estimate was carried out using parametric correlation analysis and Pearson's correlation coefficient (r) enable us to determine the direction and strength of relations between variables presented in Table 1.

Table 1. Correlation analysis between variables.

r	1	2	3	4	5	6	7	8
1 Global trait EI	1							
2 Trait anxiety	-.638***	1						
3 Type D personality	-.665***	.665***	1					
4 Extraversion	.385***	-.212***	-.491***	1				
5 Agreeableness	.165**	-.091	-.158*	-.057	1			
6 Conscientiousness	.282***	-.281***	-.173**	-.077	.266***	1		
7 Emotional stability	.415***	-.630***	-.391***	.048	.202***	.241***	1	
8 Openness to Experience	.193**	-.076	-.272***	.323***	.032	.013	.003	1

*$p < .05$, **$p < .01$, ***$p < .001$

According to the correlation analysis we can state that global level of trait EI was negatively strongly correlated to negative emotional traits of personality (anxiety and type D-personality), and positively moderately to emotional stability (in the original theory as neuroticism) and extraversion as personality factors of Big Five model.

In addition to the above correlational analyses, a hierarchical three-step regression analysis was conducted to determine if trait anxiety as dependent variable could be predicted by D-type personality entered at the first step, then by personality factors (emotional stability, extraversion and conscientiousness) entered at the second step and then global level of trait EI on its own entered at the third step as presented in Table 2.

Table 2. Hierarchical Regression Analysis.

	Trait anxiety		
	Step 1	$F(1,221)=159{,}804^{***}$, R^2 adj. =.417	
	Step 2	$F_{change}(3,218)=31.994^{***}$, R^2 adj. =.590, R^2 change =.177	
	Step 3	$F_{change}(1,217)=28.557^{***}$, R^2 adj. =.636, R^2 change =.047	
	Beta	t	Partial correlations
Type D-personality (Step 1)	.648	12.641^{***}	.648
Type D-personality	.496	9.044^{***}	.522
Emotional stability	-.418	-8.696^{***}	-.507
Extraversion	.053	1.047	.071
Conscientiousness (Step 2)	-.083	-1.836	-.123
Type D-personality	.342	5.775^{***}	.365
Emotional stability	-.355	-7.565^{***}	-.457
Extraversion	.095	1.976	.133
Conscientiousness	-.036	-.828	-.056
Trait EI (Step 3)	**-.311**	**-5.344^{***}**	**-.341**

**p < .05, **p < .01, ***p < .001*

A three-step hierarchical regression was performed in order to investigate incremental influence of trait EI on trait anxiety. Type D-personality was entered at step 1, significant personality factors of Big Five together at step 2 and trait EI on its own at step 3. At step 1, the model was statistically significant and type D-personality predicted almost 42% of the variance in trait anxiety, then at step 2, the overall model was also statistically significant ($F_{change(3,218)}=31.994$; $^{***}p < .001$) with 59% of the variance in trait anxiety and type D-personality as a positive predictor and only emotional stability as a negative predictor ($\beta=-.418$, $^{***}p < .001$) of trait anxiety. At the final step, trait EI was found to be a significant negative predictor of trait anxiety, over and above type D-personality and personality factors of Big Five model. Trait EI predicted a significant 4.7% of unique variance in trait anxiety after controlling for type D-personality and personality factors of emotional stability, extraversion and conscientiousness with remaining partial correlation of r=-.341.

5. Discussion

The aim of this study was to examine the relationship between trait EI and trait anxiety, trait D-personality and personality factors of Big Five theory to support construct and incremental validity of trait EI. All three hypotheses were borne out by our data analysis. As stated in the H1, high level of global trait EI corresponds to higher levels of emotional stability, extraversion and conscientiousness proving the convergent validity of trait EI. The H2 was also supported where higher level of trait EI is negatively correlated to trait anxiety and type D-personality proving the discriminant validity of trait EI. Convergent and discriminant validity are both considered subcategories of construct validity. And referring to H3, trait EI predicted level of trait anxiety over and above positive and negative affect-related variables showing clear evidence of incremental validity of trait EI also in the Slovak conditions.

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INTERRELATION BETWEEN ACHIEVEMENT MOTIVATION, MENTAL HEALTH AND MENTAL DISORDERS

Olga Tapalova[1], Nadezhda Zhiyenbayeva[2], & Zarema Zhiyenbayeva[3]
[1]Doctor of Psychology, Prof. of Department of Psychology,
Kazakh National Pedagogical University named after Abay, Almaty (Kazakhstan)
[2]Doctor of Psychology, Director of the Department of postgraduate education,
Kazakh Academy of Labor and Social Relations, Almaty (Kazakhstan)
[3]Second year MA student of Psychology specialty,
Kazakh Academy of Labor and Social Relations, Almaty (Kazakhstan)

Abstract

The difference in the balance between adaptation and transcendent components of achievement motivation was revealed during the study of the phenomenon of achievement motivation at norm and mental disorders.
Based on conducted empirical study authors obtained results, which became basis for assumption that achievement motivation among people who conventionally called healthy is fundamentally different from the achievement motivation among people with mental pathology. There is a nonlinear relation between mental health, mental disorders and adaptation, transcendent. Mental health requires a balance of two components of the motivational sphere.
Sustainable predominance of one of the motivational tendencies with the corresponding stable violation of dynamic equilibrium is a sign of pathology.
The author's model of achievement motivation explaining key aspect of the studied phenomenon under normal and under pathological mental conditions. The name of the model is based on the idea of the necessity of dynamical equilibrium of two achievement motivation components: adaptive and transcendent.

Keywords: *Achievement Motivation, Model, Adaptation, Transcendence, Stress, Human Behavior and Activity, Mental Norm, Mental Disorders.*

1. Introduction

The phenomena of achievement motivation is one of the most important among studied by psychology as far as its study approaches of scientists to the answer to the question about motivation forces of human behavior and activity. Understanding of internal mechanisms of human activity increases expansibility and usability of mental resources in the most diverse spheres of individual and social functioning of a personality.

This article presents the author's model of achievement motivation explaining key aspects of the studied phenomenon under normal and under pathological mental conditions. We proceed from the assumption that achievement motivation in mental health situation differs fundamentally from achievement motivation in mental pathology situation. Clinical observations data as well as positions of scientists involved with motivation problems give occasion to such assumption.

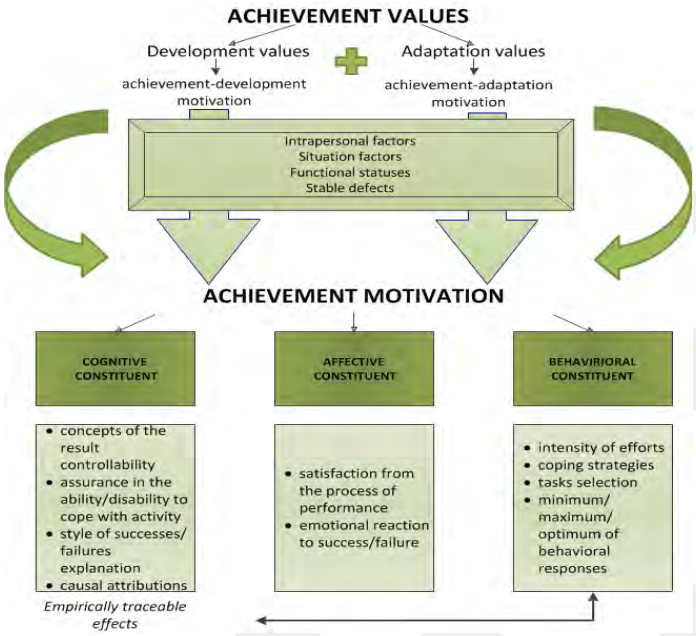
Based on such assumption and intending to study empirical regularities of achievement motivation manifestations in persons with mental disorders and persons, who may be classified as mentally sane, we considered it necessary to determine theoretical grounds for study of the phenomenon under investigation in both classes of test persons.

2. Results and Discussion

If values connected with adaptation dominate in a person, the more expressed "adaptive" constituent of the achievement motivation and corresponding sense constructs and sense dispositions are formed. If values connected with development and transcendence dominate, then dominating "transcendental" constituent and sense constructs and sense dispositions corresponding to it are formed, accordingly.

We think that normally a person has both constituents of the achievement motivation with a definitive predominance of one of them or approximately equals representation in the motivational-conceptual sphere of the person. Under mental pathology condition either extreme manifestation of one of tendencies with the weak representation of the other one or extremely weak representations of both tendencies are possible. Picture shows equilibrium-dynamical model of achievement motivation.

Figure 1. Equilibrium-dynamical model of achievement motivation.



"Achievement-development" motivation may coexist with "achievement-adaptation" motivation, but may impede it as in symmetrical situation: achievement-adaptation may be the factor exalting the opposite aspect or weakening it. So these two aspects of motivation may be both in synergism and antagonism relations. If a person has both tendencies in approximately equal measure, he is controlled by them simultaneously or alternatively. If one of constituents dominates unalterably the person prefers either development or adaptation.

Psychological adaptation is considered as an active personal function ensuring coordination of actual needs of an individual with the requirements of the neighborhood and dynamic changes of living conditions.

We can assume that the achievement motivations constituent, associated with self-development and transcendence of a person, correlates with internal locus of control, orientation towards the use and improvement of own internal resources while the achievement motivation constituent associated with adaptation correlates with external locus of control, orientation towards the requirements of neighborhood, the situation, search of external resources and belief in their predominating role in solution of difficulties. At the same time a person cannot function only in the mode of transcendence. A person is healthy until he has both constituents of motivational sphere, until they are balanced, that is, in a state of unstable equilibrium.

"Unstable equilibrium" means lack of static ratio of these motivational tendencies in equal proportions. Temporary predominance of one or another tendency depends on a set of factors, such as situational, personal, functional, physiological, as well as presence of steady pathological formations. It is obvious, that the last factor influences steady predominance of one of motivational tendencies and stable disturbance of this equilibrium.

Normally this unstable equilibrium is disturbed temporarily, with some predominance of this or that constituent. Strong predominance of some of tendencies is also allowable upon condition of temporariness of such state. That is, motivational system is a dynamic formation. Thereat, the factor of dynamism is a sign of health. A healthy person is able to be motivated by different motivational sphere constituents, move from achievement of some goals and values to the other ones: from the values of development and a self-transcendence to adaptation values and vice versa.

In a situation of mental pathology the dynamics of these two motivational tendencies is disturbed. The person is not able to change motivational vector depending on the situation requirements, perceived personal, functional and other restrictions. Therefore equilibrium becomes hard-hitting or even impossible.

3. Conclusion

Equilibrium-dynamical model of achievement motivation is based on the idea of existence in human motivation of two tendencies – adaptation and transcendence, which is for the most part represented in the tradition of existential psychology.

Value is a sense-making construct with regard to the motive. Qualitative distinction of values of a person generates diversity and specificity of acting motives of a personality. Achievement values associated with adaptation and transcendence general corresponding motives and form an integral achievement motivation.

These two aspects of motivation may be both in synergism and antagonism relations. If a person has both tendencies in approximately equal measure, he is controlled by them simultaneously or alternatively. If one of constituents dominates unalterably the person prefers either development or adaptation. A person is healthy until he has both constituents of motivational sphere, until they are balanced, that is, in a state of unstable equilibrium.

"Unstable equilibrium" means lack of static ratio of these motivational tendencies in equal proportions. Temporary predominance of one or another tendency depends on a set of factors, such as situational, personal, functional, physiological, as well as presence of steady pathological formations.

Stable predominance of one of motivational tendencies with corresponding consistent disturbance of dynamic equilibrium is a sign of pathology. Under the situation of mental pathology the dynamics of these two motivational tendencies is disturbed. The person is not able to change motivational vector depending on the situation requirements, perceived personal, functional and other restrictions. Therefore equilibrium becomes hard-hitting or even impossible.

Normally this unstable equilibrium is disturbed temporarily, with some predominance of this or that constituent. Strong predominance of some of tendencies is also allowable upon condition of temporariness of such state. That is, human "achievement" motivational system is a dynamic formation. Thereat, the factor of dynamism is a sign of health. A healthy person is able to be motivated by different motivational sphere constituents, move from achievement of some goals and values to the other ones: from the values of development and a self-transcendence to adaptation values and vice versa.

Specified constituents of achievement motivation, being refracted through intra personal, situational, physiological and other factors, are presented in actual human behavior in different proportions and configurations, forming a construct of achievement motivation in the theoretical plane of consideration. Further analysis of this construct allows distinguishing cognitive, affective and behavioral blocks therein.

Based on presented equilibrium-dynamic model of achievement motivation we plan to carry out our further scientific inquiries within the framework of this subject in the direction of empiric study of achievement motivation in persons belonging to mental norm on the one part and in persons suffering from mental disorders on the other part.

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ONLINE BURNOUT PREVENTION AMONG HUNGARIAN TEACHERS

Szilvia Horváth
Institute of Psychology, Doctoral School of Psychology, University of ELTE (Hungary)

Abstract

In Hungary 89% of the Hungarian teachers report about overwork and work-related stress, 60% of them feel that don't have control over their own responsibilities.
Online burnout prevention among Hungarian teachers is a training adaptation, which was developed and effectively tested in the frame of a randomized controlled trial in Netherland and Germany (Get.On Institute) as well. First results of the Hungarian study will be presented at the InPACT, 2017 Conference.
The primary purpose of this ongoing randomized controlled trial (RCT) is to evaluate the efficacy of internet based regeneration training (6 lessons, 1 week/lesson) and internet based problem-solving training (iPST, 5 lessons, 1 week/lesson) for employees in the educational sector (teachers from kindergarten to high school) with risk of burnout. The results of trainings will be compared to those of a waitlist control group (WLC).
The expected primary outcome includes burnout symptoms with significant improvement on at least one dimension of MBI-Educator Survey. The expected secondary outcomes includes high values on general Self-Efficacy Scale and WHO Well-Being Index, and low values on Perceived Stress Scale.

Keywords: *Teacher burnout, e-health, online prevention, stress management.*

1. Introduction

Online burnout prevention among Hungarian teachers is a training adaptation, which was developed and effectively tested in the frame of a randomized controlled trial in Netherland and Germany (Get.On Institute) as well. First results of the Hungarian study will be presented at the InPACT, 2017 Conference.

Several studies show that teachers have high risk in the population regarding work-related burnout and chronic stress disease. Factually it means that 60-70% of the European teachers suffer from chronic stress disease, and 30% of them have burnout syndrome. In Hungary 89% of the Hungarian teachers report about overwork and work-related stress, 60% of them feel that don't have control over their own responsibilities.

2. Objection

The primary purpose of this ongoing randomized controlled trial (RCT) is to evaluate the efficacy of regeneration training and internet-based problem-solving training (iPST) for employees in the educational sector (teachers from kindergarten to high school) with risk of burnout. The results of trainings will be compared to those of a waitlist control group (WLC). Symptoms will be assessed before the intervention began and in follow-up assessments after seven weeks, three months, and six months.

The expected primary outcome includes burnout symptoms with significant improvement on at least one dimension of MBI-Educator Survey. The expected secondary outcomes includes high values on general Self-Efficacy Scale and WHO Well-Being Index, and low values on Perceived Stress Scale.

3. Methods

The regeneration training consists of 6, the iPST 5 lessons. To be eligible for the study, participants had to meet the following criteria: 1) be a working teacher 2) have no notable suicidal risk as indicated by a score of <2 on item 9 of the Beck Depression Inventory (BDI).

The main goals of the regeneration and problem-solving training modules: 1. providing problem-solving and rumination techniques, 2. improving coping strategies of the participants 3. help the participants with better sleeping. The iPST in which beyond that participants acquire different problem-solving techniques additionally includes components for behavioral activation with respect to important values in life. It means the following components: techniques for coping with rumination, video introductions for each lesson produced by an expert in mental health training for teachers and example teacher characters who depict the targeted problems and demonstrate implementation of problem- solving techniques in a variety of situations.

3.1. Sample

The recruitment based on 3 platform: 1) recommendation by Hungarian school psychologists 2) school presentations 3) social media.

The recruitment for the trial began at the end of October 2016. Until 16th of December 2016 the number of registered participants is N=214, 63% of them (N=136) completed the screening and began the regeneration training, its 7% (N=10) has already finished the regeneration training and began the iPST module.

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DEVELOPMENT OF PSYCHOLOGICAL PROTOCOL OF EVALUATION AND FOLLOW-UP OF PRE-LINGUAL ADULT DEAF WITH INDICATION FOR THE COCLEAR IMPLANT

Lesle Freitas Maciel & Dra. Edna Maria Severino Peters Kahhale
Núcleo De Psicologia Hospitalar e Psicossomática, PUC- SP Pontifica Universidade Católica São Paulo- SP (Brasil)

Abstract

The objective of this research is to develop a protocol of psychological assistance for the profound adult deaf subject who wishes to perform the cochlear implant procedure, hearing aid indicated for deep neurosensorial deafness. The method used was the qualitative analysis of medical records of subjects attended at a Hospital in Curitiba, PR, Brazil, to collect information on care with and without the assistance of psychology. A hearing memory is required for this device to have a suitable hearing response. The pre-lingual deaf, a subject who was born deaf and did not develop this memory needs a specific care to enable the creation of this relationship with the sound world. The Social-Historical Psychology and, in specific Vygotsky's view on the potential of the subject within the social context, thus allowing the construction of a language of its own allowed an understanding of this person who constituted his subjective world in the absence of sound and in adult life decides to use a device which will put him into the sound world. The hearing health program in Brazil includes formalized protocols in the medical and speech-language area for a group of subjects younger than 3 years and postlingual adults, and there are no guidelines for the psychological area to act with the subject who wishes to make use of the cochlear implant. The creation of this protocol fills a gap in the area, aiming for an integral assistance so that the subject has a broad understanding of his current condition with regard to his little or no experience with sound.

Keywords: *Auditory Health, Cochlear Implant, Psychological Evaluation, Deafness.*

1. Introduction

The question of deafness was initially treated as a need to create a communication that gave the deaf the status of a "social being" with equal rights to listeners. Throughout history two paths have always been traced, orality and the use of sign language. The development of oral language does not happen naturally or in a short time and its strategy is the development of speech and comprehension through lip reading (Duarte, 2013). The deep deaf adult who has not developed any oral and / or sign language or equivalent has not had access to assistance that introduces him to the sound world.

2. Design, Objectives and Methods

The documentary analysis is classified as a qualitative research, since it is a scientific research modality that in the organization and analysis of the medical records seeks the understanding of the service process offered with and without the presence of psychology in the assistance to deep de-lingual deafness.

Three records of pre-lingual deaf adults attended at the private hospital in the city of Curitiba / Brazil from 2006 to 2015 were analyzed. A multiprofessional team (physicians, speech therapists and psychologist) was performed. In two medical records, the users were attended by the whole team, which included assistance by the psychological and the third followed the pattern being assisted by the doctor and speech therapist, without psychological counseling.

The criteria for the selection of medical records were adult users with diagnosis of severe and profound bilateral sensorial-neural loss, pre-lingual with medical and speech-language indication for cochlear implant procedures. And appropriate records of the assistance provided by the staff who accompanied the cases

The data of the medical records were collected in Excell worksheets and were analyzed qualitatively comparing the earnings of each user in order to identify assistance care offered by the different professionals that could be associated with the gains with the cochlear implant. The choice of analysis of the data was the Content Analysis, and the objective was to evaluate the differences of the users' earnings due to the psychological assistance offered in order to create a psychological protocol similar to medical and speech-language standardizations.

The project was submitted and approved by the Research Ethics Committee. The management of the hospital authorized the use of medical records. In collecting and analyzing medical records data, the users and any information that could identify them and / or their families will be kept confidential.

The results indicate gains in the quality of life and autonomy of the users served by psychology, to the detriment of the user, who is only served in the established and standardized ways: medical and speech-language pathology. For example, "listen" to the sound / car sound when crossing the street. Or, sounds of people coming into the house and having lesser feelings of fear. These results indicate guidelines for the creation of a psychological protocol that allows gains in the quality of life of the subject who undergoes the cochlear implant process, as well as autonomy and decrease dependence on third parties or caregivers

3. Discussion

The results of psychological counseling in these profound pre-lingual deaf adults did not meet the phonoaudiological criterion of speaking and identifying complete oral phrases, but when listening to certain noises that were throughout the services symbolized and incorporated in the daily life of their lives, it enabled the dispensation of caregivers and or companions for basic tasks, such as making a purchase. The recognition and symbolization of noises in sounds with meanings indicate the magnification of the subjectivity of these subjects. Besides the insertion in a sonorous world, limited, but with a certain autonomy.

4. Conclusion

These results indicate guidelines for the creation of a psychological protocol that allows gains in the quality of life of the subject who undergoes the Cochlear Implant process, as well as autonomy and decrease in the dependence of third parties or caregivers.

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TESTING "VISUAL IMPEDANCE" IN REASONING BY REDUCING READING AND WRITING REQUIREMENTS

Elpida Panagiotidou, Francisca Serrano, & Sergio Moreno-Ríos
Department of Developmental and Educational Psychology, University of Granada (Spain)

Abstract

Research about dyslexia and about reasoning has developed in parallel. However, it seems reasonable that reading and reasoning abilities are associated, especially considering that reading comprehension, which implies inferences, is carried out using other reasoning abilities.
Following Knauff & Johnson-Laird (2002), at the time of reasoning, the problem´s context provokes visual images that include details irrelevant to an inference, and this could impede reasoning (Hypothesis of Visual Impedance).
A "visual" version of a reasoning task, equal to the traditional propositional task of relational syllogisms, has been created. With this new version, it could be possible to investigate the deductive ability in tests of relational inferences without the involvement of writing and reading skills. A study with adult participants has shown that, generally, the two versions of the reasoning task are equivalent. Related results were found with the two tasks: participants were more precise in the condition of valid problems and in those with one adjective. The results corroborate the effect of visual impedance: the participants gave fewer correct responses in Imaginable problems than in Neutral ones.
In this task, the reading and writing processes are less complex than in the tasks usually applied. Further goals could include using this new task to evaluate the hypothesis of "visual impedance" in children.

Keywords: *Dyslexia, Transitive Reasoning, Visual Impedance.*

1. Introduction

The idea that people with dyslexia use different strategies from people without reading difficulties when making inferences has been investigated considerably in recent years (Bacon & Handley, 2010; Bacon, Parmentier, & Barr, 2013, Bacon & Handley, 2014). In one of their studies with university students, Knauff & Johnson-Laird (2002) found that "the relationships that provoke visual images which contain details irrelevant to an inference could hinder reasoning" (p.364). They called this phenomenon the "Hypothesis of Visual Impedance".

Bacon and her colleagues' results (Bacon & Handley, 2010, Bacon et al. 2013) from university students with dyslexia suggest that people with dyslexia, unlike participants without it, would not show the effect of visual impedance. These results could indicate that people with dyslexia are using different deductive processes. However, an alternative source for those differences could be based on their reading and writing difficulties in reasoning tasks. It would be interesting to validate the effect with other types of task with no propositional form, thus avoiding people with dyslexia who are having difficulties with propositional content.

2. Objectives

The goal of this research was to create a task equivalent to the propositional transitive inference traditional task but decreasing the "propositional" requirements. Although inference processing should be the same, the new task based on "pictures" should also show the "visual impedance effect", and could be utilised in reasoning research by people with difficulties in reading and writing, both adults and children, without the interference of written language.

3. Method

3.1. Participants

A total of 61 students, at both undergraduate and postgraduate level, from the University of Granada, participated in this experiment.

3.2. Design

Reasoning, reading, visual processing and cognitive control skills (intelligence and memory) were tested.

Reasoning was tested using 2 reasoning tasks in 2 different sessions. One task was a propositional written task, in which participants had to read and answer a questionnaire with 16 three-term series problems (Imaginable and Neutral, Valid and Invalid, Easy and Difficult). In the other task the participants used images instead of reading written premises to resolve the same 16 three-term series problems (picture reasoning task). The problems were read by the examiner and meanwhile, the participants had to choose images that were put on a table in front of them, in order to represent each premise and the conclusion. The order of the two tasks was counterbalanced by participants.

4. Results

The results showed that the 2 reasoning tasks are equivalent (See Table 1). A significant main effect of Difficulty was found; $F(1,60)=36.057$; $\eta 2=0.375$; $p< 0.01$. A marginal interaction between Imaginability and Validity was also observed; $F(1,60)=3.558$; $\eta 2=0.056$; $p=0.064$. Another significant interaction was observed between Task and Difficulty; $F(1,60)=5.901$; $\eta 2=0.090$; $p< 0.05$. A significant interaction between Validity and Difficulty was also found; $F(1,60)=6.107$; $\eta 2=0.092$; $p< 0.05$. An analysis of the second task was performed only by those participants who had performed the picture task as their first reasoning task. In this analysis, the "visual impedance" effect was shown.

Table 1. Percentage (and Standard Deviations) of the correct responses in both reasoning tasks.

		Neutral		**Imaginable**	
		Valid	**Invalid**	**Valid**	**Invalid**
Propositional Task	**Easy**	96 (17)	98 (14)	96 (17)	96 (17)
	Difficult	78 (39)	76 (39)	84 (31)	76 (38)
Picture Task	**Easy**	93 (23)	99 (6)	93 (22)	97 (12)
	Difficult	87 (29)	83 (33)	89 (28)	75 (38)

5. Discussion

This study presents some new evidence for the examination and detection of the "visual impedance effect" by using an innovative reasoning task in which pictures are used instead of verbal content. Results have shown that this new task is equivalent to the traditional propositional task used to measure transitive reasoning. Results also indicated that the participants presented the "visual impedance effect" in the Imaginable Invalid Difficult problems, showing that the picture task can be used to detect this effect. This study, therefore, shows evidence for the compatibility of a task free of verbal context for evaluating reasoning abilities, suggesting that it could be an appropriate task for studying reasoning in populations with poor verbal skills, such as those with learning disabilities or dyslexia.

This new picture task to measure reasoning does not lack the characteristics of other previously available reasoning tasks that concern related abilities, but adds the value of providing a new measure free of verbal interference. Consequently, it seems to be a useful task for measuring reasoning, giving the opportunity to expand reasoning testing beyond the previously available possibilities of more traditionally used tasks.

More research is now needed to validate this task, for example in children. A task that demands fewer verbal skills would also be suitable for studying reasoning skills at school levels when children have not yet mastered written skills.

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PREDICTORS OF ACADEMIC SUCCESS AND EDUCATIONAL EXPECTATIONS: ROLE OF TEACHER INVOLVEMENT, ACADEMIC SELF-EFFICACY, AGE AND GENDER

Demet Kara
Department of Psychology, Istanbul Kemerburgaz University, M.A. (Turkey)

Abstract

Current study investigates the relations between students' age, gender, perceived teacher involvement (PTI) and educational expectations as well as the effect of PTI on academic success through academic self-efficacy. 23 teachers and 393 students from 3rd to 8th grades participated into the study. Teacher involvement, academic self-efficacy in Literature and Math courses, educational expectations and academic success were measured using self-reports. Two moderation and two mediation models were executed using hierarchical linear modelling (HLM7) program. Results showed that gender moderated the relation between age, PTI and education expectations. Besides, PTI predicted increased academic success directly and through increasing academic self-efficacy. Students, who perceived their teachers as related and involved in their academic lives, felt more confident and competent about their academic skills and showed better academic performance. This study extends the literature by focusing on students' characteristics, teacher behaviours and their implications on students' performance and persistence.

Keywords: *Perceived teacher involvement, academic success, academic self-efficacy, educational expectations, hierarchical linear modelling.*

1. Introduction

Students' academic success and future academic expectations can be estimated by several self-related factors such as academic self-efficacy, effortful control, gender or age (Liew, McTigue, Barrois & Hughes, 2008); and other related factors such as teachers' motivation, involvement or perceptions about academic success (Wang & Eccles, 2013). This study focuses on the precursors that contribute different areas of students' academic lives.

The first question is that how are students' perceptions about their teachers and educational expectations determined? Students are presumably expected to have a close relation with their teachers considering the amount of time spent together. However, some external factors can change the quality of this interaction such as age or gender (Jerome, Hamre & Pianta, 2008). As students get through higher grades, the amount of time spent together gets lower. Not only decrease in time, adolescents might also prefer to flourish their relationships with their friends because they are in the process of gaining an autonomous self. Therefore, students might perceive their teachers as less involved in higher grades. On the other hand, as students get age, they become more aware of their future options and more decisive about their academic careers (Wigfield & Eccles, 2002). Therefore, the ones who prefer a higher academic career might set higher educational goals for themselves.

For the relationship between age and PTI, boys and girls might perceive their interaction with their teachers differently. In a previous study, Jerome et al. (2008) found that teachers reported having higher conflict with boys than girls. Therefore, present study will examine whether pattern of relations in teacher involvement change across gender. Besides, even if both females and males have equal opportunities in educational settings (Mello, 2008), there are studies showing that this gap, if any, might favour girls' educational expectations (Fortin et al., 2015). Findings from a Turkish graduate sample also pointed that girls plan to attain higher academic levels than boys (Şahin & Fırat, 2011). The current study will examine whether the same trend is valid for primary and secondary school level students and how it is shaped in Turkish culture as an example of collectivistic one.

Students' perceptions about their teachers are important because these perceptions might have further effects on other academic domains. As the most proximate person in school environment, perceiving teachers as involved in one's academic life might bring academic competence as well. Not only academic competence, PTI might also promote student's academic self-efficacy. Because students need information and feedback about their performance, feeling of involvement from a reliable source might increase students' beliefs in their competence (Pajares, 1996).

Current study hypothesizes that (a) with age, PTI will decrease, (b) as students get older, they will expect longer academic lives, (c) gender will moderate the relationship between age, PTI and educational expectations, and (d) PTI will increase students' achievement through academic self-efficacy.

2. Methods

Data was collected through self-reports from 3rd to 8th grade students and their teachers, however only student data will be used. Overall, there were 393 students and 23 teachers from seven schools (M_{age} = 9.98 yrs, SD = 1.71; N_{boys} = 167, N_{girls} = 216). First, *PTI* was measured through Student Report of Teacher as Social Context Scale (Skinner & Belmont, 1991). Students evaluated the level of teacher involvement. Internal reliability was 0.74 in the current study. Second, a*cademic self-efficacy* was measured using Academic Self-Description Questionnaire (ASDQ) that is developed by Marsh (1990). Students responded items that measure their self-efficacy on literature and math courses. Internal reliability for both Literature and Math subscale was 0.79 and 0.86, respectively. Students were asked about their future academic expectations to measure their *educational expectations.* Students were able to choose one of the options in educational system regarding their plans. Last, s*tudents' academic success* was measured through GPA scores that were obtained from the schools. Students' current grade levels (grade) at schools will be considered as their ages in the analysis.

3. Results

Current study aims to investigate whether students' gender moderate the relationship between students' grade, PTI and educational expectations, and if there is a mediational relationship between students' PTI and academic achievement through academic self-efficacy. Using Hierarchical Linear Model (HLM) program, four different models were tested. This program enables to execute within unit (Level 1) and between unit (Level 2) data simultaneously. I only used Level 1 variables because number of Level 2 participants (number of teachers) was not sufficient to obtain reliable results.

Results revealed that grade negatively predicted PTI (β = -0.05, t (351) = -2.38, $p < 0.01$), and gender moderated this relationship (β = 0.11, t (19) = 2.22, $p < 0.05$). To see the exact relations between grade and PTI, bivariate relations were executed for boys and girls. Results showed that grade and PTI has a significant negative relation for girls (r = -0.23, $p < 0.01$) but not for boys (r = -0.03, $p > 0.05$). Similarly, grade negatively predicted educational expectations (β = -0.27, t (338) = -1.99, $p < 0.05$), and gender moderated this relationship (β = 0.78, t (19) = 2.56, $p < 0.05$). Bivariate analysis showed that there is a negative relation for girls (r_s = -0.19, $p < 0.01$) but not for boys (r_s = 0.01, $p > 0.05$).

For the mediational relations, results revealed that there is positive direct relationship between PTI and academic success (β = 0.12, t (347) = 3.19, $p < 0.01$) as well as a positive indirect relationship through math self-efficacy (β = 0.10, %95 CI [(0.05), (0.14)]) at Level 1. However, at Level 2, the direct relationship between PTI and academic success was not significant (β = 0.26, t (18) = -1.36, $p > 0.05$), whereas indirect effect between these two through math self-efficacy was significant β = 0.53, %95 CI [(0.21), (0.94)]). The percentage of indirect effect was 45% at Level 1. Besides, the relationship between PTI and academic success also mediated by literature self-efficacy at Level 1 (β = 0.09, %95 CI [(0.05), (0.12)]), but not mediated at Level 2 (β = 0.09, %95 CI [(-0.05), (0.34)]). Additionally, the percentage of indirect effect was 41% at Level 1.

4. Discussion

This study tested four different models using HLM. First, as expected PTI was decreased in older students however this relationship changes according to gender meaning that only girls' PTI decreased with grade. Second, unlike I assumed, as age increased students' educational expectations decreased. However, gender also moderated this relation. For boys this effect was not meaningful whereas girls' educational expectations decreased in higher grades. Third, PTI increased students' academic success and this positive relation was mediated by both math and literature self-efficacy. This study concludes that gender moderated the link between grade-level, PTI and educational expectations while PTI enhances academic success directly and through academic self-efficacy.

This study adds to the current literature on several ways. First, it extends the literature by focusing on grade and perceived relationship, and moderator effects of gender. As a natural impact of children's and adolescents' developmental phase and current educational system, students might feel less involved with their teachers in older grades. In the transition period of being an adult, adolescents try to gain their agency through separating from proximal adults such as mother, father or teacher, and identifying with their peers (Berndt, 1982). In this separation period, adolescents might actualize their identities by reflecting their own feelings on others and perceiving others as under-involved. Besides, as a necessity of the current educational system, in older grades, students spend less time with each of their

teachers. Therefore, this might prevent them to build strong relations with their teachers. Surprisingly, this effect is only seen for girls. This might be because girls have an earlier separation period from adults than boys. Also, the characteristics of our sample might be effective in this result. The number of girls and boys in each grade level were not equal, so these results need further investigation.

Second, contrary to expectations, girls attain lower educational goals for themselves. As students age, it is more likely for them to engage in academic career options and set higher goals however, current study obtained the opposite results. It might be closely related with the girls' standing in the current society. Although a substantial improvement has been observed, in Turkish culture, girls are not fully allowed to act autonomously. Especially in rural areas, girls quit school because their families do not value girls' education. As a return of collectivistic culture, girls might be aware of the fact that they have lower chance to be in academia and so they lessen their educational expectations.

Last, this study revealed that students, within or across classrooms, displayed better academic performance if they feel that their teachers are involved in their academic lives. This involvement can be described as the feeling of relatedness between student and teacher. From the perspective self-determination theory, fulfilling humans' basic needs might bring positive outcomes (Deci & Ryan, 2000). In the current study, perceiving teachers as involved satisfies students' relatedness need and this in turn brings academic competence. Furthermore, self-efficacy mediated this relation through having a positive link with PTI and increasing academic success. Perceiving others' as involved with their academic lives might promote the beliefs of students in their academic capacities and it affects academic performance (Pajares, 1996). In other words, having an involved teacher might lead students to represent better academic performance through instilling academic self-efficacy in students.

The present study has its contributions and shortcomings as well. First, data gathered from students and teachers through self-reports. Second, moderation and mediation results do not mean causation. Third, study lacks sufficient number of Level 2 participants, more teacher data is needed. On the other hand, applying HLM method strengthens the reliability of results. This study emphasizes the effect of culture and gender in education, and the importance of teachers' roles in academic settings.

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AGREEABLENESS AND EXTRAVERSION IN BRAZILIAN STUDENTS: A COMPARATIVE STUDY IN THE FUNCTION OF SEX

Mara Leal, Tatiana Ferreira & Lucy Melo-Silva
Faculty of Philosophy, Scienses and Letter of Ribeirão Preto, University of São Paulo (Brazil)

Abstract

In the school context, the evaluation and development of socioemotional competences have been investigated for being relevant in personal and academic life. This study aims to describe the socioemotional competences of agreeableness and extroversion in adolescents, according to sex. Participated in these study 165 students from the first year of the high school, ages from 14 to 17 years, from two public schools, in a city in the countryside of São Paulo State, Brazil. Competences were measured through the Social and Emotional or Non-cognitive Nationwide Assessment (SENNA, version 1), a Brazilian instrument, based on the Big Five model. The data were obtained in the classrooms and were analyzed through the student T test for independent samples. The results shows that there is sex equity regarding agreeableness and extraversion, for this group, in this age. These results do not corroborate some findings of the literature that use the same instrument which point out differences in these dimensions regarding sex, however, is in agreement with the results of other studies that have used personality measures.

Keywords: *Evaluation, Socioemotional Competence, High School, Sex.*

1. Introduction

Researches show that socio-emotional competences are related to success in different areas of life, including academic (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). These competences can be defined as characteristics of the individual that result from the reciprocal interaction between biological predispositions and environmental variables. The socioemotional competences manifests in consistent patterns of thought, feelings and behaviors, that are developed throughout the life cycle through formal and informal processes of learning (De Fruyt, Wille, & John, 2015). Alumran and Punamaki (2008), emphasize that emotionally intelligent students perform better in the school because they have better coping strategies and facility of working in groups. Thus, the evaluation and promotion of these competences have been stimulated, especially, in the school context.

In Brazil, the Ayrton Senna Institute (a non-governmental organization) aims to promote in schools the teaching of socio-emotional competencies to achieve the integral development of students. Among its many actions, one was the construction and validation of the *Social and Emotional or Non-cognitive Nationwide Assessment* (SENNA), first Brazilian instrument for the evaluation of socioemotional competences of students in the school environment. In this instrument, the competencies are organized according to the Big Five model of personality. Researches shows that the field of study of socioemotional competences can benefit from the knowledge produced in the area of personality, with empirical evidence on the suitability of the Big Five model for the classification and organization of these competences according to their factors (De Fruyt, Primi, John, & Santos, 2016; De Fruyt et al., 2015; Santos & Primi, 2014). Among the socio-emotional dimensions evaluated by SENNA, this study, which is a cut of a larger investigation, emphasizes agreeableness and extraversion, important competences in the school context. The agreeableness refers to respect and care for others, its competence is the collaboration. This competence is observed in flexible person, who likes to help others and is not selfish, (Santos & Primi, 2014). The extraversion is a dimension that deals with sociability, enthusiasm and assertiveness whose socioemotional competence is the communication (Santos & Primi, 2014). It is important stimulated these competences, in the school context, in a society that seeks the formation of tolerant and assertive citizens.

It is believed that the knowledge about possible differences between the sexes in the socioemotional competences can help in the elaboration of more direct and effective interventions. It is known that several studies have been conducted with the purpose of increasing the knowledge about the development of these competences and the factors that influence them. Regarding the studies that took

into account the sex variable, the study of De Fruyt et al. (2016) performed with Brazilian adolescents, ages between 9 and 18 years, showed that the female sex differs from the male sex in relation to the measured socioemotional competences – agreeableness and extraversion – through SENNA, in favor of the female group. Also, these authors found agreeableness differences in favor of girls, measured by the Big Five Inventory (BFI), however, no differences were found in extroversion. On the other hand, the study of Schmitt, Realo, Voracek, and Allik (2008) on sex differences in personality traits in 55 cultures pointed to higher levels of agreeableness and extraversion for women than for men in the most of nations, however, for Brazilian sample, no sex differences were found for agreeableness. The study of Soto, John, Gosling, & Potter (2011) also found differences regarding sex in agreeableness, in a sample of people from English-speaking countries with higher scores for women of all ages (10 a 65 years) and higher levels of extraversion. The study of Vianello, Schnabel, Sriram, and Nosek (2013) found higher levels of implicit agreeableness for women and higher levels of implicit extroversion for men. Considering that this area of research is new, is relevant to expand the knowledge about this subject in the school context, in relation of sex variable, as a possibility to offer clues for intervention in educational contexts in order to develop a more tolerant society.

2. Objective

This study aims to evaluate the agreeableness and extroversion, in Brazilian students in the first high school, according to the sex variable.

3. Method

3.1. Participants

Participated in these study 165 students from the first year of high school, ages from 14 to 17 years, 92 girls and 73 boys, from two public schools, in a city in the countryside of São Paulo State, Brazil. This study was approved by the Research Ethics Committee of the research institution, so ethical care was taken regarding the authorization of the school's management, parents and the participants' assent.

3.2. Instrument

The Social and Emotional or Non-cognitive Nationwide Assessment (SENNA, version 1) was used to assess the socioemotional competences of agreeableness and extroversion. The SENNA is a Brazilian self-report instrument, which evaluate socioemotional competences in the school context in primary and secondary school students. It is authored by Santos and Primi (2014) and the Big Five model organizes it. The dimension agreeableness is composed by 13 items and it is refers to the ability to feel empathy for one’s classmates, treat them with agreeableness, be respectful, the ability to forgive the classmate, be cooperative, help the classmates when they have difficulties. 14 items compose the dimension extraversion, this dimension is related to the ability to make friends, be sociable, and be an active and enthusiastic person. (Primi, Santos, John, & De Fruyt, 2016). Self-report ratings are made on a scale from 1 (not at all) to 5 (completely).

3.3. Procedures

A psychologist and a team of four graduate students of psychology and pedagogy courses performed data collection in the classroom. The data analysis was done by means, standard deviation and student's t test for independent samples.

4. Results

The Table 1 shows the results of the comparison of agreeableness and extroversion in high school students by the sex.

Table 1. Comparison of agreeableness and extroversion by sex, in high school students (N = 165).

Dimensions	Masculine (N = 73)				Feminine (N = 92)					
	Min	Max	M	SD	Min	Max	M	SD	t	p
Extroversion	2	5	3,36	0,57	2	5	3,45	0,67	-0,95	0,343
Agreeableness	2	4	3,31	0,53	2	5	3,44	0,55	-1,57	0,117

It is observed that there were no differences between girls and boys in the dimensions of agreeableness and extroversion, measured by SENNA.

5. Discussion

The results showed that there were no significant sex differences in the agreeableness and extroversion dimensions, for students in the 1st year of high school. This result suggests that students of both sexes have similar levels of socioemotional competences in agreeableness and extraversion to the school context. This result is consistent with the Schmitt et al. (2008) for agreeableness and the study of De Fruyt, et al. (2016) for extraversion, with the use of BFI in Brazilian samples. However, do not correspond to the findings of De Fruyt et al. (2016) with the use of SENNA, in which it was verified that the female sample scored more than the male sample in both agreeableness and extroversion. In other investigations, also has been found that female sex scored more than male sex in agreeableness and extraversion with another instruments and in different cultures (Schmitt et al., 2008; Soto et al., 2011). Therefore more research is suggests to support these results.

6. Conclusions

The results show that there are no differences in the comparison between the sex in the dimensions of agreeableness and extraversion in the Brazilian sample investigated. Is highlight that this investigation has limitations and that this result cannot be generalized due to the size of the sample, which is small and not representative of the Brazilian regions. It is suggested the needed for more research on this subject with larger samples due to its relevance of the theme, especially for school context. It is believed that knowledge about possible differences between the sexes in socioemotional competencies can help in the elaboration of more targeted and effective interventions in the perspective of implementing programs to stimulate more friendly behaviors between people and a search for more collaborative society.

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THE EDUCATION IN GREECE: THE CASE OF HOSPITAL EDUCATION

Aikaterini Palasidou[1] & Maria Palasidou[2]
[1]University of Florence, Msc, (Greece)
[2]University of Plovdiv (Greece)

Abstract

The education of children with serious health problems and who are hospitalized, differs from that of healthy children in school. The same diversification exists also in teachers. Therefore, teachers being part of an inclusive circle, made up of health professionals, psychologists and from parents of child-patients, they all work in groups, in order to improve children's health and fostering socio-psychological skills.
The purpose of this paper is to present the hospital school and education in Greece, recording the institutional framework, the process of learning, the characteristics of those involved and the available difficulties-facilities.
Conducted literature review, based on studies of articles and journals in Greek and foreign-language literature, conference proceedings, and valid educational, psychological and medical websites: PubMed, PubPsych.
The hospital institutionalized education provides children-patients to continue their learning and their psychosocial development, helping them to revive their psychology, so that they can cope with their illness. Of course some difficulties exist, such as the refusal of parents to be educated their child in hospital. In foreign countries, people who are responsible for the hospital training, help this effort and support it with many transnational programs and technology, which in Greece is still at an early stage.
Through this paper is expected to raise awareness and awakening of stakeholders, which could act as a springboard for an in-depth approach to hospital education in Greece.

Keywords: *Hospital, Child, Education, Training.*

1. Introduction

Education is a multifactorial and diverse organization that is constantly growing and is affected by daily happenings. One of the many forms of education is also the form of clinical education, or differently hospital education, which is developed in this work. The definition of hospital education, according to Patsalis (2013) is: «The provided pre-school and school education (primary and secondary) of operating educational institutions in various hospitals of the country to children-students who are in them for treatment.»

2. Chronology

It is clear that a child, who is hospitalized, is away from the school environment, interrupted school career and mental health may deteriorate. So to meet the school's needs, it was suggested in 1987 by the Psychological Pediatric to the Minister of National Education and Religious Affairs the function of curriculum in hospital. The Ministry then immediately responded to this call to meet the needs of children - patients, suggesting the operation of this program, having as a basis the fact that all children have the right to continue their education while they are sick and hospitalized.

3. Legal Protection

The need for such a program dictated by the Convention on the Rights of the Child in Greece (N.2101 / 92), which states that children have the right to a continuous learning, even if they are in hospital. Also by the International Convention on the Rights of the Child. In addition to Article 7 of the EACH-Charter (European Association for Children in Hospital - is an organization that unfortunately Greece is not a member) and the HOPE-Charter (Hospital Organisation of Pedagogues in Europe – sadly Greece is not a member).

4. Hospital schools in Greece

Initially the definition of hospital given school is "The school works in a hospital, especially children's hospital, providing primary and secondary teaching children, helping them to regain their academic progress during hospitalization or rehabilitation. Responsibility for the function is the local school system. Funded by the state and follow the curriculum of public schools» (Wikipedia). Hospital schools in Greece are nine and are scattered in the big cities in all over the Greece.

All hospital schools belong to special education, except hospital schools "Aglaia Kyriakou" (Athens) and "Aghia Sophia" (Athens), which according to presidential decrees belong to General Education.

5. Characteristics of a hospital school

Regarding the administration and structure of this particular school is reported to have the administrative structure of a mainstream school. It is organized into sections liability, corresponding to clinical hospital and the realization of courses takes place in chambers individually or in specially designed rooms in groups.

The school's program is individualized. However there is also a flexibility program, tailored to the needs of each children. The objectives of the course are achievable and there is emphasis on psychological and social support. It can also be a distance learning (home teaching) and can be done using Information and Communication Technologies (eg interactive whiteboards) and supervisory materials. According to Schmitt (1999), the content of teaching is based on the psychosocial stabilization of children.

In hospital school there are children who are hospitalized for more than 4 days or suffering from chronic diseases. Children are referred by the heads of clinics in the hospital school. At the end they are given education certificates to children - patients who attended the hospital school program.

6. Effectiveness of education in hospital

The effectiveness of education in hospital is that children - patients can feel that they belong somewhere, they can be entertained, feel optimism, escape from the hospital environment and be equipped with knowledge. However, they face some difficulties, such as physical, psychological- emotional difficulties, anxiety about the course of their health and learning deficiencies (due to possible long-term absence from school).

Parents do not stay uninvolved in hospital training. Some treat it keeping a positive attitude, because the disposal their child improves and it improves and their own, and some having negative view for this, because the belief that hospital training can cause fatigue and it impairs the health of their children. The main difficulty however is the restriction of professional assurance, because of their constant presence in the hospital.

The hospital, in the other side, should provide psychological support to the stakeholders (children-parents-teachers-caregivers) for the work done.

7. Features of the teacher in the hospital school

The teacher is the one who plays the most important role in the hospital school. He has also specific features, such as specific and general training, teaching-pedagogical competence. They are carefully selected, have a strong immune system and extended knowledge of the course of all grades. Besides, they are responsible chambers, collaborate with the superior authority of the clinic, nurses, doctors, psychologists, parents & school, work having personal or educational-professional motives, have mood, persistence, sensitivity, appetite and have in their mind to be a link with school going child and information about the progress. They try to become the main friend of the child-patient and the try to not experience burnout.

8. Results and Conclusion

Consequently, and in accordance with the above, it becomes clear that it is important to have clinical education in Greece, because according to Bergmann (1980) serves as treatment. Furthermore, connects the child with the world outside, the hospital provides psychological assistance to child, reduces the stress of the child and the fear, make the child to hope and be optimistic, gives incentives to continue, to make the child feel accepted and to experience the love. Also take courses through this all the bystanders who take place in this type of education.

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RESPONSIBILITY IN BRAZILIAN HIGH SCHOOL STUDENTS: IS THERE DIFFERENCE BETWEEN GIRLS AND BOYS?

Mara Leal[1], Lucy Melo-Silva[1], & Maria do Céu Taveira[2]
[1]*Faculty of Philosophy, Scienses and Letter at Ribeirão Preto, University of São Paulo (Brazil)*
[2]*School of Psychology, University of Minho (Portugal)*

Abstract

In the school context, it is generally found that girls perform better than boys. Researches show that socioemotional competences such as responsibility, commitment and perseverance are related to school performance and professional success. Therefore, this study evaluates the socioemotional competence "responsibility" in Brazilian students according to sex. It is hoped to find greater levels of responsibility in favor of girls. Participated in the study 165 students aged between 14 and 17 years old, of both sexes from the first year of high school in two public schools. Was used the Social and Emotional or Non-cognitive Nationwide Assessment (SENNA), a Brazilian self-report instrument, that evaluate socioemotional competences in the school context in primary and secondary school students. Organized on the basis on the Big Five model, one of its dimensions, conscientiousness / responsibility, refers to the effort expended on school activities and includes behaviors such as finishing schoolwork at the right time, the organization of school material and the performance of activities in an efficient manner. Data collection was performed in the classroom, and data analysis was done by means, standard deviation and student's t test for independent samples. The results show that girls and boys are similar concerning conscientiousness, responsibility, perseverance and organization in the school context. This result is contrary to the initial expectation and can be seen positively in a society that seeks gender / sex equality.

Keywords: *Responsibility, Evaluation, Socioemotional Competences, High School.*

1. Introduction

It is known that socioemotional competences are related to the promotion of school learning. Thus, several actions have been developed in different countries for the evaluation and development of these competences. Responsibility is a socioemotional competence, which is related to duty and obligation in the most diverse fields of human activity. In the school context, this competence proves to be fundamental importance, as it expresses itself in the capacity to fulfill the school duties in an efficient way, which contributes to human development, especially the academic, and also favors the development of career skills.

Researches show that socioemotional competences can be organized according to the BIG FIVE theory (De Fruyt, Primi, John, & Santos, 2016; De Fruyt, Wille, & John, 2015; Santos & Primi, 2014). The *Social and Emotional or Non-cognitive Nationwide Assessment* (SENNA) is the first Brazilian instrument for the large-scale evaluation of students' socioemotional competences in the school environment. This instrument was built with the purpose of supporting public policies for the development of education and is validated. In SENNA, the competences are organized according to the BIG FIVE model, which has in its conscientiousness one of its dimensions. Conscientiousness refers to an individual's ability to be organized, disciplined, and goal-oriented. This dimension has an important impact on schooling achieved (Lleras, 2008), especially for males (Almlund et al., 2011).

Research that analyzed the conscientiousness according to the sex, most of them results in favor of young women, such as the study of Santos and Primi (2014), the studies of De Fruyt, Primi, John and Santos (2016) and the study of Valdivia (2016) also with Brazilian samples and with the use of SENNA. Soto et al. (2011), when examining samples from childhood to adulthood, living in English-speaker countries, found that female samples show higher levels of conscientiousness than males in all age groups. The study of Schmitt, Realo, Voracek, & Allik (2008) conducted with 55 cultures showed that the female sex presents higher levels of conscientiousness through the Big Five Inventory, (BFI) in 23 countries, the exception was for samples from India and Botswana, where men showed higher levels of conscientiousness.

Considering that the dimension of conscientiousness (socioemotional competence: responsibility) it is important to achieve good school results, to increase the knowledge about these competences regarding possible differences between the sexes, provides clues for interventions. Considering the findings of the literature, the hypothesis is that female participants are more responsible. Thus, this study was designed to verify if there is a difference between the sexes in a Brazilian sample starting high school.

2. Objective

The aim of this study is evaluate the socioemotional competence responsibility (conscientiousness) in Brazilian students of the first grade of high school, depending on the sex variable.

3. Method

3.1. Participants

One hundred sixty five Brazilian students, from the first year of high school, 43% male and 56% female, ages from 14 to 17, participated in this study. The students come from two public schools, from a city in the countryside of São Paulo state. This study was approved by the Research Ethics Committee of the research institution, so ethical care was taken regarding the authorization of the school's management, parents and the participants' assent.

3.2. Instrument

The *Social and Emotional or Non-cognitive Nationwide Assessment* (SENNA, version 1). Is an instrument for the evaluation of socioemotional competences of children and adolescents in a school context. It was developed by Santos and Primi (2014) and is organized into five dimensions of socioemotional competences, according to BIG FIVE Personality Theory (John, Naumann, & Soto, 2008). Conscientiousness is one of the dimensions of the instrument, which describes behaviors through 18 items. These behaviors express responsibility in the school context, the ability to finish homework, study for a test, keep organized material, and other behaviors. Self-report ratings are made on a scale from 1 (not at all) to 5 (completely).

3.3. Procedures

A psychologist, with aid to a team of four undergraduate students from the Pedagogy and Psychology courses, collected the data in the classroom. For the description of the data, the minimum, maximum, mean and standard deviation values were used. After verifying the normal distribution of the data, the comparison between the groups was performed using parametric statistics, students t-test for independent samples. Differences with p values ≤ 0.05 were considered significant.

4. Results

Table 1 presents the data of the comparison of the responsibility competence in Brazilian students of the first year of high school, according to the sex variable (92 female and 73 male) from the conscientious dimension of SENNA.

Table 1. Comparison of responsibility by the sex in high school studens (N = 165).

Sex	*Min*	*Max*	*M SD*	*t*	*P*
Male	2	5	2,97 0,62	-1,613	0,109
Female	1	4	3,13 0,60		

The data shows that there is no significant difference statistically in the comparison of the means obtained in the conscientious dimension of SENNA in the sample investigated.

5. Discussion

In the competence responsibility (conscientiousness), object of this study, the comparison between the participants of both sexes revealed similarities between the groups against the initial expectation. This result does not corroborate the findings of investigations with Brazilian samples of the same age group and with the use of SENNA (De Fruyt, Primi, John, & Santos, 2016; Valdivia, 2016) and also from other investigations with samples from different cultures (Schmitt, Realo, Voracek, & Allik,

2008; Soto et al., 2008). It should be noted that factors such as sample size and the relative homogeneity of the participants (only the first year of high school students) may have influenced the results found. Another issue to consider is possible biases in participants' responses.

6. Conclusions

The similarity between the sexes in levels of responsibility can be seen in a positive way, given that societies seek equality between the sexes. However, it should be noted that the results of this investigation do not allow generalizations; so further studies with larger and heterogeneous samples are needed. Even so, these results may sinalize possibilities of changes in behaviors more conducive to sex equality as possible responses to the efforts of educators and the community in advancing the civilizing process. Promising signs in this particular moment of regression in democratic societies.

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MATERNAL SOCIAL SUPPORT AND THE QUALITY OF DELIVERY EXPERIENCE

Franca Tani[1], Valeria Castagna[2], & Lucia Ponti[1]
[1]*Department of Health Sciences, University of Florence (Italy)*
[2]*Local Heath Unit 4 (USL 4) Prato (Italy)*

Abstract

Introduction. Social support plays a significant role on physical and psychological wellbeing of pregnant women. The aim of this study was to test a complex theoretical model hypothesizing that social support mothers perceive during pregnancy, could influence clinical delivery indices, both directly and indirectly, through the mediate effects of the mothers' anxiety states and their prenatal attachment to their child.
Method. A longitudinal design at two different times was carried out on 167 pregnant women (age M = 31.84, SD = 4.92). Inclusion criteria were to be nulliparous native Italian women, no risk pregnancy, and single fetus. All participant completed the *Maternal Social Support Scale* (*MSS;* Webster et al., 2000; Dabrassi et al., 2009) that allow to measure a global score about the maternal perceived social support; the *State Anxiety Inventory* (STAI-Y2; Spielberger et al., 1983; Predabissi et al., 1989), which assesses the state of anxiety; and the *Prenatal Attachment Inventory* (PAI; Muller, 1993; Della Vedova et al., 2008) that measures the mother's attachment bond to child during pregnancy. Moreover, at the first day after childbirth, clinical data of delivery were collected. Structural Equation Modeling (SEM) was employed to investigate the theoretical hypothesized model.
Results. The results confirmed that the social support mothers perceived during pregnancy promote a more positive experience of delivery, both directly, protecting women from clinical difficulties of the delivery, and indirectly, reducing the occurrence of maternal anxiety states and promoting a more secure prenatal attachment to child.

Keywords: *Maternal Social Support, Delivery Experience, Prenatal Attachment, Anxiety, Birth.*

1. Introduction

Social support during pregnancy plays a significant role on wellbeing of pregnant women. Pregnant women who perceive high levels of social support perceive the numerous and heterogeneous pregnancy-related changes as less anxious, have lower probability to develop a post-partum depression and a better delivery experience (Tani & Castagna, 2016). Moreover, the quality of social support perceived by mothers is strictly associated with the prenatal attachment to the child and with care behaviors that mothers have with their newborn (McK Doan & Zimermann, 2008).

2. Objectives

Despite the relevance of the literature above discussed, to date no study had deepened simultaneously the complex influences, both direct and indirect, of these variables on the quality of the delivery. Starting with these considerations, the purpose of this study was to investigate the influence, both direct and indirect, of maternal social support on clinical aspects of delivery, in terms of length of labor, use of oxytocin and epidural analgesia, through the mediate effect of maternal anxiety state and prenatal attachment to the child. In particular we intended to test the hypothesized theoretical model reported in Figure 1.

3. Methods

3.1. Participants

A total of 167 pregnant women, aged 20 to 42 years (M=31.84 DS= 4.92), were recruited for the present study. All participants are Caucasian women and come from the Center of Italy. Ninety-three percent of the women live with their partners, and pregnancy was planned in 86.2%.

3.2. Measures

The Maternal Social Support Scale (MSS) (Webster et al., 2000; Dabrassi, et al., 2009) was used to measure the maternal perceived social support. The MSS is a self-report questionnaire, consisting of 6 items, rated on a 5-point Likert scale from 1 (never) to 5 (often), which assesses the amount of care and love women perceive from their family, partner and friends. For the current sample, Cronbach's alpha was .78.

The State Anxiety Inventory (STAI_Y2) (Spielberger et al., 1983; Predabissi & Santinello, 1989) was used to measure the state of anxiety of the women. STAI_Y2 consists of 20 items rated on a 4-point Likert scale from 1 (never) to 4 (very often). For the current study Cronbach's alpha value was.83.

The Prenatal Attachment Inventory (PAI) (Muller, 1993; Della Vedova et al., 2008) was employed to assess the mother's attachment bond to child during pregnancy. PAI is a self-report questionnaire consisting or 21 items, rated on a 4-point Likert scale from 1 (almost never) to 4 (almost always). For the present sample Cronbach's alpha value was .93.

3.3. Procedure

A cohort longitudinal study was carried out. Data were collected at two different times:

Time 1. 31-32 week of pregnancy: all participants were requested to fill out a card with their own social data. Then they were asked to complete MSS, STAY_Y2 and PAI questionnaires;

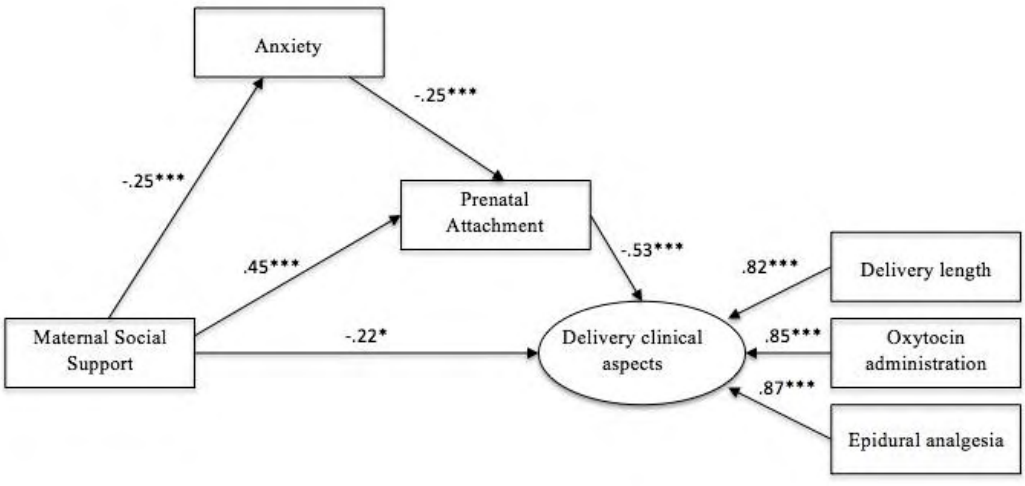
Time 2. the first day after childbirth: clinical data on childbirth were registered.

The research was conducted in accordance with the guidelines for the ethical treatment of human participants of the Italian Psychological Association. The Ethical Committee of the Azienda Sanitaria Prato had previously approved the study. A written informed consent was obtained to include the participants in the study. Inclusion criteria were to be nulliparous native Italian women, no risk pregnancy or previous spontaneous interruption of pregnancy, and single fetus. Participants were recruited when they attended the delivery preparation courses in the Maternity ward of the Misericordia e Dolce Hospital in Prato.

4. Results

Results of SEM analyses showed that the hypothesized model tested had a good fit to the data (χ^2 =440.71, *df* =15, $p < .001$, robust CFI = .97, TLI = .93, RMSEA = .10, SRMR = .04). In figure 1, the theoretical tested model and all statistical coefficients of direct effects are reported.

Figure 1. Theoretical tested model.



The maternal social support perceived during pregnancy positively predicts the prenatal attachment and negatively influences the clinical aspects of the delivery and the level of anxiety. Moreover, the maternal social support significantly affects the prenatal attachment both directly and indirectly through the level of anxiety (total effect: $\beta=.51$, $p<.01$; total indirect: $\beta=.06$, $p<.01$). Finally, maternal social support predicts the clinical aspects of the delivery, both directly and indirectly through prenatal attachment (total effect: $\beta=.49$, $p<.001$; total indirect: $\beta=-.27$, $p<.001$).

5. Discussion

Our results showed that social support has a significant direct influence on the quality of the birth experience, protecting women from clinical difficulties in terms of length of labor, and use of oxytocin and epidural analgesia. Moreover, our data show that the social support mothers perceive during pregnancy plays a significant indirect influence on the clinical aspects of delivery, reducing the maternal anxiety states and promoting a more secure prenatal attachment to child. These results confirm previous research (Anniverno et al., 2013; Tani & Castagna, 2016).

Overall, our data significantly confirm the importance of putting a new light on maternity and birth experiences, considering them as complex human processes in which social, psychological and physical aspects are highly inter-connected, influencing family, maternal, fetal and newborn health.

Despite the undeniable interest of the results, this study presents a number of limitations. First, only nulliparous women with no complications and a single fetus are included in the sample. Future research could explore samples of women with more complex psychological and physical conditions. Moreover, we investigated only the social support of close relationships with social partners, such as family, partners or friends. It would be very interesting to evaluate the role of social support given by obstetricians, midwives, and medical staff on clinical aspects of delivery.

However, despite these limitations, the present study adds important understanding of the links between the quality of maternal social support perceived and the quality of delivery experiences. It is very important given better knowledge about how and which variables can facilitate the first attachment relationship between mother and her child and the delivery process.

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COMMUNICATION SKILLS AND SOCIAL SUPPORT AT WORKPLACE

Koshi Makino
Department of Business Administration, Setsunan University (Japan)

Abstract

This study examined the relationship between communication skills and social supports from the co-workers or from the boss at workplace. Subjects were 44 university students (who have experienced part-time jobs before, 24 males and 20 females). Their communication skills with their co-workers and with the boss and social support at workplace were measured. As a result of factor analysis to the communication skill items, 4 factors were extracted: Conversation skill, Problem solving skill, Adjustment of relationship skill, and Help skill.
First, I examined the relationship between communication skills with the co-workers and their social support from the co-workers. According to the correlation analysis between them, all four factors were positively related to their social support. In other words, the higher each communication skill is, the higher their social support is. Especially, problem solving skill and help skill are strongly correlated to the social support from the co-workers. According to the multiple regression analysis, there was no significant relationship between them.
Second, I examined the relationship between communication skills with the boss and their social support from the boss. According to the correlation analysis between them, all four factors were positively related to their social support. In short, the higher each communication skill is, the higher their social support is. Especially, conversation skill has a strong positive relationship with the social support. According to the multiple regression analysis, conversation skill and adjustment of relationship skill had a significant inhibition effect on social support from the boss.

Keywords: *Communication skills, social support, workplace, co-workers, boss, university students.*

1. Introduction

Communication skills are a part of social skills, which are work more directly to interpersonal relationship. Makino (2010) have researched on communication skills of junior-school students and communication skills training for them in Japan. Makino (2012) examined the association between communication skills and friendship, their mental health. According to Makino (2012), as the person who had high communication skills for the same-sex friends, the friend relations were good and the mental health state was good. However, these studies were limited to the communication skills for friends in the college life. When a student become a member of society, the communication skills with a co-worker and the boss are necessary. In addition, they become to need social support from their co-workers and their boss at workplace. Therefore, I examined relationships between the communication skills and the social support at workplace in this study.

2. Objectives

The purpose of this study was to investigate the relationships between communication skills and social support at workplace. Most of Japanese university students have experienced part-time jobs during their school days. They work as part-time workers, but they are requested to work very hard like fulltime worker nowadays. In that situation, they often need some social support from their co-workers, or their boss. This study examined if communication skills with co-workers and the boss would help to obtain the social support from them at workplace or not. And if some skills work to help, this study tried to find which skill work to get their social support. This research will make a substantial contribution to industrial work study if it becomes clear that which skill is more useful for social support at workplace.

3. Methods

3.1. Participants

The participants were 44 university students (who have experienced part-time jobs before, 24 males and 20 females, M_{age} =19.84), enrolled in different departments of a Japanese university. Most of them were second year students.

3.2. Procedure

Participants completed a questionnaire in the classrooms. They received course credit for completing the questionnaire. The questionnaire was presented as a study about daily life among university students. They were told to answer the questions without discussing them with others.

3.3. Measures

The questionnaire was made up of eight scales (and five scales were not analyzed in this study) plus demographic items. It took about 15 minutes to complete.

Communication skills with the co-workers. The communication skills with co-workers self-report scale was arranged from Kiss18 (Kikuchi, 2004) and Makino (2012). It included 18 items that were rated on a five-point scale (1=strongly disagree, 5=strongly agree). Examples of those items were "I talk with a co-worker and am the one where many conversations do not break off." and "I can be reconciled very well with the co-worker who quarreled".

Communication skills with the boss The communication skills with boss self-report scale was arranged from Kiss18 (Kikuchi, 2004) and Makino (2012). It included 18 items that were rated on a five-point scale (1=strongly disagree, 5=strongly agree). Examples of those items were "I can help the boss well." and "Even if a trouble happens with my boss, I can handle it well." The expressions of the items were the same as the scale with co-workers, but the difference is the scale with the co-workers or with the boss.

Social support at workplace The Social supports from the co-workers and from the boss scale was arranged from Wada (1998). It included 10 items that were rated on a five-point scale (1=strongly disagree, 5=strongly agree). Social support scales were comprised of 2 factors, support from the co-workers and support from the boss.

4. Results

4.1. Factor analysis of communication skills with co-workers and with the boss

As a result of factor analysis to the communication skills items, 4 factors were extracted: Conversation skill, Problem solving skill, Adjustment of relationship skill, and help skill. The conversation skill is a technique to be able to talk well and to have many topics to talk. The problem solving problem skill is a technique that can solve the troubles when they happen with the person of the circumference. The adjustment of relationship skill is a technique to coordinate the relations with the co-workers or the boss well. And the help skill is a technique to help your co-workers or boss with work.

4.2. The relationship between communication skills with the co-workers and social support at workplace

Table 1 shows the results of the correlation analysis between communication skill with the co-workers and social support from them. All four factors are positively correlated to the social support. In other words, the higher each communication skill is, the higher their social support from co-workers is. Especially, problem solving skill and help skill are strongly correlated to the social support from the co-workers.

Table 1. Correlations of communication skills with co-workers and social support.

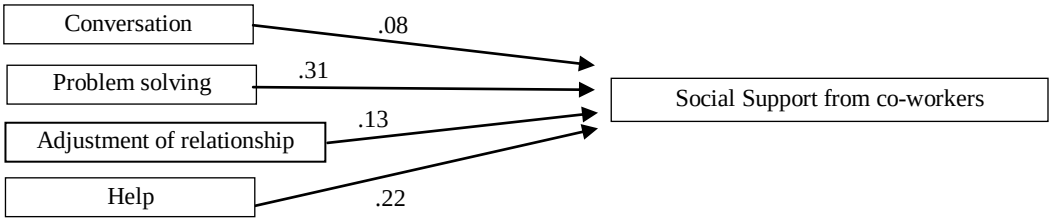
	Conversation	Problem solving	Adjustment	Help
Social Support	.49 **	.63 **	.51 **	.59 **

Note. Adjustment = Adjustment of relationship skill.
** p <.01.

4.3. The effects of communication skills with the co-workers on social support at workplace

Figure 1 presents the results of the multiple regression analysis. According to the multiple regression analysis, there was no significant relationship between them. R^2 was not so low (R^2 = .363.).

Figure 1. Path model of the relationship between communication skills with the co-workers and social support.



4.4. The relationship between communication skills with the boss and social support at workplace

Table 2 shows the results of the correlation analysis between communication skill with their boss and social support from the boss. All four factors are positively correlated to the social support. In other words, the higher each communication skill is, the higher their social support from their boss is. Especially, communication skill is strongly correlated to the social support from the boss.

Table 2. Correlations of communication skills with the boss and social support.

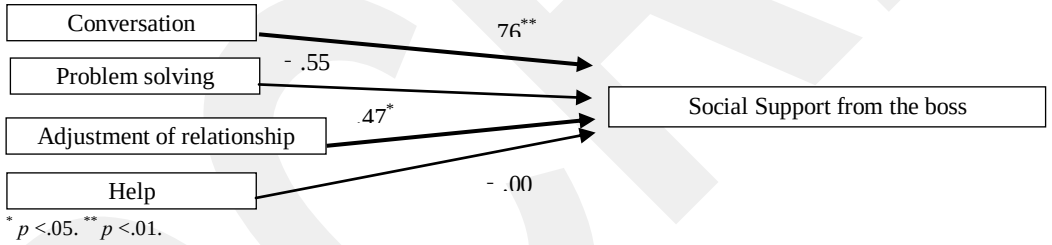
	Conversation	Problem solving	Adjustment	Help
Social Support	.54 **	.36 *	.38 *	.39 *

Note. Adjustment = Adjustment of relationship skill.
* p <.05. ** p <.01.

4.5. The effects of communication skills with the boss on social support at workplace

Figure 2 presents the results of the multiple regression analysis. According to the multiple regression analysis, conversation skill and adjustment of relationship skill had a significant promotion effect on social support from the boss.

Figure 2. Path model of the relationship between communication skills with the boss and social support.



* p <.05. ** p <.01.

5. Conclusions

As for co-workers, problem solving skill and adjustment of relationship skill are very important for workers to obtain the social support from their coworkers. It may be said that the worker helping co-workers receives support from their co-workers as revenge. As for the boss, conversation skill and adjustment of relationship skill are very important for the social support. Workers with higher conversation skill and adjustment of relationship skill had more social support from the boss.

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FACTORS OF LIFETIME PREVALENCE OF ALCOHOL USE AMONG EARLY ADOLESCENT BOYS AND GIRLS

Beata Gajdošová, Olga Orosová, Anna Janovska, & Marianna Berinšterová
Department of Educational Psychology and Health Psychology,
Faculty of Arts, P.J. Šafárik University in Košice (Slovak Republic)

Abstract

Objectives: This study aimed to explore the relationships between lifetime prevalence of alcohol use and psychological factors among adolescents. *Methods:* In the study (APVV-0253-11, APVV-15-0662), a representative sample of 1298 adolescents (53.3% girls, age M=11.72 years, SD=0.67 years) was used. Respondents indicated their lifetime prevalence of alcohol use (dichotomized: 0-not used, 1-used) as an outcome variable and accessibility of alcohol, expectations of the effect of alcohol use (positive, negative), emotional regulation were used as independent variables. Regression analyses were used and mediation effect was tested via Sobel test which was carried out separately for boys and girls. *Findings:* Models containing all predictors were *s*tatistically significant for boys (χ^2=43.22, p>0.001, 16.3%) as well as for girls (χ^2=57.04, p<0.001, 17.8%). The models showed that for boys there were significant associations between higher level of positive expectations (p<0.05), higher level of alcohol accessibility (p<0.001) lower level of negative expectations (p<0.01), lower level of emotional regulation (p<0.05) and alcohol use. For girls, significant associations were found between higher level of positive expectations (p<0.01), higher level of alcohol accessibility (p<0.001), lower level of negative expectations (p<0.01) and alcohol use. Mediation analyses showed that positive association between prevalence of alcohol use and accessibility were weakened at increasing level of emotional regulation for boys (z=2.09; p<0.001) and at decreasing level of positive expectations for girls (z=2.31; p<0.001). *Conclusions:* This study has shown that alcohol accessibility and alcohol use are associated among both genders but this association is mediated by emotional regulation among boys and by positive expectations in girls.

Keywords: *Alcohol, accessibility, emotional regulation, expectation.*

1. Introduction

While there is consistent evidence that early initiation of alcohol consumption and frequency of teenage drinking are associated with a whole range of future negative outcomes, relatively little attention has been paid to mechanisms underlying the association of alcohol consumption and psychological factors among young adolescents (10–12 years old) (Patric, Schulenberg, 2014). High level of accessibility of alcohol has been traditionally linked to higher levels of alcohol use (Komro et al., 2007). Emotional regulation and expectation of negative effect of alcohol use may strengthen alcohol refusal skills and promote protective mechanisms of young adolescents (Aurora, Klanecky, 2016). According Wardell, Read (2013) alcohol-related positive expectancies predict quantity and frequency of heavy drinking among students.

2. Design

A cross-sectional design was used.

3. Objectives

This study aimed to explore the relationships between lifetime prevalence of alcohol use and psychological factors among early adolescent boys and girls.

4. Methods

4.1. Participants and recruitment

The data were collected as a part of an evaluation study of the school-based prevention program Unplugged (APVV-0253-11, APVV-15-0662). Data comes from the first wave of this ongoing longitudinal study. The data were carried out in September 2013 on 62 Slovak primary schools, which were randomly selected.

4.2. Measures

Sample

The first wave of longitudinal UNPLUGGED study (APVV-0253-11, APVV-15-0662), a representative sample consisting of 1298 pupils (53.3% girls, age M=11.72 years, SD=0.67) was used.

Measures

Boys and girls were asked regarding their lifetime prevalence of alcohol use, accessibility of alcohol, emotional regulation and expectation of positive and negative effect of alcohol use.

Lifetime prevalence of alcohol consumption was explored for boys and girls by the question: **„** On how many occasions (if any) have you had any alcoholic beverage to drink in your life-time ", with possible answers: 0, 1-2,3-5,6-9,10-19,20-39, 40 or more. Lifetime prevalence of alcohol consumption was dichotomized and served as the dependent variable (0 = without prevalence, 1 = prevalence).

To measure accessibility of alcohol the following question was used: **„**If you wanted, would it be difficult or easy for you to obtain alcohol", with response options: 1-impossible to 5-very easy.

From the Adolescent Resilience Scale (Oshio et al., 2003) consisting of the subscales: novelty seeking (7 items), emotional regulation (9 items) and positive future orientation (5 items) only emotional regulation (Cronbach´s α= 0.68) was used in this study, with rating scale 1-definitely no to 5-definitely yes. A higher score indicated a higher level of emotional regulation.

Expectation of the effect of alcohol use (Hibell et al., 2012) was measured by the question: „ What is the probability that after consuming alcohol happen to you these things". A summary score was calculated for positive (Cronbach´s α= 0.83) and negative expectations (Cronbach´s α= 0.85), with response options: 1-very likely to 5-very unlikely.

4.3. Statistical analyses

Binary logistic regression was used for the analysis which was carried out separately for boys and girls. The model consisted of four independent variables (accessibility of alcohol, emotional regulation, positive and negative expectation of the effect of alcohol use. Adolescents´ lifetime prevalence of alcohol was used as the dependent variable, dichotomized into: 0 = without prevalence, n=332 boys, 55,1%, n=261 girls, 66,1% if answered 0 and 1 = prevalence, n=459 boys, 46%, n=225 girls ,32% if answered from 1-2 to 40 or more.

Linear and logistic regression as well as a Sobel test were used to explore the relationships between prevalence of alcohol use and accessibility of alcohol which was carried out separately for boys and girls. The conditions for mediation analysis were checked (Baron, Kenny, 1986).

5. Results

Models containing all predictors were *s*tatistically significant for boys (χ^2=43.22, p>0.001) as well as for girls (χ^2=57.04, p<0.001). The model consisting of psychological variables explained 16.3 % of variance of boys´ lifetime prevalence of alcohol use and explained 17.8 % of variance of girls´ lifetime prevalence of alcohol use. The models showed that for boys there were significant associations between higher level of positive expectations (95% CI=1.01-1.10; p<0.05), higher level of alcohol accessibility (95% CI=1.18-1.53; p<0.001) lower level of negative expectations (95% CI=0.91-0.98; p<0.01), lower level of emotional regulation (95% CI=0.89-1.00; p<0.05) and alcohol use.

For girls, significant associations were found between higher level of positive expectations (95% CI=1.02-1.13; p<0.01), higher level of alcohol accessibility (95% CI=1.22-1.52; p<0.001), lower level of negative expectations (95% CI=0.90-0.98; p<0.01) and alcohol use.

Mediation analyses showed that positive association between prevalence of alcohol use and accessibility were weakened at increasing level of emotional regulation for boys (z=2.09; p<0.001) and at decreasing level of positive expectations for girls (z=2.31; p<0.001).

6. Discussion and conclusion

Underage drinking continues to be an important public health problem and a challenge to the substance abuse for the prevention science and prevention professionals (Fleweling et al., 2013). The accessibility of alcohol was in our study directly associated with lifetime prevalence of alcohol use for both genders. We stress the general importance of the role of public health policy concerning the issue of accessibility of alcohol for this specific group of young students. Findings of Fleweling et al. (2013) suggest that an intensive implementation of underage drinking law enforcement can reduce underage drinking. The resilience model (Zimmerman, 2013) posits that individual factors may reduce sensitivity to adverse environmental factors, such as alcohol accessibility. This study supports the importance of emotional regulation, expectations of the effect as some of the causes of drinking among juveniles.

In our study, it was found that a higher level of emotional regulation was associated with a decrease in the association between lifetime alcohol use and accessibility of alcohol among boys. Mediation analyses showed that positive association between prevalence of alcohol use and accessibility were weakened at decreasing level of positive expectations for girls. These results are consistent with previous research regarding alcohol use, alcohol accessibility, protective and risk mechanisms of young people (Guillén et al, 2015, Kelly et al., 2012).

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ECONOMIC AND PSYCHOLOGICAL FACTORS OF EMIGRATION INTENTIONS AMONG SLOVAK UNIVERSITY STUDENTS

Olga Orosová[1], Beata Gajdošová [1], Marta Kulanová[2], & Marianna Berinšterová [1]
[1]*Department of Educational Psychology and Health Psychology,*
Faculty of Arts, P.J. Šafárik University in Košice (Slovak Republic)
[2]*Department of Psychology, Faculty of Arts, P.J. Šafárik University in Košice (Slovak Republic)*

Abstract

The objectives of this study were to explore the associations of several socioeconomic, as well as psychological factors, to emigration intentions (EI) among Slovak university students, and to test for the moderating effects of gender on the relationships between psychological factors and EI. The data were collected online from 375 students (75.5% females; M=22.9; SD=3.0). Students were asked to report their gender, their perception of Slovakia's economic future (EF), perception of their financial situation (FS), home/family satisfaction (HFS), desire to change one´s living environment (D), and the importance of religion in their life (IR). Multiple binary logistic regression models were used for data analyses. The final regression model, adjusted for interaction of gender and psychological independent variables, explained 64% of the variance in EI; IR, HFS, D, and the interaction of gender and IR made a statistically significant contribution to the model. A lower level of IR, as well as HFS, and a higher level of D were associated with emigration intentions. Females with emigration intentions reported lower levels of IR although females without EI reported higher level of IR when compared to males. The results contribute to a better understanding of psychological and socioeconomic predictors of EI.

Keywords: *Emigration intentions, desire to change, home/family satisfaction, religion, university students.*

1. Introduction

Intentions to emigrate have been shown to be good predictors of future emigration (Van Dalen, Henkens, 2008). Social, cultural, economic and political factors are not sufficient to fully account for emigration intentions and migrating behavior (Seibokaite, Endriulaitiene, & Marksaityte, 2009). For example, the theory of migrant personality focuses on the individual´s reactions to push and pull factors which are assumed to be the indicators of underlying migrant personality (Frieze, Hansen, & Boneva, 2006).

The investigation of emigration intentions among Slovak university students is addressed by two research goals (1) „...why, under the same unfavourable political and/or economic conditions of an equal strength, some individuals decide to stay and others decide to leave..." (Boneva & Frieze, 2001, 486), and (2) exploration of individual differences, gender differences, the moderation effect of gender on the relationship between personality factors and emigration intentions. Previous research has confirmed the gender specific psychological portrait of emigrants. It has been found that personality traits have more predictive value in the emigration context for women (Seibokaite et al., 2009). Therefore, gender analysis of the associations between personality characteristics and emigration intention is important for expanding existing knowledge.

2. Design

A cross-sectional design was used.

3. Objectives

The objectives of this study were to explore the associations between several socioeconomic, as well as psychological factors and emigration intentions (EI) among Slovak university students, and to test for the moderating effects of gender on the relationships between psychological factors and EI.

4. Methods

4.1. Participants and recruitment

All universities in Slovakia were invited to join the research project. A link to the survey website was provided to each participating institution. 51.4% of universities, 18 universities from the total of 35, were interested in collaborating with the research group and advertised the letter invitation and the survey website link on their official web sites and/or through the Academic Information Systems, and/or through official Facebook sites of the universities. A total of 436 Slovak students accepted the invitation on a voluntary basis. The questionnaires were self-completed by 375 of them (a response rate of 86%), 75.5% females; mean age=22.9; SD=3.0.

4.2. Measures

Students were asked regarding gender, their perception of Slovakia's economic future (EF), perception of their financial situation (FS), their rootedness (home/family satisfaction (HFS), desire to change one´s living environment (D), the importance of religion in their life (IR), as well as emigration intentions (EI).

Slovakia's economic future: Students were asked to evaluate the following statement on a 4-point scale from very optimistic to very pessimistic: „What do you think about the development of Slovakia's economy over the next 10 years in context of your professional career and perspective of starting your own family?"

Perception of financial situation: Students were asked to evaluate the following statement on a 7-point scale from much better to much worse: "How would you rate your financial situation in comparison to other university students?"

The Rootedness scale: A questionnaire by McAndrew (1998) was used to measure this construct capturing two dimensions focused on the desire to change one´s living environment (6 items) and attachment to one´s family and home (4 items). A five-point Likert scale ranging from „strongly disagree" to „strongly agree" was used.

The importance of religion (faith) in life: Students were asked to evaluate the following statement on a 7-point scale from fully disagree to fully agree: How much do you agree with the following statement: "My faith is important for my life?"

Emigration intentions: Students were asked to evaluate the statement „Do you plan to leave Slovakia after you finish university? Please select one from the possible answers: (1) No, I am not planning to leave, (2) I do not know, I have not thought about it, (3) I do not know, I have not decided yet, (4) I am planning to go abroad for six months, (5) I am planning to go abroad for six to twelve months, (6) I am planning to leave for more than a year, (7) I am planning to leave for more than five years, (8) I am planning to leave permanently".

4.3. Statistical analyses

Multiple binary logistic regression models were used for data analyses. Emigration intentions was included in the models as a dependent variable, dichotomized into „no intention" (n=88, 23.5%, 55.80% women) if answered (1) and „intend to emigrate" (n=87, 23.2%, 44.20% women) if answered „from 6 to 8". The first model adjusted for gender and socioeconomic factors (EF, FS), the second model for psychological variables (HFS, D, IR), and the third and final model adjusted for interaction of gender and psychological independent variables (HFS, D, IR).

5. Results

Nearly a quarter (23.2%) of surveyed Slovak university students reported having emigration intentions (44.2% women). The 1st model adjusted for gender and socioeconomic factors (EF, FS) explained only 12.1% of variance in EI and showed that gender (OR=2.318, $p<0.05$) and EF (2.048**, $p<0.01$) made a statistically significant contribution to the model. This result indicated that men were more likely to report emigration intentions than women, and a higher level of negative evaluation of EF was associated with emigration intentions. The 2nd model for psychological variables (IR, HFS, D) explained 61% of variance in EI; gender (OR=4.811, $p<0.01$), IR (OR=0.592, $p<0.01$), HFS (OR=0.779, $p<0.05$), D (OR=1.488, $p<0.001$) made statistically significant contributions to the model. A lower level of the importance of IR, as well as HFS, and a higher level of D were associated with emigration intentions. The final 3rd model adjusted for the interaction gender and psychological independent variables explained 64% of variance in EI; IR (OR=0.459, $p<0.001$), HFS (OR=0.685, $p<0.01$), D (OR=1.566, $p<0.001$), and only one interaction of gender and IR (OR=2.052, $p<0.05$) made a statistically

significant contribution to the model. Females with EI reported lower levels of IR although females without EI reported higher level of IR when compared to males.

6. Discussion and conclusion

In this study, Slovak university students who reported intentions of leaving the country showed lower levels of IR and HFS, and a higher level of a D in comparison to those who did not. These results are consistent with the findings of previous studies which have confirmed the associations between emigration intentions and family centricity, openness to change, sensation seeking, neophiliac and risk taking propensity (Tabor, Milfont, & Ward, 2015, Li, Olson, & Frieze, 2013, Paulauskaitė, Šeibokaitė, & Endriulaitienė, 2010).

The second important topic addressed in this study to some extent was religiosity. It is important to say that there has been only a very limited research focused on the relationship between religiosity and emigration intentions so far (Hoffman, Marsiglia, & Ayers, 2015). Previous research which has mainly addressed extrinsic religiosity in relation to migration has led to contradictory findings. Investigation of intrinsic religiosity on emigration intentions could contribute to a better understanding of the psychological mechanism of this relationship (Hoffman et al., 2015). Myers (2000) has supported the importance of the location-specific religious capital on emigration intentions. This study did not distinguish between extrinsic and intrinsic religiosity, but the personal value of religiosity was found among personality factors associated with intentions to emigrate, and this association among Slovak university students was moderated by gender. The current study has certain limitations. The investigation was conducted with a relatively small sample relying on self-reported data collected online. A longitudinal design, as well as qualitative analyses of emigration intentions of students should be addressed in future psychological research.

Acknowledgement

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MOTIVATIONAL READINESS OF PERSONNEL OF A HIGH TECH INDUSTRIAL ENTERPRISE TO THE CONTINUATION OF WORK AT THE STAGE OF ITS DECOMMISSIONING

Liubov Kotlyarova & Ekaterina Sysoeva
Department of Human Resource Management of the Faculty of High Tech Management and Economics, National Research Nuclear University (NRNU "MEPhI") (Russia)

Abstract

Application of information concerning motivational potential of the personnel is very important for management processes optimization at every stage of a life cycle of an enterprise. The research was aimed at studying motivational potential of employees of a high tech industrial enterprise in the period of decision-making of its decommissioning. The motivational potential is represented by two characteristics: (1) motivational readiness (MR) of the staff to continue working at the enterprise until finishing the cycle of decommissioning, to transferring to other enterprises of the same industry or to ceasing cooperation with the industry; (2) motivational profile (MP) type. Two methods are applied: a specially designed questionnaire and Milman's technique defining nine types of the MP. The research sample consists of 87% of the personnel of the enterprise. The research shows that 82% of the participants are ready to continue working at the enterprises of the same industry (Group 1), 10% (Group 2) are in decision-making process and 8% (Group 3) are going to search a new employment in other spheres.
In the Group 1 three subgroups with different orientation of motivational readiness are marked out: (1) employees who are ready to continue working at the enterprise (Subgroup A) – 43%; (2) those who are ready to continue performance at other enterprises of the industry, situated in the regions with favourable climate and developed social infrastructure (Subgroup C) – 35%; (3) employees who consider all variants of the employment in the same industry acceptable (Subgroup B) – 22%.
It is shown that each of these subgroups has its own characteristics of the MP. Thus, in the Group 2 regressive and regressive-impulsive profiles dominate, whereas in the Group progressive-impulsive and regressive-impulsive profiles have leading positions.
The employees of the Subgroup A have progressive, expressive or progressive-expressive motivational profile type. In the Subgroup B a single type of the MP dominates - the progressive one. In the Subgroup C there is a tendency to regressive and regressive-expressive profile. The patterns defined in course of research are used in designing the system of stimulation of labor activity and in staff recruitment for working in power-down mode when decommissioning power generating units.

Keywords: *Motivational potential, motivational profile type, personnel.*

1. Introduction

When closing an industrial enterprise because of depletion of its technological resource and impossibility of conversion, the management faces the following tasks: (1) providing effective performance at the stage of decommissioning and (2) maintenance of material and human resources for the industry. One of the enterprises to be decommissioned is a power station (the enterprise) situated in the Far North of Russia. Following the decision of the state structures concerning its decommissioning, the exploiting organization (the Concern) got the following managing tasks to fulfil: (1) designing the plan of the enterprise activity at the stage of decommissioning and (2) keeping human resources potential for the industry.

According to the theory of management the system of staff management is based on various factors that can be reduced to two main ones: technological and human resources (Armstrong, 2006). The resources can be presented as a complex system referring labour potential, including motivational, creative and communicative skills of specialists (Lobanova, 2015).

The Concern has carried out a research aimed at defying motivational attitudes (readiness) either to continuing work on the station and other enterprises of the same industry, or ceasing work in this sphere. The authors have taken part in the survey including data processing and analysis along with fulfilling some research objectives referring studying motivational potential of the employees of the enterprise.

2. Research aim and objectives

The research aim is studying motivational potential of the staff with various motivational attitudes towards continuing work at the stage of enterprise decommissioning and after it.

For reaching the aim the following objectives are considered: (1) defining the staff readiness to (a) continuing work at the stage of decommissioning, (b) transferring to other industrial structures and (c) ceasing work in this industry; (2) defining motivational potential of the employees.

3. Research design

The research was carried out from 2014 to 2015 and consisted of two stages. The first stage included the survey in which took part 87% employees from all main departments of the enterprise.

The second stage was aimed at the second objective of research, referring defining employees' motivational potential. The sample of 270 respondents was formed of the whole group of respondents using the principles of randomized sampling and equal presentation of various staff categories from all main departments of the enterprise.

4. Methods

For studying staff motivational readiness to continuing work a special questionnaire was designed. For studying motivational potential the Milman's technique called "The Diagnostics of Personal Motivational Structure" was used (Milman, 2005). According to the author's conception motivational scales reflect the main personal orientations – consuming and productive. The technique consists of seven scales. For complete diagnostics of personal motivational sphere each scale can be sub-divided to four others, reflecting: whole-life motivation (concerning the whole sphere of life activity); working motivation; "ideal" state of the motive understood by the author as "a level of a drive to act"; real state of a certain motive. The total index of personal motivational sphere according to the testing results consists of 28 scales of motivational profile (some scales can be consolidated). The whole personal motivational picture is reflected in a personal motivational profile representing in quantitative or graphical form the correlations between various motivational scales, registered by a psycho-diagnostic method. A character of motivational profile (MP) can be defined according to the profiles typology. After defining the characteristics of motivational sphere of each testee, his/her motivational profile can be attributed to one of the following types: progressive (Pr), regressive (Reg), expressive (Exp), impulsive (Imp), flat (Fl) or combined (progressive-expressive – Pr-Exp, progressive-impulsive - Pr-Imp, regressive-impulsive – Reg-Imp and regressive-expressive – Reg-Exp).

In accordance with Milman's ideas, the progressive type of profile positively correlates with "successful working activity. Most often this type of the MP is met among creative people… At the same time, this kind of profile is typical for a socially-oriented person and that fact can be included into a concept of creative and productive orientation of a person" (Milman, 2005, p. 42). The expressive type, related to self-affirmation in the society, developed ambition, eccentricity, constant rising of aspiration level, dominates in this group. The impulsive type is characterized by the fact that it corresponds to "impulsive" type of accentuation of personality (Groisman, 1995).

The flat type shows deficient differentiation of personal motivational hierarchy or its complete absence. All the motives of such structure have almost the same value, and that leads to wider entropy and ambiguity of their realization. It is known from the management theory that flat managing structures have low efficiency when dealing with complex structures.

There are patterns of motivational profile that can not be attributed to a certain type, but belong to two types at the same time. That happens when the "expressive" or the "impulsive" profile overlaps the progressive or regressive ones. In that case combined motivational profiles can be seen: progressive-expressive, progressive-impulsive, regressive-impulsive and regressive-expressive.

5. Results and discussion

Let us consider the results of the survey of the staff concerning their readiness to continuation of work. The survey has shown that 82% of the employees (Group 1) are ready to continue working at the enterprises of the industry.

43% of them (Subgroup A) prefer to continue working at the enterprise in the period of its decommissioning despite of possible worsening of labour conditions (shift arrangement, living in the industrial community far from social structures etc.) The numerical strength of this group shows that the number of employees willing to continue their performance exceeds the estimated manpower.

22% of participants (Subgroup B) mention that all possible variants of the employment in the same industry suit them. It should be underlined that this group is different from the others as the majority of it is presented by the specialists of the highest qualification levels and managers of linear levels.

35% of research sample (Subgroup C) showed their readiness to continuing performance at other enterprises of the industry, situated in the regions with favourable climate and developed social infrastructure.

Table 1 demonstrates the motivation profile distribution (in percentage) of motivational profile types in each subgroup according the criterion of motivational attitude to continuing work at the station.

Table 1. The distribution of the employees who are ready to continue their work at the station in the period of its decommissioning.

Motivational profile type, %	Pr	Reg	Ex	Imp	Fl	Pr-Exp	Pr-Imp	Reg-Imp	Reg-Exp
Subgroup «A»	30.5	12.6	14.7	6.2	1.2	14.7	4.2	7.4	8.5
Subgroup «B»	45.0	8.1	14.2	6.2	0	14.2	4.1	4.1	4.1
Subgroup «C»	15.6	24.7	15.6	5.2	2.5	9.1	5.2	7.8	14.3

The presented data show that three types of MP dominate in the Subgroup A: progressive, expressive and progressive-expressive. In the Subgroup B there is a pronounced tendency to domination of a single MP type – the progressive one. In the Subgroup C two types of the MP can be seen: regressive and regressive-expressive.

The second group (10%) includes respondents in the process of decision-making: whether to renew the contract in the same industry or to resign and to search for a new job themselves. This group has the following distribution of the motivational profiles: progressive – 9.1%, regressive – 27.3%, expressive – 9.1%, impulsive – 13.7%, flat – 4.5%, progressive-expressive – 4.5%, progressive-impulsive – 9.1%, regressive-impulsive – 22.7% and regressive-expressive – 0%). The tendency to domination of regressive and regressive-impulsive MP types is pronounced.

The third group (8% of research sample) consists of the employees, who have mentioned that they are not going to continue their work at the enterprises of the industry, but have their own plans for a new employment. We see the following distribution of the motivational profiles: progressive – 5.6%, regressive – 11.1%, expressive – 5.6%, impulsive – 11.1%, flat – 0%, progressive-expressive – 5.6%, progressive-impulsive – 27.7%, regressive-impulsive – 27.7% and regressive-expressive – 5.6%. Summarizing the obtained data we can come to the conclusion on the domination of progressive-impulsive and regressive-impulsive types.

6. Conclusion

The analysis of obtained data allows coming to the conclusion that employees of all categories from the main industrial structures are ready to continue working at the station in the period of its decommissioning. The number of employees willing to carry on their performance exceeds the estimated manpower. It is shown that the employees who are ready to continue working at the enterprise at the stage of its decommissioning tend to have three types of motivational profiles: progressive, expressive and progressive-expressive.

In the Subgroup B including the employees with high degree of mobility, who are ready to accept any variant of future employment, a single type of motivational profile dominates: the progressive one. The analysis of motivational structures allows coming to conclusion that the specialists of this subgroup can be characterized as having high degree of commitment, focusing at developing activity by their own initiative, and that reflects a creative approach to their work, along with high level of social and personal maturity.

In the Subgroup C consisting of the employees planning future employment in other spheres the tendency to regressive and regressive-expressive motivational profiles is pronounced. That fact corresponds with the intensity of consuming motives and constant rising of level of aspiration.

The patterns defined in the course of research are important for designing techniques of human resources management meeting the requirements of enterprise activity at the stages of preparing to and actual decommissioning power generating units.

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SOCIOCULTURAL PRESSURES ABOUT BODY IMAGE AND THE MODERATING ROLE OF GENDER AMONG SLOVAK UNIVERSITY STUDENTS

Lucia Hricová & Olga Orosová
Department of Educational Psychology & Health Psychology, Faculty of Arts, PJ Safarik University in Kosice, Moyzesova 9, 04001 Kosice (Slovakia)

Abstract

Sociocultural pressures about body image (SP) are considered risk factors of body dissatisfaction. Few studies have addressed this issue in Europe and among males. This work aims to explore how SP from family and friends (FFP), partner (PP) and media (MP) are associated with (1) Body shape dissatisfaction (BSD), (2) Body size dissatisfaction (BSZD), (3) Internalization of societal ideals of appearance (ISIA) while examining gender as a moderator. 302 Slovak university students (52.3% female, average age=21, SD=2.15) reported on the explored variables. Three separate standard multiple linear regression models were created and explained 19.3%, 18.2% and 12.9% of the variance in BSD, BSZD and ISIA, respectively. FFP (β=.30, p<.001) and MP (β=.16, p<.05) were significantly positively associated with BSD. FFP (β=.68, p<.001) and the interaction between FFP and gender (β=-.44, p<.05) were significant in the model of BSZD. MP (β=.22, p<0.001) and PP (β=.15, p<0.05) were significantly positively associated with ISIA. The interaction between MP and gender (β=-.34, p=.05) was at the threshold of significance in the model of ISIA. FFP seemed to be the most important source of pressure for body dissatisfaction based on the results. PP appeared to be significantly associated only with the ISIA. Females with higher FFP reported higher BSZD compared to males. Females with higher MP reported higher ISIA compared to males. The current results contribute to previous findings mainly with respect to the moderating role of gender and might be beneficial in preventing body dissatisfaction among male and female university students.

Keywords: *Body dissatisfaction, sociocultural pressures about body image, internalization of societal ideals of appearance, university students.*

1. Introduction

Sociocultural pressures about body image (SP) are considered risk factors of body dissatisfaction. So far, the research has focused almost exclusively on the female population despite the fact that media influence and sociocultural appearance pressure for males has been found to exist almost to the same extent for men as for women (Miller & Halberstadt, 2005). However, a small number of studies has addressed this issue among males and in Europe and more research is needed. This work aims to explore how different sources of SP from family and friends (FFP), partner (PP), media (MP) are associated with (1) Body shape dissatisfaction (BSD), (2) Body size dissatisfaction (BSZD) and (3) Internalization of societal ideals of appearance (ISIA) while examining gender as a moderator.

2. Methods

The total sample size was 302 students (52.3% female, average age=21, SD=2.15) from three universities in eastern Slovakia. A convenient sampling method was used and students filled in either an electronic or paper version of the questionnaire. Participation in the study was voluntary and anonymous.

The Contour Drawing Rating Scale (Thompson & Gray, 1995) was used to assess BSZD. It consists of nine drawings of a female/male figure increasing in size from extremely thin (1) to very obese (9). In this instrument, participants are asked to rate their ideal figure and their current size. The discrepancy between the ideal and perceived figure provides an index of body size dissatisfaction, which was calculated as an absolute value to eliminate dissatisfaction with higher/lower weight. The Body Shape Satisfaction questionnaire (Pingitore, Spring, & Garfield, 1997) was used to measure body shape dissatisfaction. Participants indicated their degree of satisfaction with 10 body parts or attributes (e.g.: height, weight, body shape, waist) on a 5-point response scale. This scale had a Cronbach's alpha of .86.

The Perceived Sociocultural Pressure Scale (Stice et al., 1996) is an 8– item 5- point rating scale, measuring the frequency of the perceived pressure to be slender and lose weight. The influence of friends, family, partners (dates), and the media are measured by inserting the name of the influence into the statements, e.g.: "I've felt pressure from my__ to lose weight". Factor analysis (PAF with Varimax rotation) of the scale in Slovak language has uncovered a three-factor structure: Friends and family, Partners pressure and Media pressure about body image factor (Cronbach's alpha of .86, .91 and .88, respectively). The Internalization-General subscale (Thompson et al., 2004) was used to assess the internalization of the ideals conveyed by the media. The scale consists of 9 items and measures a level of agreement on a 5-point response scale. The scale had a Cronbach's alpha of .88. An example of a statement from this scale is: „I would like my body to look like the people who are on TV". A higher score in each scale indicated higher body size/shape dissatisfaction, higher perceived pressure and greater internalization of the ideals conveyed by the media. All questionnaires were translated from English into Slovak using back translation. Gender differences, a descriptive analysis and T-tests were performed. Standard multiple regression was conducted in SPSS 20.

3. Results

The descriptive analysis and gender differences in all explored variables are presented in Table 1. Generally, females scored significantly higher on the variables measuring body dissatisfaction (BSD and BSZD), MP and ISIA. FFP and PP do not seem to be significantly different for males and females.

Table 1. Gender differences in the variables explored in the linear models.

	Females		Males		T	Df	p
	Mean	SD	Mean	SD			
Body shape dissatisfaction	26.47	6.35	23.60	6.23	3.79	276	<.001
Body size dissatisfaction	1.29	1.04	.81	.83	4.37	280.06	<.001
Friends & family pressure	1.49	.76	1.34	.61	1.92	286.68	.06
Partner pressure	1.43	.85	1.31	.70	1.38	287.74	.17
Media pressure	2.26	1.27	1.63	1.05	4.63	288.74	<.001
Internalization	25.11	8.66	21.2	8.47	3.83	282	<.001

Three separate models were created to explore how different sociocultural pressures are associated with (1) BSD, (2) BSZD and (3) ISIA after controlling for gender. The full models after controlling for gender were statistically significant (1) $F(3,275)=21.67$, $p<0.001$, (2) $F(3,283)=20.70$, $p<0.001$, (3) $F(4,281)=10.30$, $p<0.001$ and explained (1) 19.3%, (2) 18.2% and (3) 12.9% of the variance.

Table 2. Standard multiple regression model of (1) Body shape dissatisfaction, (2) Body size dissatisfaction and (3) Internalization of societal ideals of appearance.

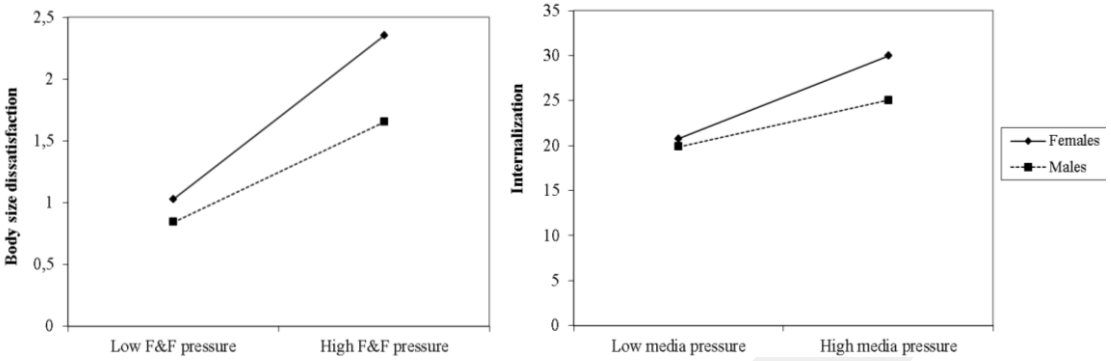
Model	Predictors	B	Beta	T	p
(1) Body shape dissatisfaction	Gender*	-1.96	-.15	-2.68	<.05
	Friends & family pressure	.68	.30	5.01	<.001
	Media pressure	.43	.16	2.63	<.05
(2) Body size dissatisfaction	Gender*	.08	.04	.33	>.05
	Friends & family pressure	.23	.68	4.14	<.001
	Interaction Gender X Friends & family	-.09	-.44	-2.33	<.05
(3) Internalization of societal ideals of appearance	Gender*	.38	.02	.20	>.05
	Partner pressure	.70	.13	2.13	<.05
	Media pressure	1.91	.53	3.01	<.05
	Interaction Gender X Media pressure	-.84	-.34	-1.94	.05

Note. *males as a reference group

FFP and MP were significantly positively associated with BSD. FFP and the interaction between FFP and gender were significant in the model of BSZD. MP and PP were significantly positively associated with ISIA. The interaction between MP and gender was at the threshold of significance in the model of ISIA. More detailed results are presented in Table 2.

Regarding the moderation effect, the relationship between (1) BSZD and FFP and (2) ISIA and MP varies depending on gender (Figure 1, 2). Females with higher FFP reported higher BSZD compared to males. Similarly, females with higher MP reported higher ISIA compared to males (Figure 2). Thus, it seems that gender moderates the relationship between (1) FFP and BSZD and (2) MP and ISIA.

Figure 1. Interaction effect of gender and Friends Figure 2. Interaction effect of gender and Media and family pressure on Body size dissatisfaction. pressure on Internalization.



4. Discussion and conclusions

The findings of this study show that FFP seems to be the most important source of pressure associated with body dissatisfaction. Furthermore, PP appeared to be significantly associated only with the ISIA and MP was found to be associated with BSZD and ISIA. Moreover, significant and unique moderator effects of gender on the relationship between (1) FFP and BSZD and (2) MP and ISIA were also found.

In accordance with these findings, the strongest association was found between body dissatisfaction and media pressure, followed by peer pressure and parental pressure among females (Keery et al., 2004). Among males, body dissatisfaction was predicted by friends' and media pressure to be mesomorphic, but not by pressure from the partner (Tylka, 2011). However, family pressure to be mesomorphic was not a significant predictor of body dissatisfaction, contrary to the present findings, though the form of pressure was different. Furthermore, neither parental criticism, nor peer teasing appeared to contribute significantly to body dissatisfaction among females (Hardit & Hannum, 2012). Partially in line with the current results, the strongest association was found between media pressure to be thin and the internalization of media messages of attractiveness, whereas the association between internalization and both parent and peer pressure to be thin was also significant and of the same strength (Keery et al., 2004). Furthermore, partner pressure to be mesomorphic was not a significant predictor of the internalization of the mesomorphic ideal among males, whereas family pressure has been shown to predict internalization (Tylka, 2011), which is dissimilar to the current results. The current results contribute to the previous findings mainly with respect to the moderating role of gender and might be beneficial in preventing body dissatisfaction among male and female university students.

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NORMATIVE BELIEFS AS A MEDIATOR OF THE RELATIONSHIP BETWEEN TIME SPENT ONLINE AND ACTIVATION FOR LEAVING THE COUNTRY

Marta Kulanová[1], Olga Orosová[2], & Jozef Benka[2]
[1]*Department of Psychology, Faculty of Arts, PJ Safarik University in Košice (Slovakia)*
[2]*Department of Educational Psychology and Psychology of Health, Faculty of Arts, PJ Safarik University in Košice (Slovakia)*

Abstract

Background: The relationship between time spent online and active efforts to leave the country has not been sufficiently explored.
Objectives: The objective of this study was to examine the mediational effect of normative beliefs regarding active efforts of other university students (peers) to leave their country (NeAL) in the relationship between time spent online (TO) and their own active efforts to leave the country (AL).
Methods: Data were collected in 2015-2016 in Slovakia, via online applications directed at the comparison of students' normative beliefs and their behavior (n=180, 68.9% women, M=21.27, SD=4.9). The variables were identified by single item measures assessing how many hours students spend online daily (TO), how much they believe a typical student of their university actively searches for possibilities for leaving (NeAL) and how much they themselves actively search for these possibilities (AL). Linear regressions and a Sobel test were used for the data analysis.
Findings: NeAL was found to be positively associated with AL and TO positively associated with NeAL. The direct relationship between TO and AL was not confirmed. The Sobel test showed that NeAL has a significant meditational effect in the relationship between TO and AL ($z=2.25$, $p\alpha<0.05$). The findings show that TO has no influence on AL other than the influence through NeAL.
Conclusion: Time spent online can modify one's efforts to leave the country indirectly through the modification of one's beliefs about trying to leave.

Keywords*: Plan to leave, normative beliefs, university students.*

1. Introduction

Descriptive normative beliefs are essentially based on individual´s perception of the behavior of others (Cialdini, 2007). More specifically, they are based on the perception of how majority of individual´s social group behaves. The key issue, according to the social norm theory, is whether individual´s perception of the prevalence of a certain behavior is accurate or inaccurate. This basically means to what extent it differs from the actual norms and behavior. The difference between the normative beliefs and the actual prevalence of the behavior, known as underestimation or overestimation of the frequency of this behavior, is believed to significantly influence the behavior of the individual (Betkowitz, 2004).

According to the cultivation theory, Gerbner et al. (1994) explain that a long-lasting exposure to media influence affects perceived prevalence of certain actions. This way, descriptive normative beliefs are formed to a considerable extent by the exposure to online media.

Intentions to move and moving itself may be strongly influenced by social norms (Kley, 2009). Furthermore, it has been demonstrated that people who consider emigration as a normative collective behavior are more likely to consider leaving their country themselves (Chan-Hoong & Soon, 2011).

2. Objective

The objective of this study was to examine the potential mediation role of normative beliefs concerning the active efforts of university students (peers) to leave their country in the relationship between time spent online and their own active efforts to leave.

3. Methods

3.1. Sample and procedure

Data were collected in 2015-2016 in Slovakia via an online application. This application is based on the previous findings and allows students to compare what they think about prevalence of different behaviors. The prevalence of various behaviors in this application is based on previous findings and allows to make a comparison with the behavior of the respondent. In short, the respondents can compare their descriptive normative beliefs with their actual behavior which they report.

The sample consisted of 180 university students from Slovakia with the mean age 21.27 (SD=4.9) and 68.9% of them were women.

3.2. Measures

The variables were measured by an online questionnaire measuring following variables:

- The time spent online was assessed by a single item measure assessing how many hours students spend online daily (from 0 to 5 and more hours)
- The descriptive normative belief about students' active effort to leave was identified by a single item measure assessing how much students believe the statement that majority of students of their university (their peers) actively search for possibilities to leave ("In my view, the majority of students of our university actively explores the possibilities of emigration to another country": 1 – I strongly disagree, I strongly agree – 5)
- Followed by a single item measure assessing how much they themselves actively search for these possibilities to leave their country. ("I actively explore possibilities for emigration to another country": 1 – totally disagree, totally agree – 5)

3.3. Statistical analyses

Linear regressions between independent and dependent variables, independent and mediational variables and mediational and dependent variables were applied and a Sobel test was used for the validation of the mediational effect.

4. Results

Results shown that male students perceived peers' exploring of possibilities to emigrate as significantly more active than females. Men and women did not differ in the other measured variables significantly. The more details can be found in the Table 1.

Table 1. The descriptive characteristics in the measured variables according to gender.

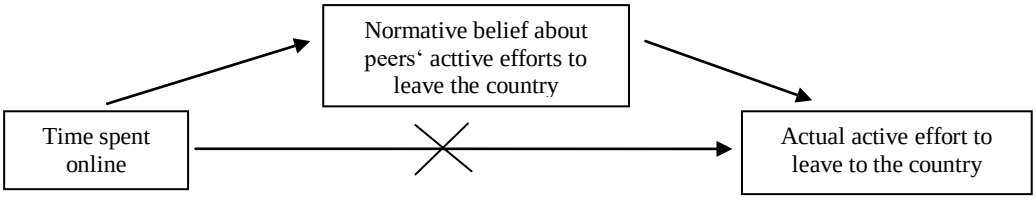
VARIABLE	MEN	WOMEN	T-test value
Time spent online	M=3.13 (SD=1.52)	M=2.87 (SD=1.36)	1.125
Normative belief about peers' effort to leave	M=1.56 (SD=1.12)	M=1.43 (SD=1.18)	2.834**
Own effort to leave	M=2.36 (SD=1.11)	M=1.88 (SD=0.92)	0.722

M – Mean; SD – Standard deviance; **p <0.01

The results further pointed to the fact that students' beliefs about how their peers actively explore possibilities to emigrate are overestimated and incorrect and differ significantly from their actual active exploring of possibilities to emigrate to another country ($t=-2.51$, $p\alpha<0.05$).

Linear regressions revealed that normative belief about peers' active effort for leaving the country are positively associated with ones' own active effort to leave the country ($B=0.440$, $Beta=0.380$, $p\alpha<0.001$). Time spent online was found to be positively associated with the normative belief about peers' effort to emigrate ($B=0.131$, $Beta=0.183$, $p\alpha<0.05$). The direct relationship between time spent online and the actual active effort to leave the country was not confirmed ($B=0.064$, $Beta=0.078$, $p\alpha>0.05$). The visualization can be seen in figure 1 below.

Figure 1. The mediational analysis.



Nevertheless, the Sobel test showed that the normative belief about peers' active effort to leave the country had a significant meditational effect in the relationship between time spent online and the actual active effort to leave the country ($z=2.25$, $p\alpha<0.05$). These findings indicate that time spent online has no direct influence on active effort to leave the country, but has the indirect effect on it through normative belief about this behavior among peers.

5. Discussion

Students who spend more time online perceive others students' efforts to leave their country as more active. At the same time, students, who perceive them to be more active, also report themselves as being more active in searching their own ways to leave their country. These findings were not sufficiently examined in previous research. It was found that exposure to the media has influence on the formation of descriptive norms about certain behaviors (Gerbner et al., 1994). In the study of Chan-Hoong & Soon (2011) it was found that respondents considering emigration as a normative collective behavior were more likely to think of leaving their country.

Limitations: Even if we assume that the time spent online is spent on social networks, we did not measure how students spend their online time. Future research requires the differentiation with respect to activities online. Furthermore, in this study we used only single item measures to explore relatively simple relationships. In the future, we would like to direct our attention to more complex examination of this phenomenon to assess additional factors important for students' efforts to leave their countries.

6. Conclusions

Time spent online can modify one's efforts to leave the country indirectly through the modification of one's beliefs about trying to leave among their peers. In the context of many countries' efforts to keep their skilled and educated young people from leaving and this way preventing brain drain, some simple implication can be made from this study. According to Berkowitz (2004) the social norms theory predicts that overestimations of problem (undesired) behavior will increase these behaviors while underestimations of desired behaviors will discourage individuals from engaging in them. Thus, correcting misperceptions of group norms is likely to result in decreased problem behavior or increased prevalence of healthy behaviors.

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ARE WE TEACHING WHAT WE'RE PREACHING? THE RELATIONSHIP BETWEEN THE VALUES OF LIFE AND CREATIVITY LEVELS IN COLLEGE LEVEL AND NON-COLLEGE LEVEL TEACHERS

Leonor Almeida, Joana Gentil Martins, Maria Malheiro Garcia, Beatriz Francisco Marques, Mariana Sofia Serras, & Beatriz Perry da Câmara
Catholic University of Lisbon (Portugal)

Abstract

This quantitative correlational study aims to 1) describe the levels of the variables creativity and life values of college level and non-college level teachers, 2) To compare the differences between groups based on gender, scientific field and teaching non-college or college level education and, finally, 3) performing correlation studies between the variable values of life and creativity.
For this purpose, the holistic model of base values (Brown, 1996, 2002) is being utilized to support the variable values of life, while the componential model of creativity is used for the creativity variable. (Urban, 1994). Two instruments have been used in the operationalization of these variables: the LVI-R, Inventory of life values and the TCT-DP, test for creative thinking drawing production. In order to achieve this, data has been collected from a sample of 196 non-college level teachers and 60 college level teachers. Noteworthy results include correlations between levels of creativity and values such as creativity, spirituality and physical health. In addition to this, the study also verified differences when considering the variables 'scientific field' and 'age' in relation to creativity and sex, being a college level teacher or a non-college teacher, scientific field and age in relation to the life values.

***Keywords**: Creativity, Life Values, College Level Teachers, Non-College Level Teachers.*

1. Introduction

Creativity can be defined as a means by which to explore ideas through the construction of original connections. It is often associated with the way in which different people - alone or collaboratively - confront and find new, imaginative solutions to day to day problems (Turner, 2013). Literature shows contradictory results in regards to the relationship between the variables sex and level of creativity (Almeida, Nogueira, Jesus & Mimoso, 2013). On the other hand, studies showed a negative correlation between the variable level of creativity and age, as younger people tend to present higher levels of creativity (Almeida, Nogueira & Silva, 2008). Values are beliefs comprised of cognitive, behavioral and affective elements (Brown & Crace, 1996). A Portuguese study found the priority values of life to be: Responsibility, Concern with Others, Achievement, Family Loyalty, and Concern with the Environment (Almeida et al, 2013). This same study found differences between these values amongst men and women, for instance, women tended to have more concern with others and the environment, as well as higher levels of spirituality, than men. There were also differences between age groups, such as the increased concern with others and levels of spirituality of older people.

Creativity and values of life are incremental tools in today's society, and therefore their relevance in teaching is undeniable. Given the ever changing and competitive nature of contemporary society (Turner, 2013), creativity has become key in assuring success (Bae, Song, Park & Kim, 2013). In this way, schools, and teachers, have a large responsibility when it comes to developing this skill, and for such, new methods must be adopted. One study showed that teachers with higher levels of creativity use more flexible and elaborate styles of teaching, fostering that same creativity in their students by giving space for abstract thinking (Sali & Akyol, 2015; Lee & Kemple, 2014). With such tools at their disposal, students are more prepared for the job market, seeing as they are able to adapt to any unexpected situation with flexibility, as well as critical and divergent thinking skills (Pishghadam, Nejad & Shayesteh, 2012). In this way, education must be regarded as more than a mere methodological accumulation and assimilation of knowledge, but instead, as Cojocariu (2015) states, an "art of acculturation", in which following the family, the school and teachers have central roles in the education and consolidation of values. Studies show that the priority values held by teachers include: work, education, sincerity, honesty and justice and respect, whilst material and economical values are the least regarded (Albu, 2015). When analysing the relationship between creativity and values of life, it was found that people only take part in activities which they like or value, and these same values may

influence the way in which people solve problems, which may be considered to be a component of creativity (Hall & Mackinnon, 1969 as cited in Runco, 2007). Given this, our hypotheses are that both levels of creativity and life values differ according to variables such as gender, age group, type of education, and scientific area, and that levels of creativity are related to life values.

2. Method

The participants in this study included a total of 256 university professors (23.4%) and non-university professors (76.6%). 65.6% were female and 34.4% were male, with ages that ranged from 20 to 77 years (M = 45.59, SD = 8.820). As for its teaching area, 91 (35.5%) taught Human Sciences, 69 (27.0%) taught Sciences, 66 (25.8%) taught Exact Sciences and 30 (11.7%) taught Arts. Participants were recruited according to a convenience method, and were contacted in person and/or via email, for subsequent application of the instrument in person between October and November 2016.

To measure the level of creativity of the participants, we used the TCT-DP - Test for Creative Thinking - Drawing Production (Jellen and Urban, 1986), theoretically supported by the componential model of creativity (Urban, 2004), which evaluates the global creativity of the individual through the elaboration of a drawing from given figures. According to previous studies (Urban and Jellen, 1996), the TCT-DP presents good psychometric qualities (Almeida, 2007). In order to evaluate life values, we used the Portuguese version of the Life Values Inventory - LVI-R (Crace & Brown, 1996), which evaluates 14 values, and has good psychometric qualities. All the statistical analyzes were conducted through the SPSS-22 program, where we performed descriptive analyzes, normality tests, correlations and differences tests.

3. Discussion

Consistent with previous studies by Almeida et al (2008, 2013), the results showed that there are no differences in creativity levels in relation to sex, while there are significant differences in relation to age, namely the group of younger participants (20-39 years) presented higher levels of creativity than the older group (60-79 years). This may be due to the fact that creativity only began to be valued in teacher training in the past few years, since it was not encouraged, nor did opportunities to be creative surge until recently (Turner, 2013). Arts teachers however revealed higher levels of creativity compared to those of exact sciences. This result may have derived from the art teacher's skills when it comes to drawing - which was what the test required. Whether teachers taught college or non-college education did not seem to change their levels of creativity.

Participants' priority values o life included: Responsibility, Concern with Others, Achievement, Independence, Concern with the Environment and Loyalty to Family or Group. With the exception of Loyalty to the Family, these values were congruent with Almeida et al. (2013). These values appear to be central to the nature of the teaching profession itself, as students must be cared for, and for values such as responsibility to be transmitted, they must be evidenced in the teacher's behavior. Moreover, in previous studies, teachers have indicated similar core values which can be operationalized into the value Concern with Others (sincerity, honesty, fairness, respect and professionalism) (Albu, 2015). Just as in Albu (2015), the least regarded value of our sample of teachers was Economic Prosperity, however, contrarily to Albu, Health and Physical Activity was also unregarded. This may be due to health concerning physical activity according to the LVI, more than health in its global sense.

Congruent with Almeida et al (2013), differences between sexes were found in relation to values of life, namely that women tend to have more Concern for Others, Responsibility and Spirituality, however contrarily to the author, our study only found a marginal difference with the value Concern with the Environment. In terms of age, only marginally significant differences were found. Despite research indicating economic prosperity to be generally unvalued among teachers (Albu, 2015), younger teachers seemed to value it more than the elder, perhaps because they are focused on monetary rewards to fulfill their life goals. Contrarily to the TCT-DP results - in which younger teachers achieved higher levels of creativity - younger teachers appeared to give less importance to the creativity value. This inconsistency may be due to the fact that creativity is a complex and ambiguous construct and has only been assessed by one instrument, thus the importance attributed to it may not correspond directly to performance. Furthermore, Privacy showed to be marginally valued by older teachers more than younger teachers, which may be due to the fact that as people age, they tend to value their private space more.

In addition to art teachers presenting the highest levels of creativity, they also seemed to value creativity more. On the other hand, teachers in the field of exact sciences valued Objective Analysis more than all other teachers, given its importance in their area. These differences between scientific areas and values are interesting because they show that teacher training may influence the formation of a teacher's set of priority life values. College teachers appeared to value Objective Analysis and Responsibility more than non-college teachers, perhaps due to the higher demand for rigorous analysis and ethical

responsibility. Notwithstanding, non-college teachers seemed to value Health and Physical Activity more, possibly given the fact that physical education is embedded into secondary and primary curriculum.

The study found a moderate positive significant correlation between the Creativity and Achievement values, which indicates that a sense of fulfillment seems to derive from creativity. Finally, when analysing the relationship between levels of creativity and values of life, the LVI creativity correlated positively with the TCT-DP creativity, congruent with the study of Almeida et al (2013). However, contrary to the same study, the spirituality value correlated positively with the TCT-DP level of creativity, perhaps due to the abstract nature of both areas. In addition to this, creativity was positively related to the value Health and Physical Activity, which may indicate how in fact the two heavily interact to produce positive results.

4. Conclusion

In essence, both creativity and life values are incremental tools in today's competitive job market, thus the early education and development of these is of great importance. This study confirms the correlation between creativity and life values when dealing with the values Creativity, Health and Physical Activity and Spirituality, as well as the differences between levels of creativity and age and scientific area; and life values and level of teaching and scientific area. Nevertheless, some limitations must be taken into account: 1) the small sample size, 2) the lack of normality of the sample, 3) the convenience process of the data collection and 4) the unequal ratio between college and non-college teachers. Given these limitations, the results should not be generalized to the population of college and non-college professors. It would be interesting for a future study to develop a qualitative study of teachers' opinions about their own values - as well as the values of the educational institution in which they work - and the influence these have on their work.

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ADOLESCENTS' EXPERIENCES OF VICTIMIZATION AS MODULATING VARIABLES IN THE EMERGENCE OF DIVERGENT CONCEPTUALIZATIONS OF CYBERBULLYING

Inmaculada Fernández-Antelo & Isabel Cuadrado-Gordillo
[1]*Department of Psychology and Anthropology, University of Extremadura (Spain)*

Abstract

Faced with the emergence of new and increasingly complex situations of abuse produced in and through cyberspace, recent research has focused on determining the structure of the conceptualization of cyberbullying of the adolescents involved in the abuse. The present study has aimed at making a foray into the attempt to understand how the types of previous experiences of victimization determine the victims' conceptualization of the cyberbullying phenomenon. The sample consisted of 1386 adolescents aged between 12 and 16. The instrument used for the collection of data was a questionnaire. The results have shown that previous cyber victimization experiences influence the interpretation of cyber abusive behaviour either as cyberbullying episodes, as social relationship mechanisms, or as a revenge reaction to an aggression suffered previously. The victims' conceptualization is based on three criteria: imbalance of power, intentionality, and publicity. The key factor in this conceptualization is the intention to harm. This factor, in addition to having a strong causal relationship with cyberbullying, can explain the existence and relevance of the other criteria (the imbalance of power and publicity) in these adolescents' perception of cyber abuse. Finally, its status as a key element is further conformed by its mediating the indirect relationship between repetition and cyberbullying. Regarding the influence of type of experience of victimization, adolescents give greater importance to criteria of intentionality, publicity and imbalance of power to those types of attacks that have previously experienced.

Keywords: *Cyberbullying, victimization, intentionality, publicity, imbalance of power.*

1. Introduction

Technological growth and easy access to Internet enables the creation of new cyber scenarios that foster novel forms of communication and interpersonal relationships, in which, at times, conflict and violence impose themselves upon balance and harmony. The aggressions that occur in these scenarios have generally been grouped under the term cyberbullying (Aboujaoude, Savage, Starcevic & Salame, 2015; Pieschl, Porsch, Kahl & Klockenbusch, 2013). There seems to be agreement in research on the conceptualization of cyberbullying about the existence of certain characteristics or criteria that enable one to differentiate between cyberbullying and other acts of aggression carried out through technological and cyber means (Aboujaoude et al., 2015). Mishna Saini and Solomon (2009) conclude that the type of involvement in cases of cyberbullying significantly influences the defining criteria considered for this construct. They also note that, as the age of the adolescents increases, the anonymity criterion becomes more relative and loses importance. Similarly, Dredge, Gleeson and de la Piedad (2014), in considering the role of victim, argue that experiences of victimization shape the perceptions that adolescents have of cyberbullying.

This present study allows one to determine the criteria victims use to differentiate a cyberaggression from a cyberbullying episode, and to identify what types of cyber abuse they consider to be cyberbullying.

2. Method

The sample consisted of 1386 adolescents aged between 12 and 16. The sample selection was approximately proportional, multistage, stratified cluster sampling with random selection of groups in Spanish state schools providing the levels of compulsory secondary education ("ESO" is the abbreviation used in Spain).

The instrument used for data acquisition was a questionnaire of 43 questions. The first three allow us to identify the aggressors, victims, and witnesses of cyberbullying. These three questions ask about the variations of cyberbullying the adolescents suffer, commit, or observe. The classification criterion of these variations is "type of behaviour". Drawing on the studies by Huang and Chou (2010), Kowalski, Limber and Agatston (2012) and Rivers and Noret (2010), we considered a total of eight categories: insults (including homophobia), threats (including blackmail), spreading false rumours, exclusion (from contact lists, social networking, etc.), impersonation, sexual harassment, publication of denigrating images or videoclips, and recording and disseminating physical aggressions. In each of these categories, the use of different technological and cyber media through which the abuse is materialized and spread is taken into account. The adolescents answer these questions indicating how often they committed, suffered, or observed each type of abuse during the past two months. The scale used is composed of four values: 'never', 'once or twice, 'once a week', and 'several times a week'.

The remaining 40 questions that make up the questionnaire are oriented towards the analysis of the perceptions that adolescents have about cyberbullying and the various forms in which it is manifested. Each of these questions contains different, not exclusive, response options in which we introduced references to the repetition of abuse perpetrated, the aggressor's intent to hurt, the imbalance of power between the aggressor and victim, the anonymity behind which those who abuse others hide, the advertising made of the aggression, the revenge the victims resort to in order to compensate their pain, the forms of communication and social interaction adolescents employ in the cyber world, and the ways adolescents have fun with technology or cyber media, among others. The response requested from the adolescent is to indicate their level of agreement with each of the options or situations presented, which may range from strongly agree (1), through agree (2), neither agree nor disagree (3), agree a bit (4), to disagree (5).

3. Results

3.1. Identifying cybervictims

A total of 186 adolescents declared themselves to be victims of cyberbullying. With respect to the variable corresponding to the type of aggressive behaviour, the descriptive results show that cybervictims are subject to more than one form of cyberbullying.

The cyber abuses with the greatest prevalences of victims are those related to the publication of humiliating images and videoclips, threats, insults, and spreading false rumours. The prevalence drops markedly when the cyberaggression involves sexual harassment (sexting), recording and publishing physical aggression, and exclusion.

3.2. Conceptualizations of cyberbullying

The analysis of the perceptions of cybervictims (KMO=.86, Bartlett=.001) showed 6 factors to explain the variability of their perceptions about cyberbullying and its various modes. Of these factors, 4 were significant. The primary factor is the intent to hurt, accounting for 43.67% of the variance. The second is advertising the aggression (variance=21.81%), the third is the imbalance of power (variance=14.72%), and the fourth is the factor corresponding to forms of social relationship (variance=9.02%)

Table 1. The victims' perceptions of cyberbullying: Rotated Component Matrix.

	Components			
	1	**2**	**3**	**4**
Definition of cyberbullying	.739	.572	.534	
Threats	.501	.437		
Spreading false rumours	.460			.310
Insults				.322
Exclusion	.553	.386		
Impersonation	.608		.337	
Sexting	.619		.340	
Physical attacks	.481	.526		
Videoclip	.425	.473		.443

Although the victims perceive that spreading hurtful rumours (.326) and the publication of offensive videoclips (.451) can sometimes be regarded as behaviour that they and their peers regularly use in their cyber contacts and exchanges, they also note that the reasons are not always just having fun or

part of 'normalized' interactions, but that in many cases there is the intent to hurt others (Table 2). On the contrary, they do not attribute insults with the intent to hurt. Rather, these are interpreted primarily as forms of greeting or expressions used to address peers, with there being no intention to cause any offence.

4. Discussion

This study has shown that, of the 5 criteria considered to be identifiers of cyberbullying, Spanish victims have recourse to just three: intent to hurt, advertising, and imbalance of power. The lack of references to repeated aggressive behaviour may be motivated, as noted by Nocentini et al. (2010), by the relationship between this criterion and advertising. Adolescents today understand that, even though the actual act of cyberaggression may occur only once, its rapid and uncontrolled spread via the Internet or mobile telephony means that the hurt is repeated.

Neither do Spanish adolescents believe that anonymity should be considered a determining factor differentiating a cyberaggression from an episode of cyberbullying. In line with these results, Vandebosch & Van Cleemput (2008) argue that adolescents relativize this criterion because many of them know, or have reasonable suspicions about, the identity of the aggressors. In most cases they are acquaintances who belong to the close environment of the victim. The high degree of continuity between off-line and on-line contexts in which adolescents interact fosters the transfer to cyberspace of interpersonal relationships that started in physical environments (Subrahmanyam, Smahel & Greenfield, 2006). Dredge et al. (2014) confirm the little relevance that adolescents grant to anonymity as an essential component of cyberbullying.

Apart from its contribution to understanding the various perceptions of cyberbullying, the present study has provided a certain access to the interpretation that adolescents make of the different modes in which this phenomenon occurs. In particular, the results show that, taking as referent the definition that the adolescents attribute to this construct, they only recognize impersonation or identity theft as being cyberbullying. For none of the other modes do they transfer simultaneously the three criteria of intent, imbalance, and advertising which, in their opinion, must concur for an act of cyberaggression to be classified as cyberbullying.

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THE ROLE OF THE INTERGENERATIONAL TRANSMISSION OF ATTACHMENT ON THE INTIMATE PARTNER VIOLENCE

Franca Tani & Lucia Ponti
Department of Health Sciences – University of Florence (Italy)

Abstract

Introduction. Insecure attachment constitutes a significant risk factor for Intimate Partner Violence (IPV) (Pearson, 2006). The main focus of this study was to deep the attachment style, both to mother and romantic partner, by women victims of IPV. Moreover, our second aim was to test the intergenerational transmission of attachment with mother, in predicting IPV condition, both directly and indirectly through the quality of attachment with partner.
Method. A total of 60 women (M = 39.68, SD = 7.92) were recruited for the present study, divided in two groups: I) a clinical group of women victims of couple violence; II) a control group of women. All participant completed the *Inventory of Parent and Peer Attachment* that allows to measure a global score about Insecurity of Attachment; and the *Experiences in Close Relationships-Revised*, which assesses 2 dimensions of romantic attachment: Anxiety and Avoidance. A MANOVA analysis was performed to assess differences between clinical and control group in maternal and romantic attachment bond. Finally, a mediation analysis was conducted to explore the influence of intergenerational transmission of maternal attachment on IPV, directly and through romance attachment.
Results. In line with previous research, our results confirmed the presence of insecure attachment bonds, both with mother and partner, in women victims of IPV. Moreover, the intergenerational transmission of attachment results to be a risk factor in outset of violence inside couple relationships.

Keywords: *Intimate Partner Violence, Romantic Attachment, Maternal Attachment, Intergenerational transmission of attachment.*

1. Introduction

The Intimate Partner Violence (IPV) is one of the most important public health problems in the world. Its consequences can be numerous and debilitating for the physical and psychological health of women (World Health Organization, 2013).

Empirical evidence has verified that the IPV tend to repeat across generations (Ehrensaft et al., 2003). The attachment theory can give a significant contribution to understand how violence can be transmitted from one generation to next (McClellean & Killeen, 2000). In particular, the intergenerational transmission of attachment style can represent a significant risk factor for violence inside couple relationships (Stith, Rosen, Middleton, Busch, Lnderberg, & Carlton, 2000). Despite the relevance of this aspect, great attention has been pointed to analyze the romantic attachment style, while no studies have investigated the influences of early and romantic attachment on women's IPV condition, simultaneously.

2. Objectives

Starting from these considerations, the main focus of this study was to: 1) explore the attachment style, both to mother and romantic partner, of abused women and 2) analyze the role that both these attachment styles play in predicting IPV condition examining their direct and indirect effects on intergenerational transmission.

3. Methods

3.1. Participants and Procedure

A total of 60 women, aged 26 to 54 years, were recruited for the present study and divided into two groups: (1) A clinical group composed of 29 women (age M = 39.52, SD = 8.36), who had habitually experienced domestic violence within their couple relationships. These women were recruited from an

anti-violence center in Tuscany, Italy; (2) a control convenience sample composed of 31 no abused women (age M = 39.84, SD = 7.62).

The research was conducted in accordance with the guidelines for the ethical treatment of human participants of the American Psychological Association. Participation in the survey was voluntary and no monetary reward was given. All participants provided their individual consent and could withdraw from participation at any time.

3.2. Measure

Participants' attachment bond to mother was assessed using the Italian form of the *Inventory of Parent and Peer Attachment* (IPPA: Armsden & Greenberg, 1987; Guarnieri et al., 2010). This scale consists of 24 items, rated on a 5-point Likert scale from 1 (almost never or never) to 5 (almost always or always), and allows to measures a global score regarding Insecurity of Attachment. In this study the Cronbach's alpha value was.71.

The Italian form of *Experiences in Close Relationships-Revised* (ECR-R: Fraley et al., 2000; Picardi et al., 2002) was used to assess the attachment bond to romantic partner. This scale is composed of 36 items, rated on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree), that allow to assess the two main dimensions of romantic attachment: Anxiety and Avoidance. In this study Cronbach's alpha value was .89, both for Anxiety and Avoidance subscales.

4. Results

No significant differences emerged between the two groups with respect to mean age, nationality, relationship status, educational level, and having children. Instead, a significant difference was found in occupation status: abused women are significantly more often unemployed than the control group ones ($\chi^2(3) = 13.28$, $p = .004$). Table 1 shows the descriptive statistics of all employed attachment measures and ANOVAs results.

Table 1. Means and standard deviations of the attachment bonds to mother assessed thorough IPPA instrument and of the attachment bond to partner assessed with ECR-R in clinical and control groups.

	Clinical group		Control group					
	M	*SD*	*M*	*SD*	*DF*	*F*	*p*	η^2
Insecurity with mother (IPPA)	73.86	15.47	53.10	11.12	1,58	23.46	.000	.29
Anxiety with partner (ECR-R)	74.10	17.43	52.03	20.31	1,58	10.27	.000	.26
Avoidance with partner (ECR-R)	84.83	21.33	38.39	18.99	1,58	79.55	.000	.58

As table reports, abused women, compared with the control group ones, reported higher insecure attachment bonds to mother, and higher levels of anxiety and avoidance in their attachment bond to partner. Finally, the results of mediation analysis are showed in table 2, that reports all direct and indirect effects among all considered variables. As table 2 shows, the two dimensions of insecure attachment to partner directly predict the IPV condition. In contrast, insecure attachment to mother has only an indirect influence on women's IPV condition through the two dimensions of romance attachment.

Table 2. Direct and Indirect Effects of Insecurity Attachment to mother on IPV condition through romantic attachment (i.e., Anxiety and Avoidance).

	Estimate	*SE*	*BC 95% CI*	
			Lower 2.5%	*Upper 2.5%*
1. Direct effect of insecurity attachment to mother on IPV condition	.017	.015	-.006	.048
2. Direct effect of insecurity attachment to mother on Anxious Attachment to partner	.430**	.169	.073	.744
3. Direct effect of insecurity attachment to mother on Avoidance Attachment to partner	.862***	.186	.483	1.197
4. Direct effect of anxious attachment to partner on IPV condition	.028***	.006	.013	.039
5. Direct effect of avoidance attachment to partner on IPV condition	.027***	.003	.020	.032
6. Indirect effect of anxious attachment to partner on the link between insecurity attachment to mother and IPV condition	.012*	.005	.052	.302
7. Indirect effect of avoidance attachment to partner on the link between insecurity attachment to mother and IPV condition	.024***	.006	.172	.444

5. Discussion

In line with previous literature (Henderson et al., 1997; Pearson, 2006) our results confirm that the insecure attachment bonds represent significant risk factors to be involved in romantic violent dynamics. However, while the insecure attachment to partner directly predict the women's IPV condition, insecure attachment to mother has only an indirect influence, through the two dimensions of romance attachment, on women's propensity to enter and maintain a violent romantic relationship. So, taken together, these results constitute a significant confirm of intergenerational transmission hypothesis.

There are a number of limitations to this research. First, the sample size is relatively limited. However, ethical and security issues make it difficult to recruit samples of abused women. A second limitation is that we have only used self-report measures to assess attachment bonds. To add strength to our findings, it could be useful to verify them through the use of multi-method assessment measures. Despite these limitations, however, the results of this study have strong theoretical and clinical implications. From a theoretical point of view, they allow an advancement of knowledge about the role early and adult attachment bonds play on the onset and maintenance of women's in victimization condition. Moreover, understanding these influences could have relevant clinical and social implications for all the psychologists and social workers who daily deal with the IPV phenomenon.

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PATTERNS OF ABUSE: PROFILING CHILD SEX ABUSE CASES USING MACHINE LEARNING

Nicholas Wisniewski & David Jimenez
Custody Care, Inc. (USA)

Abstract

In forensic psychology, there is practical interest in identifying major patterns of child sexual abuse, and associating a risk with each pattern. To this aim, we applied machine learning to a novel dataset of (n=254) pre-trial case studies conducted by a single court-appointed forensic psychologist in Los Angeles and surrounding counties, over the years 1997-2013. The case studies consist of full police reports, including victim interviews and medical reports, accompanied by corresponding suspect interviews conducted by the forensic psychologist. Our results suggest a large number of conditional dependencies between risk factors that can be used to identify patterns of abuse, and stratify motifs according to risk. These motifs provide an intuitive framework in which risk can be largely understood by combinations of 5 primary features: length of abuse, threat of force, age of victim, relationship to victim, and courtship behavior.

Keywords: *Forensics, Child Sex Abuse, Machine Learning.*

1. Introduction

Effective intervention in child sexual abuse requires accurate identification of patterns of abuse, which generally consist of motifs characterized by multiple complex features. Most attention, however, has been placed on identifying individual factors predictive of re-offense using models designed to discover simple relationships. The standard evaluations currently used for this purpose include the Static-99R (Hanson 2000, 2007, Harris 2003, Eher 2012) and STABLE-2007 (Fernandez 2012). These scoring schemes attempt to correlate various factors to recidivism, typically defined by reconviction following an initial conviction of a sex offense, and then arrive at a composite risk score by summing up the individual factors. Recidivism, as an objective measure of risk, however, is somewhat difficult to estimate in practice, exhibiting large and significant variability across studies (Helmus 2012), and suffering from bias introduced by the criminal justice system, which is quite variable across jurisdictions and tends to dismiss more minor offenses. Furthermore, application of these systems across differing cultures and subpopulations has shown dramatically varying results, suggesting that much can be gained by first identifying clusters and motifs before attempting to build an omnibus predictive model.

In this study, we attempt to circumvent these obstacles by applying machine learning to a novel dataset of pre-trial case studies conducted by a single court-appointed forensic psychologist in Los Angeles and surrounding counties, over the years 1997-2013. Because the cases are pre-trial, they circumvent the aforementioned judicial bias, offering unique estimates of various risk factors in sex abuse. Absent of conviction records, we shift away from the direct modeling of recidivism, and focus on the important task of identifying clusters of sex offenders. Our results suggest a model of risk that can be understood by combination of 5 primary features: length of abuse, threat of force, age of victim, relationship to victim, and courtship behavior.

2. Methods

The (n=254) case studies consist of full police reports, including victim interviews and medical reports, accompanied by corresponding suspect interviews conducted by the forensic psychologist. The interviews provide direct and detailed accounts of the events from which we analyze child sex abuse patterns, coded into 51 features. In each case, the psychologist provides a pre-trial assessment of the risk each suspect poses to the victim, providing a means of stratifying each pattern by apparent risk.

We used a regression tree to recursively partition the samples into clusters of similar risk profile, and subsequently analyzed each cluster to identify common motifs within each. To understand the most important features in the tree, we computed variable importance scores using random forests. In simplifying the interpretation and identifying common motifs, we analyzed the conditional dependencies between risk factors using a Bayesian network. Statistical analysis was done in R.

3. Results

Recursive partitioning using a regression tree identified 13 clusters based on risk profile (Figure 1). We found that multiple braches depended on the victim's age, suggesting different models of risk emerge for different age ranges. The most important variables in the tree, computed by random forest, were: length of abuse, victim age, time to disclosure, threat of force, escalation, gift and attention giving, suspect age, family relationship, number of other victims, and whether the suspect has children. Using conditional dependencies found by a Bayesian network, we were able to understand several of these features as redundant, being indicative of similar profiles. For example, branches in the tree based on abuse length were often indicators of familial relationships, as abuse length is significantly longer in family relationships (p=2e-9). Thus, the right branch of the tree is best understood as familial abuse, while the left branch is oriented on strangers.

Taken together, our observations suggest that it is possible to reduce the set of 51 initial features down to 5 major features which allow us to profile child sex abuse: length of abuse, threat of force, victim age, relationship to victim, and courtship behavior (grooming, gifts, attention). Applying this framework to the stratified clusters led us to the following risk profiles:

1) **Extreme risk** occurs with either long-term abuse of multiple victims (cluster 13), associated with older suspects like fathers and grandfathers; or abuse under threat of force (cluster 8), usually from strangers, neighbors, and family friends.

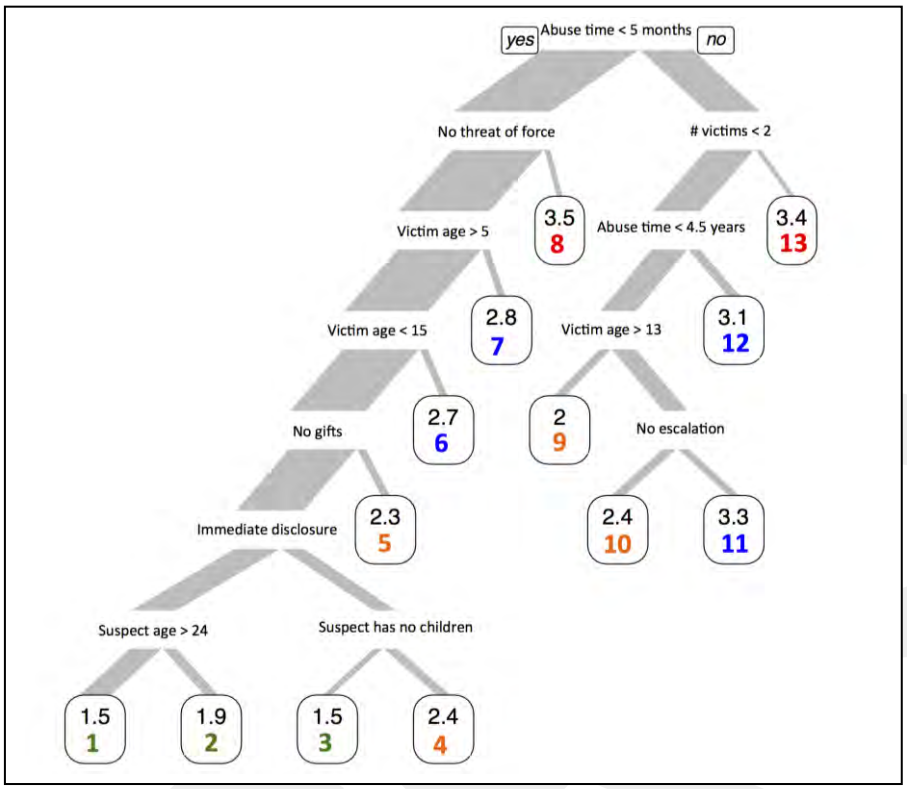
2) **High risk** occurs either in long-term abuse of a single victim (cluster 12), associated with older suspects like fathers and grandfathers; or ongoing abuse of a child under age 13 that is escalating (cluster 11), usually associated with younger fathers; or a child under age 5 (cluster 7), associated with babysitters and mother's boyfriend who are in custody of the child and may have multiple victims; or over age 15 (cluster 6), usually associated with strangers or uncles/cousins.

3) **Moderate risk** is marked by long-term abuse of a victim under age 13 that has not been escalated (cluster 10), usually associated with fathers; or long-term abuse of a victim over age 13 (cluster 9), associated with grooming and attention from strangers or uncles/cousins who can get the victim to undress herself; or short-term abuse where gifts have been given (cluster 5), usually associated with older suspects like strangers and neighbors who can get the victim to undress herself; or if the suspect has children and disclosure was not immediate (cluster 4), associated with strangers, fathers, uncles, cousins, and family friends.

4) **Low risk** is marked by cases of immediate disclosure in an abuse of a victim between age 5-15, with no threat of force and no gifts (clusters 1,2). These can be young suspects associated with strangers and uncles (cluster 2), or older suspects who are married with children and closer to the family such as neighbors and relatives (cluster 1). Or cases of delayed disclosure with no children (cluster 3), associated with young suspects such as neighbors, boyfriends, brothers, and friends who can get the victim to undress herself.

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Figure 1. We used a regression tree to identify motifs stratified by risk. Each split optimally partitions the data so that the leaves denote motifs with similar risk (quantified by the top number, between 1-low and 4-extreme.) The bottom number in each leaf is a cluster label, and is colored according to risk (low-green, med-orange, high-blue, extreme-red.) The right branch can be understood as familial abuse, while the left can be understood as non-familial.



4. Discussion

Our machine learning approach was able to identify patterns of abuse that were stratified according to risk. In this study, risk was assessed by a single forensic psychiatrist, though our methods readily generalize to data that estimates recidivism, and further investigation of this type is necessary to obtain quantifications of predictive value. Furthermore, the types of patterns found, and the relative frequencies of each, are necessarily a property of this particular dataset. Since varying patterns across datasets was part of the motivation for such a machine learning approach, it is intended for future investigations to utilize very large datasets to identify geographic and cultural patterns of abuse.

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MEDIA MULTITASKING: ARE YOU A SUPER TASKER?

Lobna Cherif & Sophie Kenny
Department of Military Psychology and Leardership, Royal Military College of Canada (Canada)

Abstract

Today, new technologies are omnipresent and evolve at a rapid pace. In order to keep up with changes in technologies, one must learn to adapt and potentially change old habits. Technological change is having an impact on many aspects of life affecting, amongst other things, the number of tasks we can perform simultaneously. While the need to multitask is now present in many fields of work, the negative impacts of multitasking on performance, in a variety of different contexts, have been widely discussed in the literature. The purpose of this study is to gain a better understanding of the negative impacts that media-multitasking, or engaging in multiple media activities simultaneously, exerts on performance. Participants were given a timed comprehension test following three test conditions: viewing a documentary video, playing a video game, or doing both simultaneously (media-multitasking condition). The results of this study are discussed within a framework which emphasizes specific processes and resources involved in the relationships of multitasking to attention and cognitive load.

Keywords: *Multitasking, workload, task switching, attention, cognitive load theory.*

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THE STUDY FOR RELATION BETWEEN COLOR PREFERENCE AND ITS REACTION TIME

Shengai Jin & Yasuhiro Kawabata
Graduate School of Letter, University of Hokkaido/ Sapporo (Japan)

Abstract

This study investigated the relation between two-color combination preferences and measured the reaction time for its examination among students aged between 20 and 30 years. In this study, we found that: 1. In the antagonistic color scheme, light tone was more preferred than vivid, dark tones; moreover, the ratings for blue-yellow pairs were higher than red-green in the same color scheme. 2. With regard to the reaction time, the examination for color preference had a negative correlation with its reaction time, the reaction time for single-colors lasted longer than for the color-pairs.

Keywords*: Preference, Color combinations, Reaction time.*

1. Introduction

Several studies on reaction time, have indicated that an inverse ratio exists between a preference and its reaction time (Arker, Bagozzi, Carman, & MacLachlan,1980; Klein & Yadav,1989; Haaijer, Kamakura, & Wedel, 2000). This means that people take lesser time when choosing preferred things, compared with choosing without preference. Similar color-related results were reported in the studies by Dashiell (1937) and Shipley, Coffin, and Hadsell (1945); they demonstrated that if a participants has a strong preference (either positive or negative) for a given color, the reaction time of between the preferred color and others will then be short. However, they also hypothesized that people have a tendency to pay more attention on examine the things preferred by them; therefore, they will spend more time examining them. In this case, the reaction time will be longer for choosing preferred things than others. This study clarifies if there is a higher relation between color preference and its reaction time when people evaluate color patches and it distinguishes its findings from the above-reported studies.

2. Methods

2.1. Participants

A total of 21 students from Hokkaido University participated in this study (average age: 23 years). They did not have any visual or color vision deficiencies.

2.2. Stimuli

In this study, six colors and six color "pairings" of these six colors were used. Red, orange, and yellow belonged to the “Warm color”-group, whereas blue, cyan, and green belonged to the “Cool color”-group. Each color-pair was divided into alternated tone systems (light tone, vivid, and dark), and according to the varying degree of distance systems between the color-pairs as shown in **Figure1**.

2.3. Procedure

First, the participants were seated facing the screen. We asked them to remain still and maintain the same position. They were seated approximately 44 cm away from the screen, and when the stimulus was presented, They had to examine the preferences of color-pairs, while being instructed to accurately estimate each stimulus as fast as possible. There were 11 scales for preference estimation, 0 represented the worst, and 10 represented the best. Finally, participants estimated each color by same evaluation method. The reaction time was recorded from the point when the stimulus appeared till when the participant pressed the corresponding button to estimate the preference.

3. Results and Discussion

Significant correlations between distances and color-pairs, and the main effects of distances; and color-pairs on reaction time were found ((F(22,440) = 2.20, p < .01; F(2,40) = 18.76, p < .01; F(11,220) = 12.41, p < .01). According to the multiple correlations of the reaction time, the dislike for the red-green or red-cyan pairs lasted longer than for the yellow-cyan or yellow-blue pairs, which were more preferred (Figure 2). Moreover, significant negative correlations existed between single-color preferences and its reaction time(r = -0.42, ** p < 0.01) (Figure 3). Similar to previous research, the main findings revealed that when people choose their preferred color, the reaction time was shorter in spite of the single-color or color-pairs. However, it is notable that the reaction time for single-colors lasted longer than for the color-pairs. This means that people decide rapidly when choosing complex combination of colors, rather than a single color. In our past experiments, we have learned that single-color preferences do not affect color-pairs including its single-color. Moreover, color-pair preferences mostly depend on their harmonic sense. Additionally, we found that significant correlations existed between color-pair references and color harmony through experimental data (r＝0.70, p < 0.01). At this point, we may conclude that when people investigate color-pairs, most consider the harmony to judge preference of them so much easily. However, in single-color preferences, it is possible that people imagine past personal experiences while investigated it, therefore, extending the reaction time.

In the future, we aim to measure the reaction time for the harmony of the color-pairs to compare them with the reaction time of the preferences of color-pairs or single colors. Moreover, we aim to clarify whether many attention to be paid to the more harmonious color-pairs.

Figure 1. Stimuli for experiment.

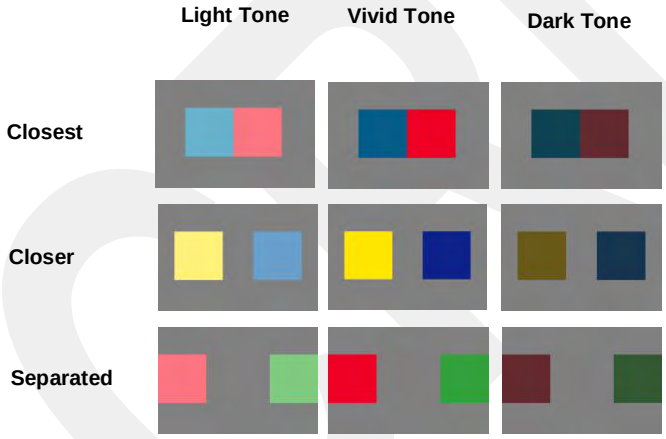
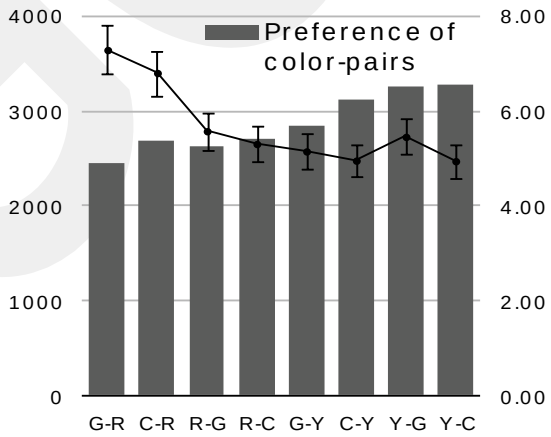
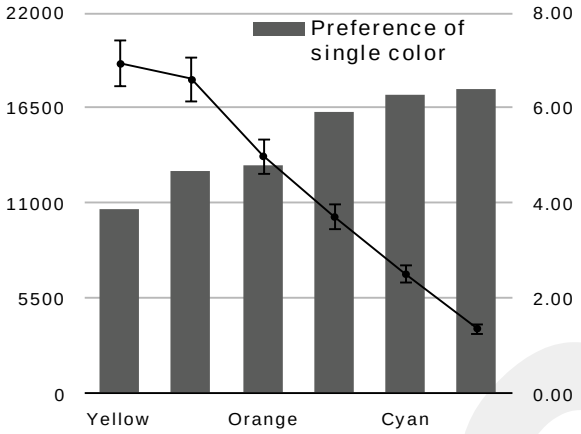


Figure 2. Correlation for color-pairs.



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Figure 3. Correlation for single color.



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EVALUATING AND PREVENTING COGNITIVE FAILURES IN A COMPANY OF THE BRAZILIAN ELECTRICAL SECTOR

Ederaldo Lopes[1], Adriano Pereira[2], Adriano Andrade[2], Selma Milagre[2], Jenaina Magela[3], & Paulo Roberto Prado[3]

[1]*Institute of Psychology, Federal University of Uberlandia (Brazil)*
[2]*Faculty of Electrical Engineering, Federal University of Uberlandia (Brazil)*
[3]*CEMIG, Belo Horizonte (Brazil)*

Abstract

Studies addressing cognitive and emotional aspects are essential to assess and prevent cognitive failures in the workplace. The aviation, electrical and health sectors have benefited from these studies in terms of planning, decision-making, quality of life and, moreover, reducing occupational accidents. This study's aim was to assess various cognitive and emotional factors that possibly underlie human failures in the workplace and propose mechanisms to reduce errors and their consequences. A correlational study was conducted with 18 employees from CEMIG, an electric power company in the state of Minas Gerais, Brazil, using measures of attention, memory, personality, individual and work stress, and a questionnaire addressing cognitive failures. A positive correlation was found between attention and memory. As for cognitive failures and stress at work, participants judged on favorable terms, disagreeing that both affect their lives at work. Half of the sample presented a moderate level of stress. The NEO-PI-R inventory showed an average level of neuroticism and conscientiousness, with a predominance of the latter. Although possible cognitive failures in the work situation cannot be explained solely by all the variables in question, preventive measures such as biofeedback techniques for stress reduction, personality assessment and training can be implemented to reduce future failures and their consequences.

Keywords: *Cognition, emotion, cognitive failures, workplace, stress.*

1. Introduction

Human error is estimated to cause from 20% to 90% of all failures in a system (Hudokin & Rozman, 1992). Even though new technology has increasingly provided reliable machines to assist people in performing increasingly complex tasks, people remain the least precise element of a human-machine system. According to Hollnagel (2007), as a psychological concept, human error may be defined from an idiographic or nomothetic perspective. From an idiographic point of view, human error may be characterized as an individual tendency or personality trait. According to this concept, there would be individuals more prone to error than others and also individuals more prone to take risks. From a nomothetic perspective, human error is common to all and, therefore, everyone is subject to the same laws of other psychological phenomena such as learning, recall, decision-making, etc. (Hollnagel, 2007).

Even though human reliability is crucial to successful performance, we need to analyze the human-machine relationship to estimate the role it plays in performance that may lead to error. Perfect performance, i.e., without errors, and systematic errors are two sides of the same coin. In reality, the cognitive system balances the process, which sometimes requires automatic tasks (those that demand little attention) and at other times, requires controlled tasks (those that demand more attention). That is, while automaticity enables the cognitive system to save energy, as it requires fewer cognitive resources, controlled tasks arising in new or stressful situations, for instance, compete with other cognitive tasks of a given system (e.g., the mind or even a machine), thus limiting processing (e.g., perception, attention and memory) and leading to information overload and loss of data (Reason, 2009). Nevertheless, correct performance seems to be more likely than error. Additionally, error takes a limited number of forms, looking very similar in a large range of mental activities. Hence, we can identify forms of errors that are comparable in action, speech, perception, memory and decision-making. One of the places in which correct cognitive performance is crucial is the workplace.

In an extensive review addressing cognition in organizations, Hodgkinson and Healey (2008) state that the tradition of studies addressing cognition in organizations is based on two fundamental perspectives: (1) human factors and (2) organizational tradition. The first is strongly linked to psychological engineering and human performance; it was inspired by the traditional approach of information processing in cognitive psychology, a movement that started immediately after World War II (Lopes, Lopes & Teixeira, 2004). The organizational tradition, on the other hand, complements the human factors approach; though apparently more "human", it is also concerned with aspects of leadership and administration in the work context. This tradition, however, has been enriched by studies addressing personal identity, beliefs and attitudes, and motivation at work, etc., which can improve understanding concerning the phenomenon of stress and its relationship with faulty performance. Therefore, the study of human failureS at work depends on an analysis of multiple factors that interact with each other producing motor actions, attention and memory deficits, the outcomes of which may be more or less serious. There are, however, steps that can be taken to decrease the likelihood of failures, from the time an employee is hired up to the time s/he receives training, such as: personality assessment; monitoring individual stress levels; level of stress at work; general health; and memory and attention levels.

2. Design

A correlational study was performed considering variables with the potential to cause cognitive failures (memory, attention and individual stress). Separate analyses were performed for the variables "cognitive failures", "stress at work" and "personality".

3. Objectives

This study's aim was to assess cognitive and emotional factors that may underlie human failures in a work situation. CEMIG (P&D GT 0462), an electric power company in Minas Gerais, funded this study to identify mechanisms to improve the efficiency of the Operation Center team and, at the same time, decrease the potential of future failures when performing different tasks.

4. Methods

4.1. Participants

The sample was composed of 18 individuals of both genders, aged from 21 to 51 years old.

4.2. Materials and Procedures

The following instruments were used: Lipp Stress Scale (1984), the Stress Scale at Work (Paschoal & Tamayo, 2004), the Recognition Memory Test (Rueda, Raad, & Monteiro, 2013), the Concentrated Attention Test (Rueda & Sisto, 2014), the WCFS – Workplace Cognitive Failures Scale (Wallace & Chen, 2005) and Neo Personality Inventory-Revised (NEO-PI-R) (Flores-Mendoza, 2007). The instruments were applied in groups over the course of two days to avoid fatigue.

4.3. Results

A correlational analysis was performed among the scores concerning individual stress, attention, and memory. In the stress assessment, 10 participants did not present significant level of stress, while eight participants presented stress in the resistance phase. Correlations were weak: stress x attention (-0.05); stress x memory (0.26); attention x memory (0.17). The Stress Scale at Work and WCFS do not produce scores and, for this reason, it was not possible to establish correlations between these scale's results and other factors. The answers in the Stress Scale at Work and in the WCFS are distributed on a five-point Likert scale and the participants' averages responses was 2.33 and 2.00, respectively; that is, neither work stress nor cognitive failures was reported by participants. Finally, a qualitative analysis of personality factors was performed in which seven participants presented high levels of conscientiousness and seven presented high levels of neuroticism.

5. Discussion

Data show that the factors studied in the different instruments do not account for failures at work. Low or controlled levels of stress, weak correlations between cognitive and emotional factors, the absence of stress at work and cognitive failures, and the presence of the conscientiousness factor attest to this statement. Even though neuroticism is related to stress, which in turn, may be related to cognitive failures, this study's results do not lead to the conclusion that neuroticism has affected performance.

6. Conclusions

Data suggest that, even though the correlations are weak, there is no evidence of stress at work and personality factors do not strongly tend to neuroticism, some individual cases presented more salient results and need to be addressed, though their results are dispersed in the overall analysis. For this reason, mechanisms to regulate stress, by means of biofeedback, and cognitive assessments can be part of a protocol the company can use to decrease cognitive failures and their consequences that most commonly manifest in the form of incidents or accidents. Such measures can improve the workers' quality of life and performance, as well as reduce costs.

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JUDGMENT OF THE CONSISTENCY BETWEEN A TEXTUAL PRIME AND A HYBRID PICTORIAL METAPHOR OF ANIMAL

Geoffrey Ventalon[1], Charles Tijus[1], Maria José Escalona Cuaresma[2], & Francisco José Domínguez Mayo[2]
[1]*Department of Psychology, University Paris 8 (France)*
[2]*Department of Web Engineering, University of Sevilla (Spain)*

Abstract

In a metaphor, there are two main concepts. The topic refers to what people are talking about, and the vehicle describes the topic and gives the metaphorical sense. A metaphor depicted in a picture is called a pictorial metaphor. This study focused on hybrid metaphor which is a pictorial metaphor in which the topic and the vehicle are stuck, illustrating an entire shape. The aim of this study was to put forward the effect of the context asking native French participants to judge the consistency between a contextual sentence and a pictorial metaphor. Sentences referred to a conceptual property of an animal (e.g. a camel is unpleasant, a parrot talks a lot). Images depicted a human with a body of an animal. The experiment started with a sentence such as: "This man doesn't like to be bored." Then, a pictorial metaphor appeared. Either the image was consistent with the sentence (e.g. a man with a body of a camel because the sentence refers to the property "unpleasant" of the animal) either not (e.g. a man with a body of a gazelle). The experiment considered a version with a woman's head too. At first, participants saw sentences and images related to the man, or sentences and images related to the woman. The order was counterbalanced. Analyses focused on correct response rate and response time. We assumed that correct response rate should be higher when there is a consistency between the sentence and the metaphor. Response time should be faster when there is a consistency too. Because animals had mostly a masculine connotation (e.g. camel, rooster, wolf, bear versus gazelle), correct response rate should be higher for pictorial metaphors depicted a man rather than a woman. Response time should be faster for pictorial metaphors of a man too. Results showed that participants found the consistency of a sentence with the metaphor. *X2* (N = 30) = 8,12, p< 0,05 but performances were not significantly different if the pictorial metaphor depicted a man or a woman. X2(N = 30) = 1.52, p> 0.05. Participants took no more time to answer if there was a consistency or not r = 0.10, p> 0.05 but response time was faster when the pictorial metaphor introduced a man r = 0.03, p< 0.05

Keywords: *Inference, text, image, property, animal.*

1. Introduction

A metaphor is a figure of speech in which a word is used instead of another to describe a situation. Usually, a metaphor has the form "X is a Y" where X referred to the topic (e.g. what we are talking about), and Y referred to the vehicle (e.g. which qualify the topic). Hamilton (2003) took the following example Sophie is a block of ice. This sentence is composed of a topic (e.g. Sophie) and a vehicle (e.g. block of ice). To understand this sentence, Hamilton (2003) followed the findings of Glucksberg and Keysar (1990) suggesting that people attribute properties of the vehicle to the topic. Property attribution depends on the category of the vehicle.

However, a metaphor can also be introduced in five modalities: text, image, verbal, music, and sound. This study examined the understanding of metaphors in image, also called pictorial metaphors. Concepts of topic and vehicle also exist for pictorial metaphors, and Forceville (2007) made a distinction between four types of pictorial metaphors depending on the availability of both concepts.

He called contextual metaphor, a metaphor where the context suggests the vehicle. For example, corn with the shape of a gun translating the idea: "The corn is a gun" preventing people against GMO.

He called simile, a metaphor where both topic and vehicle are perceptible. For example, a car and a bull are depicted in the image translating the idea: "the car is a bull" to make people understand that the car is a strong one.

He called integrated metaphor, a metaphor where the vehicle is integrated to the topic. To illustrate this type, he took the example of a coffee machine. Some famous coffee machine can have the shape of a waiter. The concept of the waiter is integrated into the coffee machine translating the idea: "The coffee machine is a waiter."

Finally, he called a hybrid, a metaphor where both topic and vehicle are stuck to create an entire shape. For example, a human head which is stuck on a body of animal translating the idea: "This man is an animal."

Pictorial metaphors used in this study depicted a man or a woman with a body of an animal translating the idea: "This man is an animal" and "this woman is an animal." Pictorial metaphors used are hybrid. When people qualify others with animal names, it is usually to make salient a particular property: either perceptual or conceptual (Ohja, 2015). In this case, a perceptual property can refer to a physical property while a conceptual property can refer to behavior. For example, "long legs" is a perceptual property whereas "dangerous" is a conceptual property. To know what kind of property required to be attributed, context is crucial (Pudelko, Hamilton, Legros & Tijus, 1999).

Therefore, the aim of this study was to put forward the effect of the context asking native French participants to judge the consistency between a contextual sentence and a pictorial metaphor. We also wanted to know if the gender of the character depicted in the hybrid metaphor has an influence on the understanding. In other words, is the understanding the same for sentences such as: "This man is an animal" and "This woman is an animal"? Our predictions were that people should be able to distinguish the consistency and the absence of consistency between a contextual sentence and a pictorial metaphor. When context and metaphor are consistent, people should answer that there is a consistency while when context and metaphor are not consistent, people should answer that there is not consistency. We believed that the gender of a character should have an influence admitting that the consistency will be found easier when the pictorial metaphor depict a man because the majority of pictorial metaphors used introduced animal with male connotation (e.g. rooster, camel, elephant versus gazelle and cicada).

2. Method

2.1. Participants

30 native French first year students in psychology were invited to participate. They had no basis in figurative meaning and image comprehension.

2.2. Materials

The software Frida was used to realize the experiment. 12 animals were selected (the bear, the camel, the chameleon, the cicada, the elephant, the gazelle, the leech, the mouse, the ostrich the parrot, the rooster, and the wolf). We used 24 contextual sentences taken from Pudelko et al. (1999) (12 for the man and the same 12 for the woman) and 24 hybrid pictorial metaphors (12 depicted a man, and 12 depicted a woman)

2.3. Procedure

The experiment started with a sentence such as: "This man doesn't like to be bored." Then, a pictorial metaphor appeared. Either the image was consistent with the sentence (e.g. a man with a body of a camel because the sentence refers to the property "unpleasant" of the animal) either not (e.g. a man with a body of a gazelle). At first, participants saw sentences and images related to the man, then sentences and images related to the woman. The order was counterbalanced.

2.4. Results

Results showed that participants found the consistency of a sentence with a metaphor $X2(N = 30) = 8,12$, $p < 0,05$ but performances are not significantly different if the pictorial metaphor depict a man or a woman. $X2(N = 30) = 1.52$, $p > 0.05$.

A focus has been made on correct response rate and response time. We assumed that correct response rate should be higher when there was a consistency between the sentence and the metaphor. Response time should be faster when there was a consistency too. Because animals had mostly a masculine connotation (e.g. camel, rooster, wolf, bear versus gazelle), correct response rate should be higher for pictorial metaphors depicted a man rather than a woman. Response time should be faster for pictorial metaphors of a man too. Results showed that participants took no more time to answer if there is a consistency or not $r = 0.10$, $p > 0.05$ but response times were faster when the pictorial metaphor introduced a man $r = 0.03$, $p < 0.05$.

3. Discussion and conclusion

This research was a study of pictorial metaphor comprehension, especially hybrids of the animal. It is common for people to qualify others with animal names because they share physical and conceptual properties (Robin Hart, & Long Jr, 2011). However, is it the same thing to say that “this man is a camel” or “this woman is a camel”? Worse, “this woman is a gazelle” or “this man is a gazelle”? This study tried to put forward two effects: the effect of the context (consistency between a sentence and a pictorial metaphor) and the effect of the gender (if the character depicted is a man or a woman). Results showed that people could determine if there was consistency or not. The effect of the gender is limited. That may be because of the lack of information in the image. Otherwise, a single sentence for context may be too short to understand well the situation.

Therefore, further studies could focus on the genre of the metaphor (e.g. an advertisement or political cartoons). Context should also be longer to make people imagine a more precise situation.

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BRAZILIAN INDIGENOUS WOMEN: EDUCATION AND PUBLIC POLICY

Sonia Grubits
Universidad Católica Dom Bosco Campo Grande, Mato Grosso del Sur (Brazil)

Abstract

This study contemplates reports and reflections about gender in its interfaces with work/job, power and political participation of women in the Guarani/Kaiowá, Kadiwéu and Terena indigenous communities in Mato Grosso do Sul, Brasil. In the specific case of Guarani/Kaiowá, women from Dourados have a more active participation in and out of the community, in the share of family incomes, and they also stimulate far more their sons to study and achieve a university degree. Among the Kadiwéu community, the most important fact is the women political power and division of roles between men and women, without valuing one role over the other. In the study on the Terena community, we observed that their close relationship with the national society has been promoting many transformations and the increase of women's activeness inside and outside their community.

Keywords**:** *Indigenous Women; Gender; Education; Health; Culture.*

1. Introduction

In Indian Women Brazilian Midwest Education and Public Policy research, we develop our fieldwork with indigenous communities Guarani and Terena Kadiwéu of Mato Grosso do Sul. We wanted to investigate and analyze the current situation of women in these groups, their effective political participation, economic, preservation of customs and traditions, including gender aspects in their work, power and politics, within and outside the community. An important fact revealed during the study was the growth in numbers of women seeking universities, in most cases not abandoning their community.

In addition, they have helped to facilitate access to other family members to higher education, confirming its active participation in the actions and decisions of the group, in addition to traditionally preserve traditions. The National Policy for Women (2003) favors our indigenous women's groups in this regard. The PNM indicates basic points for equality and respect for diversity, promoting equal rights for women and men, respect for cultural diversity, ethnic, racial, social inclusion, economic and regional situation and the different times of life of women.

2. Objective

The objective of this study is reports and reflections about gender in its interfaces with work/job, power and political participation of women in the Guarani/Kaiowá, Kadiwéu and Terena indigenous communities in Mato Grosso do Sul, Brasil.

3. Methods

The research concerned was performed on visits made to the referred communities, with group discussions with women and individual open interviews with informants from these groups, chosen for their activities within the community.

4. Terena, Guarani and Kadiwéu Communities

For the Guarani group, the conception of the human soul as key to their religious system and commands the social life of this society. The predominance of religion and the relationship with death, underlying the notion of soul or theory of the person, constitute an essential point of support for the understanding of social organization (Viveiros de Castro, 1986). “They are not one being, but one

between Heaven and earth". Another relevant fact for the understanding of their unique culture was a significant linguistic homogeneity of their dialects and their cosmology.

The Terena, together with the Guarani / Kaiowá group constitute the largest Indian nation in Mato Grosso do Sul, with about twenty-five thousand people of a total number of about fifty thousand who live in the state. The Terena belong to the people Aruak and came by the top of the Black River, being that raised about its origin hypotheses are that departed from the Colombian and Venezuelan plains. The Terena always tried to adapt to the dominant culture as a means of survival. But for this adaptation does not place increasingly at risk their identity and culture is needed the rescue of culture not only in children but also in adults in a general way.

Contact with the capitalist economy and the sedentarization of Kadiwéu the end of last century generated changes in the social, cultural and economic life of Kadiwéu. Agriculture became important, handicraft production for the foreign market, raising cattle and pasture leasing community. Just craftsmanship is an essentially feminine activity. The Kadiwéu, a smaller group, occupy more than two centuries ago, an area between the mountains of the Bodoquena, east and Paraguay to the southwest and south of the Pantanal Mato-Grosso, in the western part of the State of Mato Grosso do Sul. The area is inaccessible. Social structure, based on a stratified organization castes: the nobles or lords, warriors and captives.

5. Indigenous Women interviewed

Nilza (Terena). Two specializations in Aquidauana, "Guidelines and Teaching Techniques" and a year in private school Salgado de Oliveira. Master in Psychology. The UCDB gave a scholarship for their studies. He currently runs a school in Lagoinha community and teaches at the Federal University of MS.

Esmeralda (Guarani**).** Esmeralda has leadership in women's groups for handicrafts, and seek the participation of different institutions in the area of health and education for crash courses where women could be informed about important issues such as AIDS, child malnutrition, among others.

Cleusa (Kadiwéu). Cleusa is married eighteen years ago. He is forty years old and his partner Etelvino, 37. He graduated in Geography. Relates that "My dream is to continue my studies but my first choice is to theology and before any hesitation I philology course. But "the first dream I want to accomplish is to Theology".

6. Conclusions

The internal transformation process of these groups' social organization as well as their culture, relationships, structures of power, gender issues, etc., revealed that they have got some common aspects whereas others are completely different. This is probably related to multiple factors, which we can only suppose, by the degree and quality of the contact with each of these ethnic groups with the non-Indigenous society, determines the level of transformation of the culture.

Among the Kadiwéu community the most important fact is the women political power and a division of roles between men and women, without the attribution of more value to one role or another.

In the study with the Terena we observed that the close relationship with the national society has been providing many transformations and an increasing on the role of their women inside and outside their community. The Guarani are deeply related in their social organization with their beliefs and cosmology.

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COMPARING PERSONALITY TESTS: IS BIGGER BETTER?

David Freeze[1], Tracy A. Freeze[2], & Lisa A. Best[1]
[1]*Department of Psychology, University of New Brunswick*
[2] *Department of Psychology, Crandall University*

Abstract

According to the Five Factor Model (FFM), personality includes five basic factors: Neuroticism, Extraversion, Agreeableness, Openness to experience, and Conscientiousness. Although the Neuroticism, Extraversion, Openness Personality Inventory (NEO-PI-R) is the gold standard of personality testing, it is time-consuming, cumbersome for some participants, and provides a level of detail that is not always necessary. Our purpose was to compare longer (NEO-PI-R; 240 items), medium (Big Five Inventory; 44 items) and shorter (Ten Item Personality Inventory; 10 items) tests. Further, we were interested if a single item could be used to measure the five dimensions; we used descriptors for each of the factors and asked participants to rate how well these applied to them. Participants (N=192) were recruited from university samples and completed a series of personality inventories. Results indicated moderate to strong correlations between the tests, including between the single item descriptors and established tests. To examine the test concordance, we defined the dominant trait as the trait associated with the highest absolute factor *z*-score. There was significant concordance, particularly for Extraversion and Conscientiousness. Thus, participants had a general sense of their own personality and, thus, even a single item may provide a general indication of personality traits. Our results suggest that although facet level measurement may be preferable in some situations, shorter tests may be appropriate when time is a factor or when a quick measure of personality is necessary.

Keywords: *Big Five personality traits; Neuroticism, Extraversion, Openness, Personality Inventory Revised (NEO-PI-R); Big Five Inventory (BFI); Ten Item Personality Inventory (TIPI).*

1. Introduction

In the Five Factor Model (FFM) of Personality (McCrae & Costa, 1992) personality is conceptualized as being comprised of five broad factors: Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. Neuroticism is defined by increased levels of psychological distress and other unpleasant feelings and emotions. Extraversion is associated with higher levels of friendliness, activity, and the experience of positive emotions. Openness to experience is characterized by an intellectual curiosity, flexibility in thoughts and behaviours, and a readiness to adjust in different situations. Agreeableness is related to feelings of sympathy, cooperation, and trustworthiness, lower scores on this factor indicate feelings of distrust and pessimism. Finally, Conscientiousness is associated with an increased propensity for both organization and diligence (Costa & McCrae, 1992). These factors are considered to represent wholly unique aspects of personality that have been identified across different cultures (McCrae & Terracciano, 2005), are similarly described across languages (Goldberg, 1990), and appear to be a part of an individual's biology (Jang, McCrae, Angleitner, Reimann & Livesley, 1998).

According to Costa and McCrae (1992), the FFM is based on a tiered system with each domain containing six facets representing specific aspects of personality. The secondary facets may vary in individuals with similar scores on the FFM (McCrae & John, 1992; Matthews, Deary, & Whiteman, 2003). For instance, individuals scoring high on factor Neuroticism may vary on what makes them neurotic, which can be determined by examining individual facet scores (Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, Vulnerability; Costa & McCrae, 1992). The NEO-PI-R is used extensively in personality research and is the most validated measure of the FFM (Fazeli, 2012).

Our purpose was to compare established personality inventories with an inventory developed for this study. The NEO-PI-R (Costa & McCrae, 1992), Big Five Inventory (BFI; John, Naumann, & Soto, 2008), Ten Item Personality Inventory (TIPI; Gosling Rentfrow, & Swann, 2003) and the Individual Item Index of Personality (III-P), were administered. The III-P contained a single item designed to measure each of the FFM factors. The III-P included a list of trait descriptors and participants indicated which

descriptors they thought represented their personality (see Cattell, Cattell, & Cattell, 1993). Our overall goal was to (1) determine the relation between the personality inventories and, (2) to determine if simply asking participants to select trait descriptors could provide a reliable measure of personality.

2. Method

2.1. Participants

In total, 192 (149 females) participants completed the study. Most participants were enrolled in Introductory Psychology (M_{age} = 20.35 years, SD = 4.95), Caucasian (88%), and Canadian (89%).

2.2. Materials

In addition to a demographics form, participants completed the NEO-PI-R (Costa & McCrae, 1992), the BFI (Johns & Srivastava, 1999), the TIPI) Gosling et al., 2003), and the III-P.

2.3. Procedure

After signing informed consent, participants competed the questionnaire package, with the demographics questionnaire always presented first. The other inventories were counterbalanced.

3. Results

Correlation coefficients were used to determine the relation between the five factors as measured by the different scales. The correlations between the NEO-PI-R and BFI Factors were statistically significant (*p*s < .0001) and ranged from moderate (*r* = .60) to strong (*r* = .78), with an average correlation of *r* = .72. Correlations between the NEO-PI-R and the TIPI factors ranged from *r* = .54 to *r* = .75 with an average correlation of *r* = .64. Correlations between the BFI and the TIPI ranged from *r* = .66 to *r* = .88 with an average correlation of *r* = .73. In addition, the III-P factor scores were correlated with the factor scores from the BFI, TIPI, and NEO-PI-R (see Table 1). In all cases, Neuroticism and Extraversion produced the highest correlation coefficients, suggesting high convergent validity.

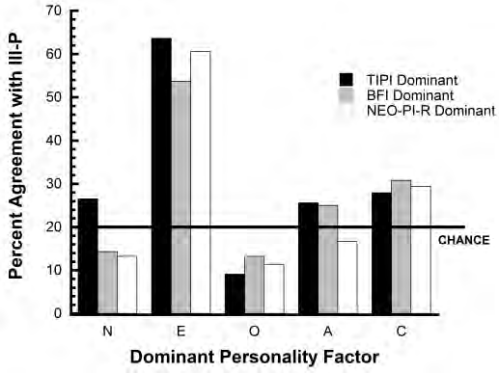
Table 1. Compilation of III-P Factor correlations between the personality inventories.

	III-P Factor				
	N	E	O	A	C
TIPI	-.50**	.76**	.44**	.29**	.32**
BFI	.51**	.76**	.34**	.35**	.37**
NEO-PI-R	.44**	.70**	.40**	.38**	.37**

Note. ** *p*=.001. The negative correlation coefficient between III-P Neuroticism and TIPI Emotional Stability is due to reverse coding of the TIPI factor.

Based on the factor *z*-scores for each test, participants were assigned a "dominant" personality trait, defined as the factor with the largest absolute *z*-score; for example, if a participant had a NEO-PI-R Neuroticism score that was -2.99 and this was factor had the largest absolute value, their dominant personality factor would be Neuroticism. With this coding, each participant had a single dominant personality trait for each of the personality scales. Figure 1 shows the percent agreement between the III-P dominant traits and the dominant traits based on the TIPI, BFI, and NEO-PI-R.

Figure 1. Percent agreement between the dominant traits of the III-P and the TIPI, BFI, NEO-PI-R.



Chi-Square analyses and Cramer's V degrees of association were calculated to determine the specific relation between the dominant traits. There were statistically significant associations between the III-P and the NEO-PI-R (χ^2 (16) = 32.70, p = .036; Cramer's V = .21, p = .036), the III-P and the TIPI (χ^2 (16) = 41.91, p < .001; Cramer's V = .23, p <.001) and BFI (χ^2 (16) = 29.69, p = .02; Cramer's V = .20, p = .02) dominant traits.

3.1. Discussion

As hypothesized, the correlations between the five factors of personality, as measured by the NEO-PI-R, BFI, and the TIPI were quite high and supported John et al. (2008). Gosling et al. (2003) examined the validity of the TIPI in comparison to longer scales and found it to be acceptable. John et al. (2008) developed the BFI as a compromise between the length of the test and the ability to measure separate facets. The reduction of items from 240 in the NEO to 44 in the BFI produced a mean alpha of .83 (John & Srivastava, 1999) and reducing the items further to 10 items reduced the co-efficient mean values to .51 (Gosling et al., 2003), showing lower overall correlation strength.

Overall, the current results suggest that the use of the III-P may be useful in areas where a brief add-on questionnaire could provide some initial insight for youth at risk of Depression without stigma of extensive testing. If personality is the primary variable of interest longer tests with more items (i.e., NEO-PI-R) may be preferable. In clinical settings, testing may be used to determine treatment options and, thus, it may be critical to be able to differentiate between Neuroticism facets, such as Depression and Angry Hostility to choose the appropriate course of treatment (Costa & McCrae, 1992). In cases such as these, the increased administration times are necessary and worthwhile. When measuring a specific relationship between personality and other research variables (i.e., attachment, life satisfaction), researchers must carefully consider which measures are most appropriate. If specific relationships between personality facets and other variables are of interest, we would recommend using the scale that had a specific relationship with the facets of interest. For example, if researchers are interested in the Big Five factors of personality, the BFI is likely appropriate but if they are interested in specific nuances of personality, the NEO-PI-R is likely the optimal test.

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NARCISSISTIC INJURY IN PATIENTS WITH HAEMATOLOGICAL DISEASES: FROM DIAGNOSIS TO CLINICAL FOLLOW-UP

Iris Miyake Okumura[1], Maribel Pelaez Dóro[1], & Aline Cristina Antonechen[2]
[1] Complexo Hospital de Clínicas da Universidade Federal do Paraná (Brazil)
[2]Hospital das Clínicas de Ribeirão Preto (Brazil)

Abstract

The following observations derive from theoretical articulation and clinical experience of psychologists from a Haematopoietic Stem-Cell Transplantation Service. With some symptoms that can be easily neglected, such as tiredness and weakness, the diagnosis of a haematologial disease is received as negative abrupt news by the patients. After confirming through laboratory exams and clinical assessment, this diagnosis carries the stigma of being a closer step towards death. At this moment, the patient experiences a grief, which is the loss of the healthy body. The sudden aspect of this diagnosis opens a narcissistic injury as a sign of the individual's finitude. Even with a good prognostic and all the investment in treatments, it is not possible to claim in advance the certainty of complete cure. Thus, the feeling of impotence is emphasized. Firstly, because of the new condition of illness and, secondly, due to not knowing what is going to succeed considering health, professional career, personal plans. The patients face lack of responses and emptiness, which obligate them to reorganize themselves in terms of life's meaning and aims. Other psychological aspect in narcissistic injury includes emotional liability. It is common to see mood disorders (anxiety, distress, depression) which must be accompanied by a psychologist, who will be able to provide appropriate embracement and attendance in order to develop coping strategies for this life-threatening moment. Understanding psychological risk factors improves the ability of dealing with emotions. Strengthening protective factors help the patient reconstruct beliefs that have fallen apart in an adverse situation.

Keywords: *Narcissistic injury, haematological diagnosis, hospitalar psychology, psychological follow-up.*

1. Introduction

Being diagnosed with a haematological disease marks the beginning of a treatment journey and also includes important lifestyle and psychological transformations. Besides drug treatment and life support resources, some patients must undergo stem-cell transplantation (SCT) in order to have a chance of living. SCT recovery requires very strict care, especially regarding opportunistic infections that, if contracted, put the patient into death risk (Dykewicz, 2001). Meanwhile the patient must go to consultations and take regular medications, as well as maintain social and working restrictions as advised in the beginning of the treatment.

It can be considered a journey mainly because there is high investment of energy as personal disposition to deal with biopsychosocial adversities (Dóro & Pasquini, 2000), such as emotional ups and downs, perception of self-image changes, disease symptoms and treatment side effects, absence from work and other social circles.

The patient passes through a grieving process while facing some losses due to the new health condition. Once there was welfare and long-term future planning; now the disease becomes the core aspect in life and the possibilities are restricted because of the necessity to consider if you are allowed or not to go on. Perception of self-control and omnipotence fade away forcefully through the illness as an external factor.

The process of realizing that the ego is weakened can be conceptualized by the psychological term "Narcissistic Injury", firstly described by Freud to understand the mechanism of a consciousness of impotence. He asserted humanity handled three injuries (Freud, 1917/1976, Birman, 2003): cosmological revolution by Copernicus, whose theory found that the Sun is surrounded by everything else, so Earth is not the center of the universe; biological revolution by Darwin, who studied species evolution understanding that the human being does not have a superior nature; and last, psychoanalytical revolution

by Freud who postulated that the psyche is not exclusively conscious. Those examples show that mankind does not have a privileged place and despite knowing, it is not information that is remembered all the time.

Narcissistic injury can be associated to several characteristics of the human nature, considering previous studies on personality disorders (Eaton et al., 2016), autism spectrum disorder (Martinez, 2015; McDowell, 2004), children adoption (Levinzon, 2006), grieving process (Oliveira & Lopes, 2008). The present proposal is to apply this term to an illness condition, from diagnosis to the following treatment stages.

2. Objective

This work discusses empirical observations with theory correlations about the subject who experiences a haematological disease condition and the psychological changes that happens concomitantly and also in consequence of this external threat.

3. Methods

Patients who are in treatment and clinical follow-up at a public Brazilian SCT hospital service are interviewed and evaluated by the psychologist. The assessment is realized in the setting of a psychological consultation and the amount of sessions vary according to the patient's demands and the professional's clinical opinion and report.

Besides life records and socio demographic data, questionnaires that measure distress level, anxiety and depression indicators and quality of life are applied. The final sum of all the collected information is analyzed by the psychologist and it helps to build clinical reasoning about the individual's personality, including protective and risk factors that may influence in the current treatment.

Some topics, like the ones cited below, tend to prevail in haematological patients. In compliance with the dynamic of the service and the treatment course, some subjects are prioritized: moment of the diagnosis, reception and dealing with every new information regarding the disease, reinforce some explanations about the treatment that might have left misunderstandings, embracement in delicate emotional situations, for example, disease relapse, treatment failure or death. If the patient wishes, there is the possibility to utilize the session to talk about any other personal issue that might be bothering.

Therefore, working empiric experience through qualified listening, embracement and psychotherapy process, together with previous theoretical knowledge, lead to a study that allow observing the patient's behavior, concerns, life modifications towards an illness.

4. Discussion

It is part of the human's nature to live regardless the fear of imminent death since there are greater concerns in order to satisfy life course ambitions (graduate, be a professional of success, form a family) and to keep up with the rhythm of the contemporary world (Schramm, 2002).

At first, tiredness, fatigue, petechiae, weight loss can be easily neglected and remain on second plan. Because of the daily activities, work and family responsibilities, the search for a health professional may be delayed. In this context, the initial evidences of a shock on the narcissistic structure arise with the symptoms of the haematological disease. It is not the fact of presenting the symptoms, but the perception that there might be something wrong with the usual function of the body.

Then, the person has to pass through meticulous examination and the abnormalities found on blood and laboratory tests indicate to be a serious problem. The diagnosis is closed and given during consultation by the physician. From now on, the person assume the role of patient, as having patience while postponing current life plans and activities, as well as suffering many interventions in health favor. Etymology of the word patient derives from Latin *patiens* which refers to the one who is capable of supporting/suffering and is resistant (Rezende & Bianchet, 2014).

Discovering the answer behind the symptoms does not mean to only have a disease. On these, a Narcissistic Injury is opened when realizing the loss of the healthy body, thus, being impotent, threatened and more fearful about the future. A loss can be understood as an experienced death (Kovács, 1992). Despite knowing that life circle ends up with death and that is the only certain mankind has, this seem to be a distant idea.

Besides the objective to stabilize and/or regress the development of the disease, medication and transfusions are resources that give the sensation that something is being done; the impression to have

some kind of power in hands because of the necessity to contain the uncontrollable. Creating beliefs in hopeless times is very important so the patient can tolerate better the treatment process (Kovács, 1992).

The next intimidating stage is the search for a stem-cell matching donor. If in one hand the transplantation can cure the person, on the other hand, it also increases life risk (when there are opportunistic infections or the graft is rejected). As it is an invasive high risk procedure, the patient finds another obstacle and the Narcissistic Injury widens together with this step forward taken towards death.

5. Conclusion

Whenever an individual faces a barrier which imposes a different reality other than the desired one, narcissistic structure will destabilize causing an indefinite moment of suffering. A disease diagnosis fits in a difficulty condition that provokes forced lifestyle changes and deep existential reflections to the patient.

At a crisis situation, it is important to quest self protective factors, whether they are religious faith or favorable coping position. Dealing with a challenge such as survival, implies passing through a shadowy path where all weaknesses seem to arise so a lightening strength can emerge and help in the patient's journey. The time needed to build a new purpose and meaning to life varies in each person, according to the available resources and the adequate measure to use them.

While other injuries may arise during treatment process, due to the oscillation between progress and failures, patient's psychodynamic and emotional condition also turn labile. Therefore, psychological assessment and follow-up are indispensable for haematological patients. This close care will help to identify the individual's subjective resources, which in turn will give a proper emotional ground to the patient.

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VIRTUAL PRESENTATIONS

GCRIS

WHO AM I? A MEANING-BASED APPROACH TO ASSESSING THE SELF-IMAGE

Shulamith Kreitler
School of Psychological Sciences, Tel-Aviv University (Israel)

Abstract

The purpose of the paper is to present a new approach to the assessment of the self image, based on the assumption that the self-image is a concept defined in terms of a set of meanings. In accordance with the Kreitler meaning system, meaning is defined as a pattern of cognitive contents assigned to a referent. A questionnaire of the self-image has been constructed in which the self functions as the referent and 30 different kinds of contents, corresponding the categories constituting the system of meaning, are presented in the form of items. The subject is requested to respond to the items by checking the degree to which each is important for expressing one's self. A study is described in which the meaning-based assessment of self (MBAS) was administered to 75 undergraduates, together with questionnaires assessing self identity, self esteem, extent of social relations, and the big five personality traits. The results showed that scores on MBAS were correlated positively with self esteem, social relations, extroversion, agreeableness and openness, and negatively with diffuse self identity and conscientiousness. The conclusions are that the MBAS is a valid and reliable measure of the self image which unravels the contents constituting the self image.

Keywords: *Self-Image, Meaning, Self Identity, Social Relations, Personality Traits.*

1. Introduction

The self-image is one of the most basic constructs in psychology, playing an important role in personality, clinical psychology and social behavior. It is the repository of the information about oneself based on experiences with one's actions and feelings, on one's attitudes, and on perceptions of others. It may be organized in different degrees, stable or changing, more or less veridical or realistic, simple or complex, it may include traits or memories, feelings or behavior tendencies, words or images. But whatever its structure and contents it is a major factor that contributes to the shaping of one's personality and behavior, as well as self-awareness and self-identity. Hence in order to understand or predict the reactions and behavior of a person it is advisable to consider one's self-image. Yet, the self-image is a notoriously unclear construct, merging often with other affiliated constructs, such as self-concept, self schema, self structure, self identity, self construction, self perception or self esteem. However, regardless of its label and of the discipline investigating it, there is one aspect that is mostly highly prominent and is shared by the different constructs. This the degree to which the construct is positive or reflects a positive attitude to oneself.

It is evident that the positivity of the self concept affects one's self acceptance and the degree of esteem one has for oneself and one's life. But it is no less evident that the positivity of one's self image does not reflect satisfactorily the structure and content of the self image. Following Smith and Mackie (2007, p. 107) it can be considered as part of the self concept. Previous studies with individuals of different age groups who were asked to describe themselves showed a wide range of different kinds of contents that people used, including descriptions of their physical appearance, social contacts and roles, personality traits, wishes and dreams (Kreitler, in press-a; Kreitler & Kreitler, 1987). Similar results were reported by others (Baumeister, 1999; Kuhn, 1960). The variety of contents evoked by the request to describe oneself indicates that the self can be considered as a concept, namely, a mental representation with different attributes (Eysenck, 2012). As a concept the self is a stimulus or referent for the assignment of meaning. It is the purpose of the present paper to describe a meaning-based tool for the assessment of the self and studies in which this tool was applied.

1.1. A brief description of the Kreitler meaning system

The meaning system is a comprehensive approach to conceptualizing, assessing and applying meaning for studying cognition, personality, emotions and behavior (Kreitler, 2014). On the basis of a large body of data and theoretical considerations, meaning was defined as a referent-centered pattern of meaning values, whereby referent is the input or stimulus which is the carrier of meaning, while meaning values are cognitive contents assigned to the referent for expressing or communicating its meaning. The referent and the meaning value together form a meaning unit (e.g., Table –made of wood) (Kreitler & Kreitler, 1990). The assessment of meaning is based on characterizing the contents, structure and expressive mode of the meaning unit in terms of five sets of meaning variables. The major set is Meaning Dimensions, which characterize the contents of the meaning values through the specific information communicated about the referent, such as Sensory Qualities or Function. For the assessment of the meaning of the self only the set of meaning dimensions was used. This set has been chosen for its relevance, comprehensiveness of content categories, empirical evidence base, and proven adequacy for assessing constructs, such as My Body, or Health (Kreitler, 2014).

1.2. The meaning-based tool for the assessment of the self

The meaning-based questionnaire for the assessment of the self (MBAS) is based on the set of the 22 contents categories identified in the framework of the Kreitler meaning system. Accordingly, the tool contains 30 items referring to meaning dimensions (all items are presented in Appendix 1) (there are 30 items because some dimensions, such as actions or feelings have active and passive forms). The respondent is asked to check on a 4-point scale whether each of the meaning dimensions is adequate for expressing one's self-image. A response that the item is highly adequate is scored as 4, and totally inadequate as 1. There are different overall scores: (a) an overall score that represents the sum total of the responses (range 30 to 120); (b) the number of items to which the response was 4 or 3; (c) the score for items representing the dynamic-actional categories (e.g., actions, functions, manner of functioning), the sensory categories (e.g., sensory experiences, sensory characteristics, weight, dimensions), the experiential inner-world categories (e.g., feelings experienced and evoked, thoughts, beliefs), and the contextual categories (e..g, causes, results, superordinate category, possessions). Scores (a) and (b) represent the breadth of the self concept, whereas the different (c) scores represent more specific aspects of the contents of the self image. It is possible to define other groupings of the items in the questionnaire.

2. Study

2.1. Objectives

The major purpose of the study was to determine the breadth and contents of the self image in healthy undergraduate students. A second purpose was to examine several hypotheses concerning the relations between the MBAS with self identity, self esteem, social relations with others, and the big five personality traits. One hypothesis was that high scores on the MBAS would be correlated positively with the score on self identity because a rich self concept may be expected to stabilize one's self identity. A second hypothesis was that high scores on MBAS would be related positively with self esteem scores because self esteem may be assumed to be based on a comprehensive and encompassing concept of oneself in which negative and positive aspects may balance one another. A third hypothesis was that high scores in MBAS would be correlated positively with the extent of social relations with others that the individual would have. The rationale is that having a rich self concept implies that the person has a variety of conceptual tools to approach human beings, including himself as well as others. This assumption has been supported by studies using diverse methods (Berger, 1952; Kreitler, in press-a). The fourth hypothesis was that MBAS scores would be related differentially to the personality traits of the Big Five: negatively to neuroticism, positively to openness, and moderately or lowly to extraversion, agreeableness and consciousness. The rationale was that neuroticism expresses narrowing-down of interests and contacts due to anxiety, and that openness expresses an expansive relation to oneself and the environment, whereas the other three are restricted in their expansion by focusing on specific aspects (e.g., external stimuli, the reactions of others, sticking to rules, respectively) (John & Srivastava, 1999).

2.2. Method

The participants were 75 undergraduates in the social sciences (35 women, 40 men) in the age range 22-31 years old. They were administered the five questionnaires unanimously in paper form and in random order as part of their study obligations. The questionnaires were: the MBAS with 30 items; the Assessment of Identity Development in Adolescence (AIDA) (Goth et al., 2012), a shortened version which included 16 items representing the marker items of the each scale (ibid, Table 2) rated on a 5-point likert scale: Discontinuity (subscales attributes/goals, relationships/roles, emotional self reflection) and Incoherence (subscales: consistent self image, autonomy/ego strength, cognitive self reflection),

e.g., I often don't know how I feel right now, I often feel lost as if I had no clear inner self; the self-esteem scale with 10 items (Rosenberg, 1965); the Social Relationships Index (Kreitler, in press-b) which is a 5-item self-report scale assessing the extent (a lot/medium/low or none) of relations one has with family members, friends and acquaintances in the close environment, friends and acquaintances in distant environments, internet social networks (e.g., Facebook), and activity/membership in social associations (e.g., for social justice) (range of scores 5-15); The Big Five Inventory (BFI) with 44 short-phrase items, rated on a 5-point scale from disagree strongly to agree strongly (John & Srivastaa, 1999). All scales had an acceptable validity and reliability (Cronbach's alpha in the range .70-.84; for MBAS .84).

2.3. Results

All the data was analyzed together because a preliminary comparison of the means of the genders in all the scales showed no significant differences. The means, SDs of the scales used in the study and the correlations with the MBAS are presented in Table 1. The findings support the hypotheses of the study. They show that MBAS is correlated negatively with low self identity, positively with self esteem, with the social relations index, and with extroversion, openness and agreeableness positively but with neuroticism and conscientiousness negatively. The level and direction of the obtained correlations are in accord with the hypotheses, except for the negative correlation with conscientiousness.

Table 1. Means of the scales and the correlations with the MBAS.

	MBAS [no. of items)[a]	AIDA	Self Esteem	Social Rel Index	Big Five Inventory (BFI)				
					Extr	Cons	Agree	Neur	Open
Means	14.22	18.55	6.91	7.23	15.37	14.95	16.83	13.24	16.41
SDs	3.46	3.47	2.32	1.42	6.82	4.62	4.75	5.15	3.11
Correlations with MBAS	_____	-.52***	.38***	.35**	.27*	-.24*	.29*	-.26*	.34**

[a]The overall mean was 49.67 (SD=10.20) *p<.05 **p<.01 ***p<.001

2.4. Discussion

The reported findings show that the MBAS is a reliable tool for assessing the self image. It has construct validity insofar as it is based on an empirically supported theoretical definition of meaning and corresponds structurally to the basic meaning categories of contents. The study provided further support for the validity of the MBAS by means of its highly significant negative correlation with personal identity and positive correlation with self esteem. These findings as well as the positive correlations with extraversion, agreeableness and openness. support the hypotheses. The negative correlation with conscientiousness is contrary to the hypothesis, probably because consciousness reflects sticking to rigid codes that may limit one's self image. The findings imply that high scores on MBAS indicate clear self identity, high self esteem, a tendency to form relations with others and correlations with all major personality traits, some positive and some negative.

Notably, the mean for the number of items on the MBAS in healthy adults indicates that the subjects used almost half of the presented meaning dimensions (14.22 out of 30) for describing their self-image. This mean is higher than the mean obtained in a sample of 56 adults with chronic diseases (e.g. orthopedic, diabetes) (M=12.32) and higher than that obtained in a group of 28 depressive patients (M=7.40) (Kreitler, in press-b). The findings imply that high scorers on the MBAS construct their self-image on a variety of aspects so that the meaning of the self is rich, variegated and provides potentially multiple perspectives. An additional comparison of the contents of the MBAS of high scorers with that of low scorers revealed that the high scorers' responses included representatives of the four groups of meaning dimensions, i.e., actional, sensory, experiential and contextual. Hence, high scores on the MBAS are not only rich but also well balanced.

The limitations of the study are that it is limited to one small sample that includes only healthy young adults. The results encourage expanding the study to further groups differing in demographic, medical, psychosocial and cultural features so as to learn more about the self image – its nature and functioning.

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Appendix

WHO AM I?

You are requested to communicate to someone – you may choose to whom you communicate – the meaning of the "I" (the self, the me, oneself) to you. In all items the theme is always you, yourself. The following questionnaire presents various descriptions of oneself that different individuals used. Each description refers to a specific aspect, such as the actions or feelings of the self, Each description is represented by a general heading or label, followed by examples designed to clarify the general description. The main thing is the kind of description, not the examples which you may change as you like. Concerning each description, please check to what extent it answers for you the question "Who Am I", to what extent it is Highly adequate or Adequate or Inadequate or Totally inadequate for expressing the meaning of the self in general and for you personally.

The description
The more general class or category to which the self belongs e.g., I am a man/woman; I belong to the human race; I am a part of my family; I belong to my age group; to the community/ to my professional group **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Different kinds of the self e.g., There is a private and a public self, there is a childish self, and a mature and responsible self; there are two different selves for the home and the street **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The parts/components of the self e.g., The self is composed of body and soul; it includes organs, e.g., the heart and live, and limbs **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The function or role of the self e.g., My function is to make others happy; I am a carpenter/teacher; I am the breadwinner of the family **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Actions that the self does or can do e.g., I work/study/run around/help others; I can play the flute/cook a dinner/drive a car **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Actions that others do with/to the self e.g., others talk to me, invite me, disturb me, take from me, pay me, give me things, push me around **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The manner in which the self functions or acts e.g. I do things carefully/impulsively/in cooperation with others **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Reasons for the existence of the self e.g., I exist because my parents wanted me/because God wanted it/I exist for no special reason **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Results and consequences of the existence of the self, things that the self causes e.g., My existence causes joy to my parent/causes disorder in the home **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
What or who I am e.g., My name is…; I am the subject of my biography; I am like the other members of my family

__Highly adequate/__Adequate/__Inadequate/__Totally inadequate
What or who is related or connected or affected by the self, to whom is the self connected or related e.g., I have friends; I have siblings; the things I do are…; My colleagues at work are… **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The materials of which the self is made e.g., I am made of flesh and bones/ of dreams and wishes; I am made of the stuff of which great football players are made **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The structure of the self e.g. On the exterior there are bones and muscles and inside there are dreams and desires; at the center of myself there is the soul; consciousness is at the core of myself
The state of the self e.g., I am healthy/sick/strong/ weak/ /vulnerable/alert/dirty/stable/fickle **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The weight and mass of the self e.g., I weigh…; I am fat/lean/heavy **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The dimensions of the self e.g., I am a tall person/my height is…/my clothes are size…/my dimensions are 34"-24"-34" **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Quantity and number of the self e.g., there are many like me in the world; I am unique; there is nobody like me **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The location or place of the self e.g., my address is..; I live in a city; most of the time I spend at…; places I have visited… **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The time and age of the self e.g., my age is…/I live in the 21st century/I am young/old; I love new things **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The possessions of the self e.g.I own a lot of property/no property; I have a diary/an album with rock music/I am poor/rich; I have a cat/ a bank account **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
To whom or to what the self belongs e.g., I belong to my parent/my partner/my family/to my state/to no one **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The development of the self e.g., I was born…/I grew up in…in my past… I coped with a lot of difficulties/In the future I want to be… **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Various sensory characteristics of the self e.g. my skin is dark/light/rough; the color of my eyes/my hair is…/my hands are warm/cool **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Sensory experiences that the self has or can have e.g. I can see things far away/colors/shapes; I can feel humidity or dryness; I can distinguish between tastes and smells; I can feel pressure and spasm s inside my body **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The feelings that the self evokes in others or that others have toward the self e.g., other people love me/are jealous of me/ are afraid of me; I evoke in others joy/hope/worries **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Feelings and emotions that the self experiences e/g/. I feel sadness/joy/ pride/longing/ happiness/excitement/; sometimes I am ashamed/feel depressed **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Judgments and evaluations of others about oneself, what others think about the self e.g. others respect me/ think that I am a good person/ that I am reliable **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
The beliefs and conceptions of the self e.g., I believe in God/in human rights/ I am a humanist/ I believe families are very important
Thoughts, memories, fantasies etc. that the self evokes in others e.g., others think/dream about me/ I inspire others/ I invoke in others logical thinking/critical thinking **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**
Thoughts, memories, fantasies etc. that the self has or can have e.g., I have a good memory/ I can think logically/I am confused/creative/curious **__Highly adequate/__Adequate/__Inadequate/__Totally inadequate**

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RELATIONSHIP BETWEEN FAMILY COHESION, RESILIENCE AND SELF ESTEEM AMONG INDIAN ADOLESCENTS

Jennifer Chandani[1] & Geetha Raman[2]
[1]*Department of Psychology, Smt. MMP Shah Women's College of Arts & Commerce, SNDT Women's University (India)*
[2]*Save The Children India (India)*

Abstract

A very crucial part of an individual's life is the adolescence period. This is the period where personalities start getting molded. Hence, focusing on variables related to the development of personalities becomes important. This is also the period when adolescents encounter challenging novel situations or otherwise that may play a major role in determining their adult life success. Attempts have been made earlier to relate and explore cohesion of family i.e. the emotional connection with family members particularly with adolescence age group, especially in the Indian Culture, where there is still higher emphasis given to family. Resilience can be understood as a personality characteristic that moderates the effects of stress and promotes adaptation. Self- esteem, (particularly high self-esteem), is yet another factor that helps and contributes positivity in a person during difficult times, by aiding in the process of recovery. The present study attempted to find out the relationship between Family Cohesion, Resilience and Self-Esteem among Indian adolescents. These variables were measured using The Family Environment Scale (FES), The 14-Item Resilience Scale (RS-14), and Rosenberg's Self-Esteem Scale respectively. 100 adolescent participants in the age group 12-19 yrs were considered for this study. Convenient Sampling Method was used and all the 3 tests were given to each participant. A Low Positive correlation was found between Family Cohesion and Self-esteem. A Moderate Positive Correlation was found between Family Cohesion and Resilience as well as between Resilience and Self-Esteem. Overall, the obtained results were found to be significant at $p<0.01$ level.

Keywords: *Family Cohesion, Resilience, Self-Esteem, Adolescents.*

1. Introduction

According to Erikson's psychosocial theory of development the stage of adolescence spans 12 to 18 years (as cited in Davey, 2014). According to this stage, an adolescent must struggle to discover and find his or her own identity, while negotiating and struggling with social interactions and "fitting in", and developing a sense of morality and right from wrong. It is seen as an age, where traits or qualities like being resilient, having good self-esteem, social boldness etc. shall help the individual if they get strengthened. A family system can be understood as a social or biological construction made up of a set of people related by blood or intention. Members interact in reciprocal relationships, responding to one another in the context of roles. Family cohesion was defined by Olson, Russel & Sprenkle (1982) as the emotional bonding that family members have toward one another (as cited in Rivera, Guarnaccia, Mulvaney-Day, Lin, Torres & Alegria, 2009). Similarly, Moos and Moos (1981) conceptualized cohesion to include the degree of commitment, help, and support family members provide for one another. The power of a stressor event to cause a large degree of crisis in a family system can be understood by the family's crisis-meeting resources like providing support, being available, showing closeness etc. Thus, in such cases and situations of identifiable stressors being present, focus on the family's cohesion becomes an important consideration. Families that have good emotional bonds are understood to be those who are better in a position to rise to challenges that threaten their wellbeing and are seen to cope well under stress while on the other hand, very high levels of family cohesion can also be dysfunctional, because emotional connections between family members also need to be balanced against family members' needs for individual autonomy (Mackay, 2003). Thus families with very high levels of cohesion have been characterised by Steinhauer et al. (1984) as "enmeshed", involving "intense, stifling relationships", while Epstein et al. (1978) used the term "symbiotic", which signals "extreme or pathological interest or investment in each other". The middle position on the measure in both of these models, described as "empathic involvement", is regarded as the healthiest level of family functioning (as cited in Mackay, 2003).

According to Wagnild, & Young (1990) 'Resilience' connotes emotional stamina and has been used to describe persons who display courage and adaptability in the wake of life's misfortunes (as cited in Aleem & Khan, n.d.). Resilience is more about focusing and expecting on positive outcomes following significant life challenges such as during adolescence which is a time of tremendous development, change, and opportunity. As our teens grow from children into adults, they experience a great many social, physical, and neurological transitions that lay the foundation for a successful adulthood. Rosenberg (1965) defined self-esteem as a favorable or unfavorable attitude toward the self (as cited in McEachron, 1993). It refers to an individual's sense of his or her value or worth, or the extent to which a person values, approves of, appreciates, prizes, or likes him or herself (Blascovich & Tomaka, 1991). Self-esteem can be an important part of an individual's success. Self-esteem levels at the extreme high and low ends of the spectrum can be damaging, so the ideal is to strike a balance somewhere in the middle. For example, those who consistently receive overly critical or negative assessments from caregivers, family members, and friends, will likely experience problems with low self-esteem (Bhondekar, 2015).

As per the various geographical climatic changes that occurred since the pre-Vedic eras in the Indian Subcontinent, various sages put forth revolutionarily creative ideas to emphasize on the importance of family system in order to develop resilient and high self-esteemed adolescents so as to preserve the family cohesion in order to help build a strong civilized society. The guidelines provided for a prosperous society in ancient scriptures such as the Vedas (sacred scriptures that were composed during the Vedic period), the Upanishads (considered to be a part of the Vedas and contain valuable information regarding the rituals and religions of Vedic Age) etc. are considered valid even today (Fasale, 2012); the latest being Sage Chanakya's aphorisms on morality during the Mauryan Empire. The practice of these principles is observed even today, the examples of which are explained by this great visionary through various 'Sutras' (a distinct type of literary composition, a compilation of short aphoristic statements) in a compilation known as 'Chanakya Neeti': 'Mother, the Supreme God', 'Father, the Guide', 'The Worthy Son', 'The Incompetent Son', 'Wife', 'Woman', 'Home', 'Mutual Relationships', 'The Parents' etc. 'Chanakya Neeti' in fact is considered to be this great thinker's pithy observation to impart the practical wisdom to the people of his time; which are found to be applicable even in today's times (Chaturvedi, 2011). Even in today's era of globalization, the families of the Indian Culture whether joint or nuclear, staying in urban or rural areas, etc. seem to cherish these values. Studying the relationship between the above mentioned concepts in the Indian Culture was thus an interesting combination that the researchers wanted to explore…

Mehrotra and Chaddha (2013), found a positively significant correlation between protective factors and resilience, which implies that the ability to bounce back in the face of adversity tends to be high in adolescents who feel a presence of safe internal and external factors around. They tend to find support from significant others present in their environment that act as buffers during adverse situations and hence feel more powerful in their ability to come back to normalcy after a turbulent phase in life. Carbonell et al. (1998), in an investigation of adolescents at-risk for depression, found that resilient adolescents had better family functioning in terms of family cohesion, communication and performance. Grossman et al. (1992) studied the relationship between risk and protective factors with a sample of 179 adolescents. Protective factors identified included family cohesion, internal locus of control, and adolescent communication with parents. They found that the protective factors were generally predictive of positive outcomes. Many studies by WestEd, (2002), Wissing and Van Eeden, (2002) and Berk (2000) (as cited in Mehrotra & Chaddha, 2013) show that the primary factor in resilience development is having caring and supportive relationships within and outside the family; and or close relationship with at least one adult is required. These relationships should create love and trust; provide role models, offer encouragement and reassurance, and help. Mehrotra and Chaddha (2013) also found a significantly positive relationship between self esteem and resilience which implies that high self worth and self efficacy help adolescents buffer the negative effects of stress and frustration caused by a defeat or failure. Buckner, Mezzacappa, and Beardslee (2003) and Gordon Rouse, Ingersoll, and Orr (1998) have also observed that resilient adolescents had higher self esteem as compared to the less resilient adolescents (as cited in Mehrotra & Chaddha, 2013). Baldwin and Hoffmann (2002) observed changes in self-esteem during adolescence were influenced by shifts in life events and family cohesion. These processes were different for males and females, particularly during early adolescence. Li and Warner (2015) conducted a comparative analysis of four Hispanic ethnic subgroups (Cubans, Mexicans, Nicaraguans, and Colombians). The results indicated that across all subgroups, parent–adolescent conflict was negatively associated with self-esteem. Family cohesion was positively associated with self-esteem across all subgroups, but it buffered the negative effect of parent–adolescent conflict among Cuban and Mexican adolescents only.

1.1. Objective

The current aimed at investigating the correlation between family cohesion, resilience and self esteem among Indian adolescents.

1.2. Research Questions

1. Is there a relationship between Family Cohesion and Resilience among Indian Adolescents?
2. Is there a relationship between Family Cohesion and Self-Esteem among Indian Adolescents?
3. Is there a relationship between Resilience and Self-Esteem among Indian Adolescents?

2. Method

2.1. Participants and Sampling:

The study was conducted on 100 adolescents (12 to 19 years, M=40, F=60) from the city of Mumbai, India. These adolescents were selected using convenient sampling where participants were selected on their basis of convenient accessibility and proximity of the researcher from different schools and colleges.

2.2. Measures:

Family Cohesion was measured using *Family Environment Scale (FES)*, by Dr. Harpreet Bhatia and Dr. N. K. Chadha (1993) (Indian Version). The test contains a total of 69 items; yet for the purpose of this research which needs to consider the sub-scale of 'Family Cohesion', 13 items were considered (Item no. 1, 9, 17, 24, 31, 37, 43, 49, 55, 60, 63, 66, and 69). The sub-scale "Cohesion" was used to measure the degree of commitment, help, and support family members provide for one another. Respondents were asked to state the degree to which they agreed or disagreed to an item. The scoring method involved calculation as per the 5-point 'Likert' scale which included reverse scoring for some items.

Resilience was measured using *Resilience Scale (RS-14)*, by Gail M. Wagnild and Heather M. Young (1993). The test contains a total of 14 items, used to measure the level of resilience among adolescents. Respondents were asked to state the degree to which they agreed or disagreed to an item. All items were scored on a 7-point rating scale from 1- disagree, to 7- agree. All the items were positively framed, thus involved only positive scoring method.

Self Esteem was measured using *Rosenberg's Self- Esteem scale (SES)*, by Rosenberg, M. (1965). The test contains 10 items, used to measure global self-worth by measuring both positive and negative feelings about the self. Respondents were asked to state the degree to which they agreed or disagreed to an item. All items were scored on a 4-point rating scale from 1- strongly agree, to 4- strongly disagree. Item numbers 1, 3, 4, 7, 10 were positively scored; while item numbers 2, 5, 6, 8, 9 were negatively framed and thus negatively scored.

2.3. Procedure:

The study involved those participants who were willing to be a part of this research. Informed Consent was taken from the participants and they were assured that their confidentiality regarding their identity would be maintained. These participants were given a week's time to complete all the 3 tests. The collected data was analyzed using Pearson Product Moment Correlation.

3. Results

Table 1, shows the mean differences and standard deviations of Family Cohesion, Resilience, Self-Esteem.

Table 1. Mean and Standard Deviation of Family Cohesion, Resilience, Self-Esteem.

	Mean	Std. Deviation	N
Family Cohesion	47.27	8.516	100
Resilience	60.88	13.360	100
Self Esteem	27.57	5.014	100

Table 2 shows the Pearson Product Moment Correlation for Family Cohesion, Resilience and Self Esteem. With reference to the table, it was observed that Family Cohesion has a Moderate Positive Correlation with the variable Resilience (r =.477). Furthermore, the variable Family Cohesion was seen to be having a Low Positive Correlation with the other variable Self-esteem (r = 0.364). Resilience and Self-Esteem had a Moderate Positive Correlation with each other (r = .475). The obtained scores thus

indicate that all the three variables were positively correlated with each other and the correlation was found to be significant at p=0.01 level.

Table 2. Correlation between the variables Family Cohesion, Resilience and Self-esteem.

		Family Cohesion	Resilience	Self Esteem
Family Cohesion	Pearson Correlation	1	.477**	.364**
	Sig. (2-tailed)		.000	.000
Resilience	Pearson Correlation	.477**	1	.475**
	Sig. (2-tailed)	.000		.000
Self Esteem	Pearson Correlation	.364**	.475**	1
	Sig. (2-tailed)	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).

4. Discussion

With reference to first research question, it was found that Family Cohesion and Resilience showed a Low Positive Correlation. The data was in line with the past researches by Carbonell et al. (1998) and Mehrotra and Chaddha (2013). Thus, the obtained result indicated that individuals who have high family Cohesion may also tend to have High Resilience.

With reference to the second research question, it was found that Family Cohesion and self-Esteem showed a Low Positive Correlation. The data was in line with the past researches by Baldwin and Hoffmann (2002) and Li and Warner (2015). Thus, the obtained result indicated that individuals who have high family Cohesion may also tend to have High Self-Esteem.

With reference to the third research question, it was found that Resilience and Self-Esteem showed a Moderate Positive Correlation. The data was in line with the past research by Mehrotra and Chaddha (2013). Thus, the obtained result indicated that there is a definite positive correlation between Resilience and Self-Esteem.

Since the present research study involved only 100 participants, a wide range exceeding this sample number couldn't be explored. Moreover there were a few more limitations to this study. The Convenient Sampling method used for the research would involve its own disadvantages as participants were selected on their basis of convenient accessibility and proximity of the researcher, only urban population was considered. The participants' socio-economic background was not controlled. Thus wide generalization would be impeded. For the purpose of forming better impression, there is a likelihood of the participants' giving socially desirable answers.

The authors accept that the study may be a single drop of the ocean and wish to carry this study further in order to get a deeper understanding of these variables with reference to the Indian Culture and its dynamic systems. An opportunity to take this research study further would involve, studying and analyzing the relationship between Family Cohesion, Resilience and Self-Esteem, with varying literacy levels (as an indicator of education), comparison between the participants in rural and urban areas, family type, young and middle adulthood, gender differences etc.

Using these results professionals can consider planning different intervention strategies, awareness programs or techniques for concerned issues thus emphasizing on the relationship between Family Cohesion, Resilience and Self-Esteem. Since, adolescence is the period of major personality development; a supportive family can help in bringing positive influence over an adolescent's personality in helping him become resilient and high in Self-Esteem.

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IMPROVING COGNITIVE DEFICITS RELATED TO COMMON PSYCHIATRIC DISORDERS WITH AN INNOVATIVE ASSESSMENT AND TRAINING PROGRAM

Paul B. Cliveden, Martina Ratto, & Keiron T. Sparrowhawk
MyCognition Ltd. (United Kingdom)

Abstract

Cognitive deficits are common in patients with neurodegenerative and psychiatric disorders. The costs associated with administering, analyzing, and reporting for traditional assessments are high and interventional training programs are seldom linked to an assessment's results. A new program has been developed that integrates an online, self-administered assessment with cognitive training embedded in an engaging video game. The training game dynamically adapts itself to the assessment's results, providing the user a personalized program focused on improving the weakest domains of cognition. The key domains assessed and trained are attention, working memory, episodic memory, executive function, and processing speed. The assessment uses electronic versions of the most researched, previously validated, psychometric tests to provide a broad evaluation of cognitive function. The assessment has been validated in two cohorts of 19 and 58 patients with psychiatric disorders – obsessive-compulsive disorder, schizophrenia/schizoaffective disorder, or major depressive disorder – who used the new tool alongside the more extensively adopted Cambridge Neuropsychological Automated Test Battery assessments, showing significant correlations between the equivalent subtests. A randomized, controlled trial is in progress to evaluate the effectiveness of the cognitive training program in these patients. The protocol requires playing the videogame for at least 30 minutes per day, three times a week for twelve weeks. Clinical symptoms and cognitive and psychosocial functioning are assessed following the training period. The results of an initial pilot study showed significant improvements in cognitive function, particularly in verbal memory and visual memory. A larger study with an analogous set of patients is in progress. The positive results achieved justified further studies employing the cognitive program in other psychiatric sets. A preliminary study is in progress as one part of a multimodal intervention program at a clinic for children diagnosed with post-traumatic stress disorder (PTSD) resulting from child sexual abuse. Although it isn't possible to evaluate the effectiveness of this program's individual intervention modules, the cognitive assessment's results have shown large improvements in cognitive function for many in the patient population with commensurate improvements in PTSD symptoms and scores. A study is in progress with a group of hospitalized children affected by a range of psychiatric disorders, investigating both the relationship between the patients' cognitive function and the psychiatric disorder itself and the potential improvements related to the cognitive training.

Keywords: *Cognitive impairments, psychiatric disorders, cognitive assessment and training.*

1. Introduction

The traditional paper-and-pencil assessments of cognitive function are time-consuming to administer, score, and report on. While having the advantage of being extensively used over many years and well-validated, clinical trials patients and control subjects must attend a visit to the investigator's office or clinic to take the assessment under supervision. Patients with psychiatric disorders frequently experience cognitive impairment and an assessment of these deficits is essential in trials aimed at improving cognitive status. A rapid, online, self-administered assessment of five key domains of cognition has been validated in a trial in patients with psychiatric disorders by comparison with a well-validated product. The assessment is implemented in an online, self-administered, cognitive assessment application and training program designed to identify patients' weaknesses and strengths and provide them a tool to enhance their cognition. Patients may use both the assessment and the cognitive training program in their homes.

The aim of this paper is to evaluate the potential of this program in different cohorts of psychiatric patients. The results of a first pilot study involving a mixed adult population of patients diagnosed with major depressive disorder, schizophrenia/schizoaffective disorder, or obsessive-compulsive disorder (OCD) will be shown. Current studies in analogous conditions will be presented, together with additional studies involving children with psychiatric issues such as post-traumatic stress disorder (PTSD) due to child sexual abuse (CSA) and eating disorders.

2. Methods

The standard, basic protocol adopted in clinical studies calls for an initial cognitive assessment, together with any additional assessments to collect secondary measurements for the specific study, such as clinical symptoms or psychosocial functioning. Following administration of the first assessments, patients should engage in a 12-week program of using a video game training application designed to exercise each patients' domains of cognitive weakness more intensively than their domains showing better scores. The training regimen requires subjects to play the cognitive game at least three times a week for at least 30 minutes each day. Additional cognitive assessments are carried out every four weeks to monitor progress and at the end of the study. After the course of video game training, secondary measures such as clinical symptoms and cognitive and psychosocial functioning may be assessed again.

A first pilot study (Nieman et al. 2015) aiming to evaluate the effectiveness of cognitive training on psychiatric populations involved 19 patients (8 females and 11 males) with a mean age of 30.53 years (SD=8.7) and a diagnosis of obsessive-compulsive disorder (OCD) (n=5) or schizophrenia/schizoaffective disorder (n=14) in a randomized controlled trial (RCT). Each patient was randomized to either a Treatment as Usual (TAU) control group or a TAU plus cognitive training experimental group, each of which followed the recommended training program described above.

A second follow-on study (Domen et al. 2016) with an analogous population includes 58 patients (27 females and 31 males) with a mean age of 35 years (SD=10.8) with a diagnosis of OCD (n=27), schizophrenia/schizoaffective disorder (n=23), or major depressive disorder (n=5). This study is designed to validate the 30-minute, online, cognitive assessment consisting of 10 subtests. Patients take both the online, cognitive assessment and an extensively validated and widely-used paper-and-pencil assessment.

The cognitive assessment and training applications have also been adopted as a part of multimodal programs in two boarding clinics for children with severe psychiatric disorders. A preliminary study employs the two applications as one part of an intervention program at a clinic for children diagnosed with PTSD resulting from CSA (Silverstone et al. 2016). Thirty-five children aged 8-12 (23 females and 12 males) with a mean age of 10 entered the program. A study at a community "Special School" is in progress with a group of 19 hospitalized children aged 5-16 affected by a range of psychiatric disorders (including a subgroup of adolescents with eating disorders), investigating both the relationship between the patients' cognitive function and the psychiatric disorders themselves, along with the potential improvements related to the cognitive training. All children use the programs throughout their long-term, hospital stay.

2.1. The assessment and training program

The program includes a computerized, self-administered assessment comprised of ten tests, targeting attention, working memory, episodic memory, executive function, and processing speed, on whose scores a cognitive training program is built and embedded in a video game. The assessment can be completed in about 30 minutes and both the assessment and the training game are available online.

2.2. The assessment system

The tests that comprise the assessment may be considered revised versions of models that are commonly employed in traditional neuropsychological assessment, as illustrated in Table 1. This table indicates which domains are primarily indexed by each of the measures, as well as traditional paper-and-pencil and computerized versions of the paradigms employed in the assessment presented. Each subtest in the assessment records two variables, the mean reaction time and the number of incorrect answers, with a set of raw scores documented at the end of the assessment. These raw scores, a measurement of the latency and the errors for each subtest, are then combined to produce a score from 1 to 100 for each cognitive domain, the average of which generates an overall cognitive score.

Table 1. Assessments subtests with related cognitive domains and paper-and-pencil equivalent tests.

Test in online assessment	Principal cognitive domain	Paper & pencil equivalent
Simple Reaction Time	Psychomotor speed	Donders Type A
Choice Reaction Time	Attention	Donders Type B
Go/No-go	Attention/Executive Function	Donders Type C
Verbal recognition memory	Episodic memory	Ray Auditory Verbal Learning test
Visual recognition memory	Episodic memory	Benton Visual Retention test
1-Back	Working memory	Wayne Kirchner N-back test
2-Back	Working memory	Wayne Kirchner N-back test
Trail-making A	Attention/Psychomotor speed	Trail-making test Part A
Trail-making B	Executive function	Trail-making test Part B
Coding	Attention/Psychomotor speed	Digit Symbol substitution test

The validity of the assessment has been tested in two cohorts of 19 and 58 patients with either major depressive disorder, schizophrenia/schizoaffective disorder, or OCD, in comparison with the widely-validated Cambridge Neuropsychological Automated Test Battery (CANTAB), showing significant correlations for most of the equivalent subtests (Domen et al. 2015; Domen et al. 2016).

The assessment system provides clinical trial subjects with personalized reports in real time, showing their current scores, their progress over time, and detailed explanations on individual strengths and weaknesses. The first part of the reports shows a pentagonal radar chart representing the subject's cognitive function across the five cognitive domains. If the subject's scores are balanced across the five domains, the pentagon graph will have a regular shape – the larger the size of the pentagon, the better the subject's overall cognitive function. If the pentagon has an irregular shape, this indicates that the scores are not balanced across the domains, so that user will have both strengths and weaknesses in different domains of cognition. An interactive graph representing the individual progress over time for each domain is then displayed, allowing the subjects to monitor their improvements and the existing relationships between the overall score and the scores for each domain. In addition, a graph showing the relationships between the speed and the accuracy components of the overall score is provided, allowing the subjects to monitor their progress over time across the two components. Finally, a detailed explanation of the results for each domain is reported. This furnishes the subjects with guidelines to understand their weaknesses and strengths for each domain and offers suggestions on how to improve specific skills or learning strategies, personalized based on the individual scores. The principal investigator has the option to display or hide these dynamically generated reports from subjects' view.

2.3. The training game

The training is based on the subject's assessment results as described above. This produces personalized training for every user, calibrating the amount of the training for each cognitive domain on the score in each domain. The lower a subject's score, the more intensive the training for that domain. The training works by encouraging the player to undertake repetitive, and increasingly more challenging, tasks that are embedded in a video game. The tasks are designed to train a specific cognitive domain. Each cognitive domain is mainly trained by a specific training loop, even if some domains are trained across different tasks, as shown in Table 2.

Table 2. Example of training tasks with related cognitive domains.

Training task	Description	Main cognitive domain
Memory shot	Remember the position of the glowing fish in the loop.	Working memory
Quick shot	Snap the fish as soon as you see it.	Processing speed and attention
Careful quick shot	Snap the fish as soon as you see it, but be careful not to snap the shocking, flashing fish.	Attention and executive function (inhibition)
Group shot	Snap the group of fish when all are together.	Attention and processing speed
Fish tracker	Remember which fish are glowing after they change position.	Working memory
Oceanic survey	Remember which fish have you seen at the end of the dive.	Episodic memory
Missions and map exploration	Achieve the goals proposed by the daily missions and try to discover new areas on the ocean map.	Executive function (planning and organizing)

The game develops on multiple structural levels. At the basic structural level, there are the loops, which correspond to the five first tasks in the table above. The loops are organized into dives, so that in each dive the user will experience a set of loops. The ocean map represents a meta-level of cognition. At the map level, users must organize their dives to both achieve the proposed mission and to discover new areas. The progress of the players on the map, and consequently the increasing difficulty of the training game, depends on the coins the players collect during their dives. In this way, the game adapts its difficulty to the level of improvement reached by the player.

Since the intensity of the training also depends on the individual cognitive scores, the number of loops for each type of task that the user experiences depends on the score obtained for each cognitive domain. In this way, the more impaired domains will receive greater training.

3. Results

The first pilot study in patients with OCD and schizophrenia/schizoaffective disorder, evaluating the effectiveness of the video game training application, showed a significant improvement for the experimental group in verbal memory performance ($z=-2.023$, $p<0.04$) and a trend in improved visual memory performance ($z=-1.682$, $p<0.09$). In contrast, the control group showed no significant improvements in the same domains of cognition.

The second, follow-on study in patients with OCD, schizophrenia/schizoaffective disorder, and major depressive disorder was designed to validate the online cognitive assessment against the well-validated CANTAB. Most of the subtests in the online assessment showed significant correlation with the corresponding domains of CANTAB. Kendall's tau correlations were calculated between the online assessment's subtests measuring specific cognitive domains and the CANTAB subtests measuring corresponding domains. All key domains showed correlations between the respective subtests:

Attention: Two online subtests, Choice Reaction Test (CRT) and Go/No-go Reaction Test (GNG), showed significant correlations with the CANTAB subtest, Rapid Visual Information Processing (RVP) r_τ=.221; p=.042 and .313; p=.001. The online Simple Reaction test (SRT) did not show significant correlation to RVP.

Psychomotor speed: The online SRT, CRT, GNG, and Trail-making test A (TMTA) correlated significantly with the CANTAB subtest, CRT. r_τ was between .349 and .421; p<.001.

Episodic memory: The online Verbal Memory Recognition (VeM) and Visual Memory Recognition (ViM) both showed significant correlation with the CANTAB Paired Associates Learning (PAL) visual memory test: r_τ=.279; p=.005 and .265, p= 007. VeM also significantly correlated with the CANTAB Verbal Recognition Memory (VRM) task: r_τ=.301; p=.001.

Working memory: The online test N-back 2 (NB2) correlated with the CANTAB test, One-touch Stockings of Cambridge (OTS) (r_τ=.233; p=.022) and with the number of total errors of the CANTAB Spatial Working Memory test (SWM): r_τ=.250; p=.010. The working memory test Coding (COD) showed significant correlations with OTS r_τ=.199; p=.043 and with SWM total errors (r_τ=.336; p<.001).

Executive function: The online Trail-making test B (TMTB) and GNG showed significant correlations with the CANTAB task OTS (r_τ=.217; p=.030 and r_τ=.233; p=.022). Neither test showed a significant correlation with the CANTAB task Intra-Extra Dimensional Set Shift (IED).

A larger RCT is in progress following the above study, including 85 patients in the same mixed psychiatric population. This study is aimed at both validating the online, 30-min, 10-test, cognitive assessment in five domains against the CANTAB and investigating whether patients who comply with the protocol for playing the video game training intervention show improvement in domains of cognitive deficit. Usability and acceptability of the intervention will also be assessed.

In the case of multimodal programs, although it isn't possible to evaluate the effectiveness of individual intervention modules, interim analysis of the cognitive assessment results has shown large improvements in cognitive function for many in the patient population, with commensurate improvements in PTSD symptoms and scores in the program where these were measured. Data analysis will be completed for the study with children in the hospital school in 2017, including reviews of correlation between cognitive scores and other measurements, including Key Stage 2 results, academic achievement, symptom assessment, and psychosocial measurements, plus correlations between changes in cognitive assessments and changes in other measures document during the period of in-patient residency.

4. Conclusion

Initial studies demonstrated the feasibility, practicality, and time-saving benefits of the use of an online, self-administered, cognitive assessment and training program. Most patients used the assessment tool and played the cognitive training application successfully from their homes. Analysis of data from the first pilot study in a mixed psychiatric population showed that the treatment group had a significant improvement in scores in the memory domains. The second, follow-on study with an additional psychiatric disorder diagnosis added provided evidence for validation of the assessment. A full analysis of the data from the training application, including additional validation analysis, will be performed on completion of the trial in 2017. The studies with the mixed psychiatric populations of children in boarding clinics provide additional challenges in data analysis because the studies were not designed to examine the results of the cognitive training intervention, but rather to assess the overall benefit of multimodal interventions for these children. Individual case studies, with each child acting as his/her own control using baseline assessments and evaluations (self-controlled studies) may reveal useful information that can guide development of future RCT protocols.

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THE QUALITY OF PARENTING AND SELF-EFFICACY OF ADOLESCENTS

Snežana Stojiljković & Jelisaveta Todorović
Faculty of Philosophy, University of Niš (Serbia)

Abstract

The family context of growing up is an important factor that can contributes to building a positive self-concept and child's perception of self-efficacy. According to Bandura's theory, self-efficacy refers to person's belief that he can successfully carry out the actions needed to achieve certain goals.
This study was aimed to investigate the relationship between the quality of parenting and self-efficacy of adolescents. The research sample consisted of 148 primary school students from Nis, Serbia, aged 13-14 years. KOBI scale (Vulić-Prtorić, 2002) was used to measure four styles of parenting (acceptance and rejection by mother and father, perceived by their children) and also to estimate the overall satisfaction with family interaction. The questionnaire SEQ-C (Muris, 2001) was used to measure three forms of self-efficacy: a) social - the belief that person is able to relate with peers in an assertive manner, b) academic - the person's belief about competence to learn and meet the expectations of the school, c) emotional - the belief that the person is able to cope adequately with negative emotions.
The results showed that adolescents perceived their parents as moderately accepting while parental rejection was estimated quite low. Rather high score was obtained on general satisfaction with family (M = 41.25, range 11-55). All this suggests that adolescents perceive their parents primarily as accepting and warm. They also reported high quality of child-parent interaction and satisfaction with the family (M=41.25, range 11-55), which was correlated to emotional self-efficacy (r=.224, p<.01) and academic self-efficacy (r=.209, p<.01). Perceived upbringing style of father was the most important correlate of social self-efficacy of adolescents, which is shown by a positive correlation with father's acceptance (r=.267, p<.01) and negative correlation with father's rejection (r=-.207, p<.05); in addition, a negative correlation was found with rejection by the mother (r=-.178, p<.05). Perceived acceptance by parents is the most important correlate of academic self-efficacy of adolescents, which is evidenced by a positive correlation with the acceptance by mother (r=.223, p<.01) and father (r=.192, p<.05); it was also found a negative correlation with father's rejection (r=-.171, p<.05). A similar picture of the correlates of emotional self-efficacy of adolescents was found: the perceived acceptance of both parents can contribute to their emotional self-efficacy while rejection by the mother may slow it down. These findings are discussed in the light of formative role of parents and the importance of family factors in the development of personality.

Keywords: *Parental styles, family satisfaction, self-efficacy, adolescents.*

1. Introduction

The interest for studying of parents' upbringing styles is particularly strengthened in mid-20th century and continues to these days. The main approaches to the study differ as to whether parental behavior was examined by an independent investigator or a parent was reporting about. During the 1930s, it was recognized that child's perception of parents could be as important as the data collected by parents themselves, and in some cases even more important than real behavior of parents. Independently from the theoretical and methodological issues, it is considered that the family context of growing up is an important factor of formation of numerous psychological characteristics of children. The way of raising children and the quality of relationships in the family are studied in Serbia as a factor that contributes to child' emotional in/stability, capacity for empathy, self-esteem stability, optimism and pessimism, interpersonal orientation, subjective well-being, locus of control, feeling of inferiority (Crnjaković, Stojiljković and Todorović, 2008; Matejević and Todorović, 2012; Opsenica-Kostić & Stefanović-Stanojević, 2010; Pavićević and Stojiljković, 2016, Todorović, 2004; Todorović, Stojiljković and Hedrih, 2011). So, a large number of empirical studies reported about connectedness between perceived parental styles, at the one side, and different domains of adult social, cognitive and emotional functioning. Parental

educational practices, more specifically, the way a child perceives them, have an impact on the child's own perception of self-efficacy and real achievements (Spera, 2005).

2. Design and objectives

Generally speaking, the purpose of this study was to investigate the relationship between the quality of parenting and self-efficacy of adolescents. The research is planned as correlational study. Precisely, the main objective was to determine whether certain aspect of parenting and family functioning were correlated with self-efficacy in adolescents. In addition, we have set up two more specific objectives, all with the intention to better understand the research problem. These are: 1) examine how adolescents perceive their parents mainly, more precisely, how they evaluate educational practices of parents (father and mother separately), 2) examine how adolescents evaluate their own efficiency in certain domains, more precisely, how they assess their efficacy in the academic, social and emotional spheres' of functioning.

The starting assumption in the study of the quality of parenting is the view that dominates in contemporary literature. The way parents raise their children is an important factor of development but it is also very important the perception of the child whether it is accepted and loved in his family. For this reason the child's perception of their parents upbringing methods has been studied in this research. One of the most influential standpoint in this area is the *Parental acceptance-rejection theory* (PART), developed by Rohner and associates (Rohner et al., 1984; Rohner et al., 2009, according to Opsenica-Kostić and Stefanović-Stanojević, 2010). The theory suggests that parental acceptance and rejection are two extremes of dimension or continuum defined as "warmth". Acceptance dimension is characterized by the presence of all behaviors showing parents' affection, concern and love; in general, there is a strong positive bond between parents and their children. Rejection, on the contrary, represents parents' patterns of behaviors such as lack of warmth, care and support; generally, it means that children are experiencing the lack of love from their caregivers. Some studies reported that parental rejection can be experienced by any combination of four emotional expressions: (1) cold and unaffectionate, (2) hostile and aggressive, (3) indifferent and neglecting, and (4) undifferentiated rejecting (Rohner at al., 2009). In order to assess the quality of family interaction is also important to take into account the total satisfaction of emotional exchange between children and parents and the general atmosphere in the family.

Self-efficacy is the concept from Bandura's social-cognitive theory of personality and behavioral change (Bandura, 1997; 1999). It refers to person's belief that he can successfully carry out the actions needed to achieve certain goals. Self-efficacy is related to people's beliefs in their capabilities to produce given outcomes. The actual abilities, although necessary, are not sufficient to a person to perform some action or perform a specific task. According to Bandura, for a successful functioning it is necessary to have a belief that the existing abilities can be used effectively. This is multifaceted concept including a differentiated set of self-beliefs linked to variety of personal functioning domains. Although self-efficacy is differentiated, specific efficacy beliefs may co-vary because successful performance in different domains is partly managed by higher-order self-regulatory skills. In this study self-efficacy refers to person's belief about his own competence to meet the expectations in three domains – social, emotional and academic (schooling). Precisely, adolescents' self-efficacy refers to their ability to to control their emotions and to behave appropriately in social interactions and in the school.

The basic research hypothesis is that there is a correlation between the observed ways of raising children and family satisfaction, on the one hand, and adolescents' beliefs about their own competence to function in the academic, social and emotional sphere, on the other side.

3. Methods

3.1. Participants

Sample consisted of 148 primary school students from Niš, Serbia, aged 13-14 years (72 males and 76 females). Participants live primarily with both parents in complete families (85.1% of them).

Some recent findings suggest that the perception of parental behavior over the course of adolescence is not so stable as it appears to be in late adolescence and during adulthood. Taking into account, the research sample was age-homogeneous, and comprised the younger adolescents.

3.2. Instruments

Quality of family interactions questionnaire (KOBI, Vulić-Prtorić, 2002) – designed for measuring parent-child interaction based on the quality of emotional exchange, along two dimensions, which are described in the relevant literature as acceptance and rejection. According to the PART theory,

acceptance refers to the warmth and intimacy in the parent-child relationships, while rejection is referring to the emotional coldness, control and neglect. In addition, the questionnaire estimate the overall satisfaction with family interactions on the basis of person's feelings about the family as a whole. KOBI consists of 55 statements and respondents were asked to assess their level of agreement with each of statements, on the 5-points Likert scale (1 = not true at all, 5 = completely true). It includes the following subscale: Satisfaction with the family interactions (11 items, e.g. *For me, family is a source of comfort and satisfaction. My family is getting on my nerves),* Acceptance by the mother (10 items, e.g. *My mother is not interested in how I actually live. My mother is making great efforts that I can be better.*), Acceptance by the father (10 items, e.g. *My father does not matter what I actually feel. I have a feeling that my father would sacrificed everything for me*.) Rejection by the mother (12 items, e.g. *My mother is asking too much from me. It seems to me that my mother would be happier that I'm gone.*), Rejection by the father (12 items, e.g. *My father is often yelling at me. My father puts impossible demands on me.*).

The Self-efficacy Questionnaire - version for children and youths, translated into Serbian (SEQ-C, Muris, 2001) - measures three forms of self-efficacy: a) social - the belief that person is able to relate with peers in an assertive manner, b) academic - the person's belief about competence to learn and meet the expectations of the school, c) emotional - the belief that the person is able to cope adequately with negative emotions. The questionnaire is composed of 24 items that are distributed into the following three scales: social (*I'm not find it hard to tell a friend that I feel bad. I can easily make friends with others*), academic (*It's easy for me to concentrate on learning even when there are other interesting things around me. I am successful in all the school subjects*) and emotional self-efficacy (*I cannot encourage myself when I feel sad. I can easily control my feelings*), consisting of 9, 8 and 7 items respectively. Respondents were asked to estimate their level of agreement with each of statements on a 5-points Likert scale (1= not at all, 5 = totally agree).

3.3. Procedure

The research was conducted in several schools, in Ni Niš, Serbia. The questionnaires were administered in groups during regular classes, with the prior consent of the subject. Participants were told that data will be used only for research purposes and that the anonymity is guaranteed.

The obtained data were processed by statistical package for social sciences SPSS, version 19.

4. Results and discussion

Description of the results will begin with the data relating to the two previously mentioned objectives of narrower scope, which are shown in Table 1. As can be seen, the results showed that adolescents perceived their parents mostly as warm and accepting and this is true for the perception of father and mother too. It can be concluded that respondents chose in average, on a five-point scale, modality '4-mostly agree' with the statements that describe this quality of relationships between children and parents. In addition, parental rejection was estimated quite low. Rather high score was obtained on general satisfaction with family (M = 41.25, scores range 11-55). It's important to emphasize that these data are consistent and, in general, all this speaks in favor of that upbringing styles was evaluated as based on love and other positive emotions between parents and children. Further, data pointed out that quality of parenting was estimated as quite good, which indicates that there are appropriate conditions for the development of children in such families. These findings are consistent with numerous studies conducted around the world, and with the findings reported by researchers from our environment (Matejević and Todorović, 2012; Opsenica-Kostić & Stefanović-Stanojević, 2010; Pavićević and Stojiljković, 2016; Todorović, 2004; Todorović, Stojiljković and Hedrih, 2011).

Table 1. Descriptive measures of quality of family interactions (KOBI) and self-efficacy aspects (SEQ-C).

Measures of quality of family interactions and self-efficacy aspects	Scores range on the scales	Scores range in research sample	Mean	SD
Acceptance by father	10-50	18-47	36.78	7.359
Rejection by father	12-60	12-47	24.13	9.305
Acceptance by mother	10-50	15-47	36.14	7.997
Rejection by mother	12-60	15-46	24.66	7.975
Satisfaction with family interaction	11-55	25-50	41.25	4.761
Social self-efficacy	9-45	16-41	30.26	6.414
Academic self-efficacy	8-40	14-38	24.50	5.937
Emotional self-efficacy	7-35	12-31	20.60	4.922

When it comes to the assessment of self-efficacy, the results showed that adolescents on average estimated that their competence was moderately high in all observed domains of functioning. The important finding is also that adolescents from the research sample significantly better assess their own competence for social relations in comparison with the ability to govern their own emotions. It is known that at the time of adolescence is very important interaction with peers, and it becomes even more important than support for families, given that adolescents are trying to build their own personal identity. This is what numerous researchers are reporting in the field of personality psychology, developmental and social psychology (e.g. Larsen & Buss, 2008; Maccoby & Martin, 1983).

*Table 2. Pearson's coefficients of correlation between quality of family interactions and aspects of self-efficacy in adolescents (** p< .01; *p<.05).*

	Family satisfaction	Acceptance by father	Rejection by father	Acceptance by mother	Rejection by mother
Social self-efficacy					
correlation coefficients	.046	**.267****	**-.207***	.142	**-.178***
Sig.	.578	.001	.011	.085	.031
Academic self-efficacy					
correlation coefficients	**.209***	**.192***	**-.171***	**.223****	-.123
Sig.	.011	.020	.038	.006	.138
Emotional self-efficacy					
correlation coefficients	**.224****	**.168***	-.110	**.175***	**-.226****
Sig.	.006	.042	.182	.033	.006

In the next part we will present the results pertaining to the main objective of the research, and present data on the relationship between certain aspects of parenting and self-efficacy in adolescents. As can be seen on Table 2, perceived upbringing style of father was the most important correlate of social self-efficacy of adolescents, which is shown by a positive correlation with the father's acceptance (r=.267, p<.01) and negative correlation with father's rejection (r=-.207, p<.05); in addition, a negative correlation was found with rejection by the mother (r=-.178, p<.05). The father is seen as a representative of the wider social environment, especially if the mother is not employed or work less appreciated work. Experience of rejection by the father and mother may have the effect of interfering by the belief that the child can communicate with peers in an assertive manner, as if this experience can generalized to the relationships with peers, and later may be also extended to relations with the wider community. Perceived acceptance by parents is the most important correlate of academic self-efficacy of adolescents, which is shown by positive correlation with the acceptance by the mother (r=.223, p<.01) and the father (r=.192, p<.05); it was also found a negative correlation with father's rejection (r=-.171, p<.05). Global satisfaction with family was positively correlated to both emotional and academic self-efficacy of adolecents. This kind of connectedness could be interpreted as the overall support steaming from family was important factor that can contributed children's feeling as being competent to manage different academic tasks and their own emotional states too. Perceived acceptance of both parents can contribute to adolescents' self-efficacy in emotional domain of functioning; while rejection by the mother may slow it down. Adolescent's belief that is not able to establish proper control over their emotions, which is otherwise difficult developmental task in this period, can be further boosted if he/she feel rejected by the mother. Overall, the results suggest that the experience of acceptance by parents as well as overall satisfaction with family, represent a kind of necessary preconditions for a child in order to believe that is able to cope with negative emotions and to control their own feelings. This also can be concluded from the results obtained when it comes to the adolescent's belief that he/she is competent to adequately behave in the school environment and the wider social community (.Maccoby & Martin, 1983; Matejević and Todorović, 2012; Spera, 2005;Todorović, 2004).

5. Conclusions

The main findings and conclusions of the research will be exposed from the perspective of the set of research questions and objectives. Adolescents perceived their parents mainly as accepting and they expressed a high level of satisfaction with family interactions. Generally speaking, these are good preconditions for the overall development of a child, so connection between certain aspects of parenting and adolescents' self-efficacy is in accordance with it. It is a way to explain that the high quality of parenting can contribute to the development of certain aspects of adolescents' self-efficacy, as is obtained

in this study. Besides, perceived rejection by parents, even if it is not based on the real unsupported attitude of parents, may slow it down and probably interferes with functioning in other areas.

In our opinion, the results of this study indirectly support the assumptions that derive from psychodynamic conceptions of socio-emotional development of personality as well as socio-psychological theory which are emphasizing the role of parents and the 'significant other' from the social environment. In addition, the interpretation of results should rely on Bandura's socio-cognitive theory of personality.

Future research of self-efficacy should include personality traits. It would be useful to follow the course of the development of self-efficacy in various domains during the person's lifetime.

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NORMATIVE BELIEFS, PERCEIVED HIGH EXPECTATIONS FROM ADULTS IN SCHOOL AND PREVENTION PROGRAM UNPLUGGED – GENDER DIFFERENCES

Marianna Berinšterová & Olga Orosová
Department of Educational Psychology and Health Psychology, Faculty of Arts, Pavol Jozef Šafarik University in Košice, Slovakia

Abstract

The aim of this contribution was to explore the effectiveness of the universal prevention program Unplugged with respect to behavioral indicator – lifetime prevalence of alcohol use and psychological indicators – descriptive normative beliefs about drunkenness of friends and perceived expectations from adults in school, separately among boys and girls. Moreover, the mediational role of the changes in the perceived high expectations from adults in school in the relationship between changes in descriptive normative beliefs about drunkenness of friends and lifetime prevalence alcohol use among adolescents was examined separately for boys and girls, controlling for school attachment.
Method: Sample consisted of 1298 early adolescents (53.3% girls, Mean age=11.72 years, SD=0.67 years), who took part in the evaluation study of the universal prevention program Unplugged. The sample was divided into groups with respect to gender and program participation. Data were collected before the program implementation (T1), 12 months after the program implementation (T2) and 15 months after the program implementation (T3). Single item measure of normative beliefs was used from the questionnaire of international study ESPAD. Perceived high expectations from adults in school and school attachment were measured by the Resilience and youth development module questionnaire.
Paired sample T test and Wilcoxon test were used for exploring differences between gender and program (non)participation. Linear and binary logistic regression and Sobel test was used for mediational analysis.
Results: Lifetime prevalence of alcohol use increased in all groups between T1 and T3. Descriptive normative beliefs significantly increased, and perceived high expectations from adults in school decreased between T1 and T2, except for girls in the experimental group. Moreover, among girls, mediational role of changes in perceived high expectations from adults was found in the relationship between descriptive normative beliefs about drunkenness of friends and lifetime alcohol use (T3) ($Z=2.01$; $t<0.05$).
Conclusion: The effect of the program Unplugged was not confirmed with respect to the behavioral indicator. Gender differences were found in effectiveness of the program Unplugged with respect to psychological variables – descriptive normative beliefs about drunkenness of friends and perceived high expectations from adults in school. Despite the increase in descriptive normative beliefs, perceived positive expectations for adults in school has a protective role regarding lifetime prevalence of alcohol use among girls. These findings contribute to the knowledge about gender differences in effectiveness of Unplugged and suggest the importance of support from significant adults in school.

Keywords: *Descriptive normative beliefs, high expectations from adults, alcohol use, Unplugged.*

1. Introduction

The age of alcohol use initiation is one of the risk factors for the development of alcohol disorders (DeWit, Adlaf, Offord, Ogborne, 2000). One of the main objectives of prevention programs for adolescents is to delay substance use initiation (Sloboda, Bukoski, 2003). Program Unplugged is a universal prevention program based on comprehensive social influence model, which combines effective prevention strategies, including social skills enhancement and correction of normative beliefs (Faggiano et al. 2010; Faggiano et al. 2008).

Normative beliefs are one of the dimensions of passive social influence (Bosari, Carey, 2001) related to an individual's perception and interpretation of the substance use and reinforcement of others. Normative beliefs generally predominate as predictors of substance use among young people (Morgan, Grube, 1989) and mediate the relationship between social norms and behaviour (Maddock, Glanz, 2005).

Perceived high expectations from adults at school is one of the factors from the environment, which may lead to the development of resilience and a decrease of the health risk behaviour (Constantine, Benard, Diaz, 1999). Teachers as significant adults (Galbo, 1989) could contribute to strengthening the self-regulation of children (Merritt, Wanless, Rimm-Kaufman, Cameron, Peugh, 2012) which has been shown to be negatively associated with multiple forms of risky behaviour (Magar, Phillips, Hosie, 2008; Tangney, Baumeister, Boone, 2004).

2. Objectives

The aim of this contribution was to explore the effectiveness of the universal prevention program Unplugged with respect to behavioral indicator – lifetime prevalence of alcohol use and psychological indicators – descriptive normative beliefs about drunkenness of friends and perceived high expectations from adults in school. Since there are studies suggesting that a gender specific effect in prevention program exist (Gabrhelik, Duncan, Lee, Stastna, Furr-Holden, Miovsky, 2012), analyses were conducted separately for boys and girls. Moreover, the mediational role of the changes in perceived high expectations from adults in school in the relationship between changes in descriptive normative beliefs about drunkenness of friends and lifetime prevalence alcohol use among adolescents was also examined separately for boys and girls, controlling for school attachment. School attachment could be an element of social control (Hirschi, in Hirschi, Gottfredson, 1988).

3. Design and Methods

This study has an experimental design with experimental and control group and measurements immediately after the program implementation (T1), and post-tests (T2- 12 months after the program implementation; T3 – 15 month after program implementation). A representative sample of 1298 (53.3% girls, Mean age=11.72 years, SD=0.67 years) early adolescents from 60 Slovak schools participated in the research. In 30 schools program Unplugged was implemented and 30 schools were assigned to the control group.

Methods: Lifetime prevalence of alcohol use was measured by the item (Hibell et al., 2012): *„How many times (if any) have you drunk an alcoholic drink?".* Item was dichotomised (0 – never/1 – at least once).

Descriptive normative beliefs about drunkenness of friends were measured by the single item (Hibell et al. 2012): *„According to your estimation, how many of your friends get drunk?"(none – a few – some – most – all).*

Perceived high expectations from adults in school and school attachment were measured by the Resilience and youth development module questionnaire (Constantine, Benard, Diaz, 1999).

Perceived high expectations form adults in school (Items) - *At my school, there is a teacher or some other adult who: ...tells me when I do a good job; ...always wants me to do my best.... believes that I will be a success.* Items were assessed at 4-point scale (totally disagree – totally agree).

School attachment (item example): "*I feel that I am part of this school.".* Five items assessed at 5-point scale (totally disagree – totally agree).

4. Results

4.1. Changes in explored variables

A Willcoxon signed-rank test was used to explore changes in lifetime prevalence of alcohol use and descriptive normative beliefs about drunkenness of friends among boys and girls in experimental and control group.

Table 1. Changes in Lifetime prevalence of alcohol use.

			Mean	S.D.	Median	Z	Sig.
Boys	E*	(T1)**	.2407	.42822	0	-6.231	<.001
		(T3)**	.5158	.50107	1		
	C*	(T1)**	.2367	.42575	0	-5.250	<.001
		(T3)**	.4607	.49986	0		
Girls	E*	(T1)**	.1716	.37759	0	-4.478	<.001
		(T3)**	.3270	.47001	0		
	K*	(T1)**	.1026	.30393	0	-6.490	<.001
		(T3)**	.3272	.47027	0		

*E (experimental group), C (control group);
** T1(immediately before program implementation), T3 (15 month after program implementation)

Lifetime prevalence of alcohol use increased among boys and girls in experimental and control group between T1 and T3.

Table 2. Changes in descriptive normative beliefs about drunkenness of friends.

			Mean	S.D.	Median	Z	Sig.
Boys	E*	(T1)**	1.23	.623	1	-3.014	.003
		(T2)**	1.32	.638	1		
	C*	(T1)**	1.24	.410	1	-4.176	<.001
		(T2)**	1.42	.935	1		
Girls	E*	**(T1)****	**1.10**	**.386**	**1**	**-1.836**	**.066**
		(T2)**	1.15	.463	1		
	C*	(T1)**	1.12	.410	1	-6.283[c]	<.001
		(T2)**	1.48	.935	1		

*E (experimental group), C (control group);
** T1(immediately before program implementation), T2 (12 month after program implementation)

A Wilcoxon Signed-ranks test indicated that significant differences were found in descriptive normative beliefs about drunkenness of friends between T1 and T2, among boys in experimental and control group, and among girls in control group. Among girls in experimental group significant differences in descriptive normative beliefs were not found.

A pair sample t-test was conducted to explore changes in perceived high expectations from adults in school between T1 and T2.

Table 3. Changes in perceived high expectations from adults.

			Mean	**S.D.**	**t**	**df**	**Sig.**
Boys	E*	(T1)	8.8438	2.50806	3.407	127	.001
		(T2)	7.9609	2.57915			
	C*	(T1)	8.3516	2.54283	2.312	127	.022
		(T2)	7.6875	2.92626			
Girls	E*	(T1)	**8.8144**	**2.50451**	**.957**	**166**	**.340**
		(T2)	**8.5928**	**2.67779**			
	C*	(T1)	9.1033	2.58097	4.799	183	.000
		(T2)	8.0380	2.66605			

*E (experimental group), C (control group);
** T1(immediately before program implementation), T2 (12 month after program implementation)

Significant differences were found in perceived high expectations from adults in all groups except for girls in the experimental group. Perceived high expectations from adults decreased among boys in the experimental and control groups and among girls in control group.

4.2. Mediation

Since the results of the exploration of differences in the groups of boys and girls in the experimental and control groups pointed to a positive development among girls in the experimental group, mediational analysis was conducted to explore the mediational role of changes in perceived high expectations from adults in school (PHE change) in the relationship between changes in descriptive normative beliefs about drunkenness of friends (DNB change) and changes in lifetime prevalence of alcohol use among girls.

Linear regression model was conducted to explore the association between changes in descriptive normative beliefs about drunkenness of friends and changes in perceived high expectations from adults in school (Table 4). The model was significant and explained 6.6% of the variation in the dependent variable.

Table 4. Linear regression model. Association between changes in descriptive normative beliefs about drunkenness of friends and perceived high expectations from adults in school.

	B	S. E.	Beta	t	Sig.
DNB Change (T1-T2)	**-.986**	**.284**	**-.215**	**-3.467**	**<.001**
School attachment (T2)	-.017	.038	-.027	-.444	.658
Unplugged participation	-.575	.381	-.093	-1.508	.133

Binary logistic regression model was used to explore the association between descriptive normative beliefs about drunkenness of friends and lifetime prevalence of alcohol use (Table 5). This model was significant (χ^2=23.103; p<0.001) and explained between 6.8 – 9.5 % of variation in the dependent variable. Increase in descriptive normative beliefs about drunkenness of friends was positively associated to lifetime prevalence of alcohol use. Participation in the program Unplugged was not significantly associated with the dependent variable. Controlled variable - school attachment (T2) - was negatively associated to lifetime prevalence of alcohol use.

Table 5. Binary logistic regression model. Association between changes in descriptive normative beliefs about drunkenness of friends and lifetime prevalence of alcohol use.

	B	S.E.	Exp(B)	95% C.I. for EXP(B)	
DNB Change (T1-T2)	**-.626**	**.187**	**.535**	**.370**	**.771**
Unplugged participation	-.167	.253	.846	.516	1.389
School attachment (T2)	**-.061**	**.023**	**.941**	**.899**	**.985**

Binary logistic regression was used to explore the association between descriptive normative beliefs about drunkenness of friends, perceived high expectations from adults in school and lifetime prevalence of alcohol use (Table 6). The model was significant (χ^2=30.295 p<0.001) and explored between 11.18 – 16.6% of variation in the dependent variable. In addition to the association between increase in descriptive normative about drunkenness of friends and dependent variable, an association between perceived high expectations from adults in school and lifetime prevalence of alcohol use was found. Participation in the program Unplugged was not significantly associated to dependent variable. Controlled variable - school attachment (T2) - was negatively associated to lifetime prevalence of alcohol use.

Table 6. Binary logistic regression model. Association between changes in descriptive normative beliefs about drunkenness of friends and lifetime prevalence of alcohol use.

	B	S.E.	Exp(B)	95% C.I. for EXP(B)	
DNB Change (T1-T2)	**-1.129**	**.275**	**.323**	**.189**	**.554**
PHE Change	**-.104**	**.050**	**.901**	**.817**	**.994**
Unplugged participation	-.312	.309	.732	.399	1.342
School attachment (T2)	**-.072**	**.030**	**.931**	**.878**	**.986**

Sobel test confirmed the mediational role of changes in perceived high expectations from adults in the relationship between descriptive normative beliefs about drunkenness of friends and lifetime alcohol use (T3) (Z=2.01; t<0.05).

5. Discussion

Results of this study contribute to the knowledge about the gender differences of the prevention program Unplugged (Gabrhelik, Duncan, Lee, Stastna, Furr-Holden, Miovsky, 2012). Although lifetime prevalence of alcohol use increased among boys and also among girls, program related variable - descriptive normative beliefs about the drunkenness of friends was seen to increase in all groups except for the girls in the experimental group. In addition, the perceived high expectations of adults in school decreased in all groups except for girls in the experimental group. A decrease of perceived high expectations from adults was associated with an increase in descriptive normative beliefs about drunkenness of friends, which suggests the protective role of perceived support from adults in school (Galbo, 1989).

Results also show a negative association between school attachment and lifetime prevalence of alcohol use. School attachment could be considered as a source of social control (Hirschi, in Hirschi, Gottfredson, 1988) and its role in the context of prevention program effectiveness should be explored as well as the role of a teacher, an implementer of school-based prevention in the context of fidelity of the program realization.

6. Conclusions

Within the implementation of the school-based prevention programs, gender specific aspect of the programs should be integrated. Examining the effectiveness of prevention programs should include monitoring of fidelity of program implementation, which includes taking into account the personality of the teacher, who carries out the program, his attitude towards the program and his/her teaching style.

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EMOTIONAL AND PERSONAL WELL-BEING'S RELATIONS WITH THE EXTRAVERSION-INTROVERSION, BURNOUT AND ADAPTATION

Galina Glotova[1] & Larisa Karapetyan[2]
[1]Psychological Department, Lomonosov Moscow State University (Russia)
[2]Psychological Department, Ural Federal University (Russia)

Abstract

Objectives: the first objective of the research was to explore how adults assess their emotional and personal well-being. The second objective was to explore psychological correlates of self-assessment of emotional and personal well-being. Design: a quasi-experimental study was conducted. The correlation analysis (by Spearman) was applied to the data obtained. Methods: the "Self-Assessment of Emotional and Personal Well-being" research technique (Glotova & Karapetyan, 2009) were offered to adults aged 18-65. The participants had to assess themselves on a seven-point scale, using the following parameters: "happy", "lucky", "optimist" (positive emotional component A); "successful", "competent", "reliable" (positive personal component B); "pessimistic", "unhappy", "envious" (negative component C) (Study 1). The results for each of the nine parameters were analysed and the general index of self-assessment of emotional and personal well-being was calculated using this formula: A+B-C. The following research techniques were also used: the Myers Briggs Type Indicator (MBTI, F; EI scale) (Study 2); the Maslach Burnout Inventory (MBI) (Study 3); the Rogers-Diamond Test of Social-Psychological Adaptation (SPA) (Study 4). The results: in Study 1 (n=2229) descriptive statistics were obtained for each of the nine parameters and for the general index of self-assessment of emotional and personal well-being. The results of Study 2 (n=857) showed correlations between extraversion (EI scale MBTI, F) and the positive parameters and the general index of self-assessment of emotional and personal well-being, and correlations between introversion and the negative parameters. The results of Study 3 (n=381) showed the positive parameters and the general index of self-assessment of emotional and personal well-being correlate negatively with the indicators of burnout (MBI), while the negative parameters correlated positively. The results of Study 4 (n=1201) showed the positive parameters and the general index of self-assessment of emotional and personal well-being as positively correlated with the six integral indicators of the SPA research technique, while the negative parameters of emotional and personal well-being correlated negatively with the six integral indicators of the SPA. Conclusion: the results of the obtained data indicate a possibility of using the construct "emotional and personal well-being" along with the constructs "subjective well-being" and "psychological well-being".

Keywords: *Well-being, extraversion-introversion, burnout, adaptation.*

1. Introduction

The study of human well-being has a long history. Since the ancient times, this subject has been reviewed from the angle of two research traditions: the hedonic and the eudaimonic one (Lopez & Snyder, 2009). Nowadays, these traditions are represented by the constructs of "subjective well-being" (Diener & Larsen, 1993; Diener, Suh, Lucas, & Smith, 1999) and "psychological well-being" (Ryff, 1989; Ryff & Keyes, 1995). These constructs are considered relatively autonomous, though both of them are related to people perceiving their well-being (Keyes, Shmotkin, & Ryff, 2002). Thus, "subjective well-being" and "psychological well-being" can be experienced simultaneously by one person, although combinations differ depending on an individual, both types of well-being can be developed at the same level (high, medium or low), or one of them can be more pronounced than the other (Keyes, Shmotkin and Ryff, 2002). The components of "subjective well-being" are significantly different from the components of psychological well-being. "Subjective well-being" is comprised of such rather more integral constructs as "satisfaction with life" and "balance of positive and negative affects" (Diener & Suh, 1997), whereas "psychological well-being" includes six integral constructs ("self-acceptance", "personal growth", "purpose in life", "positive

relations with others", "environmental mastery", "autonomy") (Ryff & Keyes, 1995, p. 720). Subjective well-being can be described as emotional well-being due to its integral constructs, while psychological well-being can be described as the well-being of human personality. Ryff & Keyes (1995), as it was noted that psychological well-being is something more than just the feeling of happiness and satisfaction with life (p. 724). Thus, two important oppositions emerge from the study of human well-being: a) opposition of subjective (emotional) to psychological (personal) well-being; b) opposition of the positive to the negative effect. These two parameters were used as a basis for the development of a new construct: "emotional and personal well-being" (Glotova & Karapetyan, 2009), which includes two positive components: "emotional" (A), and "personal" (B) and one negative component (C).The theoretically selected components were expanded with the content of the nine integral constructs. Happiness, luck and optimism were identified as the three elements of the "positive emotional component" (A). Success, competence and reliability were identified as the three elements of the "positive personal component" (B). Pessimism, unhappiness (emotional elements), envy (personal element) were identified as the three elements of the "negative component" (C). The "Self-Assessment of Emotional and Personal Well-being" research technique was developed on the basis of this construct. In psychological researches studying individuals' perception of well-being based on any constructs and using different research techniques the question of a specific psychological correlates always come up. It was indicated that subjective well-being is closely correlated with personality traits (Gutiérrez, Jiménez, Hernandez, & Puente, 2005; Hayes & Joseph, 2003; Lucas, 2008). For example, correlation was identified between some components of both subjective and psychological well-being and extraversion (Lucas & Fujita, 2000; Schmutte & Ryff, 1997), and also depression (Ryff & Keyes, 1995). In this study the task was to explore some of the psychological correlates of the new construct – "emotional and personal well-being" and to compare them with the psychological correlates of the constructs - "subjective well-being" and "psychological well-being".

2. Design

A quasi-experimental study was conducted. Correlation analysis (by Spearman) was applied to the obtained data.

3. Objectives

The first objective of the research was to explore how adults evaluate their own emotional and personal well-being. The second objective was to explore the psychological correlates of self-assessment of emotional and personal well-being.

4. Methods

The "Self-Assessment of Emotional and Personal Well-being" research technique (Glotova & Karapetyan, 2009) was offered to adults aged 18-65. The participants had to assess themselves on a seven-point scale, using the following parameters: "happy", "lucky", "optimist" (positive emotional component A); "successful", "competent", "reliable" (positive personal component B); "pessimistic", "unhappy", "envious" (negative component C) (Study 1, n=2229). The results for each of the nine parameters were analysed and the general index of self-assessment of emotional and personal well-being was calculated using this formula: A+B-C. The following research techniques were also used: Myers-Briggs Type Indicator (MBTI, F; EI scale) (Briggs Myers & McCaulley, 1985) (Study 2, n=857); Maslach Burnout Inventory (MBI) (Maslach, Jackson, & Leiter, 1996) (Study 3, n=381); Rogers-Diamond Test of Social-Psychological Adaptation (SPA) (Raygorodsky, 2000) (Study 4, n=1201).

5. Results & Discussion

Study 1 was conducted using the "Self-Assessment of Emotional and Personal Well-being" research technique for adults aged 18-65 (n=2229). The descriptive statistics were obtained for each of the nine parameters and for the general index of self-assessment of emotional and personal well-being (A+B-C). The scores for the general index ranged between -9.00 to 39.00, M=23.67.

Study 2 explored the correlations between the parameters and the index of self-assessment of emotional and personal well-being and the continuous "extroversion-introversion" (EI) scale of the

Myers-Briggs (MBTI, F) research technique (the high scores on the EI scale correlate with introversion, and the low scores correlate with extraversion).

The Spearman's correlation coefficient of the general index of self-assessment of personal and emotional well-being (A+B-C) with the continuous "extroversion-introversion" (EI) scale of the Myers-Briggs (MBTI, F) research technique, is statistically significant ($r = -0.280$; $p \leq 0.001$).

Table 1 shows Spearman's coefficients of correlation between nine parameters of the "Self-Assessment of Emotional and Personal Well-being" research technique and the continuous scale "extroversion-introversion" (EI).

Table 1. Correlations between the parameters of the "Self-Assessment of Emotional and Personal Well-being" research technique and the scores of the continuous scale EI (MBTI, F) (n = 857).

A	EI	B	EI	C	EI
Happy	-0.206***	Successful	-0.198***	Pessimistic	0.127***
Lucky	-0.218***	Competent	-0.162***	Unhappy	0.053
Optimist	-0.248***	Reliable	-0.172***	Envious	0.083*

Note: *** p≤0.001; ** p≤0.01; * p≤0.05

As you can see in Table 1, all of the six positive parameters of the "Self-Assessment of Emotional and Personal Well-being" research technique showed negative correlation (at p≤0,001) with the EI scale, i.e. with introversion. The negative parameters, on the contrary, had shown positive correlation with introversion (the parameter "pessimistic" at p≤0.001; "envious" at p≤0.05; for "unhappy" the correlation is non-significant). The above stated means that people who evaluate themselves with high scores on "happy", "lucky", "optimist", "successful", "competent" and "reliable", and with low scores on "pessimistic" and "envious", in most cases are extroverts. The correlations between the higher rates obtained using the "Self-Assessment of Emotional and Personal Well-being" research technique and extraversion is identified and between the lower rates and introversion corresponds to the results obtained using other constructs of well-being and other research techniques. Thus, in the research by Schmutte & Ryff (1997), five out of the six parameters of "psychological well-being" showed statistically significant correlation with "extraversion" (E), obtained using the methodology of NEO Five-Factor Inventory (Costa & McCrae, 1992).

Study 3 (n=381) used the Maslach Burnout Inventory (MBI) research technique to explore the correlations between the nine parameters and the general index of self-assessment of emotional and personal well-being and the burnout indicators. The presence of burnout is indicated by high scores on the scales of "emotional exhaustion", "depersonalization" and low scores on the scale of "personal achievements".

The general index showed statistically significant negative correlations with the indicators of "emotional exhaustion" ($r = -0.307$, $p \leq 0.001$), "depersonalization" ($r = -0.275$, $p \leq 0.001$), and significant positive correlation with the "personal achievements" indicator ($r = 0.259$, $p \leq 0.001$).

For the nine parameters of the "Self-Assessment of Personal and Emotional Well-being" research technique, 24 out of 27 possible correlations are significant, with 15 of them being significant at $p \leq 0.001$, 7 - at $p \leq 0.01$ and 3 - at $p \leq 0.05$ (Table 2).

Table 2. Spearman's correlations between the parameters of the "Self-Assessment of Personal and Emotional Well-being" research technique and the MBI burnout indicators (n = 381).

Nine parameters	Emotional exhaustion	Depersonalization	Personal achievements
Happy	-0.226***	-0.186***	0.185***
Lucky	-0.212***	-0.167**	0.176***
Optimist	-0.202***	-0.190***	0.212***
Successful	-0.251***	-0.220***	0.260***
Competent	-0.115*	-0.158**	0.182***
Reliable	-0.178***	-0.177***	0.152**
Pessimistic	0.223***	0.160**	-0.122*
Unhappy	0.150**	0.103	-0.095
Envious	0.157**	0.152**	-0.041

Note: *** p≤0.001; ** p≤0.01; * p≤0.05

As can be seen in Table 2, six positive parameters of self-assessment of personal and emotional well-being had shown significantly negative correlation with the "emotional exhaustion", and the three negative parameters correlated positively. The six positive parameters showed a significant negative correlation with "depersonalization", and two of the negative three showed significant positive correlation with "depersonalization", and the parameter "unhappy» tended towards

positive correlation. In contrast, the six positive parameters of self-assessment of emotional and personal well-being correlated positively with the scale of "personal achievements", while the negative parameters correlated negatively (or statistically significantly or in tendency, or, else, no significant correlation was indicated – like it was in the case of the "envious" parameter).

Thus, the higher the scores for the emotional (A) and personal (B) parameters of the positive components of self-assessment of emotional and personal well-being, and the lower the scores for the parameters of the negative component (C), the less exhaustion is indicated, and vice versa. This confirms the correlation between self-assessment of emotional and personal well-being and the individual aspects of a person's emotional sphere. This study has revealed the correlations between individuals' perception of a specific extent of well-being and manifestations of burnout, whereas the study of Schmutte & Ryff (1997), where the research technique of NEO Five-Factor Inventory (Costa & McCrae, 1992) explored the correlation between "psychological well-being" and neuroticism: four of the six parameters of "psychological well-being" showed statistically significant correlations with "neuroticism" (N). It was also indicated that the six parameters of "psychological well-being" showed statistically significant negative correlations with the scale "depression" and the "negative affect" scale, and statistically significantly positive correlations with "positive affect" and "balance of positive and negative affects" (Ryff & Keyes, 1995, p. 724). In addition, the emotional sphere in the form of balance of positive and negative affects and satisfaction with life is the essence of the construct "subjective well-being", also called "emotional well-being" (Diener, 1984).

In Study 4, multiple correlations were revealed, using Spearman's correlation analysis, between the nine parameters and the general index of self-assessment of emotional and personal well-being and the integral indicators of the Rogers-Diamond Test of Social-Psychological Adaptation (SPA) research technique (n = 1201).

The general index of self-assessment of emotional and personal well-being (A+B-C) significantly correlated with all six integral indicators of SPA: with "adaptation" ($r = 0.422$, $p \leq 0.001$), "self-acceptance" ($r = 0.401$, $p \leq 0.001$), "acceptance of others" ($r = 0.360$, $p \leq 0.001$), "emotional comfort" ($r = 0.428$, $p \leq 0.001$), "internality" ($r = 0.349$, $p \leq 0.001$), "need to dominate" ($r = 0.244$, $p \leq 0.001$).

Using Spearman's correlation analysis of the nine parameters of the "Self-Assessment of Emotional and Personal Well-being" research technique with the integral coefficients of the SPA (n = 1201), 52 out of 54 possible statistically significant correlations were obtained, and, moreover, all 52 had a high level of significance ($p \leq 0.001$). The positive parameters "happy", "lucky", "optimist", "successful" and "competent" revealed six out of six possible significant positive correlations with the integral coefficients of SPA, and the parameter "reliable" revealed five significant positive correlations. The negative parameters "pessimistic" and "unhappy" revealed six significant negative correlations, out of the possible six, with the integral coefficients of SPA, and the parameter "envious" demonstrated five significant negative correlations out of six (no significant correlation was found with the integral coefficient "need to dominate").

The correlations between the nine parameters and the general index of "Self-Assessment of Emotional and Personal Well-being" research technique and the integral indicators of the SPA are of interest to us because the six integral indicators of SPA represent the six integral constructs constituting the content of the generalized construct "social and psychological adaptation". These integral SPA constructs have certain similarities with the integral constructs that constitute the generalized constructs "subjective well-being" and "psychological well-being".

The correlations obtained as a result of our study between the parameters and the general index of the "Self-Assessment of Emotional and Personal Well-being" research technique and the integral indicators of the "Social and psychological adaptation" (SPA) research technique indicate that the generalized construct of "social and psychological adaptation" comprises such integral constructs which by their nature are associated with an individual's perception of various aspects of well-being – whether subjective, psychological or emotional and personal.

6. Conclusions

1. Along with such constructs as "subjective well-being", "psychological well-being", the phenomenon of an individual's perception of their well-being can be studied with the help of the construct "emotional and personal well-being" provided in our studies.

2. The nine parameters and the general index of self-assessment of emotional and personal well-being have revealed a large number of statistically significant correlations with the indicators of extraversion-introversion, burnout and adaptation.

3. For people with high scores of positive parameters and a high general index of self-assessment of emotional and personal well-being the following are typical: extroversion, high scores of adaptation, self-acceptance, and acceptance of others, emotional comfort, internality and need to dominate; on the other hand, they demonstrate low levels of burnout.

4. The obtained data confirm the possibility of using the "emotional and personal well-being" construct in research and for practical purposes, along with the constructs "subjective well-being" and "psychological well-being".

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ON BURNOUT PERCEPTION AMONG SECONDARY SCHOOL TEACHERS: A PILOT STUDY

Isabella Corradini[1], Assunta Marano[1], & Federico Paolinelli[2]
[1]Themis Research Centre (Italy)
[2]Secondary School Teacher (Italy)

Abstract

Burnout is a stress phenomenon widely described in literature (e.g. Freudenberger, 1974; Maslach 1976; Maslach, Schaufeli and Leiter, 2001, 2009; Cherniss, 1980). It concerns particularly helping professions, as medical and social work professions, but it is increasingly found in any workplace, due to the higher and higher rate of organizational and procedural changes.
The focus of our pilot study is the evaluation of teacher's burnout perception based on the analysis of the following categories defining the professional realization: personal expectations, satisfaction elements, discrepancy elements, perception and management of work difficulties.
The study has involved 74 Italian secondary school teachers aged between 25 and 64 (F:24,3%; M:75,7%) from central regions of Italy. The sample completed a subjective multiple response questionnaire on burnout perception (Corradini, Paolinelli, 2016). The sample was stratified with respect to the following variables: age (Percentage/Range 25-34: 6.8%; 35-44: 28.4%; 45-54: 29.7%; 55-64: 35.1%); teaching seniority (Percentage/Range 1-10: 35,1%; 11-21: 25,7%; 21-30: 17.6%; more than 30: 21.6%), gender, and balanced in term of employment status and level of education.
Analyses were conducted using quantitative statistical method to identify satisfaction factors among teachers and their possible correlations and dissimilarities. The correlation analysis with a Spearman method revealed two significant coefficients (salary satisfaction and role recognizing satisfaction) sharing important prediction within each of the two relevant independent variables (salary satisfaction by teaching seniority, R^2=.08; role recognizing satisfaction by gender, R^2=.10) identified by a stepwise regression.
Even if coming out from a pilot study, these results point to the necessity of adapting prevention measures to the specific characteristics of the considered teachers' groups. We plan also to extend the study to a larger sample.

Keywords: *Burnout, teacher, perception, prevention, workplace.*

1. Introduction

Burnout is a serious problem, increasingly found in any workplace, due to the higher and higher rate of organizational and procedural changes. It is considered related to psychosocial factors in the workplace (European Agency for Safety and Health at Work, EU-OSHA).

One of the most relevant definitions describes burnout as «a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do "people work" of some kind» (Maslach and Jackson, 1986).

In fact, this multidimensional syndrome affects people who exercise the so called "helping professions", for example social workers and teachers, when they are not to able to respond adequately to the excessive loads of stress that their work leads them to assume.

Studies have shown that teaching is a stressful career and this can lead to teachers suffering from burnout (McCarthy, Lambert, O'Donnell, & Melendres, 2009). Teachers who experience burnout syndrome have low morale, low self-esteem and they are physically exhausted. In fact the symptoms can be summarized in three categories: exhaustion, depersonalization and diminished personal achievement (Roloff and Brown, 2011).

Many studies analyzed factors involved in teachers' burnout (Farber and Miller, 1981; Blase, Blase and Du, 2008; Grayson and Alvarez, 2008; Kyriacou and Sutcliffe, 1978; Russel, Altmaier, and Van Velzen, 1987; Sorenson, 2007). Some of them have considered the importance of organizational and

situational factors related to the phenomenon, such as number of tasks required, excessive workload, role clarity, school pressure to achieve goals, crowded classroom, difficulty of interacting with students, lack of administrative and social support.

2. Design and methods

This pilot study aims to analyze teachers' perception on the phenomenon of burnout, particularly the existence of a discrepancy between their ideal job and the effective realization.

The tool employed in the study is a questionnaire on burnout perception (Corradini, Paolinelli, 2016), composed by 28 items. Most of these items are multiple choice responses, two questions are open and concern the tasks of teachers and personal proposal to improve their job conditions. The areas investigated by the questionnaire are the following: personal expectations, satisfaction elements, discrepancy elements, perception and management of work difficulties.

The study has involved 74 Italian secondary school teachers aged between 25 and 64 (F:24,3%; M:75,7%), from central regions of Italy, and all the sample teachers completed the questionnaire on burnout perception (Corradini, Paolinelli, 2016). The sample was stratified with respect to the following variables: age (Percentage/Range 25-34: 6.8%; 35-44: 28.4%; 45-54: 29.7%; 55-64: 35.1%); teaching seniority (Percentage/Range 1-10: 35,1%; 11-21: 25,7%; 21-30: 17.6%; more than 30: 21.6%) and gender. The sample was balanced in term of employment status and level of education.

The statistical analyses were focused on job's satisfaction (satisfaction elements) perceived by teachers.

3. Results

Analyses were conducted using quantitative statistical method to identify satisfaction factors among teachers and their possible correlations and dissimilarities.

Descriptive analysis (frequencies, means, and standard deviation) was conducted for demographic and job's satisfaction variables. Comparisons between continuous distributions were carried out by means of the analysis of variance (ANOVA). The Pearson correlation coefficient and stepwise regression analysis was also used. All these statistical analyses were performed using the SPSS software package (SPSS v17.0), Chicago, Illinois, USA.

The teachers declared a consistent understanding and in average teachers (Mean=70%) check a high knowledge as regard to situational and social satisfaction elements.

The satisfaction elements, analyzed by correlation analysis with a Spearman method, revealed two significant coefficients: salary satisfaction ($r= -32$; $p<.005$) and role recognizing satisfaction ($r= .33$; $p<.005$).

Finally, several stepwise multiple regression analyses were carried out. The results showed an influence of social and situational components on job's satisfaction; more specifically, this effect was related to teachers' gender and teaching seniority.

Both salary satisfaction and role recognizing satisfaction emerged as significant predictors ($p = 0.05$) of the satisfaction elements: while salary satisfaction scores emerged as significant predictor ($p = 0.05$) by teaching seniority ($R= .08$, $p<.05$; $\beta= -.15$, $p<.05$) role recognizing satisfaction emerged as significant predictor ($p = 0.05$) by gender ($R= .10$, $p<.05$; $\beta= .311$, $p<.05$).

Figure 1. Percentages of role recognizing satisfaction by teachers' gender.

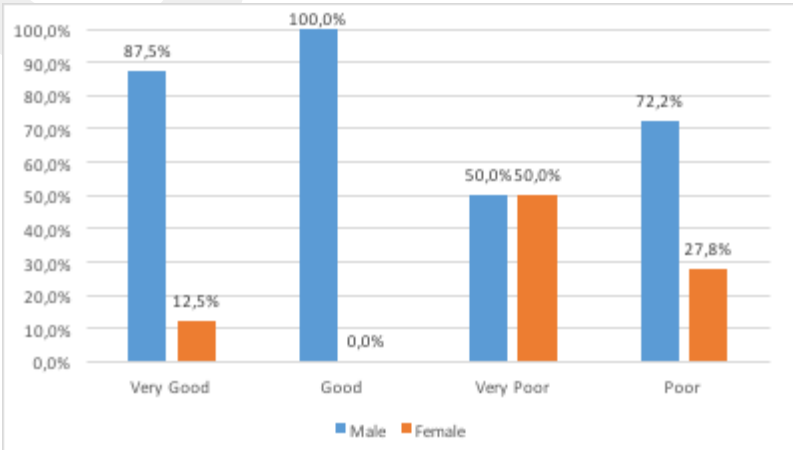
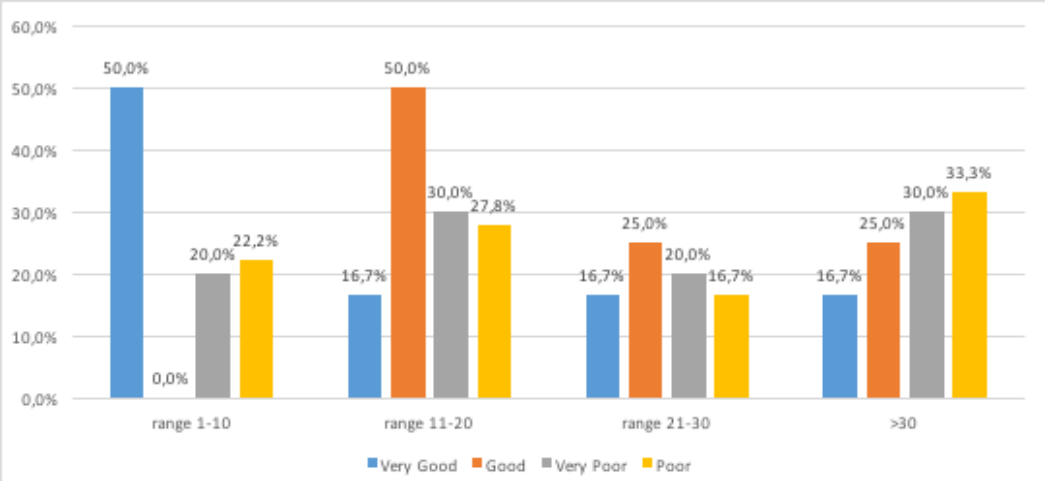


Figure 2. Percentages of salary satisfaction by teaching seniority.



4. Discussion and conclusion

The results stress the role possibly played by the specific workplace context in the development of burnout. An interesting finding is that interviewed teachers are aware of the relevance of situational factors (bureaucracy, classroom crowding, difficulty of career progression) and social factors (prestige of teachers, scholastic political, expected by society). All these factors can menace their job's satisfaction.

The study has revealed significant differences in terms of the role recognizing satisfaction between males and females: on the average women have a lower role recognizing satisfaction. Another interesting result concerns the difference between teachers with greater and smaller seniority with respect to the salary satisfaction: teacher with a lower seniority have on the average a higher salary satisfaction.

In conclusion, the teachers composing the sample are aware of their role and quite motivated, despite of problems they have to manage at school.

This is a first analysis in our research project. We plan to work with a larger sample and an extended questionnaire investigating additional factors affecting job's satisfaction.

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GCRIS

CONFLICT STRATEGIES AS PREDICTORS OF SOCIAL ANXIETY IN ADULTS

Galina Kozhukhar
Moscow State University of Psychology and Education, Moscow (Russia)

Abstract

The issue of social anxiety is becoming increasingly important in modern society, which is caused by a variety of socio-psychological and personal factors. The experience of social anxiety is directly related to the nature of human interaction, that's why the purpose of work was the study of conflict strategies and manifestation of various types of social anxiety in adults. The main question of study is to identify what kind of conflict strategies are predictors of types of social anxiety and overall level of its intensity in adult respondents. Two methods were used: Social anxiety and social phobia questionnaire (authors Sagalakova, Truevtsev) and Thomas-Kilmann test to determine conflict strategies. The survey involved 106 respondents, all of them with higher education, age from 22 to 46 (M=33.29, SD=5.74), among them 30 men and 76 women. Descriptive statistics, percentage and regression analysis вместо were used for data processing. The main findings allowed to describe the models containing conflict strategies, for each type of social anxiety and general level of its intensity. The average indicator of the level of social phobia was 29.55 points, located on the border between the intermediate zone (social courage - episodic manifestations of social anxiety) and moderately increased social anxiety. At the same time, 46.23% of respondents had an increased social anxiety to a greater or lesser degree. It was found that model that allows to predict the overall level of social anxiety includes 4 conflict strategies out of possible 5, and with a negative sign. This means that if the adults, in a conflict situation, are able to apply competition, compromise, collaboration, and accommodation, their social anxiety reduces. Different strategy models were as predictors for different types of social anxiety. Moreover, avoiding had a direct correlation with an increase of such types of anxiety, as "being in spotlight", desire to overcome anxiety in expert situations, restraint in expression of emotions, as well as taking the initiative in formal situations because of fear of criticism and possible loss of subjective control. Limitations of study are unbalanced sample by gender and use of only two methods of research. We believe that results of this study will help to carry out the prediction of manifestation of various types of social phobia, based on preferred conflict strategies in adults and to use a change of behavior in conflict with the help of psychological training as a method for preventing and overcoming the various types of social anxiety.

Keywords: *Social anxiety, social phobia, conflict strategies, adults.*

1. Introduction

The issue of social anxiety and social phobia is becoming increasingly important in modern society, which is due to a variety of socio-psychological and personal factors. Recently, in various studies, more emphasis is placed not so much on a single trait or disposition, as on the characteristics of the situation and interaction of the individual with the situation. In particular, they distinguish either general nonspecific personal anxiety, or a specific, characteristic one for a certain class of situations. And in the first case it is assumed that personal anxiety has a chronic character that is not related to the characteristics of the situation (Norton, Abbott, 2016; Leary, 1983; Gabdreeva, 2008).

The emergence of social anxiety is already traditionally associated with the experience of fear or unrest when interacting with other people in a situation of possible negative evaluation on their part. In our work, we relied on the definition of social anxiety by Leary, understood by him as "a state of anxiety resulting from the prospect or presence of interpersonal evaluation in real or imagined social settings" (Leary, 1983; p. 67).

2. Objectives / Methods

Since the experience of social anxiety is directly related to the nature of people's interaction with each other, the purpose was to study the types of behavior in the conflict and the manifestations of different types of social anxiety in adults. The main issue of the study was to identify what types of behavior in the conflict are the predictors of the types of social phobia and the general level of its intensity in adult respondents.

Two diagnostic methods were used in the study: 1) Social anxiety and social phobia questionnaire (O.A. Sagalakova, D.V. Truevtsev, 2012, 2014); 2) Thomas-Kilmann Conflict Mode Instrument (adaptation by N.V. Grishina) (Kilmann, Thomas, 1977), (Psychological tests, 2003).

The social anxiety and social phobia questionnaire (SASPQ) (O.A. Sagalakova, D.V. Truevtsev) is designed for differential diagnosis and determination of the dominant type of social anxiety, intensity of certain aspects of the manifestation of fear of evaluation in different situations. The questionnaire is based on a cognitive-behavioral approach to the issue of social phobia, social anxiety and its subclinical manifestations (shyness, awkwardness in socializing in different evaluation situations). It includes 29 items, in the form of questions to be answered on a 4-point scale of agree-disagree: 1 - no, 2 - rather no, 3 - rather yes, 4 - yes. Each of the items contains an indication of a certain type of evaluation situation, for example, speaking to an audience, knowledge check, getting to know or communicating with the opposite sex, drawing up documents and so on and so forth.

Scale 1. "Social anxiety in the situation of "being in spotlight, under supervision" (21 questions).

Scale 2. "Post-state ruminations and desire to overcome anxiety in expert situations" (15 questions)

Scale 3. "Restraint in expression of emotions due to fear of rejection and blocking of signs of anxiety in expert situations" (15 questions).

Scale 4. "Anxiety when displaying the initiative in formal situations due to fear of criticism in one's address and loss of subjective control" (18 questions).

Scale 5. "Avoiding direct contact during interaction in subjectively expert situations" (18 questions). In order to be able to compare, we transformed scores on each scale into the stens. The overall indicator of social anxiety and social phobia is also calculated (Sagalakova, Truevtsev, 2012, 2014).

The Thomas-Kilmann method allows to assess individual conflict strategies. While developing the inventory, the authors proceeded from a two-dimensional conflict management model in which one of the vectors is a focus on "cooperativeness" as an orientation towards the interests of all participants, and the second vector is "assertiveness" aimed at achieving one's own goals and satisfying only one's own needs and interests. There are distinguished five main conflict strategies: competing, collaborating, compromising, avoiding and accommodating. The inventory consists of 30 pairs of statements; it is necessary to choose the preferred strategy in each pair. One can score from 0 to 12 points for each strategy (Kilmann, Thomas, 1977).

106 adults, who undergo retraining on different psychological programs in one of the training centers in Moscow, all with higher education, age 22 to 46 (M = 33.29, SD = 5.74), among them 30 men (28.3%) and 76 women (71.7%) took part in the survey. Descriptive statistics, percentage and multiple regression analysis (step-by-step method) (SPSS Statistics 23) were used to solve the tasks at hand.

3. Results

The main results allowed to describe the group profile of subjects by types of social anxiety and types of behavior in conflict, as well as models containing types of behavior in the conflict for each type of social anxiety and for its overall indicator.

Note that the average indicator of the level of social phobia in the sample as a whole was equal to 29.55 points, which is on the border between the intermediate zone (social courage - episodic manifestations of social anxiety and moderately increased social anxiety). Table 1 contains data on the distribution of subjects according to levels of social anxiety intensity.

Table 1. Distribution of respondents according to the level of social anxiety.

Levels of social anxiety and social phobia intensity	*Frequency*	*%*
Unexpressed social anxiety (0 - 15 points)	9	8.49
Intermediate zone (social courage / episodic manifestations of social anxiety (16 - 30 points)	48	45.28
Moderately increased social anxiety (31-39).	21	19.81
Increased social anxiety (40 - 49 points).	21	19.81
High social anxiety (50 - 59 points)	6	5.66
Clinical social phobia (60 - 87 points).	1	0.94
Total	106	100

It should be noted that 45.28% of the entire sample are situationally capable of showing social courage or experiencing anxiety in the evaluation situation. At the same time, 46.23% of our respondents had an increased social anxiety to one degree or another. Accordingly, the same percentage of the study participants experienced moderate and increased anxiety (19.81% each), high social phobia was characteristic for 5.66%, and only one person (woman) had clinical social phobia (0.9%).

The group profile of the social anxiety components as the most pronounced ones is "Desire to overcome anxiety" (9.21 stens) and "Anxiety in response to initiative" (9); "Experiencing the social anxiety in the situation of attention" (8.71) and "Avoiding contact during interaction" (8.68) are manifested with approximately the same intensity; and our respondents are least likely to restrain their emotions (8.32).

The group profile of the types of behavior in the conflict made it possible to note the dominance of the compromising (7 points) as the strategy used with the greatest probability, avoiding (6.72) and collaborating (6.38) are used almost with the same frequency, accommodating is used less likely (5.27) and the rarest one is competing (4.27).

To identify the behavior in the conflict as predictors of social anxiety and its indicators, we used multiple regression analysis (step-by-step method, when several independent variables are introduced as parameters that affect the dependent variable).

Table 2. Coefficients for the dependent variable "Social anxiety and its characteristics".

Coefficients for dependent variable "Social anxiety "In spotlight"			
Model 1	β	t	p
(Constant)		9.286	0.000
Avoidance	0.457	4.050	0.000
Coefficients for dependent variable "Desire to overcome anxiety"			
Model 4	β	t	p
(Constant)		1.277	0.000
Compromising	-0.402	-3.437	0.001
Competing	-0.375	-3.211	0.002
Coefficients for dependent variable "Restraining emotions"			
Model 1	β	t	p
(Constant)		13.951	0.000
Avoidance	0.460	5.287	0.000
Coefficients for dependent variable "Anxiety in response to initiative"			
Model 2	β	t	p
(Constant)		6.944	0.000
Avoidance	0.464	5.436	0.000
Compromising	-0.171	-2.006	0.047
Coefficients for dependent variable "Avoiding contact during interaction"			
Model 2	β	t	p
(Constant)		15,872	0.000
Competing	-0.537	-6.079	0.000
Compromising	-0.357	-4.047	0.000
Coefficients for dependent variable "Overall indicator of social anxiety and social phobia"			
Model 6	β	t	p
(Constant)		13.759	0.000
Competing	-0.826	-7.226	0.000
Compromising	-0.586	-6.304	0.000
Collaborating	-0.517	-5.380	0.000
Accommodating	-0.411	-3.805	0.000

The share of the variation for scale "Social anxiety "In spotlight" was 20% (determination coefficient $R^2 = 0.209$) and it was explained by the choice of such type of behavior in conflict as avoiding. Accordingly, the remaining 80% can be explained by the effects of other variables that are beyond the scope of this study. The significance of the correlation coefficient was $p = 0.000$. We used the coefficient $k = 0.376$ (avoiding) and $b = 6.133$ to generate the linear regression equation. The linear equation has acquired the following form: "Social anxiety "In spotlight" = 0.376 × "Avoiding" + 6.133. At the same time, the more often adults use avoiding, the more intensely they experience social anxiety due to being in spotlight.

For scale "Desire to overcome anxiety", determination coefficient was equal to $R^2 = 0.224$. The variability in the level of desire to overcome anxiety was due to a change in the use of compromising and competing, allowing us to describe this variability by 22%. Accordingly, the remaining 78% can be described through the influence of other factors. The significance of the correlation coefficient was

p = 0.000. We used coefficients *k* = -0.428 (compromising) and *k* = -0.241 (competing); *b* = 13.268 to generate the linear regression equation. The linear equation has acquired the following form: "Desire to overcome anxiety" = -0.428 × "Compromising" + -0.241 × "Competing" + 13.268. This means that the less often adults use compromising and competing, the more often they feel the desire to reduce anxiety. And the weight of these factors in the model is almost the same, with a slight predominance of the role of compromising level.

The manifestation of restraint of emotions was explained by the change in the use of avoiding (R^2 = 0.212), allowing to describe this variability by 21%. Accordingly, the remaining 79% determined other factors. The significance of the correlation coefficient was p = 0.000. We used coefficients *k* = 0.329 and *b* = 6.109 to generate the linear regression equation. The linear equation has acquired the following form: "Restraint of emotions" = 0.329 × "Avoiding" + 6.109. At the same time, the more often avoiding is used in social interaction, the more restraint of emotions is manifested.

For such type of social anxiety, as a manifestation of anxiety in the situation of displaying the initiative (R^2 = 0.250), the change in the frequency of use of avoiding and compromising has acted as influencing factors, allowing to describe this variability by 25%. The significance of the correlation coefficient was p = 0.000. We used coefficients *k* = 0.490 (avoiding) and *k* = -0.239 (compromising); *b* = 7.383 to generate the linear regression equation. The linear equation has acquired the following form: "Anxiety in response to initiative" = 0.490 × "Avoiding" + -0.239 × "Compromising" + 7.383. This means that the less often adults use avoiding and the more often they use compromising, the more rarely they experience anxiety in situations where they should take the initiative. And avoiding contributes to this influence formula 2.71 times more than compromising.

Such kind of social anxiety, like avoiding contact during interaction (R^2 = 0.287) was due to a change in the use of competing and compromising, allowing us to describe this variability by 29%. Accordingly, the remaining 71% can be described through the influence of other factors that we considered. The significance of the correlation coefficient was p = 0.000. We used coefficients *k* = -0.331 (competing) and *k* = -0.399 (compromising); *b* = 12.880 to generate the linear regression equation. The linear equation acquired the following form: "Avoiding contact during interaction" = -0.331 × "Competing" + -0.399 × "Compromising" + 12.880. This means that the less often adults use competing and compromising, the more often they feel the need to avoid contact during interaction. Competing contributes to this influence formula1.5 times more than compromising.

For the overall indicator of social anxiety and social phobia, the determination coefficient was R^2 = 0.397. The variability of the overall indicator of social anxiety and social phobia was explained by the change in the use of competing, compromising, collaborating and accommodating, allowing to describe this variability by 40%. Accordingly, the remaining 60% can be described through the influence of other factors. The significance of the correlation coefficient was p = 0.000.

We used coefficients *k* = -2.163 (competing) and *k* = -2.781 (compromising), *k* = -1.918 (collaborating) and *k* = -1.294 (accommodating); *b* = 91.690 to generate the linear regression equation. The linear equation has acquired the following form: "Overall indicator of social anxiety and social phobia" = -2.163 × "Competing" + -2.781 × "Compromising" + -1.918 × "Collaborating" + -1.294 × "Accommodating" + 91.690.

4. Limitations

The main limitations of this work were the imbalance of the sample on the grounds of gender identity, the use of only two methods of research, as well as the study of the subjective opinion of the subjects on the level of their anxiety and the characteristics of behavior in the conflict.

5. Discussion and conclusions

Our research has shown that adults experience social anxiety and social phobia all the more intensely, the less often they use in social interaction such types of behavior in the conflict as competing, compromising, collaborating and accommodating. In this case, the greatest weight in this model belongs to competing. The model did not include only one strategy - avoiding conflict. Thus, the most important conclusion of our study is confirming a well-known fact: mastery of the skills of constructive use of conflict strategies allows to reduce social anxiety, while the use of avoiding raises both its overall indicator and its types.

Different models of strategies emerged as predictors for different types of social anxiety and social phobia. Moreover, avoiding had a direct correlation with the increase in such anxiety types as "being in spotlight", desire to overcome anxiety in expert situations, restraint in the expression of emotions, and also in the manifestation of initiative in situations of business interaction due to fears

associated with negative evaluation and criticism, a possible loss of control, leading to inadequate reactions.

We showed that the more adults used avoiding, the more intensively they experienced social anxiety due to being in spotlight.

The more often they used compromising strategies in the process of communication and were able to show assertiveness in the form of competing, the less they felt the desire to reduce anxiety. It was also revealed that the more often they used avoiding in social interaction, the more restraint of emotions was manifested. A low tendency to avoiding, with more willingness to compromising, was a predictor of lowering the experience of anxiety in situations related to the need to take the initiative. And avoiding contributed to this influence formula 2.71 times more than compromising.

It was found that for adults in our sample it is common, with a rarer use of competing and compromising, to experience the need to avoid contact during interaction. Competing contributed to this influence formula 1.5 times more than compromising.

The results of the regression analysis allow us using the regression formulas to predict the development of the dependent factor - in our case - overall indicator of social anxiety and social phobia - depending on the change of independent factors - in this case, conflict strategies. We have also shown that the use of avoiding increases both the level of social anxiety and its manifestations, such as experiencing anxiety in the situation of being in spotlight, restraining the emotions and anxiety in response to the initiative.

We believe that the results of this study will help, on the one hand, based on the preferred types of behavior in the conflict in adults, to predict the manifestations of different types of social phobia, on the other hand, to use behavioral change in conflict through psychological training as a way of preventing and overcoming various types of social anxiety and social phobia.

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IMPROVING LEARNING AND SCHOOL ACHIEVEMENT WITH AN ASSESSMENT AND TRAINING PROGRAM OF BASIC COGNITIVE FUNCTION

Martina Ratto, Paul B Cliveden, & Keiron T Sparrowhawk
MyCognition Ltd (United Kingdom)

Abstract

School achievement has commonly been associated with intelligence and performance scores obtained in skill-assessing tests. However, the identification of the neuropsychological bases of the children's academic outcomes is often missed by the common intelligence tests, which rely mainly on measures of the skills performed in the test itself, more than on the underlying cognitive functioning. This reflects on the main programs targeting pupils with special educational needs (SEN) and/or learning difficulties or disabilities, since they are focused on improving the academic weaknesses by training these weaknesses. The program presented here, in contrast, is aimed at assessing children's basic neurocognitive function which underlies a broad range of academic skills and training those domains showing weaknesses. The program comprises an online, 15-minute, self-administered assessment that includes five extensively validated tests targeted on key cognitive domains – attention, working memory, episodic memory, executive function, and processing speed. The assessment's results are then used to customise a personalised training program embedded in an engaging and challenging video game, which targets pupils' weakest domains more intensively. The video game tasks have been designed to be different from the assessment's tests, ensuring that the scores are immune to a practice effect and that potential improvements are due to an actual improvement in cognitive functioning and not to a single performance skill. A number of case studies have evaluated the potential transfer of cognitive improvements to academic achievement. Initial studies involving more than 600 mainstream school students showed that, for those who completed the recommended training program – video game playing for 90 minutes per week for 12 weeks – significant improvement in cognitive function resulted, especially in working memory and executive function. The relationship of these two cognitive domains with basic academic skills such as reading or mathematics is widely reported in the literature. Further studies involving pupils with SENs or learning difficulties/disabilities showed large improvements across all the cognitive domains with measurable progress in all the main subjects, including mathematics, English, and science for the students who followed the training program, while minor achievements were obtained in a control group participating in a homework class. Current studies are expected to provide additional evidence on the role played by the core cognitive functions in developing mathematics skills.

Keywords: *Cognitive assessment and training, learning difficulties, learning disabilities, academic achievement, special educational needs.*

1. Introduction

Most psychological assessments adopted by schools are intelligence tests. Traditionally, intelligence scales are more focused on high-level skills such as reasoning, problem solving, numeracy, and literacy. Therefore, this performance-oriented approach may be of little use when it is intended to investigate the psychological foundations of academic achievement and general learning abilities. The underlying neuropsychological bases of cognitive functions are effectively responsible for learning processes, involving a combination of different domains.

Attention and memory processes and executive function play an important role in determining general learning skills, such as concentrating in a task, organizing and retrieving information, and employing meta-cognitive strategies. In addition to this, working memory mechanisms and executive function are commonly known to be involved in calculation skills and mathematics achievements, while processing speed and accuracy and attention are responsible for literacy skills. This is particularly evident

in students having SEN, such as attention deficit hyperactivity disorder (ADHD), dyslexia, or dyscalculia, as these performance deficits are usually related to cognitive deficits in specific domains.

However, many programs targeting SEN are focused on improving academic performance itself with training tasks in numeracy and literacy, without reaching the underlying neuropsychological issues. The approach presented here has as its primary objective introducing a new paradigm in education of supporting students' learning and academic achievement by targeting the neuropsychological foundations of these. This approach is essentially different from a performance-based one, since it is mainly based on students' cognitive health, rather than on intelligence or academic core skills. This is implemented in a computerized self-administered cognitive assessment and training program aiming to identify students' weaknesses and strengths, and to provide them the proper tools to enhance their cognition and ultimately their learning ability and academic achievement.

2. The assessment and training program

The program includes a computer-based, self-administered assessment comprised of five tests, targeting attention, working memory, episodic memory, executive function, and processing speed, on whose scores a cognitive training program is built, embedded in a video game. The assessment can be completed in 15 minutes and both the assessment and the training game are available online and are accessible from personal digital devices. The recommended training program is to play the cognitive game at least three times a week for 30 minutes a day for 8-12 weeks after the first assessment, and to monitor the progress by repeated assessments every 4 weeks and at the end of the training program.

2.1. The assessment system

The tests that comprise the assessment may be considered revised versions of paradigms that are commonly employed in traditional neuropsychological assessment, as illustrated in Table 1. This table indicates which domains are primarily indexed by each of the measures, as well as traditional 'paper-and-pencil' and computerized versions of the paradigms employed in the assessment presented.

Each subtest in the assessment keeps record of two variables, the mean reaction time and the number of incorrect answers, so that at the end of the assessment a set of raw scores is obtained. These raw scores, a measurement of the latency and the errors for each subtest, are then combined to produce a score from 1 to 100 for each cognitive domain, the average of which generates an overall cognitive score.

Table 1. Assessments subtests with related cognitive domains and paper-and-pencil equivalent tests.

Test in online assessment	**Principal cognitive domain**	**Paper & pencil equivalent**
Simple Reaction Time	Psychomotor speed	Donders Type A
Choice Reaction Time	Attention	Donders Type B
Visual recognition memory	Episodic memory	Benton Visual Retention Test
2-Back	Working memory	Wayne Kirchner N-back test
Trail Making B	Executive function	Trail Making Test Part B

The assessment system provides students with personalized reports in real time, showing their current scores, their progress over time, and detailed explanations on individual strengths and weaknesses. The first part of the reports shows a pentagonal radar chart representing the student's cognitive function across the five cognitive domains. If the student's scores are balanced across the five domains, the pentagon graph will have a regular shape – the larger the size of the pentagon, the better the student's overall cognitive function. If the pentagon has an irregular shape, it means that the scores are not balanced across the domains, so that the user will have both strengths and weaknesses in different domains of cognition. An interactive graph representing the individual progress over time for each domain is then displayed, allowing the students to monitor their improvements and the existing relationships between the overall score and the scores for each domain. In addition, a graph showing the relationships between the speed and the accuracy components of the overall score is provided, allowing the students to monitor their progress over time across the two components. Finally, a detailed explanation of the results for each domain is reported. This furnishes the students with guidelines to understand their weaknesses and strengths for each domain and with suggestions on how to improve specific skills or learning strategies, personalized based on the individual scores.

The system also provides teachers with class reports, which allow a remote monitoring of the pupils' cognitive level across time and which identify the domains showing deficits, highlighted with different colors. Teachers are also provided with knowledge tips about how learning and teaching are linked with cognitive function.

2.2. The training game

As mentioned above, the training is based on the student's assessment results. This produces personalized training for every user, calibrating the amount of the training for each cognitive domain on the individual scores. The lower a student's score, the more intensive the training for that domain.

The training works by encouraging the player to undertake repetitive, and increasingly more challenging, tasks that are embedded in a video game. The tasks are designed to train a specific cognitive domain. Each cognitive domain is mainly trained by a particular training loop, even if some domains are trained across different tasks, as shown in Table 2.

Table 2. Example of training tasks with related cognitive domains.

Training task	**Description**	**Main cognitive domain**
Memory shot	Remember the position of the glowing fish in the loop.	Working memory
Quick shot	Snap the fish as soon as you see it.	Processing speed and attention
Careful quick shot	Snap the fish as soon as you see it, but be careful not to snap the shocking, flashing fish.	Attention and executive function (inhibition)
Group shot	Snap the group of fish when all are together.	Attention and processing speed
Fish tracker	Remember which fish are glowing after they change position.	Working memory
Oceanic survey	Remember which fish have you seen at the end of the dive.	Episodic memory
Missions and map exploration	Achieve the goals proposed by the daily missions and try to discover new areas on the ocean map.	Executive function (planning and organizing)

The game develops on different structural levels. At the basic structural level, there are the loops, which corresponds to the five first tasks in the table above. The loops are organized into dives, so that in each dive the user will experience a set of loops. The ocean map represents a meta-level of cognition. At the map level, users must organize their dives to both achieve the proposed mission and to discover new areas. The progress of the players on the map, and consequently the increasing difficulty of the training game, depends on the coins the players are able to collect during their dives. In this way, the game adapts its difficulty to the level of improvement reached by the player. Since the intensity of the training also depends on the individual cognitive scores, the number of loops for each type of task that the user experiences depends on the score obtained for each cognitive domain. In this way, more impaired domains will receive greater training.

3. Case-studies

A number of studies conducted in different schools have shown that the assessment described is able identify those pupils who struggle in one or more disciplines or have general learning and behavioral difficulties. The assessment has also identified specific cognitive issues in one or more cognitive domains, even in gifted and talented students.

In order to evaluate the effectiveness of the training program, an initial study has been conducted involving 600 students aged 11-13 from a school in the Netherlands, equally divided in a training and a control group. Both the groups undertook the assessment at baseline and after 4 weeks. During the 4 weeks, the training group undertook a minimum of 60 minutes a week of cognitive training. The study showed positive cognitive effects at 4 weeks in all domains, with statistical significance in working memory and executive function, as shown in Table 3.

Table 3. Results for a first study involving 600 students aged 11-13.

Domain	**Mean Difference**	**p-value**	**Cohen's d**
Working Memory	-0.266	0.0102	-0.202
Episodic Memory	-0.109	0.3277	-0.077
Attention	0.093	0.4818	0.055
Psychomotor Speed	0.212	0.1139	0.125
Executive Function	-0.150	0.0240	0.178

A subsequent study with eleven schools in Wales involved 754 year 7 and 8 students who initially completed the assessment, among whom 108 were scheduled for following the training program over 8 weeks. Strong gains (more than 10 points in the overall cognitive assessment score and up to 20

points increase in attention and processing speed) were identified in students who engaged in the training program for more than 60 minutes per week. In contrast, students who trained for less than 30 minutes per week showed little or no improvement.

The well-documented link between cognitive ability and learning and academic performance has been found in a study in a London school involving 43 year 8 and 9 pupils having SEN or learning difficulties, most of whom had English as a second language. They were equally divided into a training and a control group, which had an additional homework boost in addition to normal lessons and homework. Both groups of students were assessed with at weeks 0, 4, 8, and 12. Teachers also assessed academic achievements across 13 subjects at baseline and at the end of the study. The overall cognitive function improvement was greater in the test group – almost twice that of the control group, particularly in executive function and episodic memory. All domains showed a trend in favor of the test group. Across the three core subjects of mathematics, English, and science, the test group consistently had better results than the control group. The results showed that the cognitive function improvement in the test group was mirrored by improvements in their academic performance. A positive correlation between the amount of cognitive training and improvement in academic performance has been also found, most pronounced in English.

4. Conclusion remarks

Initial studies showed the feasibility of the adoption of a self-administered cognitive assessment and training program based on a video game in school settings, and the effectiveness in terms of enhancement of the main cognitive functions responsible for learning abilities and academic achievement. Current studies are further investigating the effect of cognitive training on numeracy and literacy in different cohorts in primary schools and the relationship between cognition and learning across various stages of students' education.

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MENDING MAYA: AN ANALYSIS OF AGING AND INTERGENERATIONAL CONNECTION IN DELHI, INDIA

Aleksandr Chandra
Psychology Department, Connecticut College (USA)

Abstract

Past research suggests that intergenerational programming can have positive effects in bridging generational gaps. In an effort to explore intergenerational programming in one specific, cosmopolitan community in India, this research examined intergenerational connection and understanding and tested the effectiveness of implementing an art-based intergenerational intervention called Mending Maya. The intervention engaged seven young adults from a young adult's empowerment and learning center and eight seniors at an old age home. This eight-week intergenerational intervention connected both young adults and seniors through three specific art forms: music, arts and crafts, and theatre/meditation. Before and after the conclusion of this intergenerational intervention, intergenerational connection and understanding were explored in semi-structured interviews with senior program participants and young adults from the surrounding community (pre-program interviews), and with young adult intervention participants (pre and post-program interviews and structured assessments). Interviews were thematically coded. Results revealed that intergenerational arts programming in New Delhi, India can be an effective way to repair and restore webs of attachments between generations both inside and outside the actual parameters of the program. Aspects of the program that appeared essential to supporting these effects were utilization and maximization of existing community resources and a focus on cultural values that emphasize family and community. The final discussion synthesizes perceptions of aging in a changing world and program evaluations in order to paint a picture of aging as it is currently understood in Delhi, India. The discussion also examines the intergenerational intervention's relevance to and sustainability within the Delhi community, and suggests ways the Delhi community can utilize intergenerational programming to enhance personal and community development through civic engagement.

Keywords: *Aging, art, intergenerational contact, community development, India.*

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1. Introduction

I will talk about how I arrived at the intellectual inquiry of aging and intergenerational connection in both local and global communities. I will discuss that my own family members sparked my unique interest in intergenerational connection to begin with between myself and my own grandparents on my mother's and father's side. I took this interest into my own local community when I founded and implemented the Sages & Seekers eight-week intergenerational contact program. I then took my experience in a more research oriented approach with India to me when I implemented Mending Maya, an eight-week art-based intergenerational contact program at a old age home in Delhi.

2. Summary of Presentation

Review of aging trends globally and in India.
Overview of intergenerational contact program to address growing generational gap: Mending Maya.
Review of study methodology.
Key findings and implications .

3. The Shape of Aging

I will now focus on how aging has changed shape over time. On the screen there are three images: a pyramid, a rectangle, and a funnel. The image of the pyramid historically represents the shape of our population across different countries and cultures. The population pyramid represents how adolescents and the youngest adults of our society occupy the largest portion of the population pyramid to the point where it winnows to a tiny peak at the top with the older adults of our society occupying the smallest portion of the population pyramid. Now the population pyramid is currently being reshaped into the population rectangle. This means that there is a more even distribution of adolescents and older adults

across the board. What will happen in the future is that the population rectangle will gradually transform into the population funnel. The adolescent members of society who once occupied the largest portion of the population pyramid will gradually come to occupy the smallest portion of the population funnel. The older adults in our society who once occupied the smallest portion of the population pyramid will gradually come to occupy the largest portion of the population funnel.

3.1. Aging in Delhi India

- 250 million older persons live in India & **11 million** older persons live in Delhi and NCR
- million older persons will be living in India by 2050
- 83% of older persons were found isolated in old age (60+) in Delhi and NCR.
- 44% had no/less interaction with family members of within society is a major cause of isolation or loneliness.

3.2. Aging in a Changing World

National/transnational dispersal of families.
Increase of women in the workforce.
Individualism, materialism, careerism, nuclear families, and a scarcity of time.
Old age homes.

3.3. Maya

A Bengali term that denotes webs of attachment, affections, jealousies, and love that make up social relations in India

4. Hypothesis

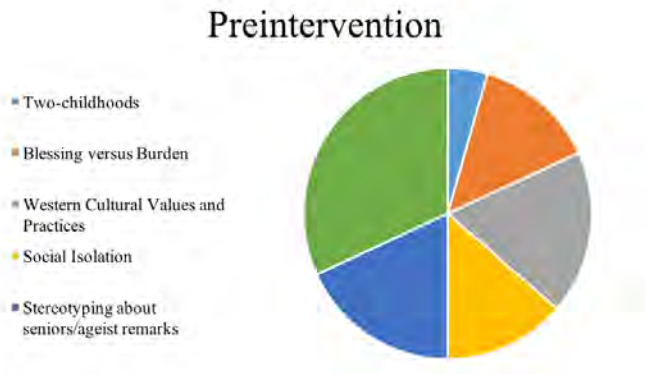
An 8-week art-based intergenerational contact program *(Mending Maya)* involving young adults and residents of an old-age home in Delhi India would repair and restore webs of attachments through: intergenerational connection and intergenerational understanding

5. Methodology

Quantitative
Five Scales
Filial responsibility
Traditional values
Qualitative
Semi-structured interviews
Coding
Transcendental Phenomenology
Pre-intervention
Eight Seniors
Seven Young Adults
Post-intervention
Seven Young Adults
Interview Questions
"What comes to mind when you think about seniors today?"
"How would you describe them in your own words?"

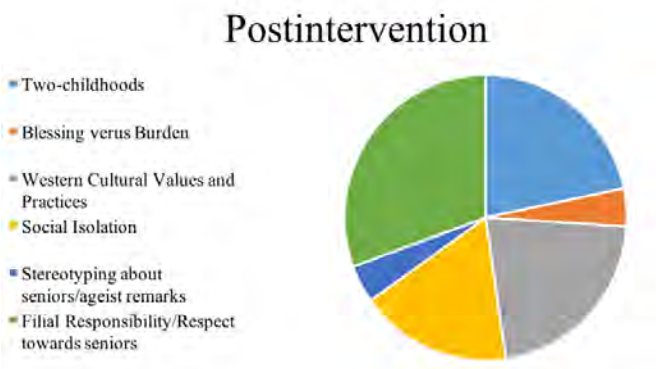
6. Pre-intervention interview themes

Figure 1. Preintervation results.



In this figure, major themes extrapolated from student responses conducted through semi-structured interviews are displayed. Two-childhoods theme means that students believed older adults in India were youthful as children and youthful again as older adults. Blessing versus burden theme means students thought older adults in India were either a blessing or a burden in their lives. Western cultural values and practices theme means that students believed intergenerational interactions were impacted by larger global forces (i.e., careerism, individualism, materialism, etc.). Social isolation theme means that students in the program loneliness and isolation characterized the lives of older adults in Indian society. Stereotyping about seniors and ageist remarks theme meant that students in the program were stereotyping about seniors or making ageist remarks towards older adults in their responses during the semi-structured interviews.

Figure 2. Postintervation results.



Will discuss how themes changed after the eight-week art-based intergenerational contact program.

7. Limitations and Future Directions

Small sample size
Limited power to detect quantitative differences
Need to expand to assess generalizability of intervention
Short duration
No senior post-Mending Maya evaluations
Evaluations of positive impact based only on informal observations during the intervention
No control group post-Mending Maya evaluations
A control group was recruited and assessed pre-MM but resource constraints interfered with post-MM follow-up

8. Conclusion

Students decreased their stereotyping about seniors and ageist remarks over the course of the eight-week art-based intergenerational contact program.

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IS THERE A CONCEPTUAL SET BIAS IN MULTIPLE-TARGET SEARCH?

Margit Höfler & Birgit Hübel
Department of Psychology, University of Graz (Austria)

Abstract

Visual search is the search for a target object (e.g. a particular book on the bookshelf) among distractor objects (e.g. all other books on the shelf). Previous research has indicated that, if we search for more than one target simultaneously in a display, the detection rate of subsequent targets in the display can be reduced once the first target is found. Such subsequent search miss errors (SSMEs) have been shown to be very robust but the underlying mechanisms are still unclear. In the current experiment we tested whether a conceptual set bias might cause SSMEs. Due to a conceptual set bias, a target from a category different to the first target's category should be missed more often because search is assumed to be guided to those items that share the same category as the first target. For instance, if we search in a display for a drawing of a dangerous weapon among everyday objects and the first weapon we find is a gun, we might miss another category of weapon (e.g. a knife) more often than a weapon of the same category (another gun). In order to test this prediction, we had 26 participants search for drawings of dangerous objects of the same or different categories (guns and/or thrust weapons) within a display of everyday objects. Each search display consisted of 20 items and contained either no, one or two targets. If two targets were in the display, they were either of the same category (e.g. both were guns or both were thrust weapons) or of a different category (one gun and one thrust weapon, respectively). We analysed response times and search accuracy as measures for search performance and possible SSMEs. The results showed that, as expected, the search was overall longer, if only one search target was present as compared to when two or no targets were present. However, search accuracy did not differ with regard to the target category (same or different) and we did not observe a SSME. Together, these results suggest that, at least with the current set of stimuli, there is no conceptual set bias in multiple-target search.

Keywords: *Visual search, multiple-target search, subsequent search miss error, attention.*

1. Introduction

Searching for one or more objects in an environment that consists of various other objects is an everyday human behavior. Examples for such searches are, for instance, the search for a 10-cent coin in our purse or the search for a friend in a crowded place. In the cognitive sciences, visual search paradigms are often used to investigate the deployment and allocation of attentional processes. In a typical experiment, participants are asked to search for a target object among a varying number of distractor objects (e.g., to search for a T among Ls) in a computer display and to decide about the target's absence or presence in the display. Usually, in each trial a new search target and search display are presented and response times are measured in order to investigate search performance.

If only one target is present in a search display (and participants are aware of this), the search can be terminated once this single target is found. However, if no target is present or if, in so called multiple-target search, more than one target can be present in a display, the search process becomes more complicated. For instance, if a target is absent in a display, participants have to search through all items in order to come to this final conclusion. This is called an exhaustive search. Also in a multiple-target search, when participants have to decide whether there are one or two target(s) in the display, search cannot be stopped after a target is found. Rather, participants have to search through the remaining objects until they either find the second target or come to the conclusion that no further target is present. Such a kind of search leads to the perhaps contra intuitive finding that search is faster when two targets are present compared to only one. This is because participants can terminate the search once they find the second target but have to continue searching through all remaining objects if the second target is absent (e.g., Körner & Gilchrist, 2008, Gibson, Li, Skow, Brown & Cooke, 2000).

Besides response times, search accuracy is also an important indicator of efficient search. Errors that occur during visual search can make the search not only inefficient but can also have serious consequences. For instance, Drew, Võ, and Wolfe (2013) showed that 20 out of 24 radiologists (and all 25 non-experts) missed a small picture of an unexpected object (gorilla) while searching for lung nodules in a scan and Potchen (2006; cited after Drew et al.) showed that about 60% of the tested radiologists did not noticed that the collarbone was removed from chest x-rays when inspecting them. Furthermore, Tuddenham (1962) had three radiologists scanning more than 200 x-rays and showed that these experts often missed further anomalies in x-rays once they had found one. Tuddenham argued that the experts stopped searching the x-ray once they have found an anomaly because they were already "satisfied" with the search. Smith (1967) therefore named this phenomenon "satisfaction of search".

However, "satisfaction of search" does not seem to be the only factor responsible for missing a second target more often once a first target is found (see Cain, Adamo, & Mitroff, 2013, for an overview). For instance, there is evidence that participants do not stop searching after they had found the first target (which would be postulated by the "satisfaction of search"-hypotheses) but continue searching for the second target (see e.g., Cain et al.). This would imply that these search errors are not caused by failing to initiate a subsequent search but rather by failing to "recognize" the other target. Because of these mixed findings with regard to the cause of the effect, the terminology was recently changed from "satisfaction of search"-effect to the more neutral term "subsequent search miss error" (SSME; see Cain et al.).

Two main questions that arise from SSMEs are their origin and how they can be reduced. Put it in other words, why is a further target in an environment missed more often after one target is found and how can this error - given the possible severe consequences in various contexts - be avoided? With regard to the latter questions, Fleck, Samei and Mitroff (2010) investigated which factors cause SSMEs, having their (nonmedical) participants search through rather abstract stimuli (i.e., searching for Ts among Ls with variable saliency). They not only observed that SSMEs occur also in a nonmedical environment with non-experts as participants (making it also relevant for other search tasks such as, e.g., x-ray scanning in airport security) but also that these errors are affected by several factors such as the expectancy of a second target and external pressure (i.e., time or reward). Furthermore, Cain and Mitroff (2013) demonstrated that SSMEs disappeared when the first target was removed from the display after it was found or when it was made highly salient. However, we have recently shown that SSMEs are not reduced even if participants receive a positive reward when finding a second (less-salient) target (Höfler, Faßbender, & Ischebeck, 2016).

In the current paper, we were less interested in how SSMEs can be avoided but rather in the first question asked above; namely under which circumstances SSMEs occur. Previous research has suggested that SSMEs are shown more often for those targets that are perceptually similar to the first target and less often for targets that are perceptually different (e.g., Cain et al., 2013). However, such a perceptual-set bias was shown not to be independent from the category of a target. Biggs, Adamo, Dowd & Mitroff (2015) developed a mobile "Airport Scanner App" (KedlinCo, https://www.airportscannergame.com), in which a luggage inspection at the airport was simulated. In their study, they had online-gamers play this app. The gamers had to search for (zero, one, two or three) dangerous objects in a bag. The dangerous objects were either gun-related objects or explosives-related objects. Their results showed that if the second target was perceptually similar to the first target (i.e., was of the same color as the first target) it was found more often than when it was perceptually different (i.e. of another color than the first target). However, this effect was qualified by the category of the second target: The second target was also found more often when it was from the same category as the first target and less often when it was from a different category. That is, once a gun-related target was found in a bag, a further gun-related target was found with higher probability than an explosives-related target (and vice versa).

In the present experiment we wanted to replicate and extend the findings of Biggs et al. (2015) with regard to the semantic/conceptual set bias in a more controlled environment. That is, we had our participants search in a display that consisted of 20 drawings of every-day objects. The displays could contain none, one or two "dangerous" target objects. The participants' task was to find these targets and to mark them with a mouse click. Critically, if two target objects were present in the display, the targets were either from the same category of dangerous weapons (i.e., both targets were guns or thrust weapons) or from different categories (one target was a gun and the other was a thrust weapon). We expected that, if a conceptual set bias exists, a second target should be found with higher probability when it is from the same category as the first target and with smaller probability when it is from the other category.

2. Methods

2.1. Participants

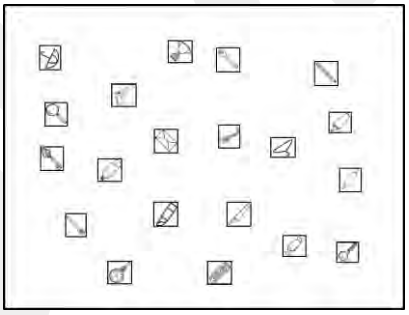
26 participants (five male, 21 female; *M* = 22.3 years, *SD* = 4.3) took part in this experiment. All of them had normal or corrected-to-normal vision and were naïve with regard to the purpose of the experiment. Most of the participants received class-credit for their participation. All of them gave informed consent. The experiment was approved by the ethics committee of the University of Graz.

2.2. Design, Material and Procedure

In order to test a conceptual set bias in multiple-target search, we had participants search in different search displays for dangerous objects of two different categories (guns or thrust weapons) within every-day objects (see Figure 1). All items were simplified drawings of every-day objects taken from the database thenounproject.com. Each display consisted of 20 objects (18, 19 or 20 distractors and 2, 1, or 0 targets, respectively). In each trial, the 20 objects were randomly selected from 50 monochrome everyday distractor objects and 20 monochrome target objects (guns or thrust weapons). In 50 % of the trials, no target was presented at all in the display (absent search). On the remaining half of the trials, one target (single-target search) or two targets (dual-target search) were presented. In case of single-target searches, the target was a gun on half of the trials and a thrust weapon on the other half. Accordingly, on half of the dual-target searches both targets were of the same category (i.e., either were both guns or thrust weapons) whereas on the other half the targets were of different categories (i.e., one target was a gun and the other a thrust weapon). The combination of target number and target conditions/categories (type of weapons and same/different category) resulted in four search conditions: 60 single-target searches (gun or thrust weapon); 60 two-targets same-category searches (two guns or two thrust weapons), 60 two-targets different-category searches (one gun, one thrust weapon) and 180 absent searches. Besides measuring the manual response times for the search we also measured the accuracy of target detection.

At the beginning of a trial, a fixation cross was presented at the center of the screen for 1,000 ms, followed by the search display. The participants were instructed to search for all dangerous weapons in the display and to select these targets via a mouse click. Upon mouse click, the item became marked with a blue circle. Participants were shown all objects before the start of the experiment in order to avoid any uncertainty about possible target items. Furthermore, they were told that maximally two targets were present in the display. The search was completed and the display was cleared when the participants pressed either the space button or did not terminate search within 15 seconds. Each participant completed two blocks of 180 searches each.

Figure 1. Schematic example display (Stimuli not drawn to scale).



3. Results

A target was defined as correctly identified when the mouse click was within a ± 30 pixels area around its center. Searches that did not meet this requirement and searches in which participants did not complete the search within 15 sec were excluded from the analysis (all in all, 3.2 % of the searches).

3.1. Response times

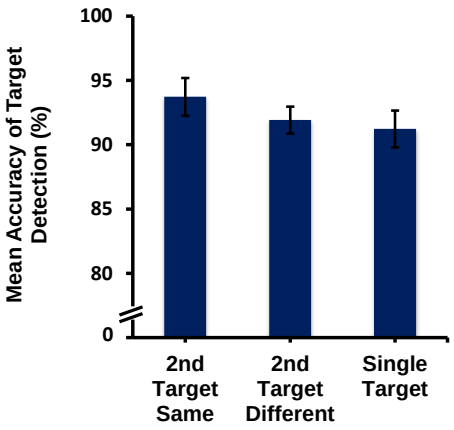
On average, participants needed 8,544 ms (*SD* = 1,467 ms) in order to find a single target, 6,751 ms (*SD* = 975 ms) to find two targets of the same category, 6,830 ms (*SD* = 864 ms) to find two targets of a different category and 7,143 ms (*SD* = 1,161 ms) for absent searches. A one-way ANOVA for repeated measures revealed a significant effect of search condition, $F(1.34, 33.47) = 36.75$, $p < .001$, $\eta^2_p = 0.595$ (Greenhouse-Geisser corrected). Post-hoc comparison (with Bonferroni corrected alphas) showed that single-target searches took reliably longer than dual-target searches (independent of category) and absent

searches (all p's < .001). No other differences were found (all p's > .05). This finding is in line with previous findings on multiple-target searches (e.g., Körner & Gilchrist, 2008; Gibson et al., 2000) demonstrating that, when participants have to search for one or two targets in a display, search performance is worse when only a single target is present as compared to when both targets are present.

3.2. Search accuracy

In single-target searches, participants correctly identified the target on average on 91.2 % of the trials (*SD* = 8.1 %; guns: 91.4 %, thrust weapons: 91.0 %). In dual-target (same category) searches, they correctly found both targets on 91.2 % of the trials (*SD* = 6.1 %; guns: 91.5 %, thrust weapons: 90.8 %). Finally, in dual-target (different category) searches, they correctly found both targets on 89.6 % of the trials (*SD* = 9.1 %). These findings suggest that participants had no difficulties identifying the target objects in general. Furthermore, the findings also revealed that search accuracy was the same for guns and thrust weapons both for single- and dual-target searches (all p's > .05). Hence, any further findings with regard to a possible SSME and a conceptual set bias should not be affected by the type of the target (gun or thrust weapon).

Figure 2. Percentage of found targets for single-target searches and for correctly identified second targets in dual-target searches. Error bars represent the 95% confidence intervals (Cosineau, 2005).



In order to investigate whether there was a SSME effect at all in the present experiment and whether this possible effect depends on the category of the second target (i.e., whether the second target is from the same or different category compared to the first target), we compared the probability to find the second target in dual-target trials (same or different category) with the probability to find the target in single-target trials (see Biggs et al., 2015). If there is a SSME effect in general, the probability to find a single target should be higher than the probability to find a second target in a dual-target search (given the first target is found successfully). Moreover, if there is a conceptual set bias qualifying the SSME effect, the probability to find the second target in the dual-target same-category search should be higher as compared to the probability to find the second target in the dual-target different-category search.

As stated above, participants correctly identified a single-target on 91.2 % of the trials. Furthermore, they found the second target in a dual-target search with slightly higher probability when it was from the same category (*M* = 93.7%, *SD* = 1.1 %) than when it was from the other category (*M* = 91.9%, *SD* = 1.1 %) (see Figure 2). A one-way ANOVA for repeated measures with target condition (single target, 2nd-target same category, 2nd-target different category) for repeated measures revealed that this difference was statistically not reliable however, $t(26) = 1.65$, $p = .11$. This finding suggests that participants neither showed a SSME effect nor a conceptual set bias while searching for the second target.

4. Discussion & Conclusion

Previous research has indicated that subsequent search miss errors (SSMEs) are a common source of error when searching for multiple targets in a display (e.g., Fleck et al., 2010). Here we were interested in whether such SSMEs are due to a conceptual set bias. That is, we were interested in whether a second target is missed more often when it is from a different category than the first target. To this end, we had participants search through a display of every-day objects in order to find one or two dangerous

objects. If two objects were present, they could be either from the same category (two guns, two thrust weapons) or from different categories (one gun, one thrust weapon).

In line with previous findings on multiple-target searches we could show that search took significantly longer if there is only one target in the display as compared to searches in which none or two targets were in the display. This effect was independent of the type of target object (gun or thrust weapon). However, and contrary to previous research, we could neither find a SSME effect in the current experiment nor a conceptual set bias. That is, in dual-target trials, participants did not find a second target less often as compared to a single-target trial. Furthermore, the probability to find a second target was independent of whether this second target was from the same or different category as the first target.

One reason why we did not find any evidence for a SSME effect could be that an expectation bias has influenced the search accuracy for the second target. For instance, Fleck et al. (2010, Exp. 9 and 10) varied the ratio between single-target searches and dual-target searches. That is, in one of their experiments it was (as in the current experiment) equally likely to find one or two targets in the display whereas in another experiment single-target trials were four times more likely than dual-target trials. The findings of Fleck et al. showed a SSME effect for the latter case but not if two targets were present on half of the trials. This suggests that SSMEs are also affected by the expectation of how many targets will be present in a search display. If searchers find a second target only rarely in a display, they might become biased to miss a second target if it is present. In contrast, if there is a second target in a display on every other trial, participants seem to learn this regularity and adapt their search behavior accordingly. It remains to future work to investigate this "expectation bias" in greater detail.

A further factor that might have influenced the current findings are the stimuli we used. That is, we used two types of dangerous objects (guns and thrust weapons) and defined the "category" of the targets accordingly. However, the actual discrimination between these two types of weapons might have been insufficient such that participants might have seen both "types" of targets as belonging to a single category. In such a case one would not expect any difference in finding the second target of the same or different category. We therefore cannot reject a possible conceptual set bias per se in multiple-target search as our set of stimuli might have been insensitive to trigger such a bias.

To sum up, our findings revealed that there is, at least with the current stimuli, neither a SSME effect nor a conceptual set bias when searching for one or two targets of the same or different category in a display. As we have addressed some points that might have influenced the current findings, these might provide a starting point for future research on the hallmarks on SSMEs and on how they can be avoided.

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WORKSHOPS

GCRIS

EVIDENCE-BASED TREATMENT STRATEGIES FOR TRICHOTILLOMANIA AND COMPULSIVE SKIN PICKING

Omar Rahman
University of South Florida (USA)

Abstract

Purpose:
- To provide a review of current evidence-based treatment for trichotillomania (TTM; hair pulling disorder) and compulsive skin picking (CSP).
- Demonstrate the basics of conducting behavioral interventions for hair pulling and skin picking
Background:
Hair pulling and compulsive skin picking are typically chronic disorders that usually begin in childhood. Behavioral and biological understanding of these disorders is limited. In addition, they are often difficult to treat, with less than optimal response rates and a high relapse rate.
Behavioral interventions, such as habit reversal training (HRT), are considered the most effective treatment for these issues. Recently, other techniques (e.g., acceptance and commitment therapy and dialectic behavioral therapy) have also demonstrated some effectiveness in increasing treatment response, often in conjunction with HRT.
Pharmacological treatment has not been very effective for TTM and CSP. However, a recent review (McGuire et al. 2014) has suggested that in certain cases serotonin reuptake inhibiters (SRI) may be somewhat effective in reducing hair pulling.
Key points
- This workshop will cover implementation of evidence-based behavioral treatment for hair pulling and compulsive skin picking.
- Strategies will include Habit Reversal Training, response prevention techniques, cognitive reappraisal, and stress management techniques.
- We will review evidence for pharmacological treatment.
- We will also discuss new advances in the treatment of these disorders, such as using adjust methods, treatment for young children, and ways to enhance treatment outcomes.
Description of the participants:
Participants will be mental health professionals (psychologists, psychiatrists, therapists, counselors, etc.) who wish to develop skills in understanding and providing comprehensive behavioral treatment for hair pulling and skin picking. Maximum number will be 40.

Keywords: *Hair pulling, skin picking, habit reversal training. trichotillomania.*

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CREATIVITY: ITS COGNITIVE, EMOTIONAL AND MOTIVATIONAL ASPECTS

Shulamith Kreitler
School of Psychological Sciences, Tel-Aviv University (Israel)

Abstract

The paper presents a comprehensive model of the major general and specific factors of creativity in the domains of cognition, motivation, emotions, personality, behavior, and health and its environmental context.

Keywords: *Creativity, cognition, motivation, cognitive orientation, meaning.*

1. Introduction

Creativity is one of the most intriguing and complex phenomena of human behavior. It is intriguing because it is everywhere – in every person or discipline or age or period or occupation – yet it eludes definition. It is complex because it depends on a great number of factors – cognitive, emotional, motivational, physical and mental health, social, personality, cultural, environmental – none of which can be overlooked if we want to understand, predict, and nurture it. It can be manifested in all domains, including art, science, technology, human relations, parenting, cooking, teaching, medicine, design, sports, entertainment, business, advertisement, etc. No domain can survive and flourish without creativity. Creativity is defined as the production of something that is both new and meaningful. The output may be concrete, or abstract, specific or general. New is a relative adjective and defined in the framework of some framework (e.g. a specific plant, technology, scientific domain) or relative to a given number of people (e.g., family, community, country, humanity at large). Meaningful is defined in operational, functional or ideational terms.

2. A general model of creativity

According to the Kreitler model of creativity, creativity is a multi-process and multi-dimensional phenomenon. The primary aspect that needs to be considered is that creativity is both a general phenomenon and a specific one. General means that a person may be creative in a variety of domains, as has been shown by create people like Leonardo da Vinci who created in art, technology and architecture, Goethe who created in physics, literature, and politics, or Picasso who created in both painting and sculpture. In addition to the general tendency for creativity there is the tendency for creativity in a particular domain, which requires different processes and abilities than the general tendency. Thus, creativity in mathematics may be expected to require for example different cognitive abilities than creativity in the plastic arts, in addition to those abilities which may be expected to underlie creativity in general. Despite the fact that creativity may be a general tendency not all creative individuals may manifest or experience or have the chance to express the general tendency for creativity. On the other hand, it is possible that some individuals would manifest only the general tendency for creativity and not the specific one in any particular domain (Kreitler & Kreitler, 1990a). Accordingly, the general comprehensive model of creativity consists of the following levels: cognition, motivation, emotion, personality, health, behavior, and the environmental context. Notably, the first six levels refer to the creative person, whereas the last level refers to the environmental context in which the creative person functions and which includes the family, the work place, the creativity domain, and the culture. Each of these levels includes a general layer which refers to creativity in general without any specific domain defining the targeted output, and a specific layer that targets specific domains of creativity, such as mathematics or dance. It is possible that there are further aspects of creativity that need to be considered. However, those selected in the present context represent those about which there is already sufficient evidence-based material.

3. Creativity from the perspective of the person

3.1. The cognitive aspects of creativity

Many studies show that creative individuals have characteristic cognitive tendencies, which include personal associations, fast shifts between figure and background, focusing on details that seem

irrelevant to others, divergent thinking and combining ideas from remote domains. Intelligence beyond an average threshold is not a strong contributing factor. The commonly used test of creativity assesses four cognitive tendencies which support the general aspect of creativity: fluency, flexibility, elaboration, and originality (Torrance, 1974). Further cognitive tendencies are revealed by the Meaning Test (Kreitler & Kreitler, 1990b) which shows that creative people use more than others both the personal-subjective (including metaphors and symbols) and the interpersonally-shared modes of meaning, a select set of processes underlying both abstract and concrete thinking, including structure, manner of operation, emotions and evaluations; as well as large and medium referent shifts, a broad range of forms of relation and a variety of forms of expression, verbal and non-verbal alike (Kreitler, 2009; in press). Studies showed the cognitive processes involved for example in creativity in mathematics, in the visual arts, in design or in computer sciences (Kreitler & Kreitler, 1983). However, little is known about the cognitive processes necessary for creativity in most particular domains.

3.2. The motivational aspects of creativity

Motivation is a necessary condition for creativity. Many individuals of different ages claim that they would like to be creative or more creative. However, the conscious striving for creativity is no guarantee or condition for actual creativity. Like many other behaviors creativity is the function of processes that are not necessarily or completely conscious or under voluntary control. Of the two components of motivation – intrinsic and extrinsic – creativity depends more on intrinsic although it is affected also by rewards (Amabile, 1996). The cognitive orientation approach to motivation provides the most comprehensive theory of the motivation for creativity. It assumes that creativity is a function of four types of beliefs – about oneself, about reality and others, about norms and about goals – referring to a set of themes defined in exploratory analyses: self development, emphasis on the inner world, inner-directedness, awareness of one's own uniqueness, contribution to society, freedom in acting, restricted internally imposed openness to society, acting under conditions of uncertainty, high demands from oneself, self-expression, non-functionality (Kreitler & Casakin, 2009). High scores in the four types of beliefs in at least half of the presented themes are related to performance of creative outputs in individuals with the adequate cognitive and professional skills as engineers or mathematicians (Kreitler & Casakin, 2010). The assessed motivation is neither conscious, nor under voluntary control. It may be assessed by means of the Cognitive Orientation Questionnaire for Creativity (CO-CR). Much less is known about the motivation for creativity in specific domains. Most people with motivation for creativity strive for achievements in specific domains, such as mathematics (Kreitler & Nussbaum, 1983) or music. Studies indicate particular themes that constitute the motivation for particular domains, such as in regard to mathematics - striving for clarity, freedom from external reality constraints, and production of completely new outputs; and in regard to acting- finding one's true self, earning the continuous love of others, being positively evaluated/admired. Thus, predicting creativity in a particular domain requires considering both the general motivation for creativity and the motivation for the particular domain.

3.3. The emotional aspects of creativity

Positive affect was shown to impact positively cognitive functioning that seems to be particularly relevant for creativity, such as increasing the availability of cognitive elements available for processing, enhancing readiness to consider complex associations, and strengthening flexibility (Davis, 2009). In addition, there are particular emotions bound with creativity, such as the special ecstasy of creation, the yearning for inspiration, and the anxiety of leaving known territory while moving into the exploration of the unknown. One could assume that the pleasure of experiencing beauty may be evoked by creativity in the arts, and pleasure of accomplishment may be evoked by creativity in sports. These and other emotions evoked by domain-specific creativity need to be studied.

3.4. Personality of the creative person

Responses to questionnaires assessing personality traits showed that creative people are more open to new experiences, less conventional and conscientious, more self-confident, self-accepting, ambitious, dominant, hostile, and impulsive (Feist,1998). Most characteristic are antithetical tendencies which many creative people have, such as humbleness and pride, extroversion and introversion, masculinity and femininity, playfulness and discipline, ability to feel suffering and enjoyment, imagination and realism (Gardner, 1993)

Some personality differences have been noted between different creative individuals. Compared to non-artists, artists score higher on openness to experience and lower on conscientiousness; further, compared to non-scientists, scientists score higher on openness to experience, conscientiousness and the confidence-dominance facets of extraversion.

3.5. The behavioral aspect of creativity

Creative people are industrious workers, and invest a lot of energy in their creative work. Studies showed that their lives are devoted to hard-work for many years and that only after a long time they may

expect a breakthrough of success and recognition of their achievement. Additionally, those who succeed are often characterized by the ability to convince others and get their financial or other support for their work. In general, being able to go on working and producing creatively requires often the ability to cooperate with others, market one's ideas, and sometimes make compromises without damaging too much one's original ideas. In specific domains particular skills are required, such as in sport cooperation with others, in theater accepting the order of the director, and in science following trends in scientific themes and methodologies.

3.6. Physical and mental health of the creative person

There are many studies showing that creative people have tendencies towards mental disorders, mainly of the schizophrenic type and mood disorders (both bipolar and polar depression). Also tendencies toward anxiety, substance abuse and suicides have been reported (Jamison, 1993). Not much is known about creativity and physical health, apart from the findings that occupation with art tends to have beneficial effects on the physical health of the individuals who deal with art if they have some physical disorder.

4. Creativity from the perspective of the environment

4.1. The social aspects of creativity

The social aspects include a variety of factors impacting creativity. First, it is necessary to consider the home in which the creative person grew up. Studies show it is mostly a creativity nurturing home, with a soft mother and a rigid father, and the availability of an accompanying mentor (Gardner, 1993). Second, the context or organization in which he person works exerts an important impact, mainly in terms of the challenge, freedom, resources, and encouragement of the organization and co-workers (Amabile, 1996). The attitudes toward creativity in the community, the specific domain in which one works, and culture to which one belongs also play a role.

5. Conclusions and implications

The brief review presented in the paper clarifies the complexity of the construct of creativity and the multiplicity of the factors on which it depends. In order to nurture creativity it is necessary to focus on one set of factors without however overlooking the rest of the factors which may stay temporarily in the background. Most of the programs for developing creativity deal with a limited aspect without considering the other influences that impact even the limited aspect which is considered. For an intervention program it is necessary to consider the major factors representing the different domains as well as those that are amenable to change. Thus, of the factors that concern the person, cognitive and motivational factors are the most important ones, while of the environmental factors the main ones are the organizational and contextual ones.

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ENGAGING AND MANAGING ANGRY YOUNG MEN WITH MENTAL HEALTH ISSUES: A SIX-SESSION INTERVENTION

Associate Professor Warrick Brewer
Honorary Principal Research Fellow
Department of Psychiatry; Centre for Youth Mental Health,
The University of Melbourne (Australia)

Abstract

Engaging antisocial young men presents considerable difficulty, particularly when the impact of acquired brain injury (ABI) or mental illness exacerbates premorbid immature personality traits. Functions of anger are often misunderstood, where diagnosis of antisocial personality reflects a behavioral description rather than etiology. Hence, aggressive behavior is commonly a hurdle to engagement and treatment response. 'Management' techniques of anger are less effective than reframing and understanding its source and function. Treatment involves release of anger as a valuable motivational source for meeting functional goals.

Objectives of this workshop include (i) provision of clinical insights for increasing engagement; (ii) summarising neural processing and clinical signs of compromised development with a view to formulating the relative impact of genetic risk, brain injury, cognitive ability, environmental compromise, personality and substance use on presentation (iii) identifying and addressing unmet emotional need arising from common threats to healthy development; (iv) understanding anger's nature and function; (v) managing violence; (vi) advancing emotional intelligence including recognition and articulation of the emotional self and structured self-identity; and (vii) Introduction of a 6-session treatment manual (In Press) for engaging and managing violent young men.

The workshop draws upon published material from a pioneering clinical-research youth mental health neuropsychology program with a focus on clients with a forensic history. The presenter's research on emotion dysregulation in neurodevelopment includes findings in Autism-spectrum, ADHD, Psychosis, OCD and Antisocial Personality disorders. Recent outcomes from an Intensive Case Management Team intervention have recently been published (Brewer et al [2015] *Lancet Psychiatry,* 2:29). This team was pioneered at the Orygen Youth Health Early Psychosis Program in Melbourne and targeted difficult to engage aggressive young men with psychosis who were at risk for homicide or suicide.

Keywords: *Violence, Suicide, Psychosis, Treatment, Neuropsychotherapy.*

Biography

A/Prof Warrick Brewer works full time in private practice as a Neuropsychologist, specialising in assessment and treatment of antisocial clients with a history of substance abuse and head injuries; he is an Honorary Associate Professor & Principal Research Fellow in the University of Melbourne Department of Psychiatry and also in the Centre for Youth Mental Health, located at ORYGEN Youth Health Research Centre- Parkville, where he pioneered a Youth Mental Health Neuropsychology Service. He also pioneered the specialist Intensive Case Management Team for the Early Psychosis Prevention & Intervention Program. He has over 100 publications and his work has won national and international awards. Professional memberships include the Australian Psychological Society, the Australian College of Clinical Neuropsychologists (Current Chair), the Association for the Study of Brain Impairments, the Australian Association of Cognitive Behavioral Therapists, the Schizophrenia International Research Society and the International Early Psychosis Association.

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