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# Psychology Applications & Developments

Edited by Clara Pracana



Advances in Psychology and Psychological Trends Series

*Psychology Applications & Developments*  
Advances in Psychology and Psychological Trends Series

Edited by: Clara Pracana



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## FOREWORD

InScience Press is proud to publish this book entitled *Psychology Applications & Developments* as part of the Advances in Psychology and Psychological Trends series.

In this volume, a devoted set of authors explore the Psychology field, contributing to the frontiers of knowledge. Success depends on the participation of those who wish to find creative solutions and believe their potential to change the world, altogether to increase public engagement and cooperation from communities. Therefore, serving society with these initiatives and promoting knowledge, as part of our mission, requires the reinforcement of research efforts, education and science and cooperation between the most diversification of studies and backgrounds.

These series of books comprise authors and editors work to address generalized research, albeit focused in specific sections, in the Psychology area. Contents show us how to navigate in the most broadening issues in contemporary education and research, in the broad Psychology field.

In particular, this book explores five major divisions within general Psychology, divided into five sections: Clinical Psychology, Cognitive and Experimental Psychology, Educational Psychology, Social Psychology, and Legal Psychology. Each section comprises chapters that have emerged from extended and peer reviewed selected papers originally published in the proceedings of the International Psychological Applications Conference and Trends (InPACT) conference series (<http://www.inpact-psychologyconference.org/>). This conference occurs annually with successful outcomes. Original papers have been selected and invited to be extended significantly, then reviewed, and authors of the accepted chapters requested to make corrections and improve final submitted chapters. This process has resulted in the final publication of 36 high quality chapters organized into 5 sections. The following sections' and chapters' objectives provide information on the book contents.

**Section 1**, entitled “Clinical Psychology”, provides reviews and studies within various fields concerning relationship processes in clinical practice. Each chapter is diversified, mainly addressing thematics in mental health patients, their well-being and quality of life. It explores also motivations and cognitions, issues with somatics and alcohol intake.

Chapter 1: *Chronic pain patients and quality of life instruments – A systematic review*; by Liliane Mendonça, Luís Azevedo, and José Castro-Lopes. Chronic pain is an overwhelmingly complex sensory and emotional experience that has a negative impact in health related quality of life (HRQoL). A meta-analysis was performed to quantitatively estimate HRQoL in chronic pain patients, based on SF-36 results. PubMed, PsycARTICLES, PsycINFO and EMBASE were searched. Included studies should report HRQoL, using general HRQoL questionnaires, in adults with non-cancer chronic pain followed in pain management units. Studies methodological quality was evaluated using the QATSDD scale. The inverse variance method was employed to calculate pooled means and 95% CI for each dimension and subgroup analysis was performed.

Chapter 2: *Alcohol outcome expectancies and consequences: Do people think themselves into and out of consequences?*; by Arthur W. Blume and Amanda K. Blume. Alcohol consequences were originally assumed to be only a function of the amount of alcohol consumed. However, the balanced placebo design drinking studies of Marlatt and colleagues demonstrated placebo effects when no alcohol had been consumed. Beliefs about expected outcomes associated with consuming alcohol have been referred to as “alcohol outcome expectancies”. Blume and colleagues later expanded upon the foundational work when they found that negative



consequences were significantly and independently associated with outcome expectancies after controlling for alcohol consumption in a cross-sectional study, leading the authors to hypothesize that some negative consequences may be a function of alcohol outcome expectancies and independent of the amount of alcohol consumed. The current study replicated and extended those findings longitudinally, demonstrating that outcome expectancies significantly predicted alcohol related consequences three months later, after controlling for consumption or number of binge drinking events, as well as age and gender. Interventions on positive expectancies may reduce the harmful consequences of drinking among university students who may be ambivalent about reducing the amount of alcohol they consume.

Chapter 3: *The relationship of self-regulatory processes, motivational conditions, and temporal frameworks with psychological well-being*; by Peter Horvath. Recent reviews have pointed out that understanding long-term issues of well-being requires other theories besides the prevailing cognitive-behavioral ones. This chapter reviews the relationship of well-being to compatibilities among self-regulatory processes, motivational conditions, and temporal frameworks. When pursuing long-term goals, experiential self-regulatory processes, such as autonomy and enjoyment, are associated with well-being. When pursuing short-term goals, cognitive-behavioral self-regulatory processes, such as goal progress and self-reinforcement, are associated with well-being. The review provides new insights regarding the roles of motivational conditions and temporal frameworks in the management of adaptive and maladaptive behaviors and offers suggestions for effective interventions for long-term well-being.

Chapter 4: *Post-traumatic growth, coping, and social support among disaster survivors in the province of Yogyakarta, Indonesia*; by Zarina Akbar. Natural disaster cause many casualties, physical damage, and loss of properties. The event has a potential to cause traumatic experiences. Traditionally research has examined the negative or pathological effects that trauma may have on individuals, as well as variables that are proposed to influence post-trauma outcomes. In recent years, empirical post-trauma research has broadened its scope to investigate positive changes that may also occur following the experience of traumatic events. This study examines coping and social support variables in relation to levels of post-traumatic growth among disaster survivors. Data were collected several years after disasters in 2013. Implications for this research offer further highlight the needs for addressing approach coping and social support, which are more important than the nature of traumatic event in rehabilitation programme for disaster survivors.

Chapter 5: *Relationships with parents and peers, attitudes towards school, and preferred spare-time activities in young adolescents reporting self-harm*; by Iva Burešová and Helena Klimusová. The study is a continuation of a large-scale survey addressing the issue of self-harm prevalence among adolescents in a broader context. The main objective was to examine the connections between the occurrence of self-harming behaviour in young adolescents and the quality of their relationships with parents and peers, attitudes to school, academic aspirations, and preferred spare-time activities. Significant associations between self-harming behavior in young adolescents and the quality of their relationships with parents and peers, attitudes to school, and preferred spare-time activities were found; these findings may prove important in targeting of the intervention programs.

Chapter 6: *Theater as instrument to promote inclusion of mental health patients: An innovative experience in a local community*; by Nicolina Bosco, Fausto Petrini, Susanna Giaccherini, and Patrizia Meringolo. People with mental illness often face with stigma in local communities. Spreading knowledge about this matter may positively influence social attitudes reducing prejudice and discrimination, while empowering activities may promote social inclusion. Theater is one of the proposed instruments to encourage socialization and build networks between the Public Mental Health Service (PMHS) and the local community. It appeared a useful strategy to encourage the expression of emotions and to improve a better inclusion of

patients with mental disorders. This study explored with qualitative methods the perceptions of the stakeholders (professionals, actors-mental patients, their relatives, other actors) involved by local PMHS in the organization of a performance. Their participation in the play gave the opportunity to analyze the perceived changes in well-being and social inclusion ascribed to this experience. Results highlighted perceptions about the improvement of well-being and capabilities in the view of participants. This research supports the importance of such experience and show relevant issues for enhancing empowerment, promoting health, building social networks and improving social inclusion.

Chapter 7: *Gender, normative beliefs and alcohol consumption among university students*; by Monika Brutovská, Olga Orosová, and Ondrej Kalina. Studies exploring students' alcohol consumption (AC) show the need to provide gender specific feedback intervention based on the gender differences in AC. No study has clearly described gender differences in descriptive normative beliefs (DNB) or in the individual-normative differences (IND) of AC (the differences between AC and DNB). The aim of the study was to explore the relationships between DNB and AC among students, to describe the gender differences in AC, DNB, and IND. The research findings confirmed and added to further studies concerning AC and DNB. Further research should be focused on research with a longitudinal design among university students.

Chapter 8: *Quality of life and body image: A psychosocial program for cancer patients*; by Valentina E. Di Mattei, Letizia Carnelli, Elena Pagani Bagliacca, Giorgia Mangili, Fabio Madeddu, and Lucio Sarno. "Salute allo Specchio" ("A reflection of Health") is a psychosocial program for cancer patients, whose aim is to improve well-being and quality of life. The focus of the program is the creation of group sessions during which a team of fashion and aesthetic consultants illustrates techniques and strategies to manage the effects of the disease and its treatments (hair loss, pale and waxy skin tone). After "beauty treatments" patients are involved in groups led by the psychologists, as the program is considered a part of a wider psychological supportive care. "Salute allo Specchio" ("A reflection of Health") project is addressed to female patients with a cancer diagnosis who are undergoing cancer treatment (chemotherapy, radiotherapy) at one of the largest hospitals in the north of Italy. Based on previous literature, it is expected that the beauty treatments, in combination with psychological support and routine care, will have a positive impact on body image perception, increase self-esteem and reduce anxiety and depression, thus improving patients' general well-being.

Chapter 9: *Somatic markers in clinical practice*; by Caroline Goodell. This chapter discusses how to explore and deepen somatic awareness and apply this awareness in clinical practice. It examines the crucial relationship between somatic markers and emotional triggers. It also discusses the art of embodied self-awareness in the subjective emotional present, and explores the role of body signals, or somatic markers, in witnessing and working with patients with a range of disorders.

Chapter 10: *Social cognition in schizophrenia chronic outpatients*; by Juan Carlos Ruiz, Inma Fuentes, Carmen Dasí, María Rodríguez, Rosa Pérez, and María José Soler. Social cognition is one of the core impaired cognitive domains that characterize schizophrenia. At the same time it is one of the most relevant factors in the prediction of social functioning. However, although social cognition deficits are well established in the literature, most of the studies have focused on inpatients and less attention has been devoted to stable outpatients with many years since the illness onset. Social cognition includes four domains: emotion processing, Theory of Mind (ToM), social perception and social knowledge, and attributional bias. The goal was to compare a group of schizophrenic stable outpatients with a healthy control group in ToM, social knowledge and emotion processing (identification and discrimination of emotions). Moreover both groups were compared in social functioning using the "Social Functioning Scale".

**Section 2**, entitled “Cognitive and Experimental Psychology”, delivers chapters concerning, as the title indicates, studies and research in the area of behavior from the point of cognitive aspects. Memory, decision making, functioning, and cognitive approaches are used to compile these works.

Chapter 11: *Developing a quantitative test of memory-related mild cognitive impairment in individuals*; by Thomas Yates and Mark Lansdale. The ability to quantify a developing memory related cognitive deficit in individuals is paramount. This becomes increasingly significant with modern society’s growing aged population, who are at greater risk of developing memory deficit. In conditions such as Alzheimer’s disease, early detection has significant implications for the quality and outcome of treatment. Quantification of deficit also has implications for a range of scenarios where its assessment is important in judging a patient’s suitability for further treatment. Many of the current clinical tests for cognitive deficit are relatively insensitive, and struggle in individual measurements to differentiate between deficits in performance associated with learning impairment and those associated with increased rates of forgetting. The authors therefore argue that new tests are required that are better suited to this purpose. In this chapter it is reported authors’ ongoing efforts to exploit a new theoretical advancement, to develop a new test (the Warhol Task) that has the potential to meet this requirement. More specifically they report what has been uncovered about the nature of learning and forgetting across life span, the noise inherent in the test, and the impact of error rates on parameter estimates. They also discuss the usability and the clinical potential of the test.

Chapter 12: *Comparison of children with reading comprehension difficulty and controls using neuropsychological tasks*; by Helena V. Corso, Tania Mara Sperb, and Jerusa F. de Salles. This study compared a group of children with reading comprehension difficulty and a group of competent readers using eight neuropsychological measures to find out which are related to performance in reading comprehension. A Quasi-experimental design was used. Instruments were the questionnaire about socioeconomic data, health and educational history, Conners Abbreviated Teacher Rating Scale, Raven matrices, word reading measures, reading comprehension measures (retelling and comprehension questions), and Child Brief Neuropsychological Assessment Battery tapping eight neuropsychological functions in 26 tasks. The impact of working memory and executive functions on reading comprehension suggests the importance of introducing these neuropsychological measures both in assessment and interventions with students who struggle with reading comprehension in the initial years of elementary education.

Chapter 13: *Decision making competencies and risk behaviour of university students*; by Jozef Bavolar. Risk behaviour is the result of various social, demographic, motivational and cognitive factors. Social and personality characteristics are the focus in risk behaviour research. The role of cognitive characteristics is relatively less known. The aim of the present research was to examine different types of adolescent health-risk behaviour using gender and decision-making competencies as possible predictors.

Chapter 14: *The global functioning evaluation: Kennedy Axis V compared with WHODAS 2.0*; by Fabio Madeddu, Laura Bonalume, Serena Dainese, and Ilaria Maria Antonietta Benzi. The study aims to compare psychometric properties and clinical utility of Kennedy Axis V (K Axis) and 12-items version of the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0), a comparable version of the 36-items one included in DSM-5, comparing them with other significant instruments for the assessment of personality. Even if further investigation will be needed, such as the increase of the sample and the update of the WHODAS version, K Axis and WHODAS 2.0 has proven to be useful tools for the evaluation of global functioning; however, while WHODAS is more consistent from a psychometric point of view, K Axis presents a multidimensional view of the functioning of the patient.

Chapter 15: *Predicting behavior: The cognitive orientation approach*; by Shulamith Kreitler. The chapter deals with the relation of attitudes and beliefs to behavior, in particular their predictive power in regard to behavior. This issue is of importance in democratic societies, especially in view of the frequent failure to demonstrate relations between attitudes and behavior. Following the description of various attempts to bridge the gap of attitudes and behavior, the cognitive orientation (CO) theory is presented. This is a cognitive-motivational approach with theoretical assumptions and a methodology that enable predicting different kinds of behavior. The prediction is based on cognitive contents representing four types of beliefs (about oneself, reality, norms and goals) referring not directly to the behavior in question but to its underlying meanings, identified by means of a standard procedure. The themes in the CO questionnaire provide insights about the motivational roots of the behavior and thus contribute to the possibility of planning targeted interventions for its prevention and treatment.

Chapter 16: *Training interactive psycho-stimulator for the police*; by Magdalena Zubanska, Agnieszka Bonus-Dziedo, and Anna K. Zubrzycka. In December 2012, the Police Academy in Szczytno started a research project entitled “Development of a training interactive psycho-stimulator for the Police”. Its purpose is to develop and implement an innovative diagnostic and training system to evaluate and stimulate the cognitive competencies and psychomotor skills of police officers. Cognitive assessment of competence is essential to the operation of both police officers and other uniformed services (including officers of the Military Police). The diagnostic-training system implemented under the project will allow automated assessment of the current efficiency level of cognitive and psychomotor functions, and then it will be possible to offer various forms of exercise for these functions in the form of games that will be implemented on both desktop computers and mobile devices such as smart phones or tablets. The essential innovation is the introduction of ongoing research systems used to stimulate the cognitive competencies of police officers by designing exercises in the form of computer games and to enable the verification of the current mental condition of policemen before assigning tasks requiring special predisposition.

**Section 3**, entitled “Educational Psychology”, offers a range of research about teachers and students, the learning process, as well as the behavior from a psycho-educational standpoint.

Chapter 17: *Parent and teacher agreement on emotional and behavioral problems in children with reading problems*; by Aikaterini Venianaki. The purpose of this study was to investigate parent and teacher agreement on emotional and behavioral problems of children with reading problems. This study was conducted in Milopotamos Province, in the municipality of Rethimnon, in Crete, where many behavioral problems in boys including school drop-out, violence and rule-breaking have been reported.

Chapter 18: *Cross-informant agreement and teacher nomination technique in the assessment of children behavior problems*; by Helena Klimusová, Iva Burešová, and Ivo Čermák. The aim of the authors study was to (1) examine the degree of agreement among children, parents and teachers on the scales and items of the Czech version of the Child Behavior Checklist, and (2) to assess a teacher nomination technique as a short and simple tool for the recognition of children with higher levels of self-reported problems. Four significant associations were found between the teacher's ratings in the nomination technique and the categorical ratings based on children self-reports (YSR). Results of both parts of the study are consistent with previous findings and emphasize the importance of utilizing multiple sources in the assessment of children behavior problems.

Chapter 19: *Effectiveness of Coping With Stress Program (CWSP) on anxiety levels: The case of secondary school students: Effects of CWSP on anxiety of students*; by Fatma Ebru Ikiz and Bedia Horoz. Children are in a different position to overcome anxiety and cope with stressors because they have less learning and experience about the ways of coping with stress. The study

aims to (a) develop a group guidance program on enhancing the skills of coping with stress (CWSP) and (b) evaluate its effects on the anxiety levels of 5th grade students. This program consisted of structuring the group process, understanding the concept of stress, its resources, physiological symptoms and emotions, relaxation training and training of transforming knowledge and skills to daily life.

Chapter 20: *Perfectionism and academic achievement in a sample of children from a regular school program context*; by Lauriane Drolet, Philippe Valois, Jacques Forget, and Pier-Olivier Caron. Perfectionism is a multidimensional construct conceptualized as an excessive need in meeting high standards, striving for flawlessness and harsh self-criticism. Past studies have shown that positive perfectionism is related to a better school performance whereas negative perfectionism is often associated with social and emotional difficulties such as anxiety, depression and lower self-esteem. The current study investigated the associations between negative perfectionism and the performance in reading, mathematics and IQ performance in children from regular classroom who are applying to an international schooling program. The results are important since negative perfectionism seem to affect negatively the performance in mathematics and in reading and thus may lead to negative long term outcomes such as drop out. These findings highlight the significance of developing the research on perfectionism and the importance of prevention and intervention among children.

Chapter 21: *Investigating the cultural, social, and psychological attitudes towards school counselling practices in the Kingdom of Saudi Arabia*; by Turki Aziz M. Alotaibi. This research study examines the existing cultural, social, and psychological attitudes towards school counselling and school counsellors in schools located in the Kingdom of Saudi Arabia (Saudi Arabia). The research study used a mixed methods design with qualitative data consisting of semi-structured interviews of school counsellors, and quantitative data consisting of questionnaires completed by a sample of head teachers and school counsellors working in secondary schools based in the city of Afif in Saudi Arabia. The research study proposes theories why cultural, social, and psychological attitudes towards school counselling in Saudi Arabia are hindering progress in developing the field of school counselling in general. It attempts to differentiate and understand cultural, social, and psychological attitudes of teachers, head teachers, parents, and school counsellors to school counselling.

Chapter 22: *Use of communicative behavior and culture framework to understand teachers' notions in pedagogical situations*; by Galina Glotova and Angelica Wilhelm. The aim of this research was to examine teachers' implicit notions in difficult pedagogical situations. Two empirical studies were conducted. To the data obtained correlation analysis was applied. For 55 modes of behavior, statistically significant coefficients of correlation between reference of these modes of behavior to the types of communicative behavior and to the levels of communicative culture of the teacher were found. These modes of behavior (both positive and negative ones) can be considered as a kernel of teachers' notions about communicative culture.

Chapter 23: *The impact of internal and external factors on the satisfaction and well-being of teachers*; by Anna Janovská, Olga Orosová, and Beata Gajdošová. This study focused on well-being of primary school teachers in Eastern Slovakia. We studied the differences in the level of teachers' life satisfaction, satisfaction in work, social and emotional well-being with respect to the perceived supportive behaviour of the headmaster and teachers' personality traits.

Chapter 24: *Associations between psycho-educational determinants and dynamic career attitudes among undergraduate students*; by Senad Karavdic, Karathanasi Chrysoula, Etienne Le Bihan, and Michèle Baumann. Monitoring and assessment of career attitudes are critical for the student's preparation for an adapted university-to-work transition. This problem remains partially addressed though optimal services proposed by universities which may enhance students' generic career capabilities. This study explored the relationships between the psycho-educational and socio-demographic factors, and the perception of their career attitudes.

The search for work self-efficacy score is linked to the employability soft-skills and job search techniques scores which are, in parallel, with the quality of life autonomy associated to the dynamic career attitudes. The findings may help to elaborate interventions aiming at improving psycho-educational determinants. It must be stimulated at the entry to university with appropriately collaborative supports, pedagogical workshops and interpersonal trainings.

Chapter 25: *Patterns of engagement and anxiety in university students – First year to senior year: Students' work engagement & anxiety: are they related?*; by Hanan Asghar. Several researches have shown student engagement as an important predictor of academic outcomes and educational success. Yet, despite evidence that student engagement is an important determinant of performance at university, it has been under analyzed in research and practice, particularly in relation to academic years of study, engagement and psychological distress. Therefore, the goal of the undertaken research is to: (a) assess the level of student engagement and anxiety across academic years of study (i.e., freshman, sophomore, junior and senior), and (b) examine the correlation between student engagement and anxiety.

**Section 4**, entitled “Social Psychology”, gives a glance on projects from a psycho-social perspective. Themes vary from migration, work management, as well as Internet use.

Chapter 26: *The reasons for migrating to a French-speaking black African population*; by Carlos Roberto Velandia-Coustol and Marie-Françoise Lacassagne. This study is part of a research program aimed at understanding the reason why French-Speaking Sub-Saharan African citizens decide to settle in Europe and particularly in France. We created an anonymous questionnaire to collect data on the construction of the migration process. Despite the progress, this study remains one based on a mixed approach, which does not seek to establish generalities applicable to all Africans wishing to migrate or in a migration process. Rather, it is to understand the reason a specific population has to migrate, allowing access to underlying psychological phenomena.

Chapter 27: *The image of the Belarusian state in students' consciousness during the recent financial crisis*; by Olga Deyneka and Valentina Dauksha. The image of the state depends on what the economic and political situation in the country is, and on how accurate and timely actions of the authorities are. The objective of this study was to investigate the image of Belarusian State in common consciousness of students before, during and after the financial crisis.

Chapter 28: *Project for work management and social inclusion of mental health users in Brazil*; by Ana Cecília Alvares Salis. As a pioneer proposal for social inclusion through work, the Work Management Project (WMP) is presented as a model of a new caregiving practice in the field of mental health designed to establish the conditions for access and permanence of individuals with mental disorders in the formal job market. Underway in the city of Rio de Janeiro/RJ, Brazil since 2008, this project today has 50 users of different mental health services and devices in a number of locations in the Greater Rio area, working at Prezunic-Cencosud S.A., with all their labor rights guaranteed. Based on specific guidelines, the WMP supports the real caregiving demands of this population to enable the users to exercise their citizenship rights through formal work.

Chapter 29: *Water use strategies under competition and cooperation conditions*; by Esther Cuadrado, Carmen Taberero, Bárbara Luque, and Rocío García. Scarce natural common-pool resources – such as water – are often overexploited, resulting in drastic consequences for both society and the planet. An experiment was carried out in order to analyze the role of cooperation and competition in the use of water as a limited natural common-pool resource.

Chapter 30: *Psychosocial factors of problematic Internet use and binge drinking among Slovak university students*; by Beata Gajdošová, Olga Orosová, Anna Janovská, and Jozef Benka. The objectives of this study were to explore the associations between gender, academic performance, relationship status, personality factors and risk behaviours (problematic internet use and binge drinking) among the first year university students.

Chapter 31: *Gender, optimism, perceived stress on problematic Internet use among Slovak university students*; by Olga Orosová, Jozef Benka, Rene Sebena, and Beata Gajdošová. A review of current literature shows that so far only few sociodemographic, psychological, and social correlates of problematic Internet use have been identified. However, even these limited findings seem to be inconclusive and inconsistent. The aim of this study was to investigate the effect of gender, optimism, and perceived stress on Generalized Problematic Internet Use among university students.

**Section 5**, entitled “Legal Psychology”, explored in these chapters, provide information on violence, stereotypes, and dysfunctional families, according to given samples.

Chapter 32: *Marital violence: From child witness to adult offender*; by Claire Metz and Laure Razon. Violence is inherent to all human beings and even forms an intrinsic part of individuals when establishing the first parental bonds. In this article, we seek to demonstrate the consequences of marital violence on the future of children who witness this act. Indeed, such children encounter a troubling relationship between their parents, founded on violence. In addition, they are caught up in the shock and the silence that are sources of trauma. Thrust in cross-generational issues where violence acts as a bond, putting this violence into action is one of the possible outcomes. This research focuses on recollections of experiences by adults of their childhood, once children who witness domestic violence. The purpose of such a research is to elucidate psychic mechanisms and mental consequences for these persons. It is based on a qualitative approach with case study method.

Chapter 33: *A culture of violence against women in South Africa: Exploring young women’s stories*; by Sarah Frances Gordon. Violence against women is extremely prevalent in South Africa and it has been labeled the rape capital of the world. It has been two decades since the end of apartheid and South Africa is still grappling with the relentless issue of violence. However this is not surprising as South Africa’s past is embedded in political violence and oppression, creating a culture of violence, which is both normalized and tolerated. This study focuses on how women’s lives and identities are transformed by living in this culture of violence.

Chapter 34: *The influence of stereotypes on eyewitness recall of perceived stereotypicality*; by Shirley Hutchinson, Paul G. Davies, and Danny Osborne. The present research investigates whether victim characteristics can exacerbate the effect of crime-type on eyewitness recall of perceived stereotypicality.

Chapter 35: *Dysfunctional family environment on direct and indirect aggression in adolescents*; by Antonio Caño, Lidia Moreno, and Carmen Rodríguez-Naranjo. The effect of a dysfunctional family environment on direct and indirect aggression was examined, testing the mediating role of hopelessness in this relationship. Knowledge of the risk factors leading to aggressive behaviors may be useful for improving specific intervention programmes to prevent the onset and to diminish adolescent adjustment problems over the course of development.

Chapter 36: *Recognizing the warning signs of violence across the lifespan: Samples from Kuwait and the USA*; by Pearl Berman and Juliet Dinkha. The World Health Organization (WHO) declared interpersonal violence a world-wide public health crisis. In the United States, victims must be counted in the millions for child abuse (Center for Disease Control and Prevention [CDC]), intimate partner violence, and elder abuse. Interpersonal violence can be

prevented and one powerful form of prevention is violence education. The objectives of the study were to assess: the internal consistency of the Warning Signs Survey scales; the perceptions students had about warning signs of destructive behavior; and the utility of the survey for informing instructors about the strengths and weaknesses of their violence education efforts.

Special thanks to the above authors, editorial advisory members, and reviewers who contributed with their efforts to make this book possible. Lastly a special thanks to Liliana Silva for the meticulous work of revision and correction of the proofs.

December 2014

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Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy  
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**Section 1**  
**Clinical Psychology**



## Chapter 1

# CHRONIC PAIN PATIENTS AND QUALITY OF LIFE INSTRUMENTS – A SYSTEMATIC REVIEW

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### ABSTRACT

*Background:* Chronic pain is an overwhelmingly complex sensory and emotional experience that has a negative impact in health related quality of life (HRQoL). A meta-analysis was performed to quantitatively estimate HRQoL in chronic pain patients, based on SF-36 results. *Methods:* PubMed, PsycARTICLES, PsycINFO and EMBASE were searched. Query: “(chronic pain) (abstract) and (“quality of life” OR “HRQOL”) (abstract)”. Included studies should report HRQoL, using general HRQoL questionnaires, in adults with non-cancer chronic pain followed in pain management units. Studies methodological quality was evaluated using the QATSDD scale. The inverse variance method was employed to calculate pooled means and 95% CI for each dimension and subgroup analysis was performed. *Findings:* Electronic search retrieved 4608 articles, 35 were selected. These studies applied 11 HRQoL questionnaires, being SF-36 the most used (n=27, 77%). Pooled mean scores were low for every SF-36 dimension (ranging from 16 [10.06, 22.25], for Physical Role, to 52 [49.01, 54.63] for Mental Health, including summary scales: PCS 29.72 [28.12, 31.32] and MCS 42.89 [38.59, 47.19] (mean [95%CI]). *Discussion:* HRQoL of chronic pain patients is low in all dimensions. Psychological interventions have an important role to improve HRQoL in this population and should be promoted and encouraged.

*Keywords:* chronic pain, pain contexts, SF-36, meta-analysis.

## 1. INTRODUCTION

Chronic pain is a major challenge for medical community (Becker, Sjøgren, Bech, Olsen, & Eriksen, 2000), since it is an overwhelming complex sensory and emotional experience (Mazzola et al., 2009).

Today it is recognized that chronic pain has a negative impact on quality of life (QoL) (Borsbo, Peolsson, & Gerdle, 2009; Breivik et al., 2008; Lamé, Peters, Vlaeyen, Kleef, & Patijn, 2005; Tüzün, 2007). There are several QoL definitions, probably the most used is the World Health Organization's: QoL is “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” (Chandra & Ozturk, 2005). Some authors make a distinction between global concept of QoL (connected to broader aspects of Humanity) and health related quality of life (HRQoL). HRQoL measures treatment and disease process impact in the holistic aspects of a person's life, embracing emotional, social and physical development and their functional capacity in daily activities (Ferrer, 2002).

HRQoL physical, emotional and social dimensions have impact on chronic pain patient's pain exacerbation or relief (Ferrer, 2002). Even treatment outcomes are affected by cognitive, motivational and emotional factors (Mazzola et al., 2009).

Multidisciplinary pain treatment is probably the most effective for chronic pain patients (Becker et al., 2000), however, for several motives, not all chronic pain patients are treated in specialized pain centers. Valid HRQoL measures in pain units used systematically allow the identification of pain impact in patient's lives, selection of best treatment options, and outcome treatment evaluation (Ferrer, 2002). There is some consensus that individuals with chronic pain

and longer pain duration have lower HRQoL (Jamison, Fanciullo, McHugo, & Baird, 2007). Some studies about pain unit's patients indicate lower levels of HRQoL when compared with other chronic populations (Fredheim et al., 2008). However many of these studies use disease specific HROQoL questionnaires (e.g., Fibromyalgia Impact Questionnaire), or participants have very specific diagnoses (as cancer pain, fibromyalgia, neck pain, lumbar pain, pelvic pain or osteoarthritis) (Ferrer, 2002). SF-36 is the HRQoL questionnaire most widely used (Elliott, Renier, & Palcher, 2003) and over the years it has been refined and culturally adapted in several countries (Alonso et al., 2004; McDowell, 2006).

The SF-36 is a 36-item questionnaire, self-administered, applied in paper pencil or computer versions, that measures health-related functions in eight domains: physical functioning (PF), role limitations due to physical problems (RP), bodily pain (BP), vitality (VT), general health perceptions (GH), social functioning (SF), role limitations due to emotional problems (RE), and mental health (MH). These eight dimensions scales are grouped into two health dimensions (summary scales): physical composite scale (PF, RP, BP, VT) and mental composite scale (SF, GH, RE, MH) (Jamison et al., 2007).

A systematic review was conducted to: 1) to identify HRQoL instruments used to evaluate chronic pain patients followed in pain management units; and 2) to quantitatively estimate HRQoL in non-cancer chronic pain patients, based on SF-36 outcomes, by performing a meta-analysis of studies estimating HRQoL in this population.

## 2. METHODS

### 2.1. Search strategy and inclusion criteria

Research was performed in several electronic databases: PubMed, EMBASE, SocINDEX, CINAHL, PsycARTICLES, PsycINFO and Cochrane Central Register of Controlled Trial and restricted to articles published until April 2011.

To conduct a sensitive search, query search was "(chronic pain) (title/abstract) and ("quality of life" OR "HRQOL") (title/abstract)" in PubMed. For all the others electronic databases query was "(chronic pain) (abstract) and ("quality of life" OR "HRQOL") (abstract)".

Inclusion criteria: a) all studies assessing HRQoL in adults (above 18 years) with chronic non cancer pain in pain contexts (pain clinics, pain management units or hospital pain specialized units) and with pain duration longer than 3 months; and b) studies describing HRQoL questionnaires application in chronic pain patients.

Exclusion criteria: a) articles assessing HRQoL in populations with specific pain diagnoses (e.g. cancer, fibromyalgia or osteoarthritis); b) studies focusing specific conditions in general diagnosis, as moderate to severe pain, intractable pain, or disabled patients by chronic pain; c) interventions that usually aren't first treatment choice, like ablative techniques; d) and, methodological studies as systematic reviews or case studies.

Inclusion process was carried out by one researcher on two occasions: first after reading title and abstract and then after reading full articles. All reasons of article's inclusion or exclusion were recorded and analyzed.

Article's collected information was: a) article's identification (title, author, publication year); b) study design, context, inclusion and exclusion criteria, sample size, pain diagnoses, pain duration, and applied questionnaires; c) and study participant's characteristics (mean age), HRQoL outcomes and predictors.

### 2.2. Statistical analysis

The inverse variance method was employed to calculate pooled means and confidence intervals (95%) for all SF-36 scales at baseline, since they are continuous variables, ranging from 0 to 100. The inverse variance method was also applied to aggregate information of several groups in the same study, which estimated pooled measures (mean, standard deviations and standard error) per study.

Random-effects model was used based on the assumption that estimated effects differ across studies, but follow the same distribution. Software used to aggregate data was



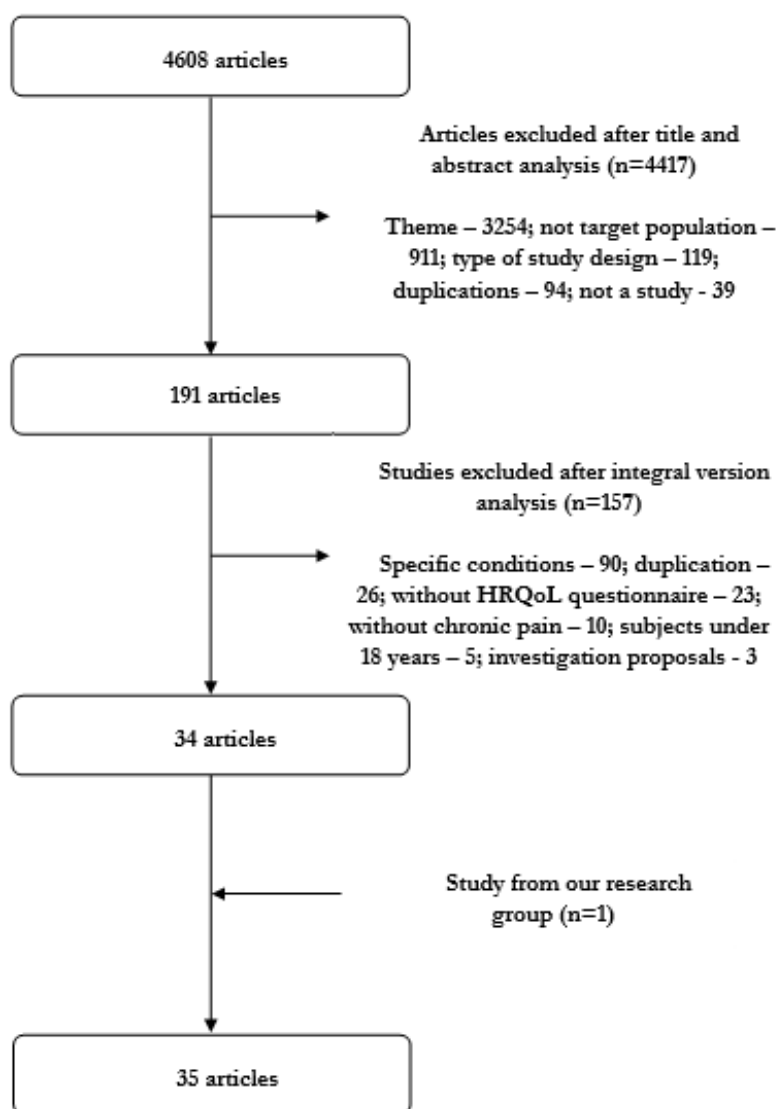
Review Manager 5<sup>®</sup>, which implements random-effects meta-analysis version described by DerSimonian and Laird (Deeks, Higgins, & Altman, 2011). Heterogeneity was explored through subgroup analyses considering study methodology, type of pain management unit, geographical region, participants mean age, and percentage of patients with low back pain.

Sensibility analysis for each SF-36 scale was performed removing one study at a time and then analyzing different pooled means. Publication bias was assessed by funnel plots for all SF-36 scales.

### 3. FINDINGS

After articles selection process 35 studies were included, see Figure 1.

Figure 1. Flowchart of literature search and review process.



Summary of the 35 included studies characteristics is presented in Table 1.

Table 1. Summary of included studies characteristics.

Authors	Type of study	HRQoL measure	Sample size	Age	Years with pain	Type or diagnosis of pain
Abbot et al. (2001), UK	Randomized Controlled Trials	SF-36	n=105; FH=25; SFH=25; DH=28; NH=27	FH - 53,6 (44,8-58,8); SH - 48,9 (44,8-53,0); DH - 57,6 (53,5-61,7); NH - 51,4 (48,1-54,7); M (95% CI)	FH - 10,9 (7,2-14,6), SH - 11,7 (6,8-16,6); DH - 11,5 (7,2-15,8); NH -10,0 (5,9-14,1); M (95% CI)	Trauma - 9; degenerative - 55; nerve damage - 22; miscellaneous - 5; unknown - 14
Adams (2002), USA	Cross-sectional	SF-36, QOLS	89	-	-	-
Becker et al. (2000), Denmark	Randomized Controlled Trials	SF-36	MPT=63; GP=63; WL=63	MPT - 57,7±15,8, GP- 55,1±14,6, WL- 57,2 ±15,5, M±SD	MPT- 10,2±9,1, GP-7,8±8,1, WL - 9,7±8,0, M±SD	Somatic - 73; neuropathic - 63; visceral - 17; psychogenic - 7; unknown - 7
Azevedo et al. (2007), Portugal	Validation study	SF-36	174	52,63 ±13,46, M±SD	-	Osteoarticular -47%; trauma - 3%; headache - 1%; surgical intervention - 11%; peripheral vascular disease - 3%; nervous system lesions - 8%; other - 28%
Caldwell, Hart-Johnson, & Green (2009), USA	Cross-sectional	SF-36	183; whites=92; blacks=91	38,2±7,5, M±SD	5±6,9, M±SD	Leg/foot - 62,7%; hip/pelvis - 53,8%; back pain - 55,6%
Cheung, Wong, Yap, & Chen (2008), China	Validation study	SF-36	224	41,8±10,3, M±SD	3,2±4,5, M±SD	Injuries at work - 59,4%; pain localization more than 3 sites - 33,5%, one site - 36,2%; back - 60,3%, neck - 11,6%, lower limbs - 8,9%, and other - 19,2%
Chibnall & Tait (1990), USA	Validation study	QOLS	393	42,4±12,8, M±SD	4,6±7,2, M±SD	Work accident - 46,6%; non-work accident - 18,8%; illness or surgery - 12%; no reason - 18,6%; unspecified events - 3,9%
Chibnall & Tait (1994), USA	Validation study	QOLS	765	-	-	-
Choinière et al. (2010), Canada	Longitudinal observational study	SF-36	728	50,8±12,6, M±SD	5 (0,5-55), Median (R)	Trauma - 308; surgery - 67; illness - 136; no precise event - 190; other - 27
Cusens, Duggan, Thorne, & Burch (2010), UK	Longitudinal intervention study	SF-36	IG=33; CG=20	IG - 46,7±11,5; CG - 48,4±12,3, M±SD	IG - 5,6±2,4; CG - 7,1±3,6, M±SD	Lower back pain: 24% and 45%; arthritis: 26% and 20%; sciatic injury: 18% and 10%; fibromyalgia: 18% and 10%, IG and CG respectively
Deshields, Tait, Gfeller, & Chibnall (1995), USA	Cross-sectional	QOLS	200	-	-	Low back, head/neck, and extremity pain
Elliott et al. (2003), USA	Cross-sectional	SF-36	242	46±0,8 (19-83), M±SD (R)	7,1±5,3, M±SD	Back pain - 57%; fibromyalgia/myofascial pain - 44%; neuropathic pain - 35%; headache - 25%; arthritis - 14%

Table 1. Summary of included studies characteristics (cont.).

Fredheim, Borchgrevink, Saltnes, & Kaasa (2007), Norway	Validation study	EORTC QLQ-C30, SF-36	286	45±13, M±SD	-	Generalized pain - 16%; neck pain - 15%; lumbar/thoracic pain - 19%; localized musculoskeletal pain - 11%; neuropathic pain - 16%; somatoform pain disorders - 9%; other pain - 14%
Gerbershagen, Lindena, Korb, & Kramer (2002), Germany	Cross-sectional	NHP, SF-36, German Life Satisfaction Scale	3294	51,3±14,8, M±SD	7,6±10,3, M±SD	Abdominal - 65; arm - 120; leg - 438; head/face - 853; back - 924; neck/shoulder - 245; fibromyalgia - 210; other - 439
Green & Hart-Johnson (2009), USA	Longitudinal intervention study	SF-36	182	-	-	-
Hart-Johnson & Green (2010), USA	Cross-sectional	SF-36	CP=49; NV: with chronic pain n=27 and without pain n=28	61-76 (R), older women	-	-
Jamison et al. (2007), USA	Validation study	WHOQOL-BREF, ICQOL-SF	S1=300; S2=336	S1 - 50,6±13,7; S2 - 51,5±14,5, M±SD	S1 - 8,7±2,0; S2 - 7,6±2,0; M±SD	Low back pain: S1 - 37%; S2 - 42,6%
Johnston, Foster, Shennan, Starkey, & Johnson (2010), New Zealand	Randomized Controlled Trials	Quality of Life Inventory	IG=12; CG=12	43 (20-84), M (R)	-	-
Kassardjian, Gardner-Nix, Dupak, Barbati, & Lam-McCulloch (2008), Canada	Validation studies	SF-36, PRISM	Validation n=138; construt validity n=26	Validation - 50,5 (25-86); Construct validity - 48,6 (34-77), M (R)	>5 years: V - 131; CV - 24; <5 years: V - 7; CV - 2	Back pain: V - 67; CV - 14; fibromyalgia: V - 19; CV - 1; arthritis: V - 17; CV - 1; headache and facial: V - 6; CV - 2; other: V - 29; CV - 8
Kerr et al. (2004), Australia	Cross-sectional	SF-36	632	50±16 (20-93), M±SD (R)	-	Work accident - 23%, at work - 10%, at home - 8,5%; motor vehicle accident - 6%; surgery - 12,5%; illness - 2,5%; no reason - 23,5%; other - 11%
Kruis et al. (2009), Netherlands	Cross-sectional	SF-36	969	53±16, M±SD	5 (2-10), M (R)	-
Lamé et al. (2005), Netherlands	Cross-sectional	SF-36	1208	49,9±14,7, M±SD	-	Headache - 2.4%; neck pain and/or brachialgia - 23.3%; back pain and/or sciatica - 27.9%; other pain - 15.7%; multiple localisations - 30.1%
Lee et al. (2005), China	Cross-sectional	SF-36	166	45,2±13,5, M±SD	-	Work-related injury - 57; accident - 23; illness/surgery - 33; unknown - 42; other - 11
Man, Chu, Chen, Ma, & Gin (2007), China	Longitudinal intervention study	SF-36	45	42 (23-57), M (R)	4 (1-27,8), Median (R)	Back - 26; limbs - 10; neck - 3; chest - 2; multiple sites - 2; others - 2

Table 1. Summary of included studies characteristics (cont.).

Marcus (2003), USA	Cross-sectional	SF-36	H=110; HF= 385; HD=148	44,8, M	50% pain for longer than 5 years	Myofascial - 38.1%; mechanical - 18.0%; headache - 17.1%, radicular/neuropathic - 13.1%; fibromyalgia - 5.9%; other - 7.8%
Mazzola et al. (2009), Argentina	Longitudinal intervention study	SF-36	38	-	12, M	Headache - 30; fibromyalgia - 4; neuropathic pain - 4
Monsalve, Soriano, & De Andres (2006), Spain	Validation study	SF-36	112	50±12 (21 - 77), M±SD (R)	-	Neuropathic pain - 33,9%; somatic pain - 58%; visceral pain - 8,1%
Pecci (2007), Argentina	Cross-sectional	SF-36	CP=102; PD=208; MH=320	65±14,9, M±SD (Chronic pain)	-	-
Schofield (2002), UK	Longitudinal intervention study	Sickness Impact Profile	73	IG - 48,2 (32-58); CG - 48,0 (29-65), M (R)	IG - 7,5; CG - 6,0, M	Low back pain - 60%
Schutze et al. (2009), Germany	Longitudinal intervention study	SF-36	189	49,3±10,4, M±SD	-	Back pain - 94; headache - 32; other pain - 63
Skevington, Carse, & De C. Williams (2001), UK	Validation studies	WHOQOL-100, SF-36	106	44 (22-79), M (R)	8,1±8,6, M±SD	-
Tiberghien-Chatelain et al. (2008), France	Longitudinal intervention study	Quality-of-Life Visual Analog Scale	166	50±16, M±SD	7 (3); M (Median)	Rheumatologic - 33,1%; neuropathic - 28,9%; headache - 13,3%; complex regional pain syndrome - 12,7%; fibromyalgia - 4,8%; others - 7,6%
Torre et al. (2008), Spain	Longitudinal intervention study	SF-36	119	55,1±13,3, M±SD	7,9±10,6, M±SD	Back pain, osteoarticular pain, fibromyalgia, neuropathic pain and other
Vallerand (1998), USA	Validation study	City of Hope Quality of Life Survey	204	40,63±9,96, M±SD	2,7±4,5, M±SD	Pain origin: skeletal, neuropathic or soft tissue
Vranken et al. (2009), Netherlands	Cross-sectional	SF-36	388	-	-	-

M – Mean; 95% CI - 95% Confidence interval; SD – Standard deviation; R - Range

Eleven HRQoL questionnaires were used in these included studies, but SF-36 is by far the HRQoL questionnaire most applied to chronic pain patients (77%, n=27), regardless study methodology. Besides SF-36, the most frequent HRQoL questionnaires used are Quality of Life Scale (QOLS) (n=4, 11%) and WHOQOL questionnaires (WHOQOL-100 and WHOQOL-Bref, n=2, 6%). All the other HRQoL measures (City of hope Quality of Life Survey, EORTC QLQ-C30, ICQOL-SF, German Life Satisfaction Scale, Nottingham Health Profile, Quality of Life Inventory, Quality of Life Survey, Quality-of-Life Visual Analog Scale and Sickness Impact Profile) were applied in only one study.

There are several advantages of SF-36 use, namely: this is an instrument that has been applied in several populations, with strong reliability and validity and diverse country specific norms, has a survey manual and interpretation guide, is self-administered, can be used in personal or telephone interviews or by mail, and takes between 5 to 10 minutes to complete (Elliott et al., 2003; McDowell, 2006).

Of the 27 studies included with SF-36 outcomes, 16 (59%) studies had information available about SF-36 scales, 12 reported 8 dimension scale's mean and standard deviation (or other measures enabling standard error calculation) and 6 reported summary scales data

(2 studies reported dimension scales as well as summary scales). About the other 11 studies, 4 were abstracts and 7 described values like correlations or had graphic information.

### 3.1. Global quantitative results

Pooled estimates are low for every SF-36 dimension (ranging from 16 [10.06, 22.25], for the dimension Physical Role (Figure 2), to 52 [49.01, 54.63] for the dimension Mental Health (Figure 3) (mean [95%CI])). Scales associated with physical health tended to have lower values than those associated with mental health: Physical Function 25.72 [18.02, 33.42], Physical Role 16.29 [10.06, 22.25], Bodily Pain 25.56 [23.89, 27.23], Vitality 35.01 [32.72, 37.29], General Health 39.91 [37.13, 42.69], Social Functioning 46.43 [41.49, 51.37], Emotional Role 36.33 [26.61, 46.04] and Mental Health 52 [49.01, 54.63] (mean [95%CI]). This pattern was equally observed when pooling mean estimates of SF-36 summary scales: PCS 29.81 [27.32, 32.23] (Figure 4) and MCS 41.58 [38.91, 44.25] (mean [95%CI]) (Figure 5).

Figure 2. Role physical.

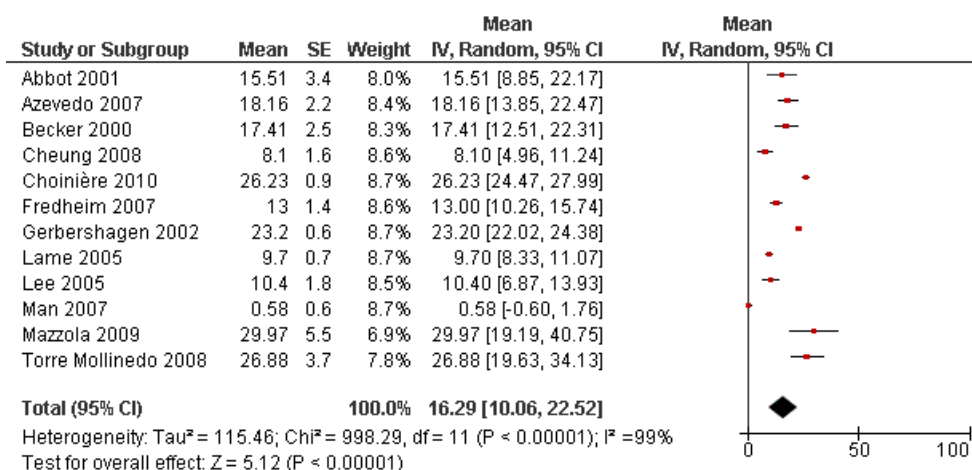


Figure 3. Mental health.

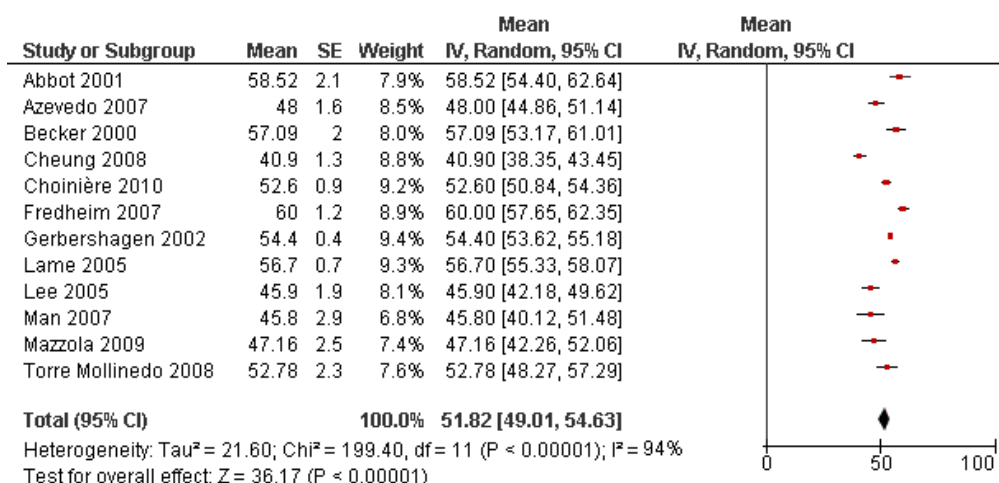


Figure 4. PCS.

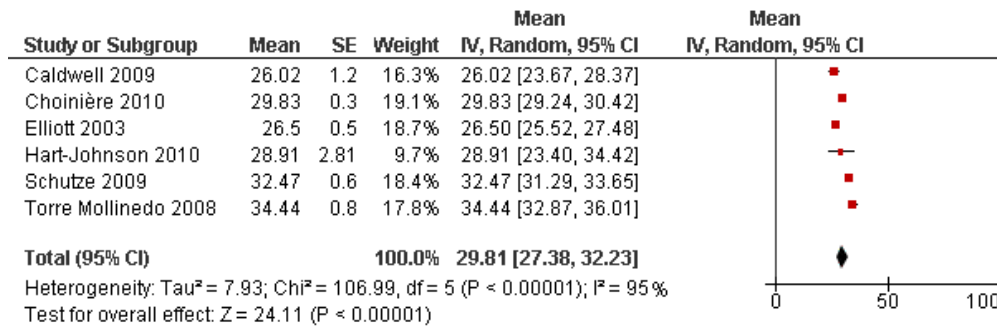


Figure 5. MCS.

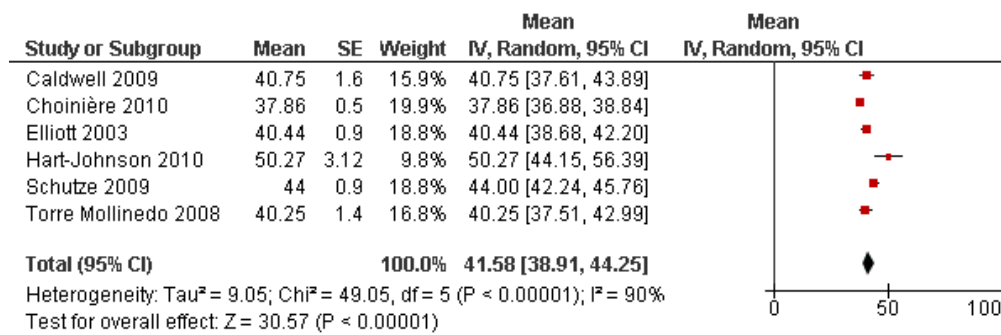
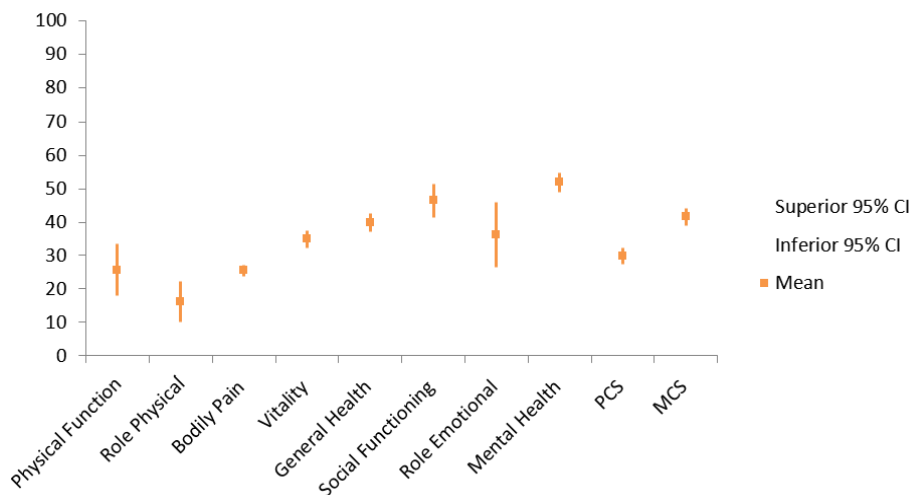


Figure 6 is a graphic presentation of SF-36 dimensions estimates. Only Mental Health dimension has a mean estimate above 50, again SF-36 scales range between 0 and 100, where 100 represents the best HRQoL.

Figure 6. SF-36 Meta-analysis results.



### 3.2. Subgroup analysis

All scales had high and significant heterogeneity. To explore moderators of heterogeneity different subgroup analysis were performed by type of study, type of pain management unit, geographical region, participants mean age, and percentage of patients with low back pain.

Considering subgroup analysis by type of study, across several designs differences were not statistically meaningful in most dimensions. In randomized controlled trials, participants tended to have higher scores, except for the Emotional Role dimension. On the other hand, participants in validation studies tended to have lower HRQoL scores. Differences were statistically significant in Physical Functioning (randomized controlled trials participants had higher values than observational and validation studies participants) and Mental Health scores (in intervention studies, randomized trials participants had higher values than longitudinal intervention studies participants).

Comparing summary scales, subjects in longitudinal intervention studies had significantly higher physical scores than participants of observational studies.

When analysing type of pain management unit, the only scale with significant differences between groups was the Mental Health dimension: patients in pain management clinics have lower Mental Health scores than patients in academic pain management centres and in tertiary multidisciplinary centres.

Dividing studies according to geographical region, only 3 continents are represented (America, Europe and Asia). Asian chronic pain patients had systematically lower HRQoL scores and differences were meaningful in Physical Functioning, Physical Role, Vitality, Emotional Role and Mental Health dimensions. Again, mean scores of Bodily Pain dimension of the 3 continents were very similar. Comparing Americans (North and South Americans) with Europeans, Americans tended to have significantly higher scores in Physical Role dimension, while Europeans tended to have significant higher values in Vitality and MCS dimensions.

SF-36 outcome comparison according to participant's mean age was also executed, when that information was available. In studies where participant's mean age was lower than 50 years SF-36 scores tended to be lower than in studies with participants mean age above 50 years. These differences are statistically meaningful in Physical Functioning and Vitality dimensions.

Another comparison performed between studies was based on percentage of low back pain patients in the sample. Considering studies where this information was available, studies with more low back pain patients (above 50% of the patients) had systematically lower HRQoL scores for all SF-36 dimensions. In General Health and MCS scores this difference was statistically significant.

Sensitivity analysis was performed first by removing each study and then considering studies mean quality assessment scale. Removing each study, SF-36 pooled scores remain very similar to the original pooling estimates.

In order to evaluate the risk of publication bias, a funnel plot was created for the pooled analysis of all SF-36 eight dimensions and for the two summary scales. Visual analysis of funnel plots did not detect major asymmetries. We concluded that in this case there was limited evidence of publication bias.

#### 4. DISCUSSION

Regarding the identification of HRQoL instruments we concluded that the most frequently used questionnaire worldwide is the SF-36, however, we identified ten other questionnaires that have been used to measure this construct in this specific context. Besides SF-36, that has been extensively validated and is the most frequently used, other relevant questionnaires that deserve a special mention are:

a) The ICQOL-SF – developed specifically for pain patients, is adequately validated, short and easy to use;

b) The Quality of Life Scale – very short and easy to use and was developed specifically for pain patients;

c) The WHOQOL-BREF – generic, short and easy to use and adequately validated in several contexts;

d) Questionnaires specifically developed in cancer populations but have been also used in chronic pain patients with other disease aetiologies, like the EORTC QLQ-C30 and the City of Hope Quality of Life Survey;

e) Other generic, classical and adequately validated HRQoL questionnaires, that are in general more comprehensive (large number of items and long times of completion), like the WHOQOL-100, the Sickness Impact Profile and the Nottingham Health Profile.

Quality of Life Scale and ICQOL-SF are pain specific HRQoL questionnaires, this indicates concern with chronic pain patient's HRQoL. There is a 10 years' time lag between these questionnaires development, probably items and dimensions increment, as well as complexity evolution reflect HRQoL concept's discussion.

It is possible to conclude based on the available evidence that the HRQoL levels of chronic pain patients are in general very low, lower than other chronic conditions and this is particularly true for physical health components of HRQoL. Although 27 studies applied SF-36 questionnaire, only in 16 studies scales outcomes were presented with mean values and standard deviations. Outcomes description and presentation changed according to study aims, and this complicated data aggregation. Even when mean scales and standard deviations were presented, sometimes researchers opted for presenting the 8 dimension scores, while others only presented summary scales and others present both set of scores.

Comparing our meta-analysis pooled estimates with IQOLA Project (Alonso et al., 2004), it is evident to conclude that chronic pain patients followed in pain management units have much lower HRQoL scores than general population and individuals with other chronic conditions (allergies, arthritis, chronic lung disease, congestive heart failure, diabetes, hypertension and ischemic heart disease). The IQOLA Project aggregates SF-36 results based in general population, which included subjects with chronic conditions, in 8 countries.

In subgroup analysis geographical region, age and low back pain are the best moderators of study heterogeneity. Among patients with chronic pain, Asians tend to have lower HRQoL values. We could think cultural conceptions would play a role in answers, but discrepancy with population norms is enormous (Lee et al., 2005), and SF-36 translations have cultural factors in consideration and good psychometric results in different countries. Regarding age, individuals bellow 50 years with chronic pain tend to perceive low HRQoL, and in this study, significant differences are mostly in physical dimensions (Physical Functioning and Vitality). This is consistent with literature probably because older people have pain for a longer time and developed better strategies to cope with pain and limitations in daily life are not seen as so problematic (Rustoen et al., 2005). Literature also supports the diminished HRQoL of low back pain patients (Lamé et al., 2005), usually associated with more functional limitations and catastrophizing thoughts about pain.

Sensitivity analysis conducted allowed to corroborate pooled estimates presented, since studies removal (one at the time) did not affect substantially the pooled estimates.

Although we have not found clear evidence of publication bias, it is always possible that this is a problem in the present study. There was an effort to include all articles regardless publication language (English, German, French, Spanish and Portuguese).

This study had some limitations that deserve further consideration. There are some limitations related to the systematic review process like the difficulty in specifying search terms or queries broad in scope. Thus the initial results of the literature search were quite extensive and it took an important amount of work and time to perform the studies selection phase.

After including only quantitative data from SF-36 applications, we found that an important part of the studies did not presented the adequate quantitative data needed to perform meta-analysis. We have contacted authors and made all efforts available in order to obtain these data.

The studies included in the meta-analysis presented high heterogeneity, associated with a high methodological variability and the existence of very different settings. Thus, we tried to assess the magnitude of the heterogeneity in every analysis performed and explored the sources of heterogeneity using sub-group analysis. However, in most cases the heterogeneity was significant and therefore pooled estimates presented should be analysed with caution.

The relevance of the present study is mainly associated with the presentation of meta-analytic estimates of HRQoL in non-cancer chronic pain patients followed in pain management units. To our knowledge, this is the first work presenting this kind of evidence for



this particular population. This work is an initial attempt to determine HRQoL of chronic pain patients in pain contexts. It would be interesting to evaluate changes in HRQoL during and after specialized pain treatment, enabling HRQoL changes monitorization and evaluate treatment impact of usual or specific treatments, like multidisciplinary treatment and the outcomes of psychological treatment.

## REFERENCES

- Abbot, N. C., Harkness, E. F., Stevinson, C., Marshall, F. P., Conn, D. A., & Ernst, E. (2001). Spiritual healing as a therapy for chronic pain: A randomized, clinical trial. *Pain, 91*(1), 79-89.
- Adams, N. J. (2002). *Evaluating quality of life, functional capabilities, and coping strategies of people with chronic pain taking opioids versus no opioids*. (Doctoral dissertation). Available from EBSCOhost rzh database.
- Alonso, J., Ferrer, M., Gandek, B., Ware, J. E., Aaronson, N. K., Mosconi, P., Rasmussen, N., Bullinger, M., Fukuhara, S., Kaasa, S., & Lepège, A. (2004). Health-related quality of life associated with chronic conditions in eight countries: Results from the International Quality of Life Assessment (IQOLA) Project. *Quality of Life Research, 13*(2), 283-298. doi:10.1023/b:qure.0000018472.46236.05
- Azevedo, L., Pereira, A., Dias, C., Agualusa, L., Lemos, L., Romão, J. & Castro-Lopes, J. (2007). Tradução, adaptação cultural e estudo multicêntrico de validação de instrumentos para rastreio e avaliação do impacto da dor crónica [Translation, cultural adaptation and multicenter validation of instruments for screening and evaluation of the impact of chronic pain]. *Dor, 15*(4), 6-58.
- Becker, N., Sjøgren, P., Bech, P., Olsen, A. K., & Eriksen, J. (2000). Treatment outcome of chronic non-malignant pain patients managed in a Danish multidisciplinary pain centre compared to general practice: A randomised controlled trial. *Pain, 84*(2), 203-211.
- Borsbo, B., Peolsson, M., & Gerdle, B. (2009). The complex interplay between pain intensity, depression, anxiety and catastrophising with respect to quality of life and disability. *Disability and Rehabilitation, 31*(19), 1605-1613.
- Breivik, H., Borchgrevink, P. C., Allen, S. M., Rosseland, L. A., Romundstad, L., Breivik Hals, E. K., Kvarstein, G., & Stubhaug, A. (2008). Assessment of pain. *BJA: British Journal of Anaesthesia, 101*(1), 17-24.
- Caldwell, J., Hart-Johnson, T., & Green, C. R. (2009). Body Mass Index and quality of life: Examining blacks and whites with chronic pain. *Journal of Pain, 10*(1), 60-67.
- Chandra, A., & Ozturk, A. (2005). Quality of life issues and assessment tools as they relate to patients with chronic nonmalignant pain. *Hospital Topics, 83*(1), 33-37. doi:10.3200/htps.83.2.33-37
- Cheung, M. N., Wong, T. C., Yap, J. C., & Chen, P. P. (2008). Validation of the Chronic Pain Acceptance Questionnaire (CPAQ) in Cantonese-speaking Chinese patients. *Journal of Pain, 9*(9), 823-832. doi:10.1016/j.jpain.2008.04.005
- Chibnall, J. T., & Tait, R. C. (1990). The Quality of Life Scale: A preliminary study with chronic pain patients. *Psychology & Health, 4*(4), 283-292. doi:10.1080/08870449008400397
- Chibnall, J. T., & Tait, R. C. (1994). The short form of the Beck Depression Inventory: Validity issues with chronic pain patients. *Clinical Journal of Pain, 10*(4), 261-266.
- Choinière, M., Dion, D., Peng, P., Banner, R., Barton, P. M., Boulanger, A., Clark, A. J., Gordon, A. S., Guerriere, D. N., Guertin, M. C., Intrater, H. M., Lefort, S. M., Lynch, M. E., Moulin, D. E., Ong-Lam, M., Racine, M., Rashid, S., Shir, Y., Taenzer, P., & Ware, M. (2010). The Canadian STOP-PAIN project - Part 1: Who are the patients on the waitlists of multidisciplinary pain treatment facilities?. *Canadian Journal of Anaesthesia, 57*(6), 539-548. doi:10.1007/s12630-010-9305-5
- Cusens, B., Duggan, G. B., Thorne, K., & Burch, V. (2010). Evaluation of the breathworks mindfulness-based pain management programme: effects on well-being and multiple measures of mindfulness. *Clinical Psychology & Psychotherapy, 17*(1), 63-78. doi:10.1002/cpp.653
- Deeks, J. J., Higgins, J. P., & Altman, D. G. (2011). Chapter 9: Analysing data and undertaking meta-analyses (Part 2). In J. Higgins & S. Green (Eds.), *Cochrane handbook for systematic reviews of interventions* [Version 5.1.0, updated March 2011]. Retrieved from <http://handbook.cochrane.org>
- Deshields, T. L., Tait, R. C., Gfeller, J. D., & Chibnall, J. T. (1995). Relationship between social desirability and self-report in chronic pain patients. *Clinical Journal of Pain, 11*(3), 189-193.
- Elliott, T. E., Renier, C. M., & Palcher, J. A. (2003). Chronic pain, depression, and quality of life: Correlations and predictive value of the SF-36. *Pain Medicine, 4*(4), 331-339.

- Ferrer, M. (2002). *Calidad de vida como herramienta de control en las Unidades de dolor* [Quality of life as a control tool in Pain Units]. Paper presented at the V Congreso de la Sociedad Española del Dolor, Salamanca, Spain.
- Fredheim, O. M. S., Borchgrevink, P. C., Saltnes, T., & Kaasa, S. (2007). Validation and comparison of the health-related quality-of-life instruments EORTC QLQ-C30 and SF-36 in assessment of patients with chronic nonmalignant pain. *Journal of Pain & Symptom Management, 34*(6), 657-665.
- Fredheim, O. M. S., Kaasa, S., Fayers, P., Saltnes, T., Jordhøy, M., & Borchgrevink, P. C. (2008). Chronic non-malignant pain patients report as poor health-related quality of life as palliative cancer patients. *Acta Anaesthesiologica Scandinavica, 52*(1), 143-148. doi:10.1111/j.1399-6576.2007.01524.x
- Gerbershagen, H. U., Lindena, G., Korb, J., & Kramer, S. (2002). Gesundheitsbezogene Lebensqualität bei Patienten mit chronischen Schmerzen [Health-related quality of life in patients with chronic pain]. *Der Schmerz, 16*(4), 271-284. doi:10.1007/s00482-002-0164-z
- Green, C., & Hart-Johnson, T. (2009). A longitudinal examination of neighborhood socioeconomic factors and chronic pain outcomes. *Journal of Pain, 10*(4), S7.
- Hart-Johnson, T. A., & Green, C. R. (2010). Physical and psychosocial health in older women with chronic pain: comparing clusters of clinical and nonclinical samples. *Pain Medicine, 11*(4), 564-574. doi:10.1111/j.1526-4637.2010.00803.x
- Jamison, R. N., Fanciullo, G. J., McHugo, G. J., & Baird, J. C. (2007). Validation of the Short-Form Interactive Computerized Quality Of Life scale (ICQOL-SF). *Pain Medicine, 8*(3), 243-250.
- Johnston, M., Foster, M., Shennan, J., Starkey, N. J., & Johnson, A. (2010). The effectiveness of an acceptance and commitment therapy self-help intervention for chronic pain. *Clinical Journal of Pain, 26*(5), 393-402.
- Kassardjian, C. D., Gardner-Nix, J., Dupak, K., Barbaty, J., & Lam-McCulloch, J. (2008). Validating PRISM (Pictorial Representation of Illness and Self Measure) as a measure of suffering in chronic non-cancer pain patients. *Journal of Pain, 9*(12), 1135-1143.
- Kerr, S., Fairbrother, G., Crawford, M., Hogg, M., Fairbrother, D., & Khor, K. E. (2004). Patient characteristics and quality of life among a sample of Australian chronic pain clinic attendees. *Internal Medicine Journal, 34*(7), 403-409. doi:10.1111/j.1444-0903.2004.00627.x
- Kruis, R., Dijkgraaf, M., Van Der Vegt, M., Wegener, J., Renshof, S., De Klerk, M., & Vranken, J. (2009). Pain epidemiology and quality of life in chronic nonmalignant pain patients referred to a Dutch academic multidisciplinary pain center. *European Journal of Pain, 13*, S231.
- Lamé, I. E., Peters, M. L., Vlaeyen, J. W. S., Kleef, M. V., & Patijn, J. (2005). Quality of life in chronic pain is more associated with beliefs about pain, than with pain intensity. *European Journal of Pain, 9*(1), 15-24.
- Lee, S., Chen, P. P., Lee, A., Ma, M., Wong, C. M., & Gin, T. (2005). A prospective evaluation of health-related quality of life in Hong Kong chinese patients with chronic non-cancer pain. *Hong Kong Medical Journal, 11*(3), 174-180.
- Man, A. K. Y., Chu, M. C., Chen, P. P., Ma, M., & Gin, T. (2007). Clinical experience with a chronic pain management programme in Hong Kong Chinese patients. *Hong Kong Medical Journal, 13*(5), 372-378.
- Marcus, D. A. (2003). Headache and other types of chronic pain. *Headache: The Journal of Head & Face Pain, 43*(1), 49-53.
- Mazzola, A., Calcagno, M. L., Goicochea, M. T., Pueyrredón, H., Leston, J., & Salvat, F. (2009). EMDR in the Treatment of Chronic Pain. *Journal of EMDR Practice and Research, 3*(2), 66-79. doi:10.1891/1933-3196.3.2.66
- McDowell, I. (2006). General health status and quality of life. In I. McDowell (Ed.), *Measuring health - A guide to rating scales and questionnaires* (3rd ed., pp. 520-702). New York, NY: Oxford University Press.
- Monsalve, V., Soriano, J., & De Andres, J. (2006). The LATTINEN INDEX (IL) for the evaluation of chronic pain: Its correlation with coping and quality of life. *Revista de la Sociedad Espanola del Dolor, 13*(4), 216-229.
- Pecci, C. (2007). Chronic disease and quality of life. *Vertex, 18*(72), 111-119.
- Schofield, P. (2002). Evaluating Snoezelen for relaxation within chronic pain management. *British Journal of Nursing, 11*(12), 812-821.
- Rustoen, T., Wahl, A. K., Hanestad, B. R., Lerdal, A., Paul, S., & Miaskowski, C. (2005). Age and the experience of chronic pain: Differences in health and quality of life among younger, middle-aged, and older adults. *Clinical Journal of Pain, 21*(6), 513-523.

- Schutze, A., Kaiser, U., Ettrich, U., Grosse, K., Gossrau, G., Schiller, M., Pöhlmann, K., Brannasch, K., Scharnagel, R., & Sabatowski, R. (2009). Evaluation einer multimodalen Schmerztherapie am UniversitätsSchmerzCentrum Dresden [Evaluation of a multimodal pain therapy at the university pain centre Dresden]. *Der Schmerz*, 23(6), 609-617.
- Skevington, S. M., Carse, M. S., & De C. Williams, A. C. (2001). Validation of the WHOQOL-100: Pain management improves quality of life for chronic pain patients. *Clinical Journal of Pain*, 17(3), 264-275.
- Tiberghien-Chatelain, F., Havet, C., Piccand, V., Balp, L., Dovico, C., Delacour, J. L., Girod, A., Fontaine, P., Lajoie, J. L. & Lallier, E. (2008). Comment un réseau douleur régional peut-il améliorer la prise en charge des patients atteints de douleur chronique? Discussion à partir des résultats d'une étude réalisée chez 166 patients pris en charge dans les structures douleur de Franche-Comté [How can a regional pain center improve management practices for patients with chronic pain? Discussion on a study of 166 patients attending Franche-Comte pain clinics]. *Douleurs*, 9(3), 118-126.
- Torre, F., Martin-Corral, J., Callejo, A., Gomez-Vega, C., La Torre, S., Esteban, I. & Arizaga, A. (2008). Health-related quality of life and coping strategies with regard to pain, in patients attended in a unit of pain. *Revista de la Sociedad Espanola del Dolor*, 15(2), 83-93.
- Tüzün, E. H. (2007). Quality of life in chronic musculoskeletal pain. *Best Practice & Research Clinical Rheumatology*, 21(3), 567-579. doi:10.1016/j.berh.2007.03.001
- Vallerand, A. H. (1998). Development and testing of the inventory of functional status-chronic pain. *Journal of Pain and Symptom Management*, 15(2), 125-133.
- Vranken, J., Van Der Vegt, M. H., Scholten, E. H., Van Beek, R., Miedema, D., & Hollmann, M. (2009). The impact of neuropathic pain on quality of life in patients with chronic nonmalignant pain. *Pain Practice*, 9, 44.

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## Chapter 2

# ALCOHOL OUTCOME EXPECTANCIES AND CONSEQUENCES: DO PEOPLE THINK THEMSELVES INTO AND OUT OF CONSEQUENCES?

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### ABSTRACT

Alcohol consequences were originally assumed to be only a function of the amount of alcohol consumed. However, the balanced placebo design drinking studies of Marlatt and colleagues demonstrated placebo effects when no alcohol had been consumed. Beliefs about expected outcomes associated with consuming alcohol have been referred to as “alcohol outcome expectancies”. Blume and colleagues later expanded upon the foundational work when they found that negative consequences were significantly and independently associated with outcome expectancies after controlling for alcohol consumption in a cross-sectional study, leading the authors to hypothesize that some negative consequences may be a function of alcohol outcome expectancies and independent of the amount of alcohol consumed. The current study replicated and extended those findings longitudinally, demonstrating that outcome expectancies significantly predicted alcohol related consequences three months later, after controlling for consumption ( $\Delta R^2 = .07$ ; Full Model  $R^2 = .48$ ) or number of binge drinking events ( $\Delta R^2 = .08$ ; Full Model  $R^2 = .44$ ), as well as age and gender. Interventions on positive expectancies may reduce the harmful consequences of drinking among university students who may be ambivalent about reducing the amount of alcohol they consume.

*Keywords:* addictive behaviors, university students, drinking consequences, expectancies, harm reduction.

## 1. INTRODUCTION

The association between alcohol misuse and alcohol-related consequences has been studied for a long time by addiction scientists (e.g., National Institute on Alcohol Abuse and Alcoholism, 1971, 2000). However, researchers have often been puzzled by the inconsistent or relatively modest relationships sometimes found between the amount of alcohol consumed and the number of consequences experienced (e.g., Kuendig et al., 2008; Rehm & Gmel, 1999). Because of the inconsistent findings and generally modest relationships between consumption and consequences, researchers became increasingly interested in how people’s beliefs about drinking may be associated with subsequent drinking outcomes.

The famous balanced placebo design study by Marlatt and colleagues (1973) illustrated that beliefs are potent predictors of drinking behavior independent of actual amount of alcohol consumed. In this study, participants who were told they were consuming tonic water but who were in fact drinking significant amounts of alcohol acted sober, whereas participants who were told they had drunk alcohol to intoxication, yet had not consumed anything stronger than tonic water, acted intoxicated. The study results opened the door for investigating how beliefs about drinking behavior predict subsequent outcomes, including drinking-related consequences.

## 2. BACKGROUND

### 2.1. Positive outcome expectancies

The next steps in this area of research were to examine how different kinds of beliefs may be associated with subsequent drinking behavior. Expectancies were a specific category of beliefs that was examined extensively. Alcohol outcome expectancies, for example, are beliefs drinkers have about what will happen as a result of drinking alcohol. The expected outcomes

can be either positive or negative. An extensive body of research has analyzed the relationships of alcohol expectancies with subsequent alcohol consumption and found that expectancies, especially positive expectancies, tend to be significant predictors of subsequent drinking (Blume, Schmalings, & Marlatt, 2003; Brown, Goldman, & Christiansen, 1985; Jones, Corbin, & Fromme, 2001).

Blume and colleagues investigated the relationship of positive expectancies with drinking related consequences among a sample of university students, and found that positive expectancies accounted for significant amounts of variance of alcohol-related consequences independent of those accounted for by consumption (Blume, Lostutter, Schmalings, & Marlatt, 2003). However, the study was limited by its cross-sectional design. The goal of the present study is to re-examine and extend the results of that particular study by use of a longitudinal design.

## **2.2. Concerns about undergraduate student drinking behavior**

The drinking behavior of university students has been of great concern. University student drinking has been associated with significant negative consequences including academic problems, crime, aggression, sexual abuse, injury, and death and has been studied and documented in countless studies for many years, (Engs, Diebold, & Hanson, 1996; Hingson, Heeren, Winter, & Wechsler, 2005; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; Presley, Meilman, & Cashin, 1996; Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002). Most of the studies on university student drinking have utilized samples that mostly included White students. Very little is known, for example, about student drinking behavior among non-White American university students, even though the proportion of the population in the US is becoming increasingly non-White. As the demographics of the US change, more non-white university students will be seeking admission to the university. It will be important to understand the drinking behavior of these groups of students to effectively address drinking behavior on the campuses of the future.

The present study offers two advantages over the Blume and colleagues (2003) study. Firstly, the study is longitudinal and allows for the investigation of hypothesized relationships over the course of a three months period. Secondly, the study includes a sample of Mexican American university students. Very little research has been conducted with this particular university student group, even though Mexican Americans are the fastest growing ethnic group in the US (Ennis, Ríos-Vargas, & Albert, 2011). In the present study, it is hypothesized that similar to the results of the Blume and colleagues (2003) study, positive alcohol expectancies will be positively associated with and account for significant amounts of observed variance of alcohol-related consequences independent of that accounted for by alcohol consumption.

## **3. METHODS**

### **3.1. Participants**

Study participants were recruited from the Introduction to Psychology course on the campus. Participants were included in the study if they expressed interest and reported drinking alcohol in the last week. Study participants at baseline (n = 96) had a mean age of 20.31 years and were predominately male (n = 57; 59%). Attrition of 12 participants was observed, yielding a study retention rate of 87.5% at three months follow-up. Analyses found no evidence of statistically significant differential attrition based upon age, gender, baseline consumption patterns, or positive alcohol expectancies scores. Study participants who completed three months follow-up (n = 84) had a mean age of 20.36 years and were predominately male (n = 48; 57.1%).

### **3.2. Measures**

Demographic variables including age and gender were collected during the baseline assessment. Furthermore, the Alcohol Expectancy Questionnaire, a widely utilized assessment of positive alcohol expectancies, was administered to participants at baseline (AEQ; Brown et al., 1985). The Global Positive Changes (GPC) scale score collected at baseline assessment was

used in subsequent analyses ( $\alpha = .88$ ). Alcohol consumption and pattern of use were determined by means of the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985), an assessment including questions and a retrospective drinking diary calendar chart to assess university student drinking behavior. The DDQ was completed at baseline and follow-up. For the purpose of this study, total numbers of binge drinking events and total consumption for the period between the baseline and follow-up assessments were determined from data collected via the DDQ at the three-month follow-up and used for subsequent analyses. Binge drinking was defined using the Wechsler criteria (Wechsler & Nelson, 2001) of five standard drinks per drinking event for men and four standard drinks per drinking event for women. The Rutgers Alcohol Problem Index (RAPI), a well-known 23-item measure to assess consequences of drinking among young adults including university students (White & Labouvie, 1989), was also administered at three-month follow-up. A total consequences score was used in subsequent analyses ( $\alpha = .89$ ).

### 3.3. Procedure

Firstly, potential participants were recruited by means of advertisement through the Introduction to Psychology Subject Pool. Students who regarded themselves as “regular drinkers” were included in the study but excluded if they were graduating prior to the end of the follow-up period. Students who expressed interest in the study were invited to meet with research assistants of the study and completed the questionnaire packet in person. The participants provided demographic data first and then completed AEQ and DDQ (in that order). Ten weeks after baseline, research assistants contacted the participants again and scheduled a three-month follow-up. During the follow-up session, participants completed the DDQ and RAPI and were compensated with a \$20 gift card of the university bookstore and thanked for participating in the study. The Institutional Review Board of the university approved this study.

### 3.4. Results

The aggregated study sample engaged in substantial alcohol use with a mean of 3.1 binge drinking events during the two weeks preceding follow-up and a mean of 413.4 standard drinks consumed over the 90-day period of the study. The mean total score of the RAPI was 20.33. A square root transformation was conducted prior to subsequent analyses to normalize the distribution of standard drinks consumed by the study sample.

Multiple regression analyses were used to test the study hypotheses concerning positive outcome expectancies, by firstly specifically examining the relationship of positive expectancies with consequences in the context of binge drinking events, and secondly examining the relationship of positive expectancies with consequences in the context of total standard drinks consumed. In the first regression analysis, age, gender, and total number of binge drinking events for the two weeks immediately preceding follow-up were entered, followed by baseline AEQ global positive expectancy scores, to predict total RAPI scores at three-month follow-up. The full regression model was found to be significant ( $R^2 = .44$ ;  $p < .001$ ; see Table 1), with all predictor variables found to be significantly associated with total RAPI scores. Specific to the aims of this study, as predicted the total global positive expectancy scores accounted for significant amounts of the observed variance of alcohol related consequences ( $\Delta R^2 = .08$ ) at three-month follow-up.

*Table 1. Binge drinking events and positive expectancies predicting RAPI scores at three-month follow-up (N = 81).*

Predictor variable(s):	$\Delta R^2$	Betas	t	95% C. I.
Age		.41	4.65**	1.186 to 2.964
Gender		-.24	-2.75*	-12.908 to -2.059
Binge drinking events		.21	2.40*	.322 to 3.432
AEQ Global Positive Scores	.08	.29	3.29**	.128 to .520

**Notes:**  $R^2 = .44$ ;  $F(4, 76) = 14.89$ ;  $p < .001$  for the full model. Betas, t values, and 95% confidence intervals listed are for the full model. \*  $p < .05$ ; \*\*  $p < .01$

In the second regression analysis, age, gender, and square root transformed scores of total standard drinks of alcohol consumed for the 90-day period during the study were entered, followed by baseline AEQ global positive expectancy scores, to predict total RAPI scores at three-month follow-up. The full regression model was found to be significant ( $R^2 = .48$ ;  $p < .001$ ; see Table 2), with all predictor variables being significantly associated with total RAPI scores. Congruent with the first analysis, total global positive expectancy scores again accounted for significant amounts of the observed variance of alcohol related consequences ( $\Delta R^2 = .07$ ) at three-month follow-up.

Table 2. Three months alcohol consumption and total AEQ predicting RAPI scores at three-month follow-up (N = 84)

Predictor Variable(s):	$\Delta R^2$	Betas	t	95% C. I.
Age		.42	5.01**	1.299 to 3.008
Gender		-.19	-2.13*	-11.581 to -0.387
Total drinks last three months		.24	2.70**	.140 to .927
AEQ Global Positive Scores	.07	.28	3.35**	.130 to .511

Notes: Square root transformation of total drinks score used in analysis.  $R^2 = .48$ ;  $F(4, 79) = 18.09$ ;  $p < .001$  for the full model. Betas, t values, and 95% confidence intervals listed are for the full model.

\*  $p < .05$ ; \*\*  $p < .01$

#### 4. FUTURE RESEARCH DIRECTIONS

The logical next steps in this area of inquiry would be to conduct future studies at universities outside the US to generalize study findings. In addition, another logical next step is to use these findings for the development of harm reduction interventions designed to reduce consequences without necessarily expecting consumption reduction. Presumably such interventions would involve challenging alcohol expectancies without an emphasis on changes in reduction to examine if the intervention would be associated with significant reductions in alcohol related consequences over time among university students.

#### 5. DISCUSSION AND CONCLUSIONS

The results supported our study hypotheses: positive alcohol expectancies as assessed by the global positive expectancies scale of the AEQ were found to be significantly associated with total number of consequences as assessed by RAPI after controlling for age, gender, and alcohol use among Mexican American university students. The hypothesized relationship was supported by results from two different regression models controlling for drinking in two different ways, the first controlling for total number of proximal binge drinking events and the second controlling for total number of standard drinks consumed during the study. In the model controlling for binge drinking events, baseline positive outcome expectancies accounted for 8% of the observed variance in alcohol related consequences at three month follow-up, and in the model controlling for proximal number of binge drinking events, positive outcome expectancies accounted for 7% of the observed variance in alcohol related consequences at three month follow-up.

The study findings are consistent with an earlier study that found that positive outcome expectancies was associated with consequences, independently of alcohol consumption (Blume et al., 2003). However, in the current study, with its longitudinal design, it emerged that positive outcome expectancies for alcohol at baseline were a significant predictor of subsequent number of alcohol related consequences experienced by participants independent of total consumption of alcohol or proximal number of binge drinking events during the study. As was originally suggested in the discussion of the well-known balanced placebo drinking study (Marlatt et al., 1973), alcohol use behavior seems to be a function of not only the level of alcohol use but also of the beliefs held by alcohol consumers, which can be independent of the level of alcohol being



consumed. In the present study and its predecessor (Blume et al., 2003), positive outcome expectancies concerning alcohol use seem to be accounting for consequences otherwise unaccounted for by the level of alcohol consumption.

Although not specifically the focus of the study, it is also worth mentioning that the control variables of age, gender, and alcohol use behavior were all significant predictors of both regression models (Tables 1 and 2), with similar relationships found in both examinations: older age, male gender, and greater drinking (either proximal numbers of binge drinking events -Table 1- or total consumption -Table 2) were significantly associated with greater numbers of consequences. The findings concerning gender and levels of drinking are not particularly surprising. However, at first glance, the significant finding concerning age may be considered unusual since younger age is often considered a risk for greater consequences among sample of White university students, usually associated with maturing out behavior (e.g., Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001). However, the particular finding in the present sample that older age and being male were significantly associated with greater alcohol related consequences, independent of level of alcohol consumption, seems congruent with other research that has found that the maturing out process (students naturally reducing their consumption as they mature) commonly seen among many young adults may not occur with Mexican American young male adults (Caetano & Herd, 1988).

From a harm reduction perspective, the results are quite interesting since they provide additional evidence that consequences attributed to alcohol use may in some instances be the function of positive alcohol expectancies and independent of amount of alcohol consumed. Theoretically speaking, interventions on alcohol expectancies could potentially be used to target alcohol related consequences, even among those students who may be unwilling or unable to change consumption patterns, providing another possible method to reduce risks to students. Given that many students would have limited motivation to change as pre-contemplators or contemplators as defined by the Transtheoretical Stages of Change Model (e.g., Prochaska, DiClemente, & Norcross, 1992), and not yet considering reductions in drinking, it would be helpful to determine additional harm reduction approaches to help these students. Although speculative, the newly proposed hypothesis is worthy of further analysis given the results of this and other similar studies. In addition, the significant association of positive outcome expectancies with consequences accounted for relatively modest amounts of variance in consequences among the students, and therefore it is unknown if an intervention on expectancies would result in clinically significant reductions in consequences. However, it could be argued that any reduction could be potentially helpful for students, especially male students who may be at risk for not maturing out of the risky behavior.

The present study was novel in the sense that it examined the relationships over time and also included a Mexican American university student sample, a population whose drinking behavior has not been adequately examined. However, the study is not without its limits. Firstly, association with the study was voluntary and the sample size was relatively modest, therefore its design may prevent broad generalization of results to all university students. In addition, the recruitment of regular drinkers for the study means that the results likely only generalize to those university students who drink routinely. The results suggest that the study examined a rather heavy drinking sample of students, given descriptive findings concerning the constructs of interest, and although unintended, this particular bias may have been the result of the decision to exclude those students who did not consider themselves as regular drinkers. However, since regular drinkers in colleges and universities, especially those who engage in binge drinking, are those who may warrant the most concern for experiencing the harmful consequences of alcohol use, one could argue that the study results will likely generalize to those students considered at greatest risk.

There is a popular saying in American culture that “doing is believing”, meaning that people often act consistently with how they believe. However, with regard to addictive behaviors, a more appropriate interpretation of what has been observed is that “believing is doing”. The preponderance of research evidence concerning addictive behaviors suggests that what people believe about alcohol use may contribute to what they do, including the consequences they experience. Since beliefs are modifiable, this is generally good news for

clients and practitioners alike who have the ability to work together to change beliefs in order to reduce the risks of alcohol abuse.

## REFERENCES

- Baer, J. S., Kivlahan, D. R., Blume, A. W., McKnight, P., & Marlatt, G. A. (2001). Brief intervention for heavy drinking college students: Four-year follow-up and natural history. *American Journal of Public Health, 91*(8), 1310-1316. doi:10.2105/AJPH.91.8.1310
- Blume, A. W., Lostutter, T. W., Schmalting K. B., & Marlatt, G. (2003). Beliefs about drinking behavior predict drinking consequences. *Journal of Psychoactive Drugs, 35*(3), 395-399. doi:10.1080/02791072.2003.10400025
- Blume, A. W., Schmalting, K. B., & Marlatt, A. G. (2003). Predictors of change in binge drinking over a 3-month period. *Addictive Behaviors, 28*(5), 1007-1012. doi:10.1016/S0306-4603(01)00287-8
- Brown, S. A., Goldman, M. S., & Christiansen, B. A. (1985). Do alcohol expectancies mediate drinking patterns of adults? *Journal of Consulting and Clinical Psychology, 53*(4), 512-519. doi:10.1037/0022-006X.53.4.512
- Caetano, R., & Herd, D. (1988). Drinking in different social contexts among white, black, and Hispanic men. *Yale Journal of Biological Medicine, 61*(3), 243-258.
- Collins, R. L., Parks, G. A., & Marlatt, G. A. (1985). Social determinants of alcohol consumption: The effects of social interaction and model status on the self-administration of alcohol. *Journal of Consulting and Clinical Psychology, 53*(2), 189-200. doi:10.1037/0022006X.53.2.189
- Engs, R. C., Diebold, B. A., & Hanson, D. J. (1996). The drinking patterns and problems of a national sample of college students, 1994: Implications for Education. *Journal of Alcohol and Drug Education, 41*(3), 13-33.
- Ennis, S. R., Ríos-Vargas, M., & Albert, N. G. (2011). *The Hispanic Population: 2010*. Washington, DC: US Census Bureau. Retrieved online August 1, 2012, from <http://www.census.gov/prod/cen2010/briefs/c2010br-04.pdf>
- Hingson, R., Heeren, T., Winter, M., & Wechsler, H. (2005). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24: Changes from 1998 to 2001. *Annual Review of Public Health, 26*, 259-279. doi:10.1146/annurev.publhealth.26.021304.144652
- Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein, A., & Wechsler, H. (2002). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24. *Journal of Studies on Alcohol, 63*(2), 136-144.
- Jones, B. T., Corbin, W., & Fromme, K. (2001). A review of expectancy theory and alcohol consumption. *Addiction, 96*(1), 57-72.
- Kuendig, H., Plant, M. L., Plant, M. A., Kuntsche, S., Miller, P., Gmel, G., Ahlström, S., Bergmark, K. H., Ólafsdóttir, H., Elekes, Z., Csemy, L., & Knibbe, R. (2008). Beyond drinking: Differential effects of demographic and socioeconomic factors on alcohol-related adverse consequences across European countries. *European Addiction Research, 14*(3), 150-160. doi:10.1159/00013
- Marlatt, G., Demming, B., & Reid, J. B. (1973). Loss of control drinking in alcoholics: An experimental analogue. *Journal of Abnormal Psychology, 81*(3), 233-241. doi:10.1037/h0034532
- National Institute on Alcohol Abuse and Alcoholism. (1971). *First special report to the U. S. congress on alcohol and health*. Bethesda, MD: Author.
- National Institute on Alcohol Abuse and Alcoholism. (2000). *Tenth special report to the U. S. congress on alcohol and health*. Bethesda, MD: Author.
- Presley, C. A., Meilman, P. W., & Cashin, J. R. (1996). *Alcohol and drugs on American college campuses: Use, consequences, and perceptions of the campus environment, Vol. IV: 1992-94*. Carbondale, IL: Southern Illinois University.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*(9), 1102-1114. doi:10.1037/0003-066X.47.9.1102
- Rehm, J., & Gmel, G. (1999). Patterns of alcohol consumption and social consequences. Results from an 8-year follow-up study in Switzerland. *Addiction, 94*(6), 899-912. doi:10.1046/j.1360-0443.1999.94689912.x
- Wechsler, H., Lee, J. E., Kuo, M., Seibring, M., Nelson, T. F., & Lee, H. (2002). Trends in college binge drinking during a period of increased prevention efforts: Findings from four Harvard School of Public Health study surveys: 1993-2001. *Journal of American College Health, 50*(5), 203-217. doi:10.1080/07448480209595713
- Wechsler, H. & Nelson, T. F. (2001). Binge drinking and the American college student: What's five drinks? *Psychology of Addictive Behaviors, 15*(4), 287-291. doi:10.1037//0893-164X.15.4.287

Alcohol outcome expectancies and consequences: Do people think themselves into and out of consequences?

White, H., & Labouvie, E. (1989). Towards the assessment of adolescent problem drinking. *Journal of Studies on Alcohol, 50*, 30-37.

## ADDITIONAL READING

Marlatt, G. A., Larimer, M. E., & Witkiewitz, K. (Eds.). (2011). *Harm reduction: Pragmatic strategies for managing high-risk behaviors* (2nd ed.). New York, NY: Guilford Press.

## KEY TERMS & DEFINITIONS

**Binge:** peak-drinking events that are strongly linked to high risk for aversive consequences. The definition for binge events often varies by culture.

**Harm reduction:** intervention strategies with the goal to make substance use less risky for those who choose to drink or use. Although harm reduction does not exclude abstinence goals, it does not necessarily expect them either.

**Outcome expectancies:** beliefs that people hold about expected outcomes from engaging in a particular behavior, in this instance, substance use.

**Transtheoretical stages of Change Model:** developed by Professors James Prochaska and Carlo DiClemente, a model for understanding the typical process of behavior change and for assessing where a person may be in the change process. The model is often used to match interventions with client motivation to change.

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## Chapter 3

# THE RELATIONSHIP OF SELF-REGULATORY PROCESSES, MOTIVATIONAL CONDITIONS, AND TEMPORAL FRAMEWORKS WITH PSYCHOLOGICAL WELL-BEING

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### ABSTRACT

Recent reviews have pointed out that understanding long-term issues of well-being requires other theories besides the prevailing cognitive-behavioral ones. This chapter reviews the relationship of well-being to compatibilities among self-regulatory processes, motivational conditions, and temporal frameworks. When pursuing long-term goals, experiential self-regulatory processes, such as autonomy and enjoyment, are associated with well-being. When pursuing short-term goals, cognitive-behavioral self-regulatory processes, such as goal progress and self-reinforcement, are associated with well-being. The review provides new insights regarding the roles of motivational conditions and temporal frameworks in the management of adaptive and maladaptive behaviors and offers suggestions for effective interventions for long-term well-being.

*Keywords:* self-regulation, motivation, goal conditions, well-being.

## 1. INTRODUCTION

Recent reviews have pointed out that understanding long-term issues of mental health requires other models and concepts besides the prevailing cognitive-behavioral ones (Hall & Fong, 2007; Ryan & Deci, 2008). The present review attempts to extend our understanding of such long-term issues with considerations of other psychological models, especially those from Self-Determination Theory (SDT) which describe motivational and experiential self-regulatory processes involved in satisfying core needs and desires (Deci & Ryan, 2000; Ryan & Deci, 2000). Long-term processes of adjustment and maladjustment and interventions for them involve unique psychological conditions and requirements which theories of motivation and experiential self-regulation can address.

Psychological well-being is based on our capacities to cope with various psychological situations and conditions. Research has established that psychological adaptation and well-being depend on our perceptions of our environment, capabilities, and resources to cope (Lazarus, 1991; Lazarus & Folkman, 1984). Past research has also drawn attention to the fact that our appraisals and coping with our life situations are interwoven in dynamic relationships. The various types of coping methods we utilize are influenced by how we appraise our life situations and psychological resources (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Peacock, Wong, & Reker, 1993). When we extend this model further and consider other forms of self-regulation such as those based on motivation, we can gain further insights into the persistence of both long-term adaptive and maladaptive behaviors and the appropriate interventions for them.

Much of past research on coping has focused on managing threatening and stressful situations and conditions. Much less research has examined the relationships of different self-regulatory and coping approaches with long-term psychological well-being. For a more complete understanding of adaptive and maladaptive behaviors in the long-term, we need further clarification of how different psychological conditions, including pursuing our goals under various temporal frameworks, require different coping and self-regulatory approaches. Recent reviews have identified the importance of motivational processes and temporal frameworks in the development of long-term maladjustments and their effective treatments

(Hall & Fong, 2007; Ryan & Deci, 2008). For example, whether our actions result in adjustment or maladjustment depends on the temporal framework of our motivations and our self-regulatory capacities (Hall & Fong, 2007). While maladaptive behaviors are often under the influence of more proximal or immediate consequences, long-term adaptive behaviors require and make use of more complex regulatory capacities and motivational processes. Following this line of reasoning, applying insights from research on self-determined motivation, experiential self-regulation, and the temporal frameworks under which they operate might extend our understanding of the nature of adaptive behaviors, the intransigent nature of maladaptive behaviors, and suggest more appropriate and effective interventions for them.

As stated above, analogous to the understanding of the conditions which promote maladaptive and adaptive behaviors, the effects of pursuing short-term and long-term goals on well-being depend on different motivational and self-regulatory processes. The following review proposes that experiential self-regulatory approaches promote well-being in the pursuit of long-term goals. On the other hand, for the promotion of well-being in more immediate situations and in the pursuit of short-term goals, behavioral and self-regulatory approaches appear to be appropriate and effective. Behavioral and experiential self-regulatory approaches have often been examined in terms of their effects on psychological well-being (Mezo & Short, 2012; Ryan & Deci, 2000). The present review followed previous conceptualizations of psychological well-being in behavioral and self-determination research as a multidimensional construct, including focus on mental health, affect, and self-esteem (Ryan & Deci, 2000; Sheldon & Kasser, 1998).

### **1.1. Goals, temporal frameworks, and self-regulation**

The type of psychological process most relevant to coping with and managing our different psychological environments for the promotion of well-being is self-regulation. Cognitive-behavioral and motivational processes have been proposed to account for the promotion of psychological well-being in theories of self-regulation (Mackenzie, Mezo, & Francis, 2012; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998). Motivational processes fall under the rubric of experiential self-regulation. As part of this review, we examine the relationship of behavioral, cognitive, and motivational self-regulatory processes with well-being under different goal conditions and temporal frameworks. Striving for goals is one of the central features in different types of self-regulations. However, few studies have examined the compatibilities of different self-regulatory processes with goal conditions under different temporal frameworks for the promotion of well-being. As a consequence, our understanding of the relationship of self-regulation, goal striving, and well-being remains fragmented and incomplete.

Construal-level theory (CLT; Liberman & Trope, 1998; Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007) is pertinent to these relationships because it outlines which psychological goal conditions might be compatible with different self-regulatory processes. Construal-level theory proposes that individuals make use of general and abstract constructs to conceptualize psychologically distant objects and specific and concrete constructs to conceptualize psychologically close objects. According to CLT, general constructs represent the core features of objects and goals. In contrast, specific constructs represent the peripheral features of objects and goals. Construal-level theory has also been applied to examine the psychological correlates of different types of goals. For more distant goals, the correlates reflect the essence of things whereas for more proximal goals the correlates reflect pragmatic and situational factors. For example, research has shown that general, abstract, and distal goals are associated with experiential attributes such as desirability, enjoyment, and interest (Trope et al., 2007). In contrast, more specific, concrete, and proximal goals are associated with behavioral dimensions such as feasibility and efficiency to achieve goals.

Following construal-level theory, under proximal goal conditions peripheral aspects of motives, such as meeting situational requirements, are thought to be activated, compatible with behavioral and cybernetic self-regulations (Horvath & McColl, 2013). Under distal goal conditions, however, core aspects of motives, such as interest and enjoyment, are thought to be

activated which are compatible with experiential self-regulation. A closer match on attributes shared by goal conditions and self-regulatory processes are adaptive and associated with greater psychological well-being. For example, specific goals in situations are compatible with cognitive and behavioral self-regulatory processes that depend on feedback and control. On the other hand, general or abstract goals have core attributes such as desirability and enjoyment that are compatible with experiential self-regulatory processes that involve pursuing intrinsic interests. Accordingly, under more circumscribed conditions, such as in the pursuit of short-term goals in specific situations, cybernetic and behavioral self-regulatory processes, such as perception of goal progress and self-reinforcement, are associated with psychological well-being (Horvath & McColl, 2013). In the pursuit of more general or personal goals, however, experiential self-regulatory processes, such as enjoyment of an activity, are associated with psychological well-being.

## **2. BACKGROUND**

### **2.1. Behavioral and cybernetic self-regulation**

Self-regulation has been conceptualized as the management and control of behavior in order to acquire goals (Bandura, 1997; Carver & Scheier, 1998; Endler & Kocovski, 2000; Kanfer, 1970). Theories of self-regulation were developed within behavioral, cognitive, and cybernetic models (Bandura, 1997; Carver, & Scheier, 1998; Kanfer, 1970). The main components of cybernetic and behavioral self-regulation include goal setting, planning, feedback, self-monitoring, self-evaluation, and self-reinforcement (Endler & Kocovski, 2000; Kocovski & Endler, 2000; MacKenzie et al., 2012; Mezo, 2009). Striving for goals is a core aspect of self-regulation and is thought to energize and guide behavior (Carver, & Scheier, 1998; Locke & Latham, 2002). Behavioral and cybernetic self-regulations share similar processes involving the control of behavior to acquire desired goals. In cybernetic regulation, however, there is relatively more emphasis on cognition and the role of information feedback to guide behavior, while in behavioral self-regulation there is relatively more focus on motivational components such as self-reinforcement. However, unlike enjoyment in experiential self-regulation, in behavioral self-regulation the reward is externally applied and the consequent experience of pleasure is differentiated from the act being reinforced. For example, one student might study for a course because of intrinsic interest in the material itself, whereas another student might use externally applied incentives, such as treats, to persist in their studies.

In both cybernetic and behavioral self-regulations, behavior is adjusted to reduce discrepancies from set goals (Carver & Scheier, 1998; Endler & Kocovski, 2000). The proximity of actions to set criteria is a determinant of adjustment, self-worth, and positive affect (Ahrens, 1987; Hyland, 1987; Siegert, McPherson, & Taylor, 2004). In cybernetic self-regulation, positive affect occurs when the person perceives that adequate progress is being made toward goals (Carver & Scheier, 1998). In contrast, negative affect occurs if the person does not perceive that adequate progress is being made. A meta-analysis of relevant research has confirmed that goal progress is associated with increased positive and decreased negative affect (Powers, Koestner, Lacaille, Kwan, & Zuroff, 2009). In addition, perceived goal progress in behavioral self-regulation leads to subsequent self-reinforcement (Endler & Kocovski, 2000; Kocovski & Endler, 2000). Positive self-evaluations and self-reinforcement for reaching goals result in positive affect (Ahrens, 1987; Endler & Kocovski, 2000; Kocovski & Endler, 2000). On the other hand, low frequencies of self-reinforcement in behavioral self-regulation are associated with emotional distress and depression (Kocovski & Endler, 2000).

### **2.2. Experiential self-regulation**

Self-Determination Theory describes the motivational and experiential self-regulatory processes involved in satisfying core needs and desires (Deci & Ryan, 2000; Ryan & Deci, 2000). Self-determined individuals are able to exercise freedom over their choice of motivated actions. Self-determined motivation is associated with the capacity and freedom to select and pursue intrinsically interesting and satisfying goals rather than extrinsic ones (Deci & Ryan,

2000; Owens, Mortimer, & Finch, 1996; Ryan & Deci, 2000). From the perspective of SDT, individuals have a propensity to satisfy their basic or primary needs for autonomy, competence, and relatedness (Deci & Ryan, 1987; Ryan & Deci, 2000). Goals and interests that meet these basic psychological needs are intrinsically motivating and satisfying. In intrinsic motivation the reward is the spontaneous experience of interest and enjoyment (Deci & Ryan, 1995; Ryan & Deci, 2000). Examples of intrinsic motivation include the pursuit of goals for affiliation, personal growth, and community relations. In contrast, extrinsic motivation includes the pursuit of goals for wealth, fame, and self-image that at best indirectly satisfy basic needs.

According to SDT, experiential self-regulation has been conceptualized to function along an autonomously and internally regulated to controlled and externally regulated continuum (Deci, Eghrari, Patrick, & Leone, 1994; Deci & Ryan, 1987). Experiential self-regulations vary in the degree to which the person pursues motives and values that have been internalized and integrated all the way from intrinsic motivation to extrinsic motivation and amotivation (Ryan & Deci, 2000). To reflect these processes, global measures have been developed to evaluate levels of experiential self-regulation from intrinsic motivation to amotivation (see Pelletier et al., 2007).

Based on theoretical and empirical grounds, however, some researchers have also conceptualized autonomous and controlled regulation as distinct experiential self-regulatory processes (Barbeau, Sweet, & Fortier, 2009; Koestner, Otis, Powers, Pelletier, & Gagnon, 2008). Autonomously regulated individuals feel free and empowered to choose intrinsically satisfying goals and enjoy their activities (Ryan & Deci, 2000; Sheldon & Elliott, 1999; Sheldon, Ryan, Deci, & Kasser, 2004). Autonomous regulation is associated with a number of positive psychological conditions including positive self-esteem (Owens et al, 1996; Sheldon & Kasser, 1995) and psychological well-being (Ratelle, Vallerand, Chantal, & Provencer, 2004; Sheldon & Kasser, 1995; Sheldon et al., 2004). In contrast, individuals using controlled regulation choose their goals in response to external forces. They perceive external constraints or demands which they feel they need to comply with. In controlled regulation, the individual does not feel free to choose intrinsically satisfying goals. In such conditions the individual is less likely to be motivated, satisfied, or successful. The pursuit of extrinsic or externally imposed goals results in less effort, basic need fulfillment, and psychological well-being in such individuals (Crocker, Brook, Niiya, & Villacorta, 2006; Sheldon et al., 2004).

### **2.3. Goal conditions and self-regulation**

Current studies on motivation have drawn distinctions between motivational content (e.g., interests and goals) and self-regulatory processes, or the ways and reasons for acting on motivational content (Deci & Ryan, 2000; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998; Sheldon et al., 2004). Motivational content has been formulated in various but complementary ways in the literature. Proponents of Self-Determination Theory have differentiated between intrinsic goals which are pursued because they are inherently enjoyable and extrinsic goals which are pursued for secondary reasons (Deci & Ryan, 1987; Ryan & Deci, 2000). Carver and Scheier (1998) placed goal pursuits in a hierarchy, from ideal and general goals at the top to specific routines, programs, scripts, and behaviors at the bottom. The general goals are pursued through the execution of specific and concrete acts at the bottom of the hierarchy. A related differentiation considers whether one is pursuing distal or proximal goals (Locke & Latham, 2002; Trope et al., 2007; Zimmerman & Schunk, 2001). The external situation is seen as more salient for individuals pursuing proximal rather than distal goals. Others have differentiated between implicit and explicit goals and motives (Thrash & Elliot, 2002). Implicit motives are based on internal needs and are less in conscious awareness whereas explicit motives are consciously formulated. The former are better at predicting long-term behaviors and achievement whereas the latter are better at predicting short-term behaviors or what people will do in specific situations (Spangler, 1992).

Certain goal types or conditions appear to be more compatible with some forms of self-regulation than others. Behavioral and cognitive forms of self-regulation tend to be applied

to the situational requirements of short-term goal pursuits (Locke & Latham, 2002; Zimmerman & Schunk, 2001). Behavioral strategies and tactics target the specific requirements of situations. Implementation planning, a component of cognitive-behavioral self-regulation, has been found to increase progress on goals and to achieve behavioral change within short time intervals (Koestner et al., 2008). Perception of goal progress, in turn, has resulted in increased well-being within short time intervals (Sheldon & Elliot, 1999; Sheldon & Kasser, 1998). In contrast, experiential aspects of self-regulation, such as intrinsic enjoyment of an activity, appear to play a more prominent role in promoting adjustment and well-being in the pursuit of long-term goals. Experiential self-regulation has been found to predict well-being after a time interval of one year (Sheldon et al., 2004), whereas its effects on well-being in short time intervals of one or two-weeks were mixed (Sheldon & Kasser, 1995, 1998). These findings suggest that the effects of different types of self-regulations on well-being may depend on the types of goals individuals are pursuing and the conditions under which they operate.

The above reviewed findings point towards several observations. First, the above conceptualizations of goals fall into two main types. More general, distal, and implicit goals, although not identical, appear to be similar constructs. Likewise, more specific, proximal, and explicit goals appear to be similar constructs. Second, different self-regulatory processes appear to have differential applicability and effectiveness in addressing these two types of goals. Some evidence suggests that experiential self-regulation might be more appropriate for general, distal, and implicit goal pursuits. On the other hand, behavioral and cognitive self-regulations have been successfully applied to specific, proximal, and explicit goals in more circumscribed situations. Accordingly, general and long-term goals appear to involve core psychological attributes which are more compatible with experiential self-regulation. In contrast, specific and short-term goals contain situational requirements which appear to be more compatible with cybernetic and behavioral self-regulations.

### **3. SELF-REGULATION AND PSYCHOLOGICAL WELL-BEING**

This section reviews how different self-regulatory processes account for psychological well-being under different goal conditions and temporal frameworks. Cybernetic and behavioral self-regulatory processes are typically applied to the pursuit of short-term goals. In specific situations, a sense of accomplishment can come from success on particular tasks. Positive feedback and consequent reinforcement for success promote self-esteem and other psychological benefits (MacKenzie et al., 2012). However, cybernetic and behavioral self-regulatory processes differ, with more emphasis on the use of information feedback to manage behavior in the former and more emphasis on the use of external rewards to manage behavior in the latter. With regard to the promotion of well-being in long-term goal pursuits, experiential self-regulatory processes, such as intrinsic enjoyment of an activity, are more likely to be beneficial (Sheldon & Kasser, 1995; Sheldon et al., 2004). Processes in experiential self-regulation appeal to the satisfaction of core needs of the self, such as for autonomy, which sustain the individual emotionally over long periods of goal striving (Sheldon & Elliott, 1999) and also produce long-term beneficial therapeutic effects (Ryan & Deci, 2008).

In a study by Horvath and McColl (2013), participants completed global measures on their typical modes of behavioral and experiential self-regulations, as well as measures of psychological well-being. They also listed important intrinsic goals they pursued more generally and goals pursued in the short-term and rated their use of cybernetic, behavioral, and experiential self-regulatory processes. These processes included perception of goal progress, self-reinforcement for goal progress, and enjoyment of goal pursuits. The study employed self-report measures of mental health, self-esteem, and general affect to form a composite index of psychological well-being. These measures are commonly used indicators of subjective well-being (Koestner et al., 2008; Ratelle et al., 2004).

Consistent with construal-level theory, Horvath and McColl (2013) found that enjoyment of the activity, an experiential self-regulatory component, accounted for psychological well-being in the pursuit of goals more generally. In contrast, in the pursuit of



short-term goals, cybernetic and behavioral components in self-regulation, namely perception of goal progress and self-reinforcement for goal progress, accounted for well-being. The latter are notable findings given the fact that they occurred even in the pursuit of short-term intrinsic goals, when one might expect extrinsic goals to be more consistent with the situational focus of cybernetic and behavioral regulation. These results suggest, therefore, that cognitive and behavioral self-regulatory processes are applicable to managing the situational requirements of various types of short-term goals.

Overall, self-determination variables, such as autonomous regulation and enjoyment, were more strongly associated with psychological well-being than were cognitive and behavioral ones, such as perception of goal progress and self-reinforcement. These positive health effects were likely due to the contributions of self-determination processes, such as autonomy, to the satisfaction of basic needs (Barbeau et al., 2009; Deci & Ryan, 1987; Ryan & Deci, 2000; Thøgersen-Ntoumani & Ntoumanis, 2007) and the relation of self-determination variables to feelings of security and confidence (Ratelle et al., 2004). Consistent with past research, controlled regulation was negatively associated with well-being (Barbeau et al., 2009; Koestner et al., 2008; Sheldon et al., 2004). Controlled regulation had no associations with other benign processes, suggesting that it might contain various dysfunctional elements related to self-management. Besides the absence of autonomy in goal pursuits, the absence of significant correlations with enjoyment and positive reinforcement also suggested that controlled regulation likely involves a mix of both pleasant and unpleasant experiences. Unlike autonomous regulation, controlled regulation appears to lack positive approach tendencies and the intrinsic enjoyment of activities. These factors likely undermine its effectiveness to promote long-term satisfaction and well-being.

According to cognitive-behavioral and cybernetic theories, psychological well-being is a product of cognitive-behavioral coping (Bandura, 1997; Carver & Scheier, 1998, Kanfer, 1970). Individuals find cognitive and behavioral interventions helpful to cope with a variety of psychological problems (Febbraro & Clum, 1998). The contributions of cognitive and behavioural regulatory processes to well-being have also been recognized in the motivational and experiential regulatory literature (Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998). Sheldon and Kasser (1995) point out, however, that psychological health not only depends on how we achieve our goals but also why we seek them. While the cybernetic and behavioural self-regulations focus more on how to cope with specific tasks and situations, experiential self-regulations focus more on why we pursue goals. They tend to be more related to the core aspects of our motives and the self. The findings on the effects of motivational and experiential self-regulation on well-being have bearing on a number of challenging mental health issues, including how to deal with the intransigent nature of long-term maladaptive and addictive behaviors (see Hall & Fong, 2007). Whereas the beneficial effects of behavioral and cognitive treatment approaches on long-term maladaptive behaviors are often wanting, findings from research on experiential self-regulation and treatments based on SDT suggest that the satisfaction of core needs lead to sustained effort and long-term well-being (Ryan & Deci, 2008; Sheldon & Elliot, 1999). Such findings suggest that to sustain adaptive behaviors and to achieve long-term mental health, behavioral changes need to be tied to aspects of self-determined motivation. For example, the selection of constructive goals and actions might be challenging for clients. However, if with assistance they have opportunities to satisfy core needs for autonomy, competence, and relationships either in the therapeutic environment or outside of it and select goals and actions that also provide some intrinsic satisfaction, then they are more likely to have the emotional sustenance for coping and adaptation in the long term.

A final point is that these various forms of self-regulation are also related. Autonomous regulation, a global experiential variable, and global self-reinforcement, a behavioral variable, have been found to be correlated with each other and with other self-regulatory processes (Horvath & McColl, 2013). These findings and those of others suggest that experiential and behavioral self-regulations are likely to be complementary to each other and make their unique contributions at different stages of the self-regulatory process.

#### 4. FUTURE RESEARCH DIRECTIONS

The above review suggests that there is need for more comprehensive and encompassing conceptualizations of long-term psychological well-being and how it can be achieved. Also pointing in this direction are the findings from positive psychology that a number of different endeavors contribute to life satisfaction, including the pursuit of pleasure, engagement in activities, and finding meaning in life (Peterson, Park, & Seligman, 2005). The question arises as to how all these psychological constructs are related to each other with regard to the promotion of life satisfaction and well-being? Different self-regulatory processes appear to have specialized and unique compatibilities with our internal and external environments in the promotion of well-being which have to be taken into consideration. Cognitive and behavioral self-regulations appear to address the short-term requirements of specific situations. Experiential self-regulation, on the other hand, appears to address our internal needs and the self which can sustain well-being in the long term. However, these different forms of self-regulations also appear to share some processes in their activation and modulation of pleasant experiences. These points involve processes of motivation which are increasingly being recognized as important aspects in the attainment of mental health and effective interventions (Miller & Rollnick, 2002). The ways in which motivational processes contribute to the promotion long-term health behaviors and effective interventions need further investigation. Future research should examine various forms of self-regulations and the motivational conditions under which they contribute to long-term and short-term well-being. For example, research should examine the contributions of other self-regulatory processes, such as emotional regulation, to psychological well-being under different types of temporal frameworks and goal conditions. The control of our emotions is often related to our motivations and vital to the successful management of situations. Finally, more research is also needed to examine how these processes complement each other at different stages of the self-regulatory process.

#### 5. CONCLUSION

In conclusion, consistent with predictions from construal-level theory, compatibilities between self-regulatory processes, temporal frameworks, and goal conditions appear to be related to psychological well-being. It makes sense that the impact of different self-regulatory processes would be related to their similarities to the conditions and requirements of our internal and external environments. Although each type of self-regulation appears to have its own niche, they are also complementary building blocks in the overall management of the self and of psychological well-being. Our review extends conceptualizations of psychological well-being by integrating cybernetic, behavioral, and experiential self-regulatory processes with motivational and temporal ones. Considerations of motivational processes appear to provide a powerful addition to the understanding and integration of issues of long-term adjustment and its management. Our review of experiential self-regulation suggests that it may have some aspects, such as its focus on motivational processes and the satisfaction of core needs, which could be used to address the intransigent nature of long-term maladaptive behaviors, their management, and the promotion of long-term psychological well-being, which more conventional behavioral and cognitive approaches have struggled with.

#### REFERENCES

- Ahrens, A. H. (1987). Theories of depression: The role of goals and the self-evaluation process. *Cognitive Therapy and Research*, 11(6), 665-680.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Barbeau, A., Sweet, S., & Fortier, M. (2009). A path-analytic model of self-determination theory in a physical activity context. *Journal of Applied Biobehavioural Research*, 14(3), 103-118.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. New York, NY: Cambridge University Press.

- Crocker, J., Brook, A. T., Niiya, Y., & Villacorta, M. (2006). The pursuit of self-esteem: Contingencies of self-worth and self-regulation. *Journal of Personality, 74*(6), 1749-1771.
- Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality, 62*(1), 119-142.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*(6), 1024-1037.
- Deci, E. L., & Ryan, R. M. (1995). Human autonomy: The basis for true self-esteem. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31-49). New York, NY: Plenum Press.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268.
- Endler, N. S., & Kocovski, N. L. (2000). Self-regulation and distress in clinical psychology. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 569-599). San Diego, CA: Academic Press.
- Febbraro, G. A. R., & Clum, G. A. (1998). Meta-analytic investigation of the effectiveness of self-regulatory components in the treatment of adult problem behaviors. *Clinical Psychology Review, 18*(2), 143-161.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*(5), 992-1003.
- Hall, P. A., & Fong, G. T. (2007). Temporal self-regulation theory: A model for individual health behavior. *Health Psychology Review, 1*, 6-52.
- Horvath, P., & McColl, V. (2013). Behavioral and experiential self-regulations in psychological well-being under proximal and distal goal conditions. *Psychology, 4*(12), 975-984. doi:10.4236/psych.2013.412141
- Hyland, M. (1987). Control theory interpretation of psychological mechanisms of depression: Comparison and integration of several theories. *Psychological Bulletin, 102*(1), 109-121.
- Kanfer, F. H. (1970). Self-regulation: Research, issues, and speculations. In C. Neuringer, & J. L. Michael, (Eds.), *Behavior modification in clinical psychology* (pp. 178-220). New York, NY: Appleton-Century-Crofts.
- Kocovski, N. L., & Endler, N. S. (2000). Self-regulation: Social anxiety and depression. *Journal of Applied Biobehavioral Research, 5*(1), 80-91.
- Koestner, R., Otis, N., Powers, T. A., Pelletier, L., & Gagnon, H. (2008). Autonomous motivation, controlled motivation, and goal progress. *Journal of Personality, 76*(5), 1201-1229.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York, NY: Oxford University Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology, 75*(1), 5-18.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57*(9), 705-717.
- Mackenzie, M. B., Mezo, P. G., & Francis, S. E. (2012). A conceptual framework for understanding self-regulation in adults. *New Ideas in Psychology, 30*(2), 155-165.
- Mezo, P. G. (2009). The Self-Control and Self-Management Scale (SCMS): Development of an adaptive self-regulatory coping skills instrument. *Journal of Psychopathology and Behavioral Assessment, 31*(2), 83-93.
- Mezo P. G., & Short, M. M. (2012). Construct validity and factor analysis of the Self-Control and Self-Management Scale. *Canadian Journal of Behavioural Science, 44*(1), 1-8.
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing*. New York, NY: Guilford Press.
- Owens, T. J., Mortimer, J. T., & Finch, M. D. (1996). Self-determination as a source of self-esteem in adolescence. *Social Forces, 74*(4), 1377-1404.
- Peacock, E. J., Wong, P. T., & Reker, G. T. (1993). Relations between appraisals and coping schemas: Support for the congruence model. *Canadian Journal of Behavioural Science, 25*(1), 64-80.
- Pelletier, L. G., Sharp, E., Levesque, C., Vallerand, R. J., Guay, F., & Blanchard, C. (2007). *The General Motivation Scale (GMS): Its validity and usefulness in predicting success and failure at self-regulation* (Manuscript in preparation). University of Ottawa, Ottawa, Canada.
- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientation to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies, 6*(1), 25-41.

- Powers, T. A., Koestner, R., Lacaille, N., Kwan, L., & Zuroff, D. C. (2009). Self-criticism, motivation, and goal progress of athletes and musicians: A prospective study. *Personality and Individual Differences, 47*(4), 279-283.
- Ratelle, C. F., Vallerand, R. J., Chantal, Y., & Provencher, P. (2004). Cognitive adaptation and mental health: A motivational analysis. *European Journal of Social Psychology, 34*(4), 459-476.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.
- Ryan, R. M., & Deci, E. L. (2008). A self-determination theory approach to psychotherapy: The motivational basis for effective change. *Canadian Psychology, 49*(3), 186-193.
- Sheldon, K. M., & Elliot, A.J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*(3), 482-497.
- Sheldon, K. M., & Kasser, T. (1995). Coherence and congruence: Two aspects of personality integration. *Journal of Personality and Social Psychology, 68*(3), 531-543.
- Sheldon, K. M., & Kasser, T. (1998). Pursuing personal goals: Skills enable progress, but not all progress is beneficial. *Personality and Social Psychology Bulletin, 24*(12), 1319-1331.
- Sheldon, K. M., Ryan, R. M., Deci, E.L., & Kasser, T. (2004). The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. *Personality and Social Psychology Bulletin, 30*(4), 475-486.
- Siebert, R. J., McPherson, K. M., & Taylor, W. L. (2004). Toward a cognitive-affective model of goal-setting in rehabilitation: Is self-regulation theory a key step? *Disability and Rehabilitation, 26*(20), 1175-1183.
- Spangler, W. D. (1992). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Bulletin, 112*(1), 140-154.
- Thøgersen-Ntoumani, C., & Ntoumanis, N. (2007). A self-determination theory approach to the study of body image concerns, self-presentation and self-perceptions in a sample of aerobic instructors. *Journal of Health Psychology, 12*(2), 301-315.
- Thrash, T. M., & Elliot, A. J. (2002). Implicit and self-attributed achievement motives: Concordance and predictive validity. *Journal of Personality, 70*(5), 729-755.
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*(2), 440-463.
- Trope, Y., & Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior. *Journal of Consumer Psychology, 17*(2), 83-95.
- Zimmerman, B. J., & Schunk, D. H. (Eds.). (2001). *Self-regulated learning and academic achievement: Theoretical perspectives* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

## ADDITIONAL READING

- Ryan, R. M., Patrick, H., Deci, E. L., & Williams, G. C. (2008). Facilitating health behaviour change and its maintenance: Interventions based on Self-Determination Theory. *The European Health Psychologist, 10*(1), 2-5.

(This paper provides a brief overview of the application of principles from Self-Determination Theory to issues of long-term health behaviour change and its maintenance.)

## KEY TERMS & DEFINITIONS

**Construal-level theory (CLT):** a psychological theory that examines the use of different levels of abstraction to conceptualize objects at different degrees of psychological distance.

**Psychological well-being:** a multidimensional construct that encompasses various psychological attributes such as mental health, affect, and self-esteem.

**Self-determination:** the capacity and exercise of freedom of choice over one's motivated actions.

**Self-determination theory (SDT):** a macro-theory of human motivation, personality development, and well-being.

**Self-regulation:** the management and control of various facets of human behavior by the person in order to acquire set goals.

The relationship of self-regulatory processes, motivational conditions, and temporal frameworks with psychological well-being

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## Chapter 4

# POST-TRAUMATIC GROWTH, COPING, AND SOCIAL SUPPORT AMONG DISASTER SURVIVORS IN THE PROVINCE OF YOGYAKARTA, INDONESIA

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### ABSTRACT

Natural disasters cause many casualties, physical damage, and loss of properties. The event has a potential to cause traumatic experiences. Traditionally research has examined the negative or pathological effects that trauma may have on individuals, as well as variables that are proposed to influence post-trauma outcomes. In recent years, empirical post-trauma research has broadened its scope to investigate positive changes that may also occur following the experience of traumatic events. This study examines coping and social support variables in relation to levels of post-traumatic growth among disaster survivors. The sample consists of 100 survivors, female 53 (mean = 75,47; SD = 8,248) and male 47 (mean = 74,04 ; SD = 8,917) affected by natural disaster, earthquake 2006 in Bantul district (n = 50) and volcano eruption 2010 in Cangkringan Sleman district (n = 50) in Yogyakarta Province, Indonesia. Data were collected several years after disasters in 2013. The measurement instrument used for data collection has subscales on post-traumatic growth level, coping, and perceived social support. Coping aspects are divided into approach and avoidance coping. Possible predictors to post-traumatic growth were examined by regression analyses. Approach coping confirmed a significant relationship with post-traumatic growth scores. The result shows that approach coping and social support are significant predictors of post-traumatic growth. Implications for this research offer further highlight the needs for addressing approach coping and social support, which are more important than the nature of traumatic event in rehabilitation programme for disaster survivors.

*Keywords:* traumatic growth, coping, social support, disaster survivors.

## 1. INTRODUCTION

Indonesia is a hazard-prone country as it is situated at the meeting point of three active plates in the world: the Indo-Australian plate in the south, the Euro-Asian plate in the north, and the Pacific plate in the east. The three plates are moving and thrusting towards one another in such a way making the area prone to natural disasters such as volcanoes, earthquakes, and tsunamis. The movement of the plates also causes the area to become a tectonically and volcanically active region (National Agency for Disaster Management, 2010). Thus, natural disasters occur almost every year in Indonesia, some of which hit Yogyakarta Province in May 2006 and October 2010 when two massive disasters, catastrophic tectonic earthquake and volcanic eruption of Mount Merapi, caused many casualties and extensive property damage.

An earthquake disaster occurred on 27 May 2006 at 05:55 a.m. local time, devastating the southern part of Yogyakarta province and the east southern part of Central Java province. The earthquake was measured at 5.9 on Richter scale or 6.3 (USGS) with the epicenter located in the Indian Ocean, at 8.26 South Latitude and 110,301 East Longitude or around 37 km from Yogyakarta city, in a depth of 33 km below sea level. The impact of the earthquake was catastrophic as it caused lots of death and destroyed thousands of houses. The worst impact occurred in Bantul district with 4,143 people dead, 12,026 people injured, 71,763 houses collapsed, 71,372 houses heavily damaged, and 73,669 houses slightly damaged, while the second place was occupied by Klaten district with 1,045 people dead, 18,128 people injured, 29,988 houses collapsed, 62,979 houses heavily damaged, and 98,552 houses slightly damaged (National Agency for Disaster Management, 2010).

Another disaster was the Mount Merapi eruption occurring between October and November 2010, which impacted the Yogyakarta and Central Java Province residents. The eruption was the most powerful and the worst after its last eruption in 1870, causing a lot of casualties of both lives and properties. It was considered the worst because it had forced a total of 32 villages with a population of more than 70.000 people to leave their homes. Based on the statistical data from the National Agency for Disaster Management (BNPB), the total number of casualties caused by the eruption included 277 from Yogyakarta province and 109 from Central Java province (National Agency for Disaster Management, 2011). The data also recorded that there were a total number of 2,527 refugees in Central Java province and 12,839 refugees in Yogyakarta province.

According to the United Nations (UN), natural disasters are increasing in frequency and severity around the globe (Jacobs, Leach, & Gerstein, 2011). The rising number of population is one of the contributors to the negative impacts of natural disasters because death tolls and devastations are greater in areas with more dense population. McFarlane and Norris defined a disaster as a potentially traumatic event that is actively experienced, an accurate onset, and the time is delimited or may be limited, and although the aftermath may be long term, the actual disaster has an ending (Bowman & Roysircar, 2011). An event may be traumatic to one person, but community experiences a disaster, be it a town, a region, or a nation (Yutrzecka & Naifeh, 2008). Natural disasters often cause a number of psychological distresses, but post-traumatic stress disorder particularly emerges when there are many casualties in the disaster. The first reaction of the individual to disasters varies ranging from a state of shock, fear, sadness, and anger, which may be leading to a denial to the catastrophic events that have just occurred. Individual's ability to control his life decrease and a lot of predictable and solvable problems are becoming difficult to see due to the disaster effects that overpower their ability to cope with the trauma (Carson & Butcher, 1998, as cited in Aiken, 2001).

The disaster did not only result in negative impacts, but also in positive ones. Various reviews revealed that 30-90% of individual reported some positive changes following a serious life event, and that the event provided a learning opportunity that helped them live their lives more fully (Park, Cohen, & Murch, 1996). Positive changes following traumatic events have been empirically demonstrated after various kinds of violence, such as rape and sexual abuse, combat, living with AIDS (Siegel & Schrimshaw, 2000), suffering heart attacks (Affleck, Tennen, Croog, & Levine, 1987), and natural disasters. These positive changes and experiences are called *post-traumatic growth* (Karanci & Acarturk, 2005).

Post-traumatic growth is the process of getting and maintaining perceived positive outcomes from a traumatic experience (Tedeschi, Park, & Calhoun, 1998). Many terms including found meaning, benefit finding, post-traumatic or stress-related growth, perceived benefits and self-transformation have been used to capture experience of positive change or growth (Siegel & Schrimshaw, 2000). In particular, the term "post-traumatic growth" has been used in reference to "a sense" that personal growth is resulted from a challenging life experience (Tedeschi & Calhoun, 1996).

Taking into consideration of cross-cultural aspects, a contribution shall thus be made to explore the long-term consequences of natural disasters in Yogyakarta Province Indonesia. Why did some survivors reach post-traumatic growth? How did the people cope with the devastating disasters? What impacts did social support have on post-traumatic growth? What is the relationship between coping and social support to post-traumatic growth?

## **2. BACKGROUND**

### **2.1. Post-traumatic growth**

Tedeschi and Calhoun (1996) have noted that traumatic events that confront the individual may become a challenge of how to make the experience manageable, comprehensible, and meaningful. Successful adaptation requires effective negotiation of these psychological tasks, which in turn can provide the base for positive individual and interpersonal changes. Such positive changes have been documented following a wide variety of difficult life

experiences – events as seemingly disparate as coping with breast cancer (Cordova, Cunningham, Carlson, & Andrykowski, 2001), sexual assault (e.g., Frazier, Conlon, & Glaser, 2001), and military combat (e.g. Fontana & Rosenheck, 1998; Linley & Joseph, 2004; Tedeschi & Calhoun, 1996, 2004). The range of reported growth prevalence varies widely (reviewed in Linley & Joseph, 2004), even after similar types of traumatic events, suggesting that positive growth outcomes may depend on the subjective experience of the event rather than strictly its type or objective characteristics.

Calhoun, Cann, Tedeschi, and McMillan (2000) defined posttraumatic growth as “positive change that an individual experiences as a result of the struggle with a traumatic event”. In contrast to the construct of resilience, in which the individual returns to baseline functioning following highly stressful or traumatic experience (O’Leary & Ickovics 1995), posttraumatic growth is characterized by post-event adaptation that exceeds pre-event levels. In other words, the experience is transformative and represents a “value-added” (O’Leary & Ickovics 1995) or “better-off-afterward” (Carver, 1997) state. The domains in which positive changes may occur span perceptions of self, philosophy of life, and relationships with others (Tedeschi et al., 1998). This general construct has received considerable theoretical and empirical attention in the past decade, variously described as posttraumatic growth (Tedeschi & Calhoun, 2004), thriving (O’Leary & Ickovics, 1995; Carver, 1997), stress-related growth (Park, Cohen, & Murch, 1996), perceived benefits (McMillan, Smith, & Fisher, 1997), and adversarial growth (Linley & Joseph, 2004), among other appellations.

Growth is presumed to result from psychologically “seismic events” (Calhoun, 1996, as cited in Tedeschi et al., 1998) – events that seriously challenge or disrupt an individual’s basic assumptions and modes of interpreting and adapting to experience. Consistent with this, some studies have found growth or the perception of benefits to be positively associated with degree of perceived threat or event exposure (e.g., Cordova et al., 2001; Fontana & Rosenheck, 1998) and level of posttraumatic stress symptoms (e.g., Cadell, Regehr, & Hemsworth, 2003), though findings have been inconsistent (e.g., Frazier et al., 2001). In some cases, however, a curvilinear relationship has been noted wherein higher growth is reported by those with intermediate levels of exposure (Fontana & Rosenheck, 1998; Lechner et al., 2003) or symptoms, suggesting that there may be a range of traumatic experience most conducive to growth (Tedeschi & Calhoun, 1998) regarding possible curvilinear relationships to personality and coping factors. In post-traumatic growth, there is an emotional and cognitive process. This affects the outcome of the traumatic experience that is threatening the individual psychology. In a cross-sectional study, Park et al. (1996) found that higher benefit-finding was positively associated with intrusion and avoidance symptoms related to a recent stressful negative event.

It is found that posttraumatic growth reported in the first few months following the September 11, 2001 terrorist attacks was associated with higher levels of trauma symptoms, more positive changes in worldview, and higher use of denial as an early coping strategy – each of these factors was significantly associated with each of the five different types of growth. Additionally, younger age, non-white ethnicity, less education, lower levels of behavioural disengagement, and a curvilinear relationship with trauma symptoms were also significantly associated with a majority of growth outcomes. Interestingly, the coping strategy of active coping/planning is positively associated with higher new possibilities, but negatively associated with relating to others and spiritual change. At the follow-up assessment, 6-8.5 months after the attacks, those who were reported to decrease in trauma symptoms and increases in positive worldview changes, acceptance, and positive reframing (compared to levels at baseline) are reported to have higher levels of growth on a majority of growth subscales. Females and those with low educational background at baseline were also associated with follow-up growth. It is found that increases in positive reframing and acceptance over time, along with a reduction in trauma symptoms, were associated with higher PTG in the longer term (Butler, Blasey, Garlan, & McCaslin, 2005).

The nature of the traumatic event, coping variables, perceived social support have commonly been investigated as predictors or correlates of post-trauma. In recent years, a few researchers have systematically investigated notions of positive post-trauma changes in individuals, for example following loss (Tedeschi & Calhoun, 1998), heart surgery (Affleck &



Tennen, 1996), sexual assault and cancer (McMillen, 1999). The rebuilding of the individuals' assumptive world that was destroyed by the trauma (Cadell & Sullivan, 2006). Tedeschi and Calhoun (1998) postulate that PTG is more likely to occur when events are highly disturbing.

## **2.2. Coping**

Coping is different from the automatic habitual responses that are perhaps measured more appropriately by psychological scale measurement. Coping is a process by which an individual manages the demands and emotions generated by that which is appraised as stressful (Lazarus, 1999; McCammon, Durham, Jackson Allison, & Williamson, 1988). Strategies include appraisals of a stressful event and bestowing the situation with meaning, as opposed to the global meaning assessed when measuring levels of PTG (Folkman & Moskowitz, 2000). The process involves appraisals as to whether a situation is a threat, a challenge, or a loss, and perceptions of what can be done to alter the situation or minimise the threat. Following the initial appraisal of the situation, coping strategies are implemented (Lazarus & Folkman, 1984). As a mediating variable, coping can be considered a transactional process between individuals, the context, and post-trauma outcome. In general though, active coping tends to be associated with better long term adjustment than are strategies that involve avoidance or disengagement, a maxim that was generally confirmed by findings with respect to predictors of 9/11 related trauma symptoms, global distress, and psychological well-being (Butler et al., 2005).

The post disaster environment and coping strategies of survivors (Karanci & Acarturk, 2005) are related to distress. Coping skills are also found to be related to growth. Park et al. (1996) found that there is a significant relationship between acceptance coping, positive reinterpretation and perceived growth. Moreover, studies reported that people, who use active coping strategies such as a problem-focused approach, can more easily handle stressful situations (Tedeschi et al., 1998). PTG was significantly correlated with the perceived severity of impact, perceived life threat, perceived social support, problem-focused coping, fatalistic coping, and helpless coping. The growth literature suggests that problem focused coping, positive reappraisal, and acceptance, are positively related with growth.

Tedeschi and colleagues (1998) also found that people may experience growth in three domains: personal changes, social changes, and spiritual changes. In spiritual changes, people were reported to have changes similar to the items of fatalistic coping such as "I tried to be happy with what I have had." Thus the results are in line with the literature showing that problem focused/optimistic coping and a fatalistic approach, which is an approach that entails acceptance, are related to growth.

## **2.3. Social support**

Tedeschi and Calhoun (1996) emphasized the importance of initial distress, personality characteristics, type of trauma and the context of social support as factors related to posttraumatic growth. Social support is important because it affects the rumination and the coping behaviours of the person (Tedeschi et al., 1998). In their study with the survivors of the Yugoslavia war, Tedeschi and Calhoun (2004) found that being a member of a group was a predictor of growth. The authors explained this finding that individual has an opportunity of belonging to a group of people in which they can provide channel for sharing trauma history, world view, and collective coping strategies with each other. Therefore social support seems to be an important facilitator of growth. Supportive social networks are often cited as a buffer against stress (Pittman & Lloyd, 1988). PTG was significantly correlated with the perceived severity of impact, perceived life threat, and perceived social support. It was found that a higher degree of perceived social support is significantly associated with less psychological distress (Dirkzwager, Bramsen, & van der Ploeg, 2003). Moreover, a supportive social network may cause the use of more active coping strategies (Dirkzwager et al., 2003). In the present study, the correlation analysis shows that perceived social support is correlated with being a volunteer and posttraumatic growth (Swickert & Hittner, 2009).

Researchers in the trauma literature have highlighted the importance of social support coping in facilitating posttraumatic growth (Tedeschi & Calhoun, 2004). Other forms of social

support, such as perceived availability of support and relationship satisfaction, would serve the same mediational role in the relationship between gender and posttraumatic growth, as does social support coping. In fact, research has documented a relationship between these two types of social support and posttraumatic growth (Park et al., 1996). Familial and general social support have also been found to promote positive outcomes (Brewin, Andrews, & Valentine, 2000; Frazier, Tashiero, Berman, Steger, & Long, 2004; Ozer, Best, Lipsey, & Weiss, 2003).

However, the association between post-traumatic growth and social support have been inconsistent. For example, Widows, Jacobsen, Booth-Jones, & Fields (2005) found no association between social support and post-traumatic growth. The simple presence or absence of a support network also has been found to be predictive of distress, regardless of the quality of social support. There is positive and negative support. The subjectively experienced, and qualitatively labeled, negative social support occurs when one attempts to be supportive but, in essence, provides a potentially damaging support comment or behavior such as “you should forget about it” or questioning “why were you there” to the trauma victim. These types of responses are not unheard of after any trauma. In other hand, they appear to have potentially become more prevalent for survivors of hurricanes because of the large number of damaging storms in the past few years. Residents in hurricane-prone areas may be dismissed or seen partially to blame for living in an area where a hurricane might strike. For example, soon after Hurricane Katrina, a poll by TIME magazine indicated that 57% of the respondents blamed the victims themselves for the relief problems (Borja & Callahan, 2008). Given the inconsistency of existing results, further research is necessary to explore more about association between growth and social support.

### **3. METHODOLOGY**

#### **3.1. Objective**

This study examines coping and social support variables in relation to levels of post-traumatic growth among disaster survivors in Yogyakarta Province Indonesia.

#### **3.2. Participants and procedure**

The sample consists of 100 survivors of affectedness natural disaster earthquake in Bantul district and volcano eruption in Cangkringan Sleman district in Yogyakarta Province, Indonesia. For the period July-September 2013, a process data was collected. The participants were personally approached, given information about the purpose of the research, and invited to participate. Confidentiality of information and its restricted use for research only were assured.

#### **3.3. Measures**

The measurement instruments used for data collection had subscales on post-traumatic growth level, coping, and perceived social support.

*Post-Traumatic Growth (PTG)*. Post-traumatic growth was assessed with the 21-items Post-Traumatic Growth Inventory (Tedeschi & Calhoun, 1996) that include aspects of perceptions of growth in relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. The Post-Traumatic Growth Inventory was developed to assess growth-related changes experienced by traumatized individuals. The 21-item scale yields a total score and five subscale scores: New Possibilities (5 items), Relating to Others (7 items), Personal Strength (4 items), Spiritual Change (2 items), and Appreciation of Life (3 items). For the present analyses only subscale scores were calculated. Participants read potential change items and rate them on a 6-point Likert-type scale, ranging from: “not at all” to “a very great degree”. The Post-Traumatic Growth Inventory has good internal consistency, and acceptable test-retest reliability, construct, convergent, and discriminant validity (Tedeschi & Calhoun, 1996).

*Coping*. Coping was assessed with a 24 items scale. These items were derived from 28 items of the Brief COPE Scale (Carver, 1997) and were selected based on their high factor loadings. Brief COPE includes subscales that assess different types of coping: self-distraction,

active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, emotional venting, positive reframing, planning, humour, acceptance, religion, and self-blame. Research participants were instructed to rate each item (1 = “I haven’t been doing this at all” to 4 = “I’ve been doing this a lot”) in relation to how they had “been coping with the stress in (their) life, including related to the disaster. Substance use and humour were not examined in this research because of low factor loading analysis and related to culture bias. The Brief COPE has adequate internal reliability (Carver, 1997). Finally, coping aspects divided into approach and avoidance coping.

*Perceived social support.* Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS). This scale was constructed to assess individual’s perceived social support. MSPSS specifically addresses the subjective assessment of social support adequacy. It was designed to assess perceptions of social support adequacy from three specific sources: family, friends, and significant others. MSPSS has good reliability, factorial validity, and adequate construct validity (Zimet, Dahlem, Zimet, & Farley, 1988).

Table 1 gives an overview of the descriptive data of the participants. The participant was 35% male and 65% female. Fifty percent of study participants were survivors from the Bantul’s earthquake 2006 and 50% of the Merapi Eruption 2010. The educational background of the participants was no school 6%, elementary school 36%, junior high school 25%, senior high school 32%, and university 1%. The marital status was single 12%, married 82%, and widow/widower 6%. All participants were Muslim. Participant’s occupation was labourer 19%, teacher 2%, housewife 31%, and others 48%.

Table 1. Participants descriptive statistics (n= 100).

<b>Demographics</b>	
<i>Gender (%)</i>	
Male	35 (35%)
Female	65 (65%)
<i>Marital status (%)</i>	
Single	12 (12%)
Married	82 (82%)
Widow/Widower	6 (6%)
<i>Level of education (%)</i>	
No school	6 (6%)
Elementary school	36 (36%)
Junior high school	25 (25%)
Senior high school	32 (32%)
University	1 (1%)
<i>Occupation (%)</i>	
Labourer	19 (19%)
Teacher	2 (2%)
Housewife	31 (31%)
Others	48 (48%)

A regression analysis in Table 2 showed that coping and social support are significantly predicted post-traumatic growth ( $F = 354.095$  ;  $p = 0.000 < 0.05$ ).

Table 2. Regression analysis result.

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	10.997	3	3.666	354.095	.000 <sup>b</sup>
Residual	.994	96	.010		
Total	11.991	99			

<sup>a</sup> Dependent Variable: PTG

<sup>b</sup> Predictors: (Constant), Coping Avo, Coping App, Social Support

Approach coping significantly predicted post-traumatic growth score ( $\beta = 0.583$ ), avoidance coping significantly predicted post-traumatic growth ( $\beta = 0.111$ ), and social support also significantly predicted post-traumatic score ( $\beta = 0.334$ ). Among those aspects significantly predicted 91,7% to post-traumatic growth. Even though both of coping strategy are significantly, we can see that approach coping is more effective than avoidance coping based on t-score (Table 3). Approach coping is more effective than avoidance coping relate to post-traumatic growth.

Table 3. Excluded avoidance coping.

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.697	.077		22.098	.000
	Social Support	.143	.028	.334	5.783	.000
	Coping App	.393	.036	.583	11.047	.000
	Coping Avo	.042	0.15	.111	2.741	.007

<sup>a</sup> Dependent Variable: PTG

#### 4. CONCLUSION/DISCUSSION

Based on the statistical regression analysis, it was found that approach coping and social support confirmed significant relationship with post-traumatic growth scores. Psychological research has long held an interest in identifying coping abilities that promote better adjustment in the aftermath of trauma. Many coping theories assume that survivors of trauma engage in a cognitive process of ascertaining meaning in relation to their experience in order to successfully cope with it (Folkman, 2008; Lazarus & Folkman, 1984; Regehr, Goldberg, & Hughes, 2002; Tedeschi & Calhoun, 1995). Coping is often referred to in terms of strategies, styles, resources, approaches, and skills. These terms may differ conceptually and the coping used by one individual to another is also different. Alternatively, other researchers use the term strategy and advocate a contextual response, whereby coping is viewed as being flexible across situations and over time (Skinner, Edge, Altman, & Sherwood, 2003; Suls & David, 1996).

Current coping theories contend that the effectiveness of any given strategy is dependent on the context of the traumatic incident (Schulz & Mohamed, 2004; Zuckerman & Gagne, 2003). According to this view, any particular strategy employed by the person to deal with the trauma can be either adaptive or maladaptive, depending on the circumstance. For example, Whealin, Ruzek, and Southwick (2008) reviewed a number of studies that have referred to adaptive and maladaptive coping influences, and other studies have differentiated coping strategies by using terms such as, functional or dysfunctional, transformation or regressive coping; and Sharkansky et al. (2000) who examined the relationship between approach focused or avoidance focused coping strategies on the psychological ill-health in active military personnel.

The coping measure employed in this study was Brief COPE Scale (Carver, 1997), based on factor analysis, which is divided into 2 factors. The first factor is called Approach Coping, comprises of 15 items: active coping, using emotional support, venting emotion, using instrumental support, positive reframing, planning, acceptance, and religion. The second factor is called Avoidance Coping, comprises of 9 items: denial, behavioural disengagement, self-blame, humour, and venting emotion (expressing negative feelings). The research result found that approach coping are recognized to post-traumatic growth in disaster survivors. Approach coping relates to direct attempts at problem-solving activities to relieve the source of psychological distress and relieve through positive reframing, and an optimistic outlook.

Social support is believed to help individuals evaluate events as being less stressful, and it has been shown to positively influence health outcomes (Tedeschi & Calhoun, 2004). Social support also has been related to posttraumatic growth (Park et al., 1996; Tedeschi & Calhoun, 2004). Post-traumatic growth can be understood as the occurrence of positive psychological change that can come about when individuals respond to highly challenging life events. Although there certainly are negative psychological effects that can result from traumatic experiences, the phenomenon of posttraumatic growth provides evidence for the notion that one can also grow and learn from stressful events (Tedeschi & Calhoun, 2004).

Three general domain areas of posttraumatic growth have been identified in the literature (McMillen, 1999; Tedeschi & Calhoun, 1995). First, individuals who have experienced traumatic events are frequently reported that they have a change in their own self-perceptions. Specifically, they are often described to have an increase in their feeling of self-reliance and self-efficacy, which can occur as individuals cope with the stressor that they have experienced. A second form of perceived benefit that people often describe after a traumatic event is a change in the quality of their relationships with others. In coping with a traumatic event, the individual may need a great deal of emotional or tangible support from others. When support is provided, this often leads the individual to see others in more positive ways and to become closer to the people in their support network. Finally, a third form of perceived benefit is that traumatized people are often reported to have a change in their life structure or their philosophy of life. After experiencing a traumatic event, individuals often recognize the vulnerability of life and, therefore, seem to develop a greater appreciation for it. Individuals also may reevaluate their spiritual lives, and for many people, this re-evaluation leads to a strengthening of religious beliefs (Tedeschi et al., 1998).

Social support is believed to influence the development of post-traumatic growth in a number of ways. Specifically, supportive others provide an outlet for the traumatized individual to talk about their experiences and, as such, the individual has an opportunity to receive emotional support, informational feedback concerning the stressful event and tangible assistance when coping with the stressor. As a result of these supportive experiences, the traumatized person may over time see others in more positive ways and may feel more confident in responding to the stressful event (Cryder, Kilmer, Tedeschi, & Calhoun, 2006; Tedeschi & Calhoun, 2004). Indeed, research has shown that traumatized people who have received support from others are often reported that they feel closer to significant others, that they engage in personal disclosure more often and that they are more compassionate and empathic when responding to others (McMillen, 1999). This influences between coping and social support to post-traumatic growth help to explain following psychological condition in disaster survivors in Yogyakarta Province Indonesia. Implications for this research offer further highlight the needs for addressing approach coping and social support, which are more important than the nature of traumatic event in rehabilitation program for disaster survivors.

## **5. FUTURE RESEARCH DIRECTIONS**

This study has focused on post-traumatic growth, coping, and social support. Further research may need to analyse other possibilities related psychological aspects to post-traumatic growth in difficult life experiences, such as the disaster experience survivors.

The sampling design and data collection methods of this study have a number of methodological strengths and limitations. Specific strengths include: the measures are well

validated and post-traumatic growth data are directly taken from the disaster survivors. Nevertheless, the number of sample may have not been sufficient. Thus, future research may need to consider having a more representative sample. In addition, it is also necessary to consider measuring some aspects of post-traumatic growth in a periodical time, such as 10, 15, or maybe 20 years after the traumatic events. This can be carried out to acquire a more comprehensive picture of post-traumatic aspects.

## REFERENCES

- Affleck, G., & Tennen, H. (1996). Construing benefits from adversity: Adaptational significance and dispositional underpinnings. *Journal of Personality, 64*(4), 899-922.
- Affleck, G., Tennen, H., Croog, S., & Levine, S. (1987). Causal attribution, perceived benefits, and morbidity after a heart attack: An 8-year study. *Journal of Consulting and Clinical Psychology, 55*(1), 29-35.
- Aiken, L. R. (2001). *Dying, Death, and Bereavement*. Mahwah, NJ: Lawrence Erlbaum Association.
- Borja, S., & Callahan, J. (2008). Recovery following hurricane Rita: A pilot study of preexisting and modifiable aspects of positive change. *Traumatology, 14*(2), 12-19.
- Bowman, S. L., & Roysircar, G. (2011). Training and practice in trauma, catastrophes, and disaster counseling. *The Counseling Psychologist, 39*(8), 1160-1181.
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*(5), 748-766.
- Butler, L. D., Blasey, C. M., Garlan, R. W., & McCaslin, S. (2005). Posttraumatic growth following the terrorist attacks of September 11, 2001: Cognitive, coping, and trauma symptom predictors in an Internet convenience sample. *Traumatology, 11*(4), 247-267.
- Cadell, S., Regehr, C., & Hemsforth, D. (2003). Factors contributing to posttraumatic growth: A proposed structural equation model. *American Journal of Orthopsychiatry, 73*(3), 279-287.
- Cadell, S., & Sullivan, R. (2006). Posttraumatic growth and HIV bereavement: Where does it start and when does it end? *Traumatology, 12*(1), 45-59.
- Calhoun, L. G., Cann, A., Tedeschi, R. G., & McMillan, J. (2000). A correlational test of the relationship between posttraumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress, 13*(3), 521-527.
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine, 4*(1), 92-100.
- Cordova, M. J., Cunningham, L. L. C., Carlson, C. R., & Andrykowski, M. A. (2001). Posttraumatic growth following breast cancer: A controlled comparison study. *Health Psychology, 20*(3), 176-185.
- Cryder, C., Kilmer, R., Tedeschi, R., & Calhoun, L. (2006). An exploratory study of posttraumatic growth in children following a natural disaster. *American Journal of Orthopsychiatry, 76*(1), 65-69.
- Dirkzwager, A. J. E., Bramsen, I., & van der Ploeg, H. M. (2003). Social support, coping, life events, and posttraumatic stress symptoms among former peacekeepers: A prospective study. *Personality and Individual Differences, 34*(8), 1545-1559.
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist, 55*(6), 647-654.
- Fontana, A., & Rosenheck, R. (1998). Psychological benefits and liabilities of traumatic exposure in the War Zone. *Journal of Traumatic Stress, 11*(3), 485-503.
- Frazier, P., Conlon, A., & Glaser, T. (2001). Positive and negative life changes following sexual assault. *Journal of Consulting and Clinical Psychology, 69*(6), 1048-1055.
- Frazier, P., Tashiero, T., Berman, M., Steger, M., & Long, J. (2004). Correlates of levels and patterns of positive life changes following a sexual assault. *Journal of Consulting and Clinical Psychology, 72*(1), 19-30.
- Jacobs, S. C., Leach, M. M., & Gerstein, L. H. (2011). Introduction and overview: Counseling psychologists' roles, training, and research contributions to large-scale disasters. *The Counseling Psychologist, 39*(8), 1070-1086.
- Karanci, N., & Acarturk, C. (2005). Post-traumatic growth among Marmara earthquake survivors involved in disaster preparedness as volunteers. *Traumatology, 11*(4), 307-323.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York, NY: Springer.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

- Lechner, S. C., Zakowski, S. G., Antoni, M. H., Greenhawt, M., Block, K., & Block, P. (2003). Do sociodemographic and disease-related variables influence benefit-finding in cancer patients? *Psycho-Oncology, 12*(5), 491-499.
- Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress, 17*(1), 11-21.
- McCannon, S., Durham, T., Jackson Allison, E., & Williamson, J. (1988). Emergency workers' cognitive appraisal and coping with traumatic events. *Journal of Traumatic Stress, 1*(3), 353-372.
- McMillen, J. C. (1999). Better for it: How people benefit from adversity. *Social Work, 44*(5), 455-468.
- McMillen, J. C., Smith, E. M., & Fisher, R. H. (1997). Perceived benefit and mental health after three types of disaster. *Journal of Consulting and Clinical Psychology, 65*(5), 733-739.
- National Agency for Disaster Management. (2010). *National Disaster Management Plan 2010-2014*. Jakarta, Indonesia: Bappenas-BNBP.
- National Agency for Disaster Management. (2011). *Action plan for post-disaster rehabilitation and reconstruction of eruption of Mount Merapi in Yogyakarta and Central Java Province 2011-2013*. Jakarta, Indonesia: Bappenas-BNBP.
- O'Leary, V. E., & Ickovics, J. R. (1995). Resilience and thriving in response to challenge: An opportunity for a paradigm shift in women's health. *Women's Health, 1*(2), 121-142.
- Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin, 129*(1), 52-73.
- Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*(1), 71-105.
- Pittman, J. F., & Lloyd, S. A. (1988). Quality of life, social support, and stress. *Journal of Marriage and the Family, 50*(1), 53-67.
- Regehr, C., Goldberg, G., & Hughes, J. (2002). Exposure to human tragedy, empathy, and trauma in ambulance paramedics. *American Journal of Orthopsychiatry, 72*(4), 505-513.
- Schulz, E., & Mohamed, N. E. (2004). Turning the tide: Benefit finding after cancer surgery. *Social Science & Medicine, 59*(3), 653-662.
- Sharkansky, E. J., King, D. W., King, L. A., Wolfe, J., Erickson, D. J., & Stokes, L. R. (2000). Coping with Gulf War combat stress: Mediating and moderating effects. *Journal of Abnormal Psychology, 109*(2), 188-197.
- Siegel, K., & Schrimshaw, E. W. (2000). Perceiving benefits in adversity: Stress-related growth in women living with HIV/AIDS. *Social Science and Medicine, 51*, 1543-1554.
- Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129*(2), 216-269.
- Suls, J., & David, J. P. (1996). Coping and personality: Third time's the charm? *Journal of Personality, 64*(4), 993-1005.
- Swickert, R., & Hittner, J. (2009). Social support coping mediates the relationship between gender and posttraumatic growth. *Journal of Health Psychology, 14*(3), 387-393.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455-471.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1-18.
- Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.) (1998). *Posttraumatic growth: Positive changes in the aftermath of crisis*. London, UK: Lawrence Erlbaum.
- Whealin, J. M., Ruzek, J. I., & Southwick, S. (2008). Cognitive-behavioral theory and preparation for professionals at risk for trauma exposure. *Trauma, Violence & Abuse, 9*(2), 100-113.
- Widows, M. R., Jacobsen, P. B., Booth-Jones, M., & Fields, K. K. (2005). Predictors of posttraumatic growth following bone marrow transplantation for cancer. *Health Psychology, 24*(3), 266-273.
- Yutzenka, B. A., & Naifeh, J. A. (2008). Traumatic stress, disaster psychology, and graduate education: Reflections on the special section and recommendations for professional psychology training. *Training and Education in Professional Psychology, 2*(2), 96-102.
- Zimet, G., Dahlem, N., Zimet, S., & Farley, G. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*(1), 30-41.
- Zuckerman, M., & Gagne, M. (2003). The COPE revised: Proposing a 5-factor model of coping strategies. *Journal of Research in Personality, 37*(3), 169-204.

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## Chapter 5

# RELATIONSHIPS WITH PARENTS AND PEERS, ATTITUDES TOWARDS SCHOOL, AND PREFERRED SPARE-TIME ACTIVITIES IN YOUNG ADOLESCENTS REPORTING SELF-HARM

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### ABSTRACT

The study is a continuation of a large-scale survey addressing the issue of self-harm prevalence among adolescents in a broader context. The main objective was to examine the connections between the occurrence of self-harming behaviour in young adolescents and the quality of their relationships with parents and peers, attitudes to school, academic aspirations, and preferred spare-time activities. Many authors view self-harm in the nonclinical population of adolescents as a certain means of communication with the social environment, which is being informed about the emotional states experienced by the self-harmer. Through self-harm, the adolescents expose their problems, making an explicit “cry for help in a hopeless situation” (Favazza, 1998) directed towards their nearest ones. For this reason, research regarding the abovementioned factors seems especially important. Significant associations between self-harming behavior in young adolescents and the quality of their relationships with parents and peers, attitudes to school, and preferred spare-time activities were found; these findings may prove important in targeting of the intervention programs.

*Keywords:* self-harm, peers, parents, school, adolescence.

### 1. INTRODUCTION

In the past two decades, the prevalence of self-harm in the adolescent population has soared. A behaviour which was recently considered highly pathological by both health professionals and general public has become a normal occurrence to such a degree that a number of authors report as much as 20% of adolescents having experimented with self-harm at least once in their lifetime (Brunner et al., 2007; Swahn et al., 2012). This means that self-harm can no longer be approached merely as a symptom of a psychiatric disorder or disturbed personality development. In the past years, research literature has repeatedly pointed out that it is necessary to come up with a more clearly specified theoretical framework of self-harm. Unfortunately, ever since 1910s, when the term *self-harm* appeared for the first time in a case study by L. E. Emerson (1913), terminological inconsistencies have made it difficult to bring the existing research studies together and derive a unified explanatory model of self-harm. In English, there are many expressions used to describe self-harming behaviour apart from *self-harm*: self-mutilation, local self-destruction, delicate cutting, self-injury, self-inflicted violence, self-battery, self-abuse, deliberate self-harm, non-suicidal self-injury, repetitive self-mutilation syndrome, self-cutting, focal suicide, para-suicide, self-injurious thoughts and behaviour, and others. The definitions by various authors usually differ with regard to the motivation and purpose of self-harm, presence or absence of a diagnosed mental disorder, as well as lethality, i.e. degree of differentiation between self-harm and suicidal behaviour.

Nevertheless, there are still many points in which all recently published research studies agree as far as self-harming behaviour is concerned: The individuals harm themselves intentionally and purposefully, with physical violence and without suicidal intentions. Moreover, the injuries are not inflicted for decorative, ritual or sexual purposes (Kriegelová, 2008). This definition most closely matches the term *non-suicidal self-injury* (NSSI), which is mainly used in American research literature (Lloyd, Kelley, & Hope, 1997).

In the present study, we define self-harm as deliberate self-injury without an explicit intention to die. The study is an extension of our previous large-scale survey (Hrubá, Klimusová, & Burešová, 2012; Klimusová, Burešová, & Bartošová, 2013) addressing the issue of self-harm prevalence among adolescents in a broader context. The main focus in this part of the study is on the quality of relationships with parents and peers in young adolescents reporting self-harm, their reported attitudes towards school, academic aspirations, and also their preferences for spare-time activities. The study focuses on adolescents between 11 and 15 years of age, which is a period scientific literature points out as the beginning and one of the peaks of self-harming behaviour. The period is distinguished, apart from physical maturation and development of secondary sex characteristics, by significant changes in affectivity and cognition, and by identity development. The adolescents' proximal social environment unquestionably plays a crucial part in these processes, as education and socialization are multi-factorial determined phenomena with complex manifestations and consequences, and strongly depend on the relationships between all individuals who participate in these processes. The results obtained in the study should serve as a starting point for the development of adequate intervention programs for students of upper grades of primary school.

## 2. BACKGROUND

The prevalence of self-injurious behaviour in the non-clinical population of adolescents is viewed by many authors (e.g. Nawaz, 2011) as connected to identity formation, a process in which parent and peer influence are believed to play a crucial role (Sartor & Youniss, 2002). At the same time, this period of maturation is characterized by relatively many conflicts both with the members of one's family and with one's peers. Since we do not address the issue of self-harm from the motivational perspective in the present chapter, we do not describe the existing explanatory models in detail (e.g., Suyemoto, 1998; Power & Brown, 2010). However, it is worth pointing out that most authors consider unsatisfactory relationships with significant others as one of the major background mechanisms of self-harm, together with increased demands on the part of the social environment, and the resulting emotional stress. It is these conflict situations, perceived lack of understanding or feelings of betrayal, which are often cited as the triggers of the first episodes of self-harm (Whitlock, Powers, & Eckenrode, 2006).

The developmental period of early adolescence itself is a major risk factor in the onset of teenage problem behaviours, with the rapid physical, emotional and social changes acting as potential stressors (Mrug, Hoza, & Bukowski, 2008). Harrington (2001) argues that it is typical for episodes of self-harm in adolescence to be preceded by stressful life events. These mostly include arguments with parents, other family problems, and rejection by a boyfriend/girlfriend, or problems at school. In all these cases, self-harm is a form of maladaptive coping. Thus, our main objective was principally to examine the connections between the occurrence of self-harming behaviour in young adolescents and the quality of their relationships with parents and peers, as these significant others play an inherent part in the adolescents' psychosocial developmental contexts and exercise the greatest influence on the formation of their psychosocial environment. The second research objective was to explore potential differences regarding school attitudes and academic aspirations between adolescents reporting and not reporting self-harm, as school may often become a significant source of psychological distress resulting in episodes of self-harm. This could be caused by increased pressure for good academic performance on the part of teachers and parents as well as by an increased importance of peer bonds in this life domain (Poledňová, 2012).

## 3. DESIGN

The study was conducted as a part of a large research project "Psychometric properties of assessment methods for screening of prevalence and forms of self-harm in early adolescents". In accordance with the research objectives, we were interested in quantitative, exploratory data, best obtainable through one-shot cross-sectional survey using self-report measures. The questionnaire was first piloted on a limited number of participants to test the psychometric

properties of the individual measures and the appropriateness of the measures for the target population. We also devoted extra attention to the ethical issues, offering help in conducting prevention programmes at schools with high prevalence of self-harm among the students. All schools were provided with a summary of partial results of the study in all domains, so they learned how they did in comparison with other schools.

### 3.1. Objectives

The objective of the present sub-study was to explore potential role of perceived relationships of young adolescents reporting self-harm with their parents and peers, their reported attitudes towards school, academic aspirations, and also their preferences for spending free time, in self-harming behaviour. In particular, we focused on the differences between respondents who never harmed themselves, those with sporadic, “experimental” experience with self-harm, and those who engaged in self-harming behaviour repeatedly and/or for a long period of time. These associations have been largely neglected by the previous research.

### 3.2. Methods

Self-harm was measured by the Self-Harm Inventory (Sansone, Sansone, & Wiederman, 1995) and the Self-Harm Behavior Questionnaire used by Gutierrez and colleagues (Gutierrez, Osman, Barrios, & Kopper, 2001). The original version of the SHI (Sansone, Sansone, & Wiederman, 1995) asks about the respondent’s experience with 22 different forms of self-harm and the frequency of occurrence of each behaviour in the respondent’s personal history. With each item, the respondents indicate whether and how many times they have engaged in the given self-harming behaviour. For the purpose of our study, we have excluded all items which were inadequate for the target population (e.g., “Lost job on purpose”). The obtained version was only 14 items long. The scale has a high reported internal consistency of about .89-.90.

The SHBQ (Gutierrez et al., 2001) measures self-harm and suicidal behaviour. The author intended the questionnaire for a nonclinical population of young people. With respect to our research objective, only Scale I, measuring self-harming behaviour, was included in the survey. The other sections, which address suicidal behaviour, were omitted. The selected section contains screening items asking whether the respondents have ever hurt themselves and – if yes – why, how old they were at the time of the self-harming episode, and whether they tended to confide this experience to other people – family, peers, or mental health professionals. The scale we used contained 11 items, some of which were yes/no questions, some were multiple-choice questions, and one was a free response item. The author of the scale reported an internal consistency of .95. Other measures included a set of items addressing various issues relevant to the research focus described above.

Complex measures of self-harm were chosen with respect to the issue that emerged in the meta-analysis by Muehlenkamp, Claes, Havertape, and Plener (2012) who analysed studies focusing on prevalence of self-harm published in 2005-2011 and found that authors who used single-item methods tended to report significantly lower prevalence compared with those who used complex lists of various forms of self-harm. When respondents were asked to indicate their experience with any of the behaviours listed, the accumulated prevalence was substantially higher.

### 3.3. Data Collection

The data was collected through random sampling, with an increased emphasis on ethical issues involved. First, a pilot study ( $N = 235$ ) was conducted, successfully validating basic psychometric properties of the research tools. In the next stage, the questionnaire was administered to a large sample ( $N = 1708$ ) selected to match the target population of adolescents aged between 11-16 years ( $M = 13.65$ ), with a gender distribution of 52% female, 48% male. Personal experience with self-harming behavior was self-reported in 341 out of 1708 (19.96 %) respondents. Prior to the data analysis, the obtained sample was balanced in terms of age and gender. The total sample thus consisted of 1371 respondents (687, i.e. 50.11 % females) containing an equal number of 13, 14 and 15-year-old adolescents ( $N = 457$  in each age group).

Next, the sample was divided into three groups according to the respondents' experience with self-harm: respondents who had no experience at all ("non-self-harmers";  $N = 784$ ), respondents who harmed themselves less than 5 times ("experimenters";  $N = 292$ ), and respondents who engaged in self-harming behaviour more than 5 times ("true self-harmers";  $N = 295$ ). We were also interested whether the respondents came from single-parent/divorced ( $N = 410$ ) or double-parent ( $N = 945$ ) families.

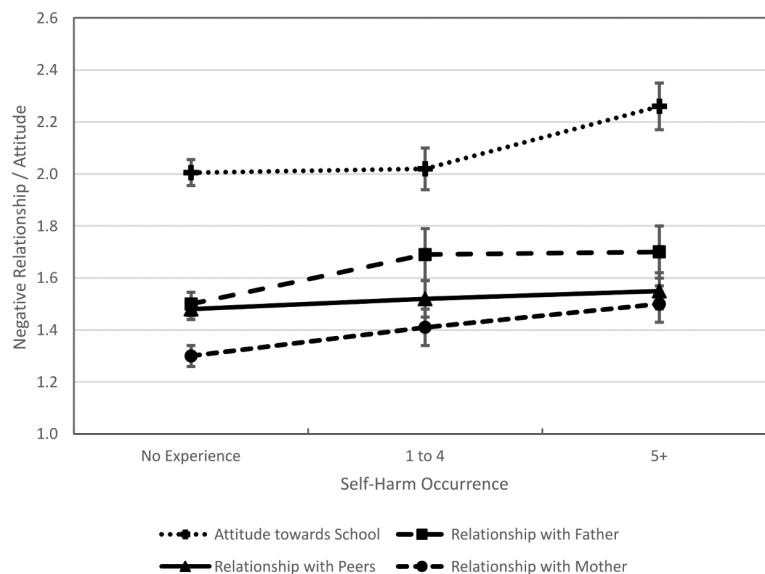
#### 4. RESULTS

The results of the study yielded valuable information contributing to the nomological network of self-harming behaviour in adolescents in a broader psychosocial context. There is a whole range of models aiming to explain self-harming behaviour. It appears that research findings in this area support the idea of a multi-factorial causality of the phenomenon, which is quickly spreading. Understanding the roots and causes of self-harm and the progress of its development might help in devising effective preventive practices, making proper and early diagnosis, and finding adequate treatment strategies. Due to the complexity of the study, we present a selection of most relevant findings for better comprehensibility, dividing the outcomes into three major parts.

##### 4.1. Self-harm occurrence, perceived quality of relationships with parent and peers, and attitudes towards school

The results of the ANOVA and LSD post-hoc tests show there were significant differences between the self-harm occurrence groups in almost all observed variables. In the area of family relationships, the group with no self-harm experience ("non-self-harmers") reported significantly better relationships with mothers than both self-harming groups ( $F = 17.38$ ;  $p < .001$ ), with the frequent self-harmers reporting marginally worse relationships than experimental (< 5 times) self-harmers ( $p = .08$ ). The same was observed for relationships with fathers ( $F = 11.25$ ;  $p < .001$ ), with "experimenters" and "true self-harmers" scoring at the same level, showing worse relationships than respondents reporting no self-harm. This means that worse quality of parent-child relationships is associated with self-harm more-or-less regardless of the frequency of occurrence. In contrast, no significant differences were found regarding the quality of respondents' relationships with their peers. As far as attitude towards school is concerned, the group that showed significantly more negative attitude than the other two were the "true self-harmers" ( $F = 19.40$ ;  $p < .001$ ). All of the abovementioned results are summarized in the diagram below (Figure 1).

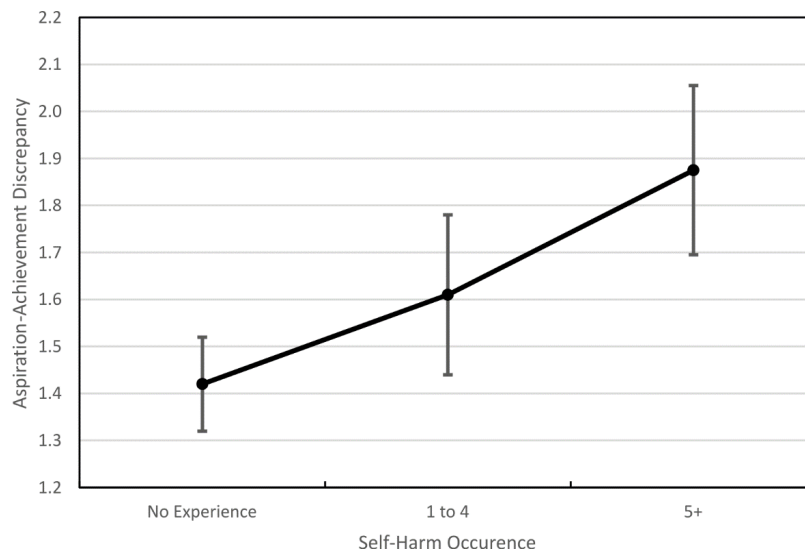
Figure 1. Plot of means showing differences between the three self-harm occurrence groups regarding relationships with parents and peers and attitudes towards school.



#### 4.2. Self-harm occurrence and academic aspirations

The analysis of academic aspirations in the three groups of adolescents yielded an interesting finding: As illustrated by the graph below (Figure 2), there was a significant positive relationship between the occurrence of self-harming behavior and the discrepancy between one's academic aspirations and the actual school grades. Significant differences were found between all three groups ( $F = 10.67$ ;  $p < .001$ ).

Figure 2. Differences between the three self-harm occurrence groups in self-reported aspiration-achievement discrepancies.



#### 4.3. Self-harm occurrence and leisure-time activity preferences

The results obtained from the last part of the study were also quite surprising. All three groups reported relatively large amounts of time spent hanging out with friends. However, while non-self-harmers and experimenters reported relatively comparable amounts of time, true self-harmers reported spending as much as 5 hours per week more than the other two groups hanging out with their peers ( $F = 9.80$ ;  $p < .001$ ). At the same time, true self-harmers also devoted one hour per week more than their peers to sports club activities ( $F = 3.74$ ;  $p < .05$ ), which might indicate attempts to diffuse physical tension. True self-harmers also spent significantly more time attending to their physical appearance ( $F = 5.40$ ;  $p < .01$ ), which might signify increased preoccupation with one's own body. However this finding could also reflect the self-harmers' attempts to conceal the signs of their self-injurious behavior. Finally, it is also worth mentioning that true self-harmers spent as much as 2 hours per week more "doing nothing" ( $F = 4.48$ ;  $p < .01$ ) than the other two groups.

### 5. FUTURE RESEARCH DIRECTIONS

Our results point to the fact that in order to achieve a deeper insight in the problem of self-harm, it is necessary to explore the nomological network of this phenomenon from a much broader perspective than the one presented in the existing research literature. Apart from the results presented here, our extensive research project explored the associations with parenting styles, self-esteem, personality, and depressive symptoms. Yet, many crucial areas are still relatively unexplored. Our prospective research objective therefore involves conducting a large-scale qualitative study to examine how self-harm is perceived by adolescents who have never engaged in this behaviour, those who have merely "experimented" with self-harm, and those who harm or harmed themselves repeatedly and for a long period of time. We are interested in differences between these three groups, which factors they perceive as protective and which, conversely, as those that might fuel the development of self-harming tendencies.

## 6. CONCLUSION

The presented study focused on selected associations between the occurrence of self-harm, perceived quality of relationships with parent and peers, and attitudes towards school. Significant differences were found between the self-harm occurrence groups in almost all observed variables. In the area of family relationships, the group with no self-harm experience reported significantly better relationships with mothers than both self-harming groups. The same pattern was observed for the relationships with fathers. Worse quality of parent-child relationships was associated with the presence of self-harming behaviour more-or-less regardless of the frequency of its occurrence. The results did not reveal any significant differences regarding the quality of the respondents' relationships with peers. As far as attitude towards school was concerned, the group that showed significantly more negative attitude than the other two groups were the high frequency (5 or more times) self-harmers. Interesting connections were observed between self-harm and academic aspirations: There was a significant positive relationship between the occurrence of self-harming behavior and the discrepancy between one's academic aspirations and the actual school grades. Differences were found between all three groups of respondents: the "non-self-harmers", the "experimenters", and the "true self-harmers". Another finding worth mentioning is the association between self-harm occurrence and leisure-time activity preferences. It was shown that 'true self-harmers' spent as much as 5 hours per week more than the other two groups hanging out with friends and also spend as much as 2 hours more per week "doing nothing". In future research, it would be useful to look more closely at the fact that self-harmers devote as much as one hour per week more than their peers to sports club activities and also spend significantly more time attending to their physical appearance. An alarming finding is that only 65.7% respondents who reported some experience with self-harm had talked to someone else about the issue. Moreover, in most cases (67.5%) the information was shared among peers; only 15.3 % of self-harmers told their parents, and just a mere 2% consulted a professional.

### 6.1. Discussion

We believe that the present findings can be considered an appreciable contribution to the understanding of the extremely complex issue of self-harm in nonclinical adolescent population. Out of the above presented results, we would especially like to emphasize the role of parent-child relationships in the adolescent's self-harming behaviour, which is often neglected or underrated by self-harm researchers, overshadowed by the increased significance of peer relations in this developmental stage. One of the most typical features of adolescence is the transformation of interpersonal relationships (Macek & Lacinová, 2006). The indicators of emotion, cognition and identity awareness clearly point to changes in personality development, which might in adolescence be very turbulent. It is quite understandable that these changes are subsequently reflected in social relationships. While relations with parents in many respects recede into the background, peer relations, especially close friendships and first romantic partners, increase in significance. However, parent-child relationships are still very important at this stage because adolescents still need the support of their parents in finding new perspectives in completing their developmental tasks. The three factors that are especially important for normal development of an individual in a family context are parents' interest, emotional involvement, and – last but not least – parenting styles. In addition, family climate and prevailing communication styles also play an essential role (Macek & Štefánková, 2006). Macek and Širůček (2005) argue that the level of an adolescent's self-confidence strongly depends on perceiving the parents as open-minded, emotionally involved and responsive (as cited by Macek & Štefánková, 2006). Family environment determines children's personality development and their attitudes to other groups of people; it also shapes their value systems and teaches them how to resolve conflicts and cope with stressful situations, while serving as essential support and anchor. The fact that peer relationship quality does not seem to be related to the occurrence of self-harm is also supported by other results of our study which suggest that peers are those to whom self-harmers are most likely to confide their self-harm experiences (in 67% of cases). This indicates that even adolescents engaging in self-harming behavior

appear to maintain good and supporting relationships with their peers. Self-harming adolescents who can communicate openly in the family and who report a sense of support on the part of their parents tend to show less suicidal ideation than those who report the opposite. Interestingly, no such differences were found with respect to peer support. Emotional experience of peer relations thus seems to be – despite the specific features of this developmental stage – less important than the experience of support on the part of primary family (Brausch & Gutierrez, 2010).

Regarding attitudes towards school, the group that showed significantly more negative attitude than the other two groups were the “true” self-harmers. We might speculate that the long-lastingly dissatisfactory emotional bonds might have a negative impact on academic performance, which, in turn, increases the self-harmers’ discomfort and the level of negative emotional experience. A closer examination of the link between self-harm occurrence and academic aspirations yielded an interesting finding: There was a significant positive relationship between the occurrence of self-harming behavior and the discrepancy between one’s academic aspirations and the actual school grades. This means that while adolescents who never harmed themselves seemed to achieve as good grades as they wished for, those who had at least some experience with self-harm were more likely to fail to meet their own academic standards, with the “true self-harmer” group being the worst off. So far, this area has not been sufficiently addressed in self-harm research; yet, it is clear that the association might be of high significance and should be taken into account when designing appropriate intervention programmes targeted at self-harming behaviour. A discrepancy between academic aspirations and academic results might, after all, also cause long-standing emotional distress to the adolescent, and might become a trigger – not only a consequence – of self-harming episodes.

Similarly, little or no attention has been devoted in previous research to potential connections between self-harm occurrence and leisure-time activity preferences. In our study, all three self-harm occurrence groups reported relatively large amount of time spent hanging out with friends. However, while “non-self-harmers” and “experimenters” scored relatively comparably in this area, the “true self-harmers” reported spending as much as 5 hours per week more than the other two groups hanging out with their peers. Apparently, self-harmers in our sample do not seem to fit the profile of reclusive, socially withdrawn adolescents at all, but rather incline towards promoting and consolidating positive peer relationships and mutual sharing of experiences. At the same time, “true” self-harmers also devote one hour per week more than their peers to sports club activities, which might indicate a tendency towards diffusing physical tension. This group also spends significantly more time attending to their physical appearance, which might signify increased preoccupation with one’s own body. However, this finding could also potentially reflect the self-harmer’s attempts to conceal the signs of self-injurious behavior. Finally, it is also worth mentioning that the group of high-occurrence self-harmers spent as much as 2 hours more per week “doing nothing”, which might actually provide space for experimenting with self-harm as well as other risk behaviours, such as alcohol or drug abuse.

A majority of respondents who reported self-harm (65.7 %) had told someone else about the issue. In most cases (67.5%), the information was shared among peers; only 15.3 % told their parents, and just a mere 2% consulted a professional. This might be a logical implication of our findings regarding the differences between self-harmer and non-self-harmer groups of adolescents in the domain of parent-child relationships.

All of the alarming results summarized in this article should be taken into consideration in the development of effective intervention programs addressing the issue of self-harm in senior elementary school/junior high school students. Our findings will surely find application in the sphere of educational and psychological counselling. We advise that helping professionals focus their attention on pedagogical guidance of adolescents both at school and in the family, especially in the area of rule setting, the degree and regularity of adherence to the rules, perceived emotional support, and the degree of freedom the child is allowed. Some studies (Oldershaw, Richards, Simic, & Schmidt, 2008), in accordance with our own findings, indicate that parents know much more about their children’s self-harming behaviour than the adolescents

think; most parents, however, choose to “wait what happens next”. Therefore, we also suggest preventive programs be developed that would be aimed directly at parents of children between 12 and 13 years of age, to help them gain greater insight into the issue of self-harm, become more sensitive to the symptoms of self-injurious behaviour, and learn about intervention options, such as improving communication in the family or adjusting one’s parenting style (Harrington, 2001; Wedig & Nock, 2007; Miller, Rathus, & Linehan, 2007; Brausch & Gutierrez, 2010). The mental health professionals engaged in self-harm research consistently argue that a lack of emotional support on the part of the parents is not only directly associated with the occurrence of self-harm, but, in addition, increases the risk of self-harm indirectly through affecting the frequency of depressive moods in teenagers. Therefore, we believe that improved communication between adolescents and their parents as well as teachers might help significantly in achieving better emotional bonds and reducing pathological phenomena in the population.

## 6.2. Limitations

Apart from the common limitations of self-report surveys, such as subjective responding, data verifiability, etc., there are several problems specific to this type of research. One of them is social stigmatization potentially connected with the status of a self-harmer. Because the data are typically collected through group administrations in the class, absolute privacy in responding cannot be completely guaranteed, which means that the data might be somehow biased by social desirability. The students might also be distrustful of the researchers’ promise of anonymity and provide untruthful data out of fear that the information will be passed on to their teachers and/or parents. A specific category is constituted by the problem of comparability of research findings across studies, which often yield different results especially due to terminological inconsistency typical of this research area, extreme differences in research samples (nonclinical v. clinical population, adults v. adolescents, etc.), or unequal methodological choices (self-harm questionnaires v. single-item responses).

## REFERENCES

- Brausch, A. M., & Gutierrez, P. M., (2010). Differences in non-suicidal self-injury and suicide attempts in adolescents. *Journal of Youth Adolescence*, 39(3), 233-242.
- Brunner, R., Parzer, P., Haffner, J., Steen, R., Roos, J., Klett, M., & Resch, F. (2007). Prevalence and psychological correlates of occasional and repetitive deliberate self-harm in adolescents. *Archives of Pediatrics & Adolescent Medicine*, 161(7), 641-649.
- Emerson, L. E. (1913). The case of miss A: A preliminary report of a psychoanalytic study and treatment. *Psychoanalytic Review*, 1, 41-54.
- Favazza, A. R. (1998). The coming age of self-mutilation. *The Journal of Nervous and Mental Disease*, 186(5), 259-68.
- Gutierrez, P. M., Osman, A., Barrios, F. X., & Kopper, B. A. (2001). Development and initial validation of the Self-Harm Behavior Questionnaire. *Journal of Personality Assessment*, 77(3), 475-490.
- Harrington, R. (2001). Depression, suicide and deliberate self-harm in adolescence. *British Medical Bulletin*, 57(1), 47-60.
- Hrubá, V., Klimusová, H., & Burešová, I. (2012). Výskyt, formy a vybrané souvislosti sebepoškození u dětí staršího školního věku [Prevalence, forms, and selected correlates of self-harm in late childhood and early adolescence]. In P. Halama, R. Hanák, & R. Masaryk (Eds.), *Sociální procesy a osobnost' 15* [Social processes and personality' 15] (pp. 118-122). Bratislava: Ústav experimentálnej psychológie SAV.
- Klimusová, H., Burešová, I., & Bartošová, K. (2013). The impact of parent-child and peer relationships on depressive symptoms and self-esteem in early adolescence. In C. Pracana, & L., Silva (Eds.), *InPACT 2013: International Psychological Applications Conference and Trends Book of Proceedings* (pp. 26-30). Lisbon, Portugal: WIARS.
- Kriegelová, M. (2008). *Záměrné sebepoškození v dětství a adolescence* [Deliberate self-harm in childhood and adolescence]. Prague, Czech Republic: Grada Publishing.
- Lloyd, E. E., Kelley, M. L., & Hope, T. (1997). *Self-mutilation in a community sample of adolescents: Descriptive characteristics and provisional prevalence rates*. Poster session presented at the annual meeting of the Society for Behavioral Medicine, New Orleans, LA.



- Macek, P. & Lacinová, L. (2006). *Vztahy v dospívání* [Relationships in adolescence]. Brno, Czech Republic: Barrister & Principal.
- Macek, P., & Širůček, J. (2005). *Parenting style during childhood and perception of parents as predictors of adolescents self-esteem*. La Laguna, Tenerife: University La Laguna.
- Macek, P. & Štefánková, Z. (2006). *Vztahy s rodiči a jejich souvislosti s citovou vazbou* [Relationships with parents and their relation to attachment]. In L. Lacinová & P. Macek (Eds.), *Vztahy v dospívání* [Relationships in adolescence] (pp. 25-38). Brno, Czech Republic: Barrister & Principal.
- Miller, A. L., Rathus, J. H., & Linehan, M. M. (2007). *Dialectical behavior therapy with suicidal adolescents*. New York, NY: The Guilford Press.
- Mrug, S., Hoza, B., & Bukowski, W. M. (2008). Choosing or Being Chosen by Aggressive Disruptive Peers: Do They Contribute to Children's Externalizing and Internalizing Problems? *Journal of Abnormal Child Psychology*, 32(1), 53-65.
- Muehlenkamp, J. J., Claes, L., Havertape, L., & Plener, P. L. (2012). International prevalence of adolescent non-suicidal self-injury and deliberate self-harm. *Child and Adolescent Psychiatry and Mental Health*, 6, 10.
- Nawaz, S. (2011). The Relationship of parental and peer attachment bonds with the identity development during adolescence. *FWU Journal of Social Sciences*, 5(1), 104-119.
- Oldershaw, A., Richards, C., Simic, M., & Schmidt, U. (2008). Parents' perspectives on adolescent self-harm: qualitative study. *The British Journal of Psychiatry*, 193(2), 140-144.
- Poledňová, I. (2012). Výkonová motivace v prostředí školy – Souvislosti se sebepojetím a utvářením sociálních vztahů [Performance motivation in school environment – Relations to self-concept and social relations development]. In P. Macek, & L. Lacinová (Eds.), *Vztahy v dospívání* [Relationships in adolescence] (pp. 115-125). Brno, Czech Republic: Barrister & Principal.
- Power, J. & Brown, S. L. (2010). *Self-injurious behaviour: A review of the literature and implications for corrections* (Full Report No. R-216). Retrieved from Corrections Service Canada, Government of Canada website: <http://www.csc-scc.gc.ca/research/005008-0216-eng.shtml>.
- Sansone, R. A., Sansone, L. A., & Wiederman, M. W. (1995). The prevalence of trauma and its relationship to borderline personality symptoms and self-destructive behaviors in a primary care setting. *Archives of Family Medicine*, 4(5), 439-442.
- Sartor, C. E. & Youniss, J. (2002). The relationship between positive parental involvement and identity achievement during adolescence. *Adolescence*, 37(146), 221-234.
- Suyemoto, K. L. (1998). The functions of self-mutilation. *Clinical Psychology Review*, 18(5), 531-554.
- Swahn, M. H., Ali, B., Bossarte, R. M., Van Dulmen M., Crosby, A., Jones, A. C., & Schinka, K. C. (2012). Self-harm and suicide attempts among high-risk, urban youth in the U.S.: Shared and unique risk and protective factors. *International Journal of Environmental Research and Public Health*, 9(1), 178-191.
- Wedig, M. M., & Nock, M. K. (2007). Parental expressed emotion and adolescent self-injury. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46(9), 1171-1178.
- Whitlock, J. L., Powers, J. L., & Eckenrode, J. (2006) The virtual cutting edge: The internet and adolescent self-injury. *Developmental Psychology*, 42(3), 407-417.

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## Chapter 6

# THEATER AS INSTRUMENT TO PROMOTE INCLUSION OF MENTAL HEALTH PATIENTS: AN INNOVATIVE EXPERIENCE IN A LOCAL COMMUNITY

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### ABSTRACT

People with mental illness often face with stigma in local communities. Spreading knowledge about this matter may positively influence social attitudes reducing prejudice and discrimination, while empowering activities may promote social inclusion. Theater is one of the proposed instruments to encourage socialization and build networks between the Public Mental Health Service (PMHS) and the local community. It appeared a useful strategy to encourage the expression of emotions and to improve a better inclusion of patients with mental disorders. This study explored with qualitative methods the perceptions of the stakeholders (professionals, actors-mental patients, their relatives, other actors) involved by local PMHS in the organization of a performance. Their participation in the play gave the opportunity to analyze the perceived changes in well-being and social inclusion ascribed to this experience. Depth interviews and a focus group were conducted, including actors, relatives, professionals, and audience. Data analysis was realized by means of a qualitative analysis software (Atlas.ti). Results highlighted perceptions about the improvement of well-being and capabilities in the view of participants. This research supports the importance of such experience and show relevant issues for enhancing empowerment, promoting health, building social networks and improving social inclusion.

*Keywords:* public mental health services, inclusion, social theater, community based interventions, qualitative research.

## 1. INTRODUCTION

Health is defined by the World Health Organization as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (1946, as cited in World Health Organization [WHO], 2006, p.1) that may be reached if an individual or group “is able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment [...] a positive concept emphasizing social and personal resources, as well as physical capacities” (WHO, 1986, p. 1). As highlighted in Mental Health Action Plan 2013-2020 (WHO, 2013), the mental health (MH), as integral part of health and well-being of the individuals, could suffer the effects of concomitant variables. Determinants of MH are related to individual, social, cultural, economic, political and environmental factors such as living standards, job conditions and, most important in our discipline, the social support in the local community. In this perspective, health promotion may be considered as a social and political process, requiring an active participation in the planning and realization of actions towards well-being.

Participation becomes essential in every action of health promotion. It assumes that individuals are able to care their own health, in order to acquire or strengthen their coping strategies through an educational process aimed to improve the quality of life (WHO, 1998). However, for people with mental illness, the associated stigma makes the participation to the community life more difficult, weakening their social relationship. People affected by mental illness are discredited because of negative attributions related to their disease, hence they become bearers of stigma, which in turns produces social exclusion and thwarts their recovery (Wahl, 2012). Stigma may act on two levels: both as self-stigma and social stigma (Corrigan, Watson, & Barr, 2006). The internalization of stigma (*self-stigma*) leads individuals to consider

other people's attributions relevant for themselves, producing negative effects on self-esteem and self-efficacy (Corrigan et al., 2006; Goffman, 1963; Pescosolido et al., 2010, Thornicroft, Brohan, Rose, Sartorius, & Leese, 2009). Social stigma, which falls back also on families and social networks, may be an obstacle to the achievement of individual goals (Phelan, Bromet, & Link, 1998). Then, social rejection from living contexts conduces to unequal repartition of life possibilities, increases poverty, homelessness, unemployment, and reduces the optimism toward recovery (Link, 2006).

All this considerations highlight that the promotion of MH and social re-integration for people with mental illness must be a specific goal to support *in the community*, involving individuals, families, and institutions, creating significant connections in order to allow a change in quality of life for people in the social system (Wahl, 2012).

According to Foster-Fishman, Nowell, and Yang (2007), system change is realized across a process aimed to modify its *status quo*, in terms of form and function. By referring to system as "a collection of parts that, through their interaction, function as a whole" (Foster-Fishman et al., 2007, p. 198), both institutions and researchers have to promote intervention strategies acting on the system, involving the whole community, and establishing a care system for people with mental illness (Foster-Fishman & Droege, 2010; Foster-Fishman et al., 2007).

The central elements of the system are the structures connections, processes and relationships grounded in a system of *values and principles of care* (Hodges, Ferreira, Israel, & Mazza, 2010). According to these analysis, and taking into account the Community Psychology main concepts as empowerment (Zimmerman, 2000), sense of community (McMillan & Chavis, 1986) and community development (Chavis & Wandersman, 1990), we may suppose that carrying out empowerment-oriented interventions means to promote change and social inclusion, reducing stigma effects.

Among the innovative instruments to foster participation both of people with mental illness and the other community actors, theater is recognized as a powerful tool (Somers, 2002) improving empowerment and reducing stigma by means of disclosure in collective action (Christens, 2012; Corrigan, Kosyluk, & Rüsck, 2013). Through the expression and communication of shared emotions, social theater promotes the creation of a socio-physical space for significant relations (Tofteng & Husted, 2011), becoming an instrument to facilitate self-development and learning, discovering one's own potential and re-evaluating skills (Okwori, 2002). In mental illness, theater can reduce stereotypes, facilitates the inclusion in the social community, acknowledging the individuals and their social role. Planning the performance all together, people can re-discover their capabilities to interact with others, even to help others when they are in trouble, with positives effects on self-esteem and self-efficacy (Corrigan et al., 2006; Faigin & Stein, 2010).

Theater enhances the quality of interpersonal relationships and the sense of group membership, which increases range and density of social networks (Scott, 1991), fostering the inclusion in the community. For mental health patients theater has a relevant role for improving their skills (Fox, 2007; Moran & Alon, 2011): acting with others elicits the creation of an environment where social distance is reduced and skills are empowered by working on the individual responsibilities. It allows the appreciation of marginalized individuals (Rossiter, 2012).

Theater can lead to a relevant social change building a link between individuals and local community: it offers a different way of communication among citizens, allowing to put in touch with those who usually live on the fringe of society (Koh & Shrimpton, 2014; Twardzicki, 2008).

## 2. THE RESEARCH

### 2.1. Aim

The general aim of the research could be defined as: *the will to investigate the psychological value of the theater experience for the Public Mental Health Service (PMHS) patients, collecting different perceptions of the different social actors and stakeholders involved*

*in the project*. It was a *participatory evaluation research*, oriented to explore and evaluate the meaning of theater experiences performed by mental health patients included in the local acting company. Evaluating such activity together with all involved social actors became an *empowering process* for all the participants, first of all for patients, but also for professionals, relatives and citizens.

## **2.2. The context of the research**

The research project took place in a rural town in Tuscany, Italy. Since 2009 the PMHS promoted a project inspired to the values of community psychology, aimed at integrate its patients in a social activity involving the whole citizenship. Two acting teachers have been engaged, offering a free course to the community, using the small and beautiful theater of the town. All the participants knew that also health professionals and mental health patients could be involved, but none of them was explicitly labeled, therefore they didn't know the respective origins one another. They have been presented each other just as equal citizens involved in a social activity. A final performance has been organized to present the results of the course.

The script respected some characteristics in order to facilitate the participation of patients: many group scenes, broad use of the choreography, many mimed interpretations rather than dialogues and memorized parts. The performances weren't *easy*, but at the same time each of the scenes didn't need a long rehearsing, so to facilitate the participation of those who can't afford a continuative attending. In the year when the research was carried out, "The tempest" by Shakespeare was put on show with about fifty actors.

## **2.3. The research strategy. Reflexivity about methods**

In order to investigate the perceived value of social theater the first step was to define a community psychology approach and suitable research methods.

The research group needed to choose quite flexible and not aprioristic methods, extremely fitting the subjective perception of the participants, and, at the same time, a methodologically correct strategy to comply with the scientific process. In community psychology it could be identified in the qualitative methods.

We aimed at enclosing different viewpoints, the in-depth subjective perceptions of the experience, and to delimit the factors and boundaries that made the project appropriate for that specific context. Consistently with the empowerment evaluation (Andrews, 2004; Carr, Lhussier, Wilkinson, & Gleadhill, 2008; Fetterman, 2002; Fetterman, Kaftarian, & Wandersman, 1996) and the participatory evaluation approach (Boyd et al., 2001; Suárez-Herrera, Springett, & Kagan, 2009), our interest was not to give a judgment about the social theater: the entire group of researchers and operators needed to change its conception of "evaluation" turning it around a "self-evaluation" process, aimed at put together the different perceptions. Therefore, there were some embedded methodological values which we wanted to transmit to the involved social actors: the will to give equal importance to every voice, to compare the different perspectives each other, to give participants an instrument to raise their self-consciousness about the experience, and finally to determine what works or not in that context and in that moment. According to the methodological approach of the Grounded Theory (Glaser & Strauss, 1967/2009; Strauss & Corbin, 1990) and its principle of "theoretical sampling" (Glaser & Strauss, 1967/2009, pp. 45-77), we tried to enclose all the social groups, including those not directly involved in the activity in order to appreciate the differences.

We managed the collected data trying to elicit the expression of values and meanings that participants ascribed to the experience. In-depth interview proved to be an open and flexible instrument, especially suitable to show the subjective perspective of weak social groups or minorities (Morse, 2000; Parker, 2005; Smith, 1995).

In-depth interviews were carried out with all the kind of stakeholders, while a specific focus group was also organized with the actors-patients. The methodological approach to conduct effective focus groups was derived by the recommendations manual of Bloor, Frankland, Thomas and Robson (2001), which suggest how to properly use focus group to collect complete data in a small lapse, using at the same time the technique as a way to prevent uneasiness in participants. This could be achieved choosing to involve participants who know

each other and improving their perception to be an interest group. Moreover, specific recommendations about how to lead a focus group with psychiatric patients were derived from the study of Schulze and Angermeyer (2003), which highlight the strengths of focus group as a way to involve participants who may find face-to-face interaction intimidating. This may be particularly true for people with mental illness, who may be reminded of therapeutic relationships in an interview situation, and thus expecting to get help through an expert's knowledge and advice.

### 3. METHODS

#### 3.1. Participants

Participants have been recruited by means of a purposive and non-probabilistic sampling. Assuming the principles of theoretical sampling, researchers together with professionals decided the best strategy to gather the widest number of different points of view coming from individuals and/or groups with suitable features for the aim of the study. To understand the transformative embedded value, it is useful to describe the process that put researchers and stakeholders working together.

The first step was to participate in the activities promoted by the PMHS. One of the researchers (as *fieldworker*) was introduced to the group of actors, attending some of the rehearsals. At the same time, a second researcher collaborated with PMHS in order to re-define the initial objectives and values of the study. Together with the health professionals it was drawn up a first list of the stakeholders to involve in the research. We tried to enclose also the social groups not directly involved in the activity in order to appreciate the differences.

At this level, it was very important to promote a real negotiated understanding of need that is the core of the participatory process. This meant to divert the attention of the psychiatric team from the research of the clinical evidences towards process evaluation. Once it happened, the whole process of cooperation between researchers and professionals improved on.

Selected participants have been:

- 13 actors, (five patients, involved in a focus group; three mental health professionals performing as actors and five other citizens, involved by means of in-depth interviews)
- 7 spectators, (three members of patient's families and four other spectators not personally involved)
- 8 health professionals differently involved in the project (three health professionals as managers of the project: two psychiatrists and one psychologist; three "observers" not directly involved in the project: a psychiatrist, a nurse and a social worker; two acting teachers).

The total number so consisted in: One focus group (5 individuals) and 23 in-depth interviews.

#### 3.2. Instruments and procedures

The research group prepared an interview draft according to the suggestions given by the PMHS's team. Some photos, taken during the performance, were used as visual stimuli to elicit the expression of the emotions both in the interviews and in the focus group.

The main topics treated in the interviews and focus groups were:

- Subjective concept of wellbeing;
- Perception of the mental illness;
- Relatives and audience's perceptions about actors' theatrical competence after the performance;
- Changes after the experience;
- Increased (or decreased) participation in the other local community activities.

Every interview lasted about one hour and a half; each of them was registered and transcribed verbatim, granting privacy and anonymity to every participant. Participants have been contacted by the researchers and interviewed both in the PMHS (professionals) and during the rehearsals (actors and acting teachers), while relatives and audience were contacted during the performance. Focus group with actors-patients was carried out in the PMHS office.

### 3.3. Data analysis

The qualitative analysis, inspired to the “*Grounded Theory*” approach, and proceeded along these steps:

- data collection and analysis were carried out simultaneously, the collection of interviews was stopped when no other interesting elements were emerging to extend our conclusions (theoretical saturation);
- for theoretical sampling the choice of participants to interview have been not aprioristic, but emerged step by step. “Negative cases” (people who were not directly involved in the experience, e.g. audience and some of the professionals) have been considered too.

The coding phases have been discussed among the research group to reach an agreement on the definitions, then the labels have been assigned to the codes and the underlying contents were analyzed. The software Atlas.ti for computer assisted qualitative research was used. We will show in the graphs the emerged macro-areas of contents and how they consist of codes with different level of importance and closeness to the main category. We will present explanation and interpretation of findings as a narrative, using the participants’ words (*quotations*). Each of the links between two codes is established by one (or more) significant quotations that explains that relation.

In the text macro-areas and codes are marked in bold. Participants’ quotations have references – generated by software Atlas.ti – that respectively indicate the number of *Primary Document* in the software, the progressive number of the quotation, and its line number in the document.

## 4. FINDINGS

We are showing here only the main results, related to the most relevant and meaningful points of view. For the sake of brevity we cannot report here all the other interesting voices, as negative cases or acting teachers. In a further wider study we could expose the whole results.

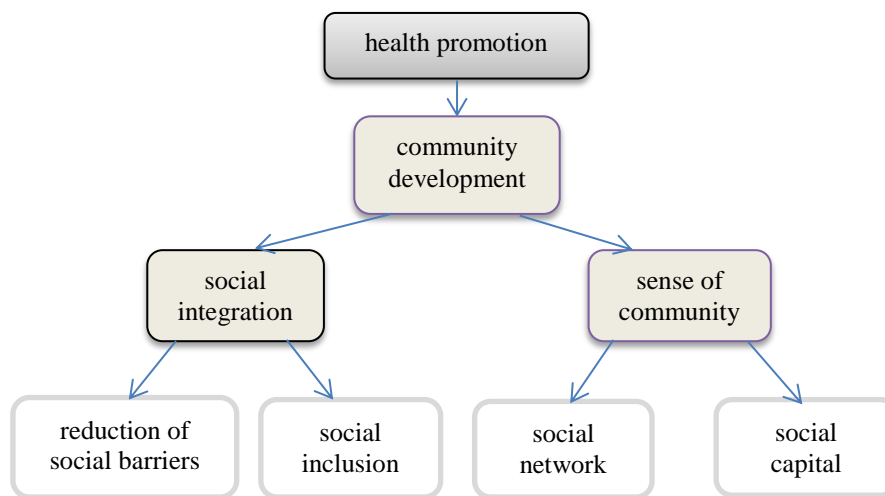
### 4.1. Professionals

The most relevant topic presented by professionals concern the relation between the value of the theater experience, and the needs and problems met by the PMHS. They talk about the new kind of patients and their greater perception of social stigma, which often hold the call for help back because of the fear to be labelled as a fool, particularly in youth.

The increasing presence of young people with severe mental illness lead the service to renovate some therapeutic strategies, including the theater, as a more acceptable way to promote recovery and reintegration into the social network.

Professionals are concerned in patients’ health promotion (Figure 1), which means not only to reduce symptoms but also to increase socialization and participation in the daily life relationships. They underlined also the great differences among patients: *Patients are changing. Young people with severe psychopathology are arriving at the service ... very young. For these younger patients it is absolutely important to be in touch with peers, so we decided to promote a theater workshop for them, to facilitate the integration...* (Professional, 20: 3, 8).

Figure 1. Health promotion.



To be more effective in activities aimed to mental health, community development – as the process towards improved networks for social support and socialization – is a critical point.

This includes social integration: ... *as soon as the curtain of the theater was opened the first day, the stage was full of people! It was surprising for us... because working with mental illness... we always feel isolated... generally we are asked for interventions in removing problems* (Professional, 20: 5, 8); reducing social barriers and above all the stigmatization: *Working together in a group, with other citizens, is important for patients... who may become active participants. So they may reveal their skills, their capabilities, their “normality”... the normal part of themselves* (Professional 33: 17, 13); through this kind of action social inclusion may be possible: ... *finally there were forty persons on the stage, and ten of them were patients... and therefore it was no longer a project for patients! Patients were on the stage, but no one noticed them* (Professional, 20: 7, 8).

The final outcome is to build a sense of community, consisting primarily in a better sense of belonging and in a greater emotional sharing: *another important thing is that... there is a harmony, a synergy, a membership expresses by the group. This means that the distance among us may be reduces. And this isn't simple to do for all the patients* (Professional, 33: 12, 10); increasing social networks: *they had the opportunity to improve their relationships, also weak ones, not necessarily close and meaningful, but, however, they felt as part of the community, where it's possible to meet the others without feeling lonely* (Professional, 20: 22, 12); and the social capital: ... *the well-being is important for everyone. We live together, and if the person close to me feels bed I can't say “this is his problem”. Indeed, it's also my problem, because I cannot live well with someone with a health problem...* (Professional, 14: 17, 36).

#### 4.2. Relatives

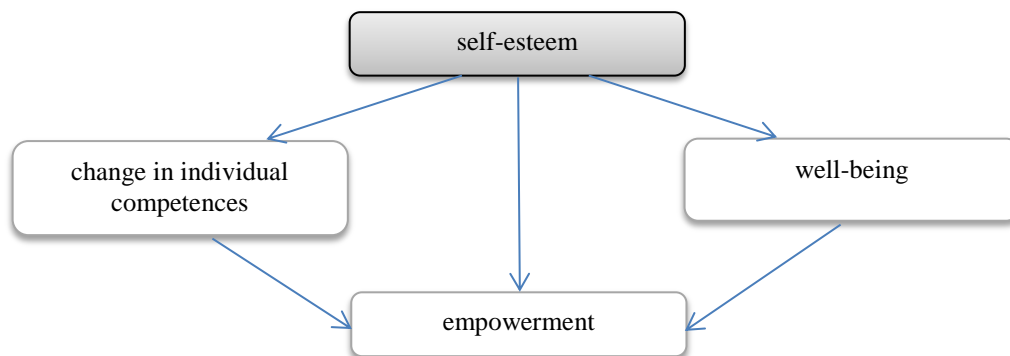
The actors' relatives valued this project as a way to promote individual serenity and a change in the social bonds building. Relatives often describe experiences of indirect stigma concerning their son/daughter or husband/wife, thus, to see their relative in a social place, with other citizens, playing theater, was always described as a significant positive event for them.

Relatives generally perceived positive changes and recognized the importance of theater as a way to grow together and deal with others, increasing patients' self-esteem and their active participation. At the same time they also noticed their personal growth, reducing the self-labeling processes (Figure 2).

The first consideration offered by many relatives was that the patient's self-esteem has been increased: *a positive experience for them, for all of them. They learnt to have confidence in themselves and to live with others* (Relative, 12: 12, 42).



Figure 2. Perceived changes.



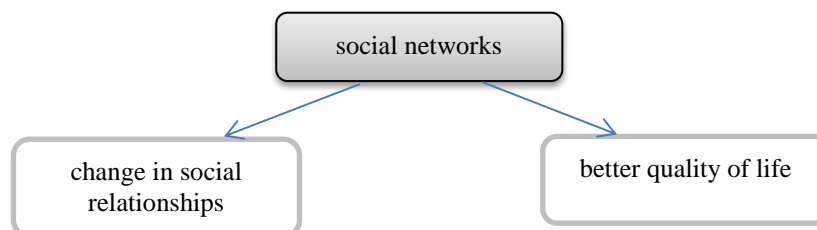
Relatives noticed a change in individual competences: *Especially at the beginning... the contact with others [was difficult] ... then, being more able in public speaking... and overcoming the shame...* (Relative, 13: 6, 32); and so a greater feeling of well-being: *... self-confidence... or maybe greater quietness* (Relative, 13: 12, 40); *... a strong emotion... I thought that he should do it more frequently! It would be really a good thing for him...* (Relative, 12: 10, 38). Consequently, the main implicit output they talk about was the empowerment of the participants.

Empowerment is described as a process from learned helplessness towards the capability to control one's own life, actively participate and act in a group. This code seems to be embedded in quotations like these: *Perhaps it's a way to compare themselves with other people... and surely this may influence positively their self-presentation, the way of speaking, especially for shy persons...* (Relative, 13: 1, 9). *...Well, before the performance she was very excited! ... However she managed her emotion, and carried out her assigned task* (Relative, 11: 23, 48).

### 4.3. Actors-patients

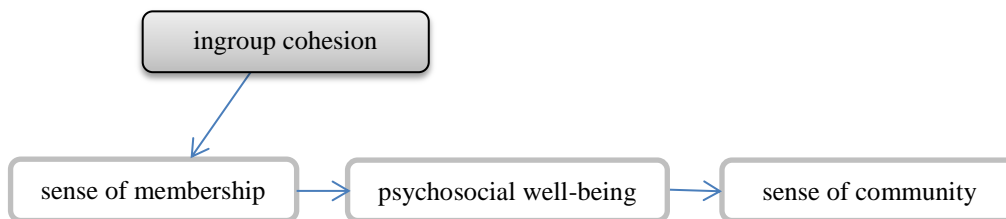
The patients participating in this activity perceived it as a way to create social bonds and improving their quality of life. Talking about the performance, the sense of cohesion among all the participants was emphasized. Thus, the quotations from the actor-patients were aggregated around two main codes: the building of social networks and the ingroup cohesion.

Figure 3. Social networks.



They noticed a change in social relationships: *... once I was very shy, but the theater experience has helped me so much... Now I feel better and I have found lots of friends, I know all of them* (Actor-patient, 7: 29, 195). Then the friendship seems impact also on the quality of life: *before [this experience] I was alone, without any friends [...] working together we may better know each other; socialize. We could come here often and meet our friends...* (Actor-patient, 7: 8, 81; 3, 165).

Figure 4. Ingroup cohesion.

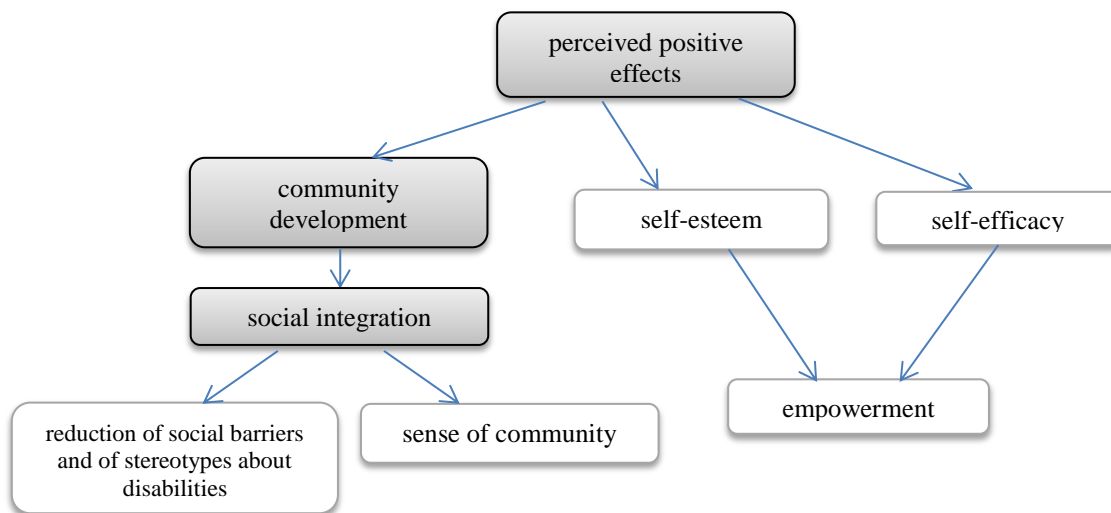


The ingroup cohesion has been perceived as a powerful condition which led to a strong sense of membership: *We perceived friendship and a sense of contact among us... [...] we felt so close one another that the audience was a surplus* (Actor-patient, 7: 18, 154; 25, 230). Also in this case psychosocial well-being was cited: *We felt a “hymn to the pleasure”* (Actor-patient, 7: 23, 270), said emphatically one of them.

In a circular way, this process seems to strengthen the perceived sense of community: *Unity is strength!* (Actor-patient, 7: 21, 216); *... a sense of cohesion... the unity among everyone... I think that unity perhaps comes out from this [experience]...* (Actor-patient, 7: 39, 214).

#### 4.4. Actors-not patients

Figure 5. Perceived positive effects.



Many relevant observations came from the interviews of the other actors. Like the patients, they perceived the social theater as a way of personal growth and social development, affecting their self-esteem and promoting the appreciation of their own talents. Moreover, they receive an additional reinforcement by the awareness of their social commitment towards the integration of people with mental illness: *... if we are able to bring on the stage some people with psychiatric disease, which are always ashamed, I should think it's fantastic! I think it's good for them and also for our society...* (Actor not-patient, 8 : 64, 41).

On the individual side, it may be observed an increased self-esteem: *Well... the fear of forgetting a cue or speaking not so well... However it was a challenge that gave me more confidence... and let my self-esteem grown up, too* (Actor not-patient, 3: 8, 13); and self-efficacy: *I think it is important for everyone, not only for patients... I think it is important for an individual to say “I staked myself and I did it! I didn't turn back, I was worry but I didn't run away” ... I think it is nice* (Actor not-patient, 6: 44, 51).

As in the other cases, an embedded process of empowerment is recognizable: *It's a good experience for those who don't want to dominate the others... the social theater... I think the first rule is to help others to fulfil themselves* (Actor not-patient, 6: 26, 64). Even in this group we can talk about community development: *If there had been more participation we would have more integration for these persons... they are always seen with some special attention: "It may be dangerous! Maybe is better to keep them away". Instead they are persons to keep close to us... We have to help them as much as possible, to stay close to them... They have to stay 'inside' the local community... for a better inclusion* (Actor not-patient, 8: 19, 28). So it will be possible to obtain social integration: *... it's a way to learn how to live together: [this experience] teaches you to accept differences...* (Actor not-patient, 6: 12, 51).

Even the reduction of social barriers and of stereotypes about disabilities has been perceived: *On the stage, in this performance, there were the same fears, the same emotions... we were the same people...* (Actor not-patient, 32: 6, 24). And, finally, an increased sense of community came out: *I like this mix of people... there is no ghetto here ...* (Actor not-patient, 3: 37, 24).

#### 4.5. Audience's point of view

The audience perceived the usefulness of theatre for enhancement of patients' self-esteem and self-efficacy. Some of them saw the project as an instrument to promote awareness about the mental illness. For others, however, this aim was considered almost impossible to achieve;

*It's difficult to forward the message [to the society], ... I don't think it's so easy to make people aware of issues like these... Perhaps it's more useful to those who perform the play than to the society* (Audience, 28: 17, 35). Moreover they acknowledge the effects on patients' relatives: *I imagine that it was a pride for parents to see his son performing a play... and this is important* (Audience, 29: 12, 30).

#### 4.6. Perceived weaknesses

Participants also highlighted weaknesses in this experience: some of them are organizational difficulties, as the lack of time to prepare performances, or the insufficient funding to guarantee the continuity of the project. Others weaknesses were related to an irregular attendance at the meetings, so the group wasn't steady. Actor-patients claimed their wish to change repertoire, without a repetition of the same plays, even though may be difficult for them to learn a new role.

An interesting quotation came from a professional who was involved also as actor: *... I am afraid to make a mistake, to forget a cue... but I have also to pay attention to patients... I have to hold my anxiety and their anxiety... this was the main difficulty* (Professional, 17: 13, 15).

Professionals underlined other important aspects: the first was related to *the possibility to stop and rethink of experience [...] it would be necessary to verify our activity, monitoring it so to understand if it works, and how it works* (Professional, 24: 34, 26; 32, 26).

But the most critical aspect was: *...how can we transfer positive outcomes of this patients' experience in everyday life?* (Professional, 25: 35, 25), *... in everyday life, perhaps there is less ignorance about mental illness than in the past, but the culture of fear is still present* (Professional, 24: 63, 38-39).

## 5. DISCUSSION AND CONCLUSION

According to literature, results show the perception of the effectiveness of theater as a powerful instrument to improve the quality of life of mental patients, according to Moran and Alon (2011). The empowerment process is realized by the definition and the achievement of a common aim, experiencing a new image of self and the building of new relationship. This is one of the main strengths perceived by participants, in accordance with Faigin and Stein (2010).

Positive effects are highlighted in the individual and social sphere: these are identified in the increased self-esteem and social skills both for patients and other actors. Moreover,

positive effects are underlined by patients' relatives and PMHS professionals. For the latter this experience has been important also to redefine themselves and their professional role, an issue not enough deepened in previous studies.

Actors – both patients and not-patients – underlined the importance of sharing the management of the activity and the organizational decisions about it, their participation in planning and realization, the involvement of both citizens and professionals in the same objective were indicated among the strengths of the research.

The group was perceived by all the participants as a powerful resource: while the explicit aim was to realize the show, the community indirectly enriched social networks, rediscovering values as in-group cohesion and friendship. The participation seems to have favored a real reduction of social barriers, enhancing the reintegration process in the local community. These topics had a relevant space in the majority of the interviews.

To sum up, the analysis suggests some guidelines to set up similar experiences:

- a key element of the social theater was the style of the advertisements and dissemination. Every message indicated the provision of a resource for the whole community. This was even more effective in the small local dimension where the research took place. For example, the final event arranged in the city theater was really presented as a cultural opportunity for the citizenship and not as a voluntary or charity action;

- an element of the success was a sufficient guarantee of privacy to prevent the identification of different kind of actors. Even if sometimes people understood more than they heard, all the possible labeling procedures were avoided; no one knows who was a MH patient;

- professionals were coherent in recommending this activity to their patients and also to other citizens. They really supported it in every step of the management, sometimes taking a challenge personally;

- the presence of experienced acting teachers was essential to adapt the script to the particular needs of actors.

## 6. FUTURE RESEARCH DIRECTIONS

Future research directions will aim at involving other elements of the local community such as schools, which may be a powerful instrument for spreading knowledge and commitment not only in young people, but also in teachers and students' families, so to create ties with other knots of the social network. A suitable outcome may be a *system of care*, involving social, health and educational institutions, suggesting a way to conceive the well-being promotion related to other life environments, as leisure or sport or entertainment activities, so to build a community able to contrast stigma and to foster social empowerment. A community that cares.

## REFERENCES

- Andrews, A. B. (2004). Start at the end: Empowerment evaluation product planning. *Evaluation and Program Planning*, 27(3), 275-285.
- Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus group in social research*. Introducing Qualitative Methods series. London, UK: Sage.
- Boyd, A., Geerling, T., Gregory, W., Midgley, G., Murray, P., Welsh, M., & Kagan, C. (2001). Methods and techniques for use in stakeholder, goal-based and organizational evaluation. In *Capacity-building for evaluation: A report on the HAZE Project to the Manchester, Salford and Trafford Health Action Zone* (pp 53-64). Hull, UK: Centre for Systems Studies, Business School, University of Hull.
- Carr, S. M., Lhussier, M., Wilkinson, J., & Gleadhill, S. (2008). Empowerment evaluation applied to public health practice. *Critical Public Health*, 18(2), 161-174.
- Chavis, D. M., & Wandersman, A. (1990). Sense of community in the urban environment: A catalyst for participation and community development. *American Journal of Community Psychology*, 18(1), 55-81.
- Christens, B. D. (2012). Toward relational empowerment. *American Journal of Community Psychology*, 50(1-2), 114-128.

- Corrigan, P. A., Watson, A. C., & Barr, L. (2006). The self-stigma of mental illness: Implications for self-esteem and self-efficacy. *Journal of Social and Clinical Psychology, 25*(8), 875-884.
- Corrigan, P. W., Kosyluk, K. A., & Rüsch, N. (2013). Reducing self-stigma by coming out proud. *American Journal of Public Health, 103*(5), 794-800.
- Faigin, D., A., & Stein, C. H. (2010). The power of theater to promote individual recovery and social change. *Psychiatric Services, 61*(3), 306-308.
- Fetterman, D. M. (2002). Empowerment Evaluation: Building communities of practice and a culture of learning. *American Journal of Community Psychology, 30*(1), 89-102.
- Fetterman, D. M., Kaftarian, S., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Thousand Oaks, CA: Sage.
- Foster-Fishman, P. G., & Droege, E. (2010). Locating the system in a system of care. *Evaluation and Program Planning, 33*(1), 11-13.
- Foster-Fishman, P. G., Nowell, B., & Yang, H. (2007). Putting the system back into system change: A framework for understanding and changing organizational and community systems. *American Journal of Community Psychology, 39*(3-4), 197-215.
- Fox, H. (2007). Playback theatre: Inciting dialogue and building community through personal story. *The Drama Review, 51*(4), 89-105.
- Glaser, B. G., & Strauss, A. L. (2009). *The discovery of Grounded Theory: Strategies for qualitative research*. Chicago, IL: Aldine Transaction. (Original work published 1967)
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2010). Systems of care, featherless bipeds, and the measures of all things. *Evaluation and Program Planning, 33*(1), 4-10.
- Koh, E., & Shrimpton, B. (2014). Art promoting mental health literacy and a positive attitude towards people with experience of mental illness. *International Journal of Social Psychiatry, 60*(2), 169-174.
- Link, B. A. (2006). Stigma and its public health implications. *Lancet, 367*(9509), 528-529.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14*, 6-23.
- Moran, G. S., & Alon, U. (2011). Playback theatre and recovery in mental health: Preliminary evidence. *The Arts in Psychotherapy, 38*(5), 318-324.
- Morse, J. M. (2000). Researching illness and injury: Methodological considerations. *Qualitative Health Research, 10*(4), 538-546.
- Okwori, J. Z. (2002). Popular theatre, popular participation and empowerment. *Contemporary Theatre Review, 12*(1-2), 161-170.
- Parker, I. (2005). *Qualitative psychology: Introducing radical research*. Maidenhead, UK: Open University Press.
- Pescosolido, B. A., Martin, J. K., Long, J. S., Medina, T. R., Phelan, J. C., & Link, B. G. (2010). A disease like another? A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. *American Journal of Psychiatry, 167*(11), 1321-1330.
- Phelan, J., Bromet, E. J., & Link, B. G. (1998). Psychiatric illness and family stigma. *Schizophrenia Bulletin, 24*(1), 115-126.
- Rossiter, K. (2012). Bearing response-ability: Theater, ethics and medical education. *Journal of Medical Humanities, 33*(1), 1-14.
- Schulze, B., & Angermeyer, M. C. (2003). Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social Science and Medicine, 56*(2), 299-312.
- Scott, J. (1991). *Social network analysis*. London, UK: Sage.
- Smith, J. A. (1995). Semi-structured interviewing and qualitative analysis. In J. A. Smith, R. Harre, & L. Van Langenhove (Eds.), *Rethinking methods in Psychology* (pp. 9-26). London, UK: Sage.
- Somers, J. (2002). Drama making as research process. *Contemporary Theatre Review, 12*(4), 97-111.
- Strauss, J., & Corbin, A. (1990). *Basics of qualitative research. Grounded Theory procedures and techniques*. Newbury Park, CA: Sage.
- Suárez-Herrera, J. C., Springett, J., & Kagan, C. (2009). Critical Connections between participatory evaluation, organizational learning and intentional change in pluralistic organizations. *Evaluation, 15*(3), 321-342.
- Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., & Leese, M. (2009). Global pattern of experienced and anticipated discrimination against people with schizophrenia: A cross-sectional survey. *Lancet, 373*(9661), 408-415.

- Tofteng, D., & Husted, M. (2011). Theatre and action research: How drama can empower action research processes in the field of unemployment. *Action Research*, 9(1), 27-41.
- Twardzicki, M. (2008). Challenging stigma around mental illness and promoting social inclusion using the performing arts. *Perspectives in Public Health March*, 128(2), 68-72.
- Wahl, O. F. (2012) Stigma as a barrier to recovery from mental illness. *Trends in Cognitive Sciences*, 16(1), 9-10.
- World Health Organization. (1986). *Ottawa charter for health promotion*. An International Conference on Health Promotion. Geneva, Switzerland: Author. Retrieved October 9, 2014, from <http://www.phac-aspc.gc.ca/ph-sp/docs/charter-chartre/pdf/charter.pdf>
- World Health Organization. (1998). *Health promotion glossary*. Geneva, Switzerland: Author. Retrieved from <http://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf>
- World Health Organization. (2006). Constitution of the World Health Organization. *Basic documents* (45th ed.), Supplement. Retrieved October 9, 2014, from [http://www.who.int/governance/eb/who\\_constitution\\_en.pdf?ua=1](http://www.who.int/governance/eb/who_constitution_en.pdf?ua=1)
- World Health Organization. (2013). *Mental Health Action Plan 2013-2020*. Geneva, Switzerland: Author. Retrieved from [http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021_eng.pdf)
- Zimmerman, M. A. (2000). Empowerment Theory: Psychological, organizational and community levels of analysis. In M. A. Rappaport, & E. Seidman (Eds.) *Handbook of Community Psychology* (pp. 43-63). New York, NY: Springer.

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## Chapter 7

# GENDER, NORMATIVE BELIEFS AND ALCOHOL CONSUMPTION AMONG UNIVERSITY STUDENTS

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### ABSTRACT

Studies exploring students' alcohol consumption (AC) show the need to provide gender specific feedback intervention based on the gender differences in AC. No study has clearly described gender differences in descriptive normative beliefs (DNB) or in the individual-normative differences (IND) of AC (the differences between AC and DNB). The aim of the study was to explore the relationships between DNB and AC among students, to describe the gender differences in AC, DNB, and IND. 1938 university students (79.2% females;  $M=21.7$ ;  $SD=2.164$ ) participated and were asked about AC and DNB. Spearman correlation coefficients, U-tests in SPSS 20.0 were used for data analysis. The positive correlation between DNB and AC was confirmed. Statistically significant gender differences in AC, DNB and IND were found. Males had a higher level of AC and DNB. They perceived the AC of others more similarly to their own AC than females. The research findings confirmed and added to further studies concerning AC and DNB. Further research should be focused on research with a longitudinal design among university students.

*Keywords:* descriptive normative beliefs, alcohol consumption, university students, gender differences.

## 1. INTRODUCTION

This study focuses on the widespread problem of alcohol consumption among university students (Stone, Becker, Huber, & Catalano, 2012). The prevalence of alcohol consumption among university students is high across different countries. In the USA, 44% of university students are reported to have been binge drinking (Wechsler, Lee, Kuo, & Lee 2000), while in Canada it is 35% of students (Kuo et al., 2002), about 40% of students in the UK (Dantzer, Wardle, Fuller, Pampalona, & Steptoe, 2006), 21% in Germany (Pischke et al., 2012) and 66% in Slovakia (Sebena, Mikolajczyk, & Orosová, 2009). Alcohol consumption among university students is associated with many factors (Ham & Hope, 2003). This study has focused on descriptive normative beliefs, which can be described as the perception of the prevalence of alcohol consumption in the population or reference groups (Cialdini, 2007). Furthermore, it has focused on the gender differences in both constructs – alcohol consumption and descriptive normative beliefs, where on one hand (within alcohol consumption) there are clear findings and on the other hand (within descriptive normative beliefs) there are contradictory findings. The aim of this study is to fill this gap and to prepare systematic findings in this area of research mainly in the sample of Slovak university students.

## 2. BACKGROUND

### 2.1. Alcohol consumption among university students

Alcohol consumption reaches its highest prevalence among university students (e.g. Stone et al., 2012; Menagi, Harrell, & June 2008). The lifestyle of university students is associated with independence, lower social control and living without parents which can lead to an increase in alcohol consumption (e.g. Stone et al., 2012; Menagi et al., 2008). University students' alcohol consumption is characterised by certain gender differences, which has been confirmed by a huge number of studies (e.g. Guha, Bass, & Bruce, 2007; Dantzer et al., 2006).

By this, males drink more frequently, have more alcoholic drinks at a single occasion, are more likely to experience negative consequences from alcohol and are more likely to be alcohol dependent than females (e.g. Guha et al., 2007; Dantzer et al., 2006; Baumgartner, 2000).

Alcohol consumption is associated with many factors which can be described as risk or protective, as fixed (e.g. gender) or variable (attitude), as intrapersonal (e.g. normative beliefs), interpersonal (e.g. attachment to peers with risk behaviour) or environmental (e.g. society) (Orosová, Janovská, Kopuničová, & Vaňová, 2012; Ham & Hope, 2003). All of these factors can contribute to the persistence of alcohol consumption among university students (Stone et al., 2012; Orosová et al., 2012). In the current research, the focus will be specifically on normative beliefs, which are defined as self-regulation beliefs regarding the relevance of one's social behaviour (Huesmann & Guerra, 1997).

## 2.2. Normative beliefs

Normative beliefs relate to the norms from an individual's perspective and are created on the basis of subjective social experience (Lovaš, 1998a; Lovaš, 1998b). The present study is based on the Focus Theory of Normative Conduct, which addresses the process of internalization of norms and claims that each behaviour is influenced by an activated norm. Norms can be either injunctive or descriptive. Injunctive normative beliefs include the perception of the acceptability of a specific behaviour, while descriptive normative beliefs include the perception about the prevalence of behaviour in the population (Cialdini, 2007). Studies focusing on different types of normative beliefs tend to show inconsistent or contradictory findings. Some authors have shown that: (1) descriptive normative beliefs are the most effective predictors of alcohol consumption and focus on them in their research (Elek, Miller-Day, & Hecht, 2006; Dams-O' Connor, 2007) and interventions (Lojewski, Rotunda, & Arruda, 2010; Corbin, Iwamoto, & Fromme, 2011); (2) other authors have shown that injunctive normative beliefs are the most effective predictors of alcohol consumption (Berkowitz, 2004; Larimer et al., 1997, as cited in Dams-O' Connor, 2007); (3) and finally the third group of authors have shown that both, descriptive and injunctive normative beliefs are strong predictors of alcohol consumption (Crawford & Novak, 2010). Overall, there does not seem to be compelling evidence of differential effects of injunctive and descriptive normative beliefs on alcohol consumption (Elek et al., 2006). Although, while we are aware of the importance of injunctive normative beliefs, we have decided to focus on the descriptive normative beliefs. This is due to the nature of our sample which consists of university students. University students are likely to be influenced by the behaviour of their friends and peers (O'Hara, Harker, Raciti, & Harker 2008; Ruiselová, 2000). Within this study we are mainly interested in the impact of the perception of peers' alcohol consumption on the actual alcohol consumption of individuals which has further relevance for intervention programs.

Within descriptive normative beliefs, it is important to determine whether they differ from the actual norms and actual behaviour. The gap between the behaviour and descriptive normative beliefs (what people think is true about others' behaviours) is called "misperception". Misperception occurs when there is an overestimation or an underestimation of the prevalence of behaviours, which influences subsequent actions. With regard to alcohol consumption, numerous studies have shown that university students typically overestimate the alcohol consumption of their peers (Lojewski et al., 2010; Abar & Maggs, 2010). This can increase their personal alcohol consumption in an attempt to adapt to their descriptive normative beliefs (Borsari & Carey, 2003; Berkowitz, 2004; Guha et al., 2007).

The relationship between descriptive normative beliefs and behaviour could be understood as a tendency to approximate one's behaviour according to perceived norm. It can be labelled as social perception, empathy, or social sensitivity (Baumgartner, 1997; James, 1955). Studies have shown that behaviour can be predicted by one's perceptions of others (James, 1955). It has been confirmed that the mere perception of others' behaviour automatically increases the likelihood of engaging in that behaviour oneself (Chartrand & Bargh, 1999).

Regarding alcohol consumption, gender differences have been clearly described by a large number of studies (e.g. Dantzer et al., 2006; Guha et al., 2007). Yet, with regards to descriptive normative beliefs, only a few studies have analysed gender differences and showed



contradictory findings. While some studies did not find gender differences (Steffian, 1999; Ráczová, 2002), other studies showed that (a) females misperceive more than males (Berkowitz, 2004) or (b) males misperceive more than females (Lewis & Neighbors, 2006; Lojewski et al., 2010). While such studies expected gender differences in descriptive normative beliefs, they didn't always analyse it. Furthermore, they did not explore the relationships between descriptive normative beliefs and alcohol consumption according the gender, which is the aim of this study.

### 3. DESIGN

A cross-sectional design was used.

### 4. OBJECTIVES

The aim of this study is to explore the relationships between descriptive normative beliefs and alcohol consumption among Slovak university students and to describe the gender differences in alcohol consumption, descriptive normative beliefs, and in the individual-normative differences of alcohol consumption (the differences between individual alcohol consumption and descriptive normative beliefs about the alcohol consumption of majority of university students).

### 5. METHODS

#### 5.1. Sample

In the study, 1938 university students (79.2% females;  $M_{\text{age}} = 21.7$ ;  $SD = 2.16$ ; response rate = approximately 50%) from 4 different universities in the Eastern part of Slovakia (PJ Šafárik University in Košice - 39.01%; Technical university in Košice - 18.63%; The University of Veterinary Medicine and Pharmacy in Košice - 10.68%; University of Prešov - 31.58%) participated. Students were invited in seminars or via email to participate and subsequently register their email on the project website. Following this, the link on the online questionnaire was sent to their email addresses where they subsequently completed online questionnaires. The data were collected from November 2011 until March 2012. Further details of the study are available in the published protocol (Pischke et al., 2012).

#### 5.2. Measures

The online questionnaire consisted of three parts:

- firstly, students were asked question on gender;
- the second part measured individual alcohol consumption by 4 items concerning: (a) frequency of alcohol consumption over the last 2 months with possible answers ranging from 1 (never) to 10 (daily or nearly daily); (b) quantity of alcoholic drinks typically consumed when drinking with the possibility of entering a number of drinks ranging from 0 to 50; (c) maximum quantity of alcoholic drinks at one sitting over the last 2 months, with the possibility of entering a number from 0 to 50; (d) frequency of drunkenness over the last 2 months on a scale with 10 verbal choices from “never in life” to “daily or nearly daily”;
- the third part measured descriptive normative beliefs concerning the alcohol consumption (frequency of alcohol consumption, typical quantity of alcoholic drinks, maximum quantity of alcoholic drinks, frequency of drunkenness) of the majority (at least 51%) universities students (males or females – according to the gender of participant) by adjusting the 4 items used to measure alcohol consumption to measure descriptive normative beliefs. It means that when an item measuring an individual's alcohol consumption was: “How often have you consumed alcohol over the last 2 months?”, the item concerning descriptive normative beliefs was “How often do you think the majority (at least 51%) of students (males / females) from your university have consumed alcohol over the last 2 months?”. Items were answered on the same scale as alcohol consumption.

### 5.3. Statistical analyses

Spearman correlation coefficients, U-tests were used for data analysis in the statistical program SPSS 20. Non-parametric statistics were used in cases where the data were an ordinal scale or weren't normally distributed. A new variable was computed which represented the difference between students' descriptive normative beliefs about alcohol consumption of the majority of university students and individual alcohol consumption. Higher values meant a higher difference between the perception of oneself and other's alcohol consumption.

## 6. RESULTS

This study found statistically significant positive correlations between descriptive normative beliefs and alcohol consumption for both genders. Spearman correlation coefficients for males were: (1)  $r = .19$  ( $p_{\alpha} < .001$ ) between the frequency of alcohol consumption and descriptive normative beliefs; (2)  $r = .46$  ( $p_{\alpha} < .001$ ) between the typical quantity of alcoholic drinks and descriptive normative beliefs; (3)  $r = .39$  ( $p_{\alpha} < .001$ ) between the maximum quantity of alcoholic drinks and descriptive normative beliefs; (4)  $r = .097$  ( $p_{\alpha} = .007$ ) between the frequency of drunkenness and descriptive normative beliefs. Spearman correlation coefficients for females were: (1)  $r = .19$  ( $p_{\alpha} < .001$ ) between the frequency of alcohol consumption and descriptive normative beliefs; (2)  $r = .42$  ( $p_{\alpha} < .001$ ) between the quantity of alcoholic drinks and descriptive normative beliefs; (3)  $r = .36$  ( $p_{\alpha} < .001$ ) between the maximum number of drinks per occasion and descriptive normative beliefs; (4)  $r = .18$  ( $p_{\alpha} < .001$ ) between the frequency of drunkenness and descriptive normative beliefs. Generally, a higher level of descriptive normative beliefs regarding the alcohol consumption of the majority of university students (they think that the majority of males / females drink alcohol frequently, in large quantities and are frequently drunk) was associated with a higher level of individual alcohol consumption.

Next, the study focused on the gender differences in alcohol consumption and descriptive normative beliefs. Regarding alcohol consumption, statistically significant gender differences were found in all items concerning alcohol consumption (Table 1). Males were found to drink more frequently, typically consume more alcoholic drinks at a single occasion and be drunk more frequently than females.

Table 1. Gender differences in alcohol consumption.

		U	z	$p_{\alpha}$	mean rank
frequency of alcohol consumption	Males	448231.00	-10.321	<.001	<b>1357.12</b>
	females				<b>1058.15</b>
typically quantity of alcoholic drinks	Males	408732.00	-12.827	<.001	<b>1404.80</b>
	females				<b>1032.32</b>
maximum quantity of alcoholic drinks	Males	370638.00	-15.142	<.001	<b>1448.95</b>
	females				<b>1006.72</b>
frequency of drunkenness	Males	431261.00	-11.644	<.001	<b>1377.42</b>
	females				<b>1048.95</b>

Regarding descriptive normative beliefs, the study found statistically significant gender differences in all items concerning descriptive normative beliefs about the alcohol consumption of the majority of university students (Table 2). Females generally showed a lower level of descriptive normative beliefs regarding the frequency and typical/ maximum number of consumed alcoholic drinks and the frequency of drunkenness in the majority of university students than males.

Table 2. Gender differences in descriptive normative beliefs (DNB).

		U	z	$P_{\alpha}$	mean rank
DNB about the frequency of alcohol consumption	Males	524500.00	-5.521	<.001	<b>1269.25</b>
	females				<b>1109.69</b>
DNB about typically quantity of alcoholic drinks	Males	410565.00	-12.947	<.001	<b>1413.11</b>
	females				<b>1035.47</b>
DNB about maximum quantity of alcoholic drinks	Males	359642.00	-16.246	<.001	<b>1477.41</b>
	females				<b>1002.29</b>
DNB about frequency of drunkenness	Males	525442.00	-5.417	<.001	<b>1268.06</b>
	females				<b>1110.31</b>

Finally, the study focused on the gender differences in the individual-normative differences of alcohol consumption. The findings are shown in Table 3. Gender differences in the individual-normative differences of alcohol consumption were found. Males had a lower difference in the individual-normative differences, except the maximum quantity of alcoholic drinks at one occasion. Males perceived the frequency of alcohol consumption, the typical quantity of alcoholic drinks and the frequency of drunkenness in the majority of university students more accurately to their individual alcohol consumption than females perceived it.

Table 3. Gender differences in individual-normative differences of alcohol consumption.

		U	z	$P_{\alpha}$	mean rank
IND of the frequency of alcohol consumption	Males	528503.00	-4.98	<.001	<b>1064.49</b>
	females				<b>1209.35</b>
IND of typically quantity of alcoholic drinks	Males	562031.00	-2.665	<b>.008</b>	<b>1107.74</b>
	females				<b>1185.42</b>
IND of the maximum quantity of alcoholic drinks	Males	581981.00	-1.195	.232	1133.93
	females				1168.87
IND of the frequency of drunkenness	Males	570039.00	-2.093	<b>.036</b>	<b>1119.59</b>
	females				<b>1180.64</b>

**Note:** IND = the individual – normative difference of alcohol consumption

## 7. DISCUSSION

The main contribution of our study is in the findings regarding the association between alcohol consumption and descriptive normative beliefs in the sample of Slovak university students. Most of the existing findings are from the USA context. Much less research on alcohol consumption has been conducted among European university students when compared to USA. This study was based on a large sample of Slovak university students and showed similar results when compared with the cited studies showing that alcohol plays an important part in university life.

The research findings are consistent with other studies (Berkowitz, 2004; Lewis, 2008; Stone et al., 2012), which confirmed a positive correlation between descriptive normative beliefs and alcohol consumption (frequency of alcohol consumption and quantity of alcoholic drinks). In addition, these findings were confirmed by the frequency of drunkenness. It has highlighted that students who perceive the majority of university students to drink alcohol

frequently, in larger quantities and are frequently drunk have a higher level of individual alcohol consumption.

Furthermore, the study has confirmed the gender differences in alcohol consumption. Males consumed alcohol more frequently, a higher quantity of alcoholic drinks and were more frequently drunk than females. Others authors have found similar results (Guha et al., 2007; Stone et al., 2012). In addition, this study found statistically significant gender differences regarding descriptive normative beliefs. Males had a higher level of descriptive normative beliefs than females where males perceived the majority of males' university students as those who consume alcohol more frequently, a higher quantity of alcohol drinks and are more frequently drunk than females perceived it. Finally, gender differences in the individual-normative differences of alcohol consumption were found. Males were found to have a lower difference between individual alcohol consumption and descriptive normative beliefs about alcohol consumption in the majority of university students. It means that males perceived the frequency of alcohol consumption, the typical quantity of alcoholic drinks and the frequency of drunkenness of university students such more similarly to their individual alcohol consumption.

This study offers a view on gender differences in alcohol consumption, descriptive normative beliefs and in the individual-normative differences of alcohol consumption. It has shown that males not only had a higher level of alcohol consumption and higher level of descriptive normative beliefs, but adapted their individual alcohol consumption to their descriptive normative beliefs to a greater extent than females. Therefore, the study emphasizes the need to provide gender specific feedback intervention and points out the merit of using the correction of descriptive normative beliefs in prevention and intervention programmes.

Generally, these findings provide an overview of the problem of alcohol consumption and descriptive normative beliefs among Slovak university students. Concerning the cultural significance of alcohol consumption in Slovakia, alcohol is accepted as an important part at celebrations, parties and when meeting with friends. Alcohol is socially accepted in spite of its negative consequences. Similarly situation can be found at universities and among students making it a relevant topic for further research. This study has some limitations concerning the online data collection (the representativeness of the sample, the distribution of data), cross-sectional design of the study and a limited range of variables. Furthermore, some variables were measured only by single item instruments. Finally, the age of the respondents was not used as a potential predictor of alcohol consumption in our analyses, but the variation in age was low and it wasn't the aim of this study.

Further research should include a larger spectrum of variables, e.g. personal attitudes toward alcohol or injunctive normative beliefs. It would be also beneficial to employ more sophisticated statistical analyses such as e.g. structural modelling.

## **8. CONCLUSION**

The research findings have confirmed that a relationship exists between descriptive normative beliefs and alcohol consumption. Furthermore, the findings have also confirmed gender differences in alcohol consumption, descriptive normative beliefs about alcohol consumption of the majority of university students and in the individual-normative differences of alcohol consumption. These findings extend the knowledge about alcohol consumption and the importance of descriptive normative beliefs in this context in the sample of Slovak university students. Further research should focus on research with a longitudinal design among university students and identifying reasons why females' descriptive normative beliefs differ from males' in order to construct more effective intervention programs, in the next steps focus on a larger spectrum of variables and use more sophisticated statistical analyses.

## **9. FUTURE RESEARCH DIRECTIONS**

This study has confirmed and extended findings in the area of alcohol consumption and descriptive normative beliefs with the focus mainly on gender differences in the sample of

Slovak university students. The analyses provide a summary view on gender differences in general so further research should be focused on gender differences with more in-depth analyses in a longitudinal design. It is important to identify reasons why females' descriptive normative beliefs differ in order for more effective intervention programs to be applied. The identification of factors that are related to females' descriptive normative beliefs could also improve the understanding of males' descriptive normative beliefs and subsequently their alcohol consumption.

## REFERENCES

- Abar, C., & Maggs, J. (2010). Social influence and selection processes as predictors of normative perceptions and alcohol use across the transition to college. *Journal of College Student Development, 51*(5), 496-508.
- Baumgartner, F. (1997). Sociálne poznávanie [Social cognition]. In J. Výrost, & I. Slaměník (Eds.), *Sociální psychologie* [Social Psychology]. Prague, Czech Republic: ISV.
- Baumgartner, F. (2000). Perception of risk situations and its relation to normative beliefs in females and males. *Studia psychologica, 42*(3), 181-185.
- Berkowitz, A. (2004). The Social Norms Approach: Theory, research, and annotated bibliography. Retrieved December 3, 2012, from [http://www.alanberkowitz.com/articles/social\\_norms.pdf](http://www.alanberkowitz.com/articles/social_norms.pdf)
- Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol, 64*(3), 331-341.
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology, 76*(6), 893-910.
- Cialdini, R. (2007). Descriptive social norms as underappreciated sources of social control. *Psychometrika, 72*(2), 263-268.
- Corbin, W., Iwamoto, D., & Fromme, K. (2011). Broad social motives, alcohol use, and related problems: Mechanisms of risk from high school through college. *Addictive Behaviors, 36*(3), 222-230.
- Crawford, L., & Novak, K. (2010). Beliefs about alcohol and the college experience as moderators of the effects of perceived drinking norms on student alcohol use. *Journal of Alcohol and Drug Education, 54*(3), 69-86.
- Dams-O' Connor, K. (2007). *The relationship between social norms perceptions, control orientation, and college student health risk behaviors*. (Doctoral dissertation). Retrieved from <http://gradworks.umi.com/32/86/3286302.html>
- Dantzer, C., Wardle, J., Fuller, R., Pampalone, S. Z., & Steptoe, A. (2006). international study of heavy drinking: Attitudes and sociodemographic factors in university students. *Journal of American College Health, 55*(2), 83-89.
- Elek, E., Miller-Day, M., & Hecht, M. (2006). Influences of personal, injunctive, and descriptive norms on early adolescent substance use. *Journal of Drug Issues, 36*(1), 147-171.
- Guha, N., Bass, E., & Bruce, S. (2007). *I drink, I get drunk, I fall down, no problem: An analysis of college student binge drinking and related decision making behaviors*. Paper presented at the IEEE Systems and Information Engineering Design Symposium, SIEDS '07, Charlottesville, VA.
- Ham, L., & Hope, D. (2003). College students and problematic drinking: A review of the literature. *Clinical Psychology review, 23*(5), 719-759.
- Huesmann, R. L., & Guerra, N. G. (1997). Children's normative beliefs about aggression and aggressive behavior. *Journal of Personality and Social Psychology, 72*(2), 408-419.
- James, B. (1955). Cognitive complexity-simplicity and predictive behavior. *The Journal of Abnormal and Social Psychology, 51*(2), 263-268.
- Kuo, M., Adlaf, E. M., Lee, H., Gliksman, L., Demers, A., & Wechsler, H. (2002). More Canadian students drink but American students drink more: Comparing college alcohol use in two countries. *Addiction, 97*(12), 1583-1592.
- Lewis, T. (2008). An explanatory model of student-athlete drinking: The role of team leadership, social norms, perceptions of risk, and coaches' attitudes toward alcohol consumption. *College Student Journal, 43*(3), 818-831.
- Lewis, M., & Neighbors, C. (2006). Social norms approaches using descriptive drinking norms education: A review of the research on personalized normative feedback. *Journal of American College Health, 54*(4), 213-218.
- Lojewski, R., Rotunda, R., & Arruda, J. (2010). Personalized normative feedback to reduce drinking among college students: A social norms intervention examining gender-based versus standard feedback. *Journal of Alcohol and Drug Education, 54*(3), 19-40.

- Lovaš, L. (1998a). Model diferenciácie sociálnych a personálnych noriem: Normatívny pohľad na odplácanie (kontraagresiu) [Model of social and personal norms differentiation: the normative view of retaliation (contra-aggression)]. *Československá Psychologie*, 42(6), 543-557.
- Lovaš, L. (1998b). Súčasný pohľad na vplyv sociálnych noriem na ľudské správanie v sociálnej psychológii [Current views on the impact of social norms on human behavior in social psychology]. *Človek a spoločnosť*, 2(1). Retrieved from <http://www.clovekaspolocnost.sk/jquery/pdf.php?gui=LU5Y1FCPPVPCC2WT3PIEPAA>
- Menagi, F., Harrell, Z., & June, L. (2008). Religiousness and college student alcohol use: Examining the role of social support. *Journal of Religion Health*, 47(2), 217-226.
- O'Hara, R., Harker, D., Raciti, M., & Harker, M. (2008). Attitudinal, normative and demographic influences on female students' alcohol consumption. *Young Consumers*, 9(1), 7-16.
- Orosová, O., Janovská, A., Kopuničová, V., & Vaňová, M. (2012). *Základy prevencie užívania drog a problematického používania internetu v školskej praxi* [Primary prevention of drug use and problematic Internet use in school practice]. Košice, Slovakia: UPJŠ Filozofická fakulta.
- Pischke, C. R., Zeeb, H., van Hal, G., Vriesacker, B., McAlaney, J., Bewick, B. M., Akvardar, Y., Guillén-Grima, F., Orosova, O., Salonna, F., Kalina, O., Stock, C., Helmer, S. M., & Mikolajczyk, R. T. (2012). A feasibility trial to examine the social norms approach for the prevention and reduction of licit and illicit drug use in European University and college students. *BMC Public Health*, 12, 882-889.
- Ráčzová, B. (2002). Analýza percepcie noriem u adolescentov/tiek vo vzťahu k modelu IDP [The analysis of perception norms in adolescents/Relations to IDP model]. In M. Blatný, M. Svoboda, I. Ruisel, & J. Výrost (Eds.), *Sociální procesy a osobnost: Sborník příspěvků* [Social processes and personality: Proceedings] (pp. 77-81). Brno, Czech Republic: Psychologický ústav Akademie věd Brno. Retrieved from <http://www.spao.eu/files/sbornik01.pdf>
- Ruiselová, Z. (2000). Descriptive norms – Adolescents and their adjustment. *Studia psychologica*, 42(3), 197-202.
- Sebena, R., Mikolajczyk, R., & Orosová, O. (2009). Sociodemographics factors and its role in Slovak university students' alcohol use. In O. Orosová, B. Gajdosova, M. Bacikova-Sleskova, F. Salonna, & R. Sebena (Eds.), *Health-related behaviour among adolescents and young adults* (pp. 203-218). Košice, Slovakia: Equilibria.
- Steffian, G. (1999). Correction of normative misperceptions: An alcohol abuse prevention program. *Journal of Drug Education*, 29(2), 115-138.
- Stone, A., Becker, L. G., Huber, A. M., & Catalano, R. F. (2012). Review of risk and protective factors of substance use and problem use in emerging adulthood. *Addictive Behaviors*, 37(7), 747-775.
- Wechsler, H., Lee, J. E., Kuo, M., & Lee, H. (2000). College binge drinking in the 1990s: A continuing problem. *Journal of America College Health*. 48(5), 199-210.

## ADDITIONAL READING

- Brutovská, M., Orosová, O., Kalina, O., Petkeviciene, P., & Lukács, A. (2013). Normative beliefs, social support and alcohol consumption among non/risk alcohol consumers – A longitudinal study. *Psychology & Health*, 28(sup. 1), 178.
- McAlaney, J., & McMahon, J. (2007). Normative Beliefs, Misperceptions, and Heavy Episodic Drinking in a British Student Sample. *Journal of Studies on Alcohol & Drugs*, 68(3), 382-392.
- Sanderson, C. (2012). *Health psychology*. Hoboken, NJ: John Wiley and Sons.
- Sloboda, Z., & Bukoski, W. J. (Eds.). (2006). *Handbook of drug abuse prevention – Theory, science, and practice*. New York, NY: Springer.

## KEY TERMS & DEFINITIONS

**Alcohol consumption:** is the widespread behaviour among university students, which is the part of the lifestyle of university students; it is associated with many factors (risk or protective, fixed or variable, intrapersonal, interpersonal or environmental).

**Normative beliefs:** relate to the norms from an individual's perspective; they are created on the basis of subjective social experience.

**The Focus Theory of Normative Conduct:** is based on the process of internalization of norms; it claims that each behaviour is influenced by the activated norm, which may be injunctive or descriptive.

**Descriptive normative beliefs:** include the perception about the prevalence of behaviour in the population.

**Injunctive normative beliefs:** include the perception of the acceptability of a specific behaviour.

**Misperception:** it is the gap between the behaviour and descriptive normative beliefs (what people think is true about others' behaviours); it occurs when there is an overestimation or an underestimation of the prevalence of behaviours.

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## Chapter 8

### QUALITY OF LIFE AND BODY IMAGE: A PSYCHOSOCIAL PROGRAM FOR CANCER PATIENTS

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#### ABSTRACT

*Introduction:* “Salute allo Specchio” (“A reflection of Health”) is a psychosocial program for cancer patients, whose aim is to improve well-being and quality of life. The focus of the program is the creation of group sessions during which a team of fashion and aesthetic consultants illustrates techniques and strategies to manage the effects of the disease and its treatments (hair loss, pale and waxy skin tone). After “beauty treatments” patients are involved in groups led by the psychologists, as the program is considered a part of a wider psychological supportive care. *Method:* “Salute allo Specchio” (“A reflection of Health”) project is addressed to female patients with a cancer diagnosis who are undergoing cancer treatment (chemotherapy, radiotherapy) at one of the largest hospitals in the north of Italy. Up to now, 24 patients have taken part in the program. Anxiety (STAI-Y), depression (BDI), quality of life (EORTC QLQ-30), body image perception (BIS), and self-esteem (SE) are assessed at the beginning ( $t_0$ ), at the end of each session ( $t_1$ ) and after 3 months ( $t_2$ ). *Expected results:* Based on previous literature, we expect that the beauty treatments, in combination with psychological support and routine care, will have a positive impact on body image perception, increase self-esteem and reduce anxiety and depression, thus improving patients’ general well-being.

*Keywords:* psycho-oncology, female cancer, aesthetic, psychosocial program, quality of life.

#### 1. INTRODUCTION

Of the many diseases that threaten life, cancer is one of the most stressful and traumatic. In spite of technological progress in the field of oncology, the subjective reality of cancer and its individual interpretation remain that of an insidious and uncontrollable disease that invades, transforms and slowly brings an end to life. The International Psycho-Oncology Society standard of quality cancer care states that:

- 1) Quality cancer care must integrate the psychosocial domain into routine care;
- 2) Distress should be measured as the Sixth Vital Sign after temperature, blood pressure, pulse, respiration and pain.

Few other diseases have so many evident consequences for the sufferer, or interfere with so many different dimensions of the patient’s life: the relationship with one’s body (brought to the forefront by this disease in its limited nature and fragility), the meaning of life, the suffering, family, social and professional relationships, one’s identity and role. The anxiety links to a feeling of profound insecurity weighs the patient down and destabilises their entire existence. With this illness, it is essential to implement all of the physical, mental and affective resources available to help the patient find an area of thought and possibility, free of the anxiety and the limitations that the disease imposes.

Faced with the comprehensive nature of the oncological disease, which interferes with multiple spheres in the patient’s life, the need to couple traditional medical treatment with psychosocial intervention becomes increasingly apparent. Feelings and thoughts in fact neither cause nor cure cancer, but they are integral aspects of the whole person (LeShan, 1994) which can’t be left aside in a perspective of patients’ integrate care. Such interventions aim to provide an opportunity to resolve problems of a not strictly medical nature that patients experience in



their course of treatment (psychological, social and practical problems, for example). They respond to the need for an overall management of the patient, with the goal of not only reinstating, where possible, a condition free of illness but also the protection of a state of psycho-physical well-being. If health corresponds to a “state of complete physical, mental and social well-being that does not coincide with the simple absence of disease or infirmity” (World Health Organization, 1948), nobody working in the clinical world is exempt from considering the patient in their entirety. This means taking into consideration those aspects that are not strictly concerned with the pathology, regarding the patient as a person (LeShan, 1994).

### **1.1. The experience of the oncological patient**

From the psychological point of view, cancer is a highly traumatic event in the life of the individual who has become ill. Initial reactions and signs of suffering may appear in response to the first symptoms or suspicions of disease which then explode with intensity when the diagnosis is made (Stanton & Snider, 1993). The elaboration of the disease must, however, be seen as a process; it is not a single event but rather a complex and varied adaptation divided over time.

Reactions to the news of cancer tend to follow a similar pattern with some individual variations. The first stage is *shock* (incredulity and protest at the “catastrophe” that has occurred); in this phase, the patient often uses defence mechanisms such as “denial” which help to postpone the moment of confrontation. The *transitional* stage (fluctuating states which alternate between anger, desperation, anguish and fear) occurs when the reality of the situation really sets in. Here, the defense mechanisms implemented are often varied and contradictory (for example, “regression” and “projection”) (Lingiardi & Madeddu, 2002). The true psychological impact of the diagnosis and treatment are of extreme importance in this stage (Bolund, 1990). In the transitional stage, the patient is forced to continually re-adapt and re-evaluate the situation by the different steps of treatment. Lastly, the *reorganisation* phase (efforts to establish a balance) involves adaptation and acceptance of events.

The great variability of these stages largely depends on the coping strategies (cognitive and behavioural adaptation to a stressful situation) adopted by the patient and the defense system used to reduce the state of anxiety and tension. The quality and intensity of the reactions can, therefore, also be very different, although still within a normal range. However, almost 40% of these physiological manifestations of discomfort and suffering assume a pervasive and maladaptive nature, to the point that a true disorder can be diagnosed psychiatrically (Grassi, Biondi, & Costantini, 2003). Factors favouring the appearance of true psychological-psychiatric symptoms are certainly medically variable (disabling symptoms, aggressive medical treatment, advanced stage of the disease, etc.), psychological (preceding psychiatric history, perception of little control over events, tendency to repress emotions, etc.) and relational (poor family or social support, low social-economic level, etc.). The most frequent disorders found are depression (in 16% of patients), anxiety (10%), and adaptation (19%) (Mitchell et al., 2011).

### **1.2. Quality of life**

One of the aspects most considered today in the treatment of the oncological patient is the quality of life during and after treatment. Currently, with the transformation of cancer from an inevitably fatal disease to a disease that is increasingly chronic (Varni, Katz, Colegrove, & Dolgin, 1995), it becomes essential to assess the ratio between benefits (increase in survival) and costs (short- and long-term side effects) of each therapeutic choice, emphasizing the well-being of the sick person.

The term quality of life (QoL) lends itself to various possible definitions; it can generally be defined as an overall state of well-being felt and evaluated by individuals through subjective and objective measurements, global functioning, health and satisfaction with the dimensions of life that they consider most important (Hunt, McEwen, & McKenna, 1985). In relation to health, quality of life is divided into some fundamental dimensions: physical function, social function, mental and emotional state, the gravity and weight of the symptoms and the feeling of overall well-being perceived by the patient (Stewart & Ware, 1992).

The conclusions of the research regarding the impact of the oncological disease and its treatment on the quality of life of patients are not always consistent (Rosenfeld, Roth, Gandhi, & Penson, 2004) mainly because of different definitions of the construct and its dimensions. However, beyond these differences, it is recognized that anxiety and depression are significantly correlated with impaired QoL (Frick, Tyroller, & Panzer, 2007); the quality of life of the patient is also an independent positive prognostic factor (Ganz, Lee, & Siau, 1991) and is particularly influenced by the important physical changes that the patient often rapidly undergoes starting from the first therapeutic interventions (Przedziecki et al., 2013).

### **1.3. Body image and cancer**

The concept of body image, previously considered almost exclusively in other sectors, has acquired relevance in the oncological sphere, both in terms of research and also as the specific focus of intervention. When we talk of body image, we need to think of a multi-dimensional mental construct, dynamically moulded throughout life and established on biological and psychological bases. Its definition is still under discussion. However, despite the ambiguities, researchers generally agree on defining it as the mental representation relating to perceptions, feelings, thoughts and attitudes concerning one's body (Cash, 2004; Grogan, 2006).

The experience of cancer causes significant changes to body image. The body is the first aspect to be struck by the disease and the treatments associated with it - alopecia, changes in weight, mutilations, oedema, pallor, nausea, sickness, alterations of taste, loss of energy, and compromise of physical abilities, bring to the forefront the image of a changed, suffering body that is often no longer recognised or felt as one's own (Rosenberg, et al., 2013). In turn, these changes can generate difficulties in daily life and interfere with social life, lifestyle, and moods. The changes relating to how a person sees themselves and how others see them threaten the identity, the sense of oneself and integrity (Grassi et al., 2003).

Studies on body image in oncological patients concentrate on different and specific areas of study, according to the objectives. Researches on the relationship between body image and cancer, for example, highlight how compromises in the former have a negative effect on the quality of life, psycho-social adaptation, sexuality and self-esteem of patients (Erol, Can, & Aydiner, 2012; Arora et al., 2001; Härtl et al., 2003; Anagnostopoulos & Myrzianni, 2009). Some authors have likewise explored investment in body image (i.e. "how much it counts" for the individual) as determinant in the development of a positive or negative psychological adaptation. On this point, the literature shows that a consistent change in the condition and integrity of one's body is experienced more negatively when the investment in body image is particularly intense and high and that a person's self-esteem very much depends on their physical appearance (Carver et al., 1998).

Lastly, as early as the 1970s, some studies in the psycho-oncological area showed how part of psychiatric morbidity in oncology is linked to problems relating to body image. Some cases of social phobia arise as a result of the therapy, especially if it mutilates or changes the exterior appearance of the person. The fear of being judged and the feeling of being watched and pitied can lead to isolation, and bring out feelings of abandonment and solitude. Avoidance behaviour, can also occur as a consequence of the fact that some changes typically linked to treatment (such as, loss of hair) are for many proclamations of their disease status and a constant reference for themselves and others to their stigmatised, easily recognisable condition as "*a person with cancer*".

**1.3.1. Body image in female cancer patients.** The need to redefine one's image and psycho-corporeal identity is more evident if a woman becomes ill with an oncological disease. The concept of female body image is particularly complex. Throughout life, the female body undergoes changes that are not linear: menarche, the development of secondary sexual characteristics, pregnancy, birth and menopause represent radical changes that necessitate continuous restructuring of a woman's self-perception and of her 'bodily self'. In this sense, the conquest of femininity follows a complex pathway marked by a certain fluidity and continuous comparison with the change and the new (Pigozzi, 2004). Thus, when a female patient becomes ill, the fear of losing her beauty, her integrity, the sense of herself as a woman (self-image,

sexuality, fertility, etc.) add to her fear of the disease itself. It is clear that for all these reasons, the approach to female neoplasia cannot be based exclusively on medical considerations but must include an evaluation and management of psychological and aesthetic problems (an integral part of the disease).

## 2. BACKGROUND

A simple analysis of the data for 2012 shows that the incidence of cancer in Italy is approximately 354,500. Of these cases, almost 192,200 are male and 162,300 are female. Data for 2012 in Europe shows 3,442,300 new cancer cases; 1,611,700 are female (Globocan, 2012).

As described in the previous paragraphs, the experience of being diagnosed and subsequently treated for cancer is a time of deep personal crisis and the cause of severe physical and psychological stress for the vast majority of patients. This stress is exacerbated for many patients by additional concerns over changes in body image or self-perceptions about physical appearance (Morasso & Tomamichel, 2005). The main changes that patients experience concerning their appearance are loss of hair, eyelashes and eyebrows, pale skin and increase or loss of weight (in addition to any physical impairments related to surgeries). These changes have a detrimental impact on perceived quality of life, self-esteem and level of emotional and social functioning (Quintard & Lakdja, 2008).

In recent years, closer attention to body image and quality of life in oncological patients has led to the creation of specific psychosocial programs in addition to traditional medical care; their impact has been investigated by empirical studies. An early study of 2008 (Quintard & Lakdja, 2008) confirms the usefulness of a program aimed at providing advice and beauty treatments to patients with breast cancer. Patients who took part in the program showed significantly higher scores in the perception of their body image within six months of surgery (which was associated with routine care). A second study of 2009 (Taggard & Ozolins, 2009), evaluates the effectiveness of the program “*Look Good Feel Better*” on a group of cancer patients admitted to a hospital in the UK. At the end of the program, patients showed significant improvements in anxiety, body image and perceived support.

“Salute allo Specchio” (“A Reflection of Health”) is a psychosocial program for cancer patients which has been developed as a result of these studies. Its aim is to improve well-being and quality of life through the creation of group sessions in which a team of fashion and oncology aesthetic consultants illustrate techniques and strategies to manage the effects of the disease and its treatments. All patients are personally involved in this experience, all becoming “models” of a set and “customers” of a prestigious spa, both recreated inside the hospital. During these “beauty session” they are instructed not only about make-up, wigs’ management and skin care, but also about how to wear coloured clothes and choose dressy accessories such as foulards, scarves, earrings and necklaces. In a playful atmosphere, consultants give theoretical and practical suggestions often with the help of pictures taken from magazines and famous paintings: by using these images, they are able to establish a link between healthy and ill women. Stressing these aspects, patients’ femininity, often threatened by illness and body changes, could be improved, allowing them to feel more comfortable with themselves and with others; this could ultimately result in a better adaptation to the disease and to the treatment. Moreover, through the participation to this session, patients could recover the pleasure of taking time for themselves, giving greater importance to body care as one of the way to enrich personal wellbeing; “*I learned the importance of dedicating less time to the disease, to the work, to the duties and more time to myself, as a woman*” said a patient at the end of a group. After treatment, patients are involved into discussion groups, led by the team psychologists, where participants can share their experiences and emotions. The program in fact is considered part of a wider psychological supportive care effort, and the group is a fundamental psychological support device (Yalom & Leszcz, 1997).

*“The best thing for a cancer patient is to share the disease with other cancer patients. Only who is sick can really understand what I mean. Here I found some special friends”.*

### 3. METHODS AND RESULTS

#### 3.1. Sample selection and recruitment

Patients with a cancer diagnosis undergoing cancer treatment (chemotherapy, radiotherapy or surgery) at one of the largest hospitals in the north of Italy were invited to take part in the program. Women eligible were over 18, Italian speaking, with at least an elementary school education. Approval from the Medical Ethical Committee and informed patient's consent were obtained.

#### 3.2. Measures

The demographic and clinical information of all participants was collected before the beginning of the program (baseline). The following instruments were distributed:

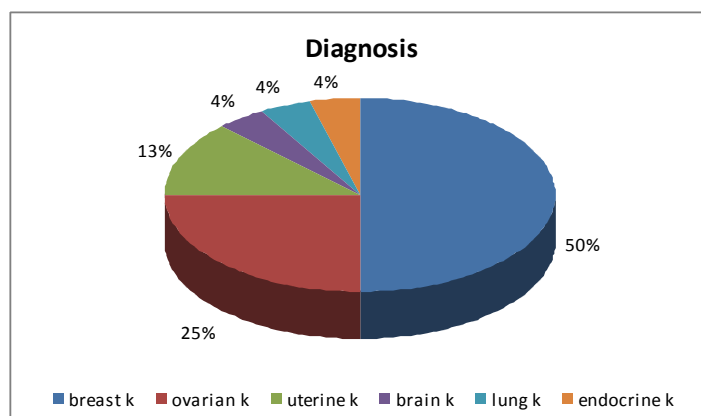
- Self-Report Questionnaire, which includes date of birth, socio-demographic information, date and type of diagnosis, nature of therapy, main 'aesthetic' side effects.
- State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970). This consists of 40 items (rated on a 4-point scale) and measures state and trait anxiety. Total scores range from 20 to 80 for each subscale; higher scores indicates higher levels of anxiety.
- Beck Depression Inventory–Revised (BDI-II) (Beck, Brown, & Steer, 1996). This contains 21 questions (each answer scored on a scale value of 0 to 3) and is one of the most widely used instruments for measuring the level of depression. Higher scores indicate greater severity.
- Rosenberg Self-Esteem Scale (SE) (Rosenberg, 1965). This consists of 10 items (answered on a four point scale) and is considered a reliable and valid quantitative tool for the assessment of self-esteem. Total scores range from 10 to 40; higher scores indicate higher self-esteem.
- Body Image Scale (BIS) (Hopwood, Fletcher, Lee, & Al Ghazal, 2001). This is a brief scale (10 items scored from 0 to 3) which is used to assess body image perception in patients with different types of cancer. Total scores range from 0 to 30, with higher scores denoting a worse body image perception.
- European Organization on Research and Treatment of Cancer QLQ-C30 (EORTC QLQ-C30) (Aaronson et al., 1993). This is a 30-item questionnaire developed to assess the quality of life of cancer patients consisting of five functional scales, nine symptom scales and a global health and quality of life scale. All the scales range in scores from 0 to 100. A high score for a functional and global health status scale represents a healthy level of functioning, while a high score for a symptom scale represents a high level of dysfunction.

A second assessment will be conducted at the end of each session (time 1) and a final follow up will be carried out after 3 months (time 2).

#### 3.3. Available results

To date, 24 patients have been recruited for the program and have completed the baseline assessment. The mean age of the patients is 53.63 years (sd: 10.79; range: 32-74). Time elapsed since diagnosis is on average 19.13 months (sd: 32.85; range: 1-150). All patients are treated with chemotherapy; 5 of them are also treated with radiotherapy (21%). Diagnoses are distributed as follows (Figure 1):

Figure 1. Diagnosis distribution.



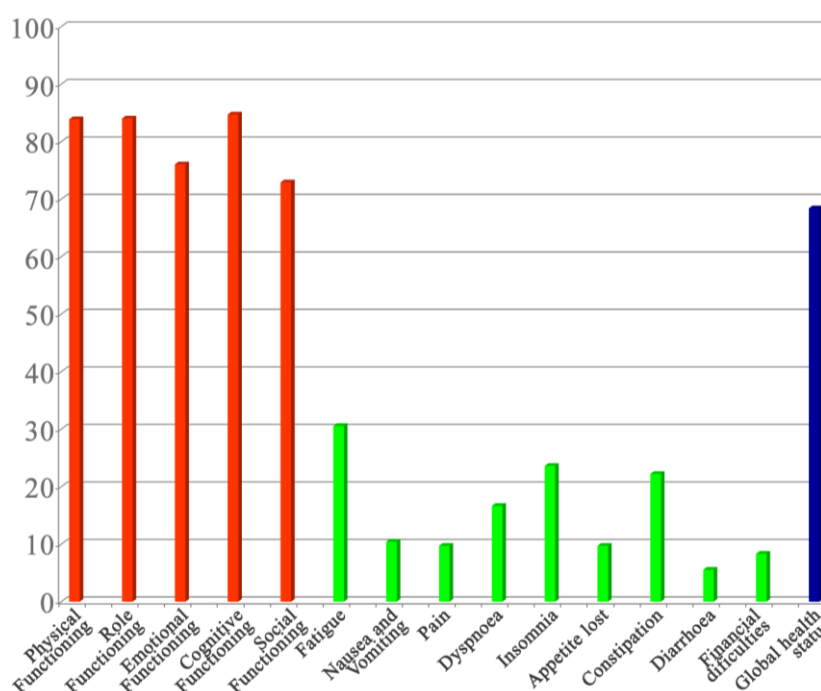
Score ranges, means and standard deviation for STAI, BDI, BIS and SE are reported in the following table (Table 1).

Table 1. Score ranges, means and sd.

Variable	min	Max	Mean	standard deviation
STAI state	22	66	44.42	10.79
STAI trait	28	63	38.75	8.28
BDI total score	1	27	11.83	7.60
BIS total score	0	28	11.75	7.49
SE total score	23	40	33.13	4.52

EORTC QOL-30 results are distributed as follows (Figure 2):

Figure 2. EORTC QLQ-30.



#### 4. FUTURE RESEARCH DIRECTIONS

As this is a preliminary study, the data available has some limitations. First of all, we have conducted only descriptive analyses of the data from which only the initial distribution of the variables in the sample (anxiety, depression, body image, self-esteem and quality of life) and their starting levels can be deduced. At present, there are no repeated measurements in time which would enable the real impact of the project to be assessed and the existence of significant changes in the variables to be considered. In order to obtain generalised results it would be helpful to increase the sample which is rather small at present ( $n = 24$ ). In future, it would also be important to extend the variety of diagnoses so that the results obtained can be better generalised.

Lastly, it would be interesting to extend the assessment of the impact of the project from the patient involved to her family. At present, qualitative observations and clinical feedback demonstrate a lower level of stress and tension expressed by caregivers as well as a climate of greater harmony and positivity in the days following the “Salute allo Specchio” (“A Reflection of Health”) meetings. These aspects certainly deserve further investigation from both an empirical and a research point of view.

#### 5. CONCLUSION/DISCUSSION

Based on previous literature, we expect the “Salute allo Specchio” (“A Reflection of Health”) project will reduce the levels of anxiety and depression, improve perception of body image, increase self-esteem and have an overall positive impact on patients’ quality of life. In addition, the active participation of psychologists and the staff involved (voluntary workers, doctors and professionals) in the groups of each cycle provided the opportunity to observe in vivo the extent that meeting with other women going through similar experiences created a secure context for the patients; they shared their feelings and thoughts and received support. These elements contrasted with the isolation and solitude that cancer patients often experience in their daily lives.

Finally, the ambition of this project is to become an integral part of medical treatment for oncological patients and be a useful tool to favour compliance with the therapies to promote faster adaptation to the condition of this illness.

#### REFERENCES

- Aaronson, N. K., Ahmedzai, S., Bergman, B., Bullinger, M., Cull, A., Duez, N. J., Filiberti, A., Flechtner, H., Fleishman, S. B., de Haes, J. C. J. M., Kaasa, S., Klee, M., Osoba, D., Razavi, D., Rofe, P. B., Schraub, S., Sneeuw, K., Sullivan, M., & Takeda, F. (1993). The European Organization on Research and Treatment of Cancer QLQ-C30: A quality-of-life instrument for use in international clinical trials in oncology. *Journal of the National Cancer Institute*, *85*(5), 365-376.
- Anagnostopoulos, F., & Myrghianni, S. (2009). Body image of Greek breast cancer patients treated with mastectomy or breast conserving surgery. *Journal of Clinical Psychology in Medical Settings*, *16*(4), 311-321.
- Arora, N. J., Gustafson, D. H., Hawkins, R. P., McTavish, F., Cella, D. F., Pingree, S., Mendenhall, J. H., & Mahvi, D. M. (2001). Impact of surgery and chemotherapy on the quality of life of younger women with breast carcinoma. *Cancer*, *92*(5), 1288-1298.
- Beck, A. T., Brown, G., & Steer, R. A. (1996). *Beck Depression Inventory II manual*. San Antonio, TX: The Psychological Corporation.
- Bolund, C. (1990). *Crisis and coping: Learning to live with Cancer*. In J. C. Holland, & R. Zittoun (Eds.), *Psychosocial aspects of Oncology* (pp. 13-26). Berlin, Germany: Springer-Verlag.
- Cash, T. F. (2004). Body image: Past, present and future. *Body Image*, *1*(1), 1-5.
- Carver, C. S., Pozo-Kaderman, C., Price, A. A., Noriega, V., Harris, S. D., Derhagopian, R. P., Robinson, D. S., & Moffat, F. L. (1998). Concern about aspects of body image and adjustment to early stage breast cancer. *Psychosomatic Medicine*, *60*(2), 168-174.
- Erol, O., Can, G., & Aydiner, A. (2012). Effects of alopecia on body image and quality of life of Turkish cancer women with or without headscarf. *Support Care Cancer*, *20*(10), 2349-2356.

- Frick, E., Tyroller, M., & Panzer, M. (2007). Anxiety, depression and quality of life of cancer patients undergoing radiation therapy: A cross-sectional study in a community hospital outpatient centre. *European Journal of Cancer Care*, *16*(2), 130-136.
- Ganz, P. A., Lee, J. J., & Siau, J. (1991). Quality of life assessment. An independent prognostic variable for survival in lung cancer. *Cancer*, *67*(12), 3131-3135.
- Globocan (2012). *Estimated Cancer Incidence, Mortality and Prevalence Worldwide in 2012*. International Agency for Research of Cancer, World Health Organization.
- Grassi, L., Biondi, M., & Costantini, A. (2003). *Manuale pratico di Psico-Oncologia* [Handbook of Psycho-Oncology]. Rome, Italy: Il Pensiero Scientifico Ed.
- Grogan, S. (2006). Body image and health: Contemporary perspectives. *Journal of Health Psychology*, *11*(4), 523-530.
- Härtl, K., Janni, W., Kästner, R., Sommer, H., Strobl, B., Rack, B., & Stauber, M. (2003). Impact of medical and demographic factors on long-term quality of life and body image of breast cancer patients. *Annals of Oncology*, *14*(7), 1064-1071.
- Hopwood, P., Fletcher, I., Lee, A., & Al Ghazal, S. (2001). A body image scale for use with cancer patients. *European Journal of Cancer*, *37*(2), 189-197.
- Hunt, S. M., McEwen, J., & McKenna, S. P. (1985). Measuring health status: A new tool for clinicians and epidemiologists. *The Journal of the Royal College of General Practitioners*, *35*(273), 185-188.
- LeShan, L. (1994). *Cancer as a turning point: A handbook for people with cancer, their families, and health professionals* (rev. ed.). London, UK: Penguin Books.
- Lingiardi, V., & Madeddu, F. (2002). *I meccanismi di difesa. Teoria, valutazione, clinica*. [The defense mechanisms. Theory, evaluation, practice.]. Milan, Italy: Raffaello Cortina Ed.
- Mitchell, A. J., Chan, M., Bhatti, H., Halton, M., Grassi, L., Johansen, C., & Meader, N. (2011). Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: A meta-analysis of 94 interview-based studies. *The Lancet Oncology*, *12*(2), 160-174.
- Morasso, G. & Tomamichel, M. (2005). *La sofferenza psichica in oncologia. Modalità di intervento*. [Psychological suffering in oncology. Ways of intervention.]. Rome, Italy: Carrocci.
- Pigozzi, L. (2004). Modificazioni dell'immaginario del corpo femminile [Changes in women' body imagination]. In D. Luisiardi (Ed.), *Le donne e il cancro al seno: L'esperienza del corpo, l'immaginario, la terapia*. [Women and breast cancer: Body experience, imaginary, therapy]. Milan, Italy: Metis.
- Przezdziecki, A., Sherman, K. A., Baillie, A., Taylor, A., Foley, E., & Stalgis-Bilinski, K. (2013). My changed body: Breast cancer, body image, distress and self-compassion. *Psycho-Oncology*, *22*(8), 1872-1879.
- Quintard, B., & Lakdja, F. (2008). Assessing the effect of beauty treatments on psychological distress, body image and coping: A longitudinal study of patients undergoing surgical procedures for breast cancer. *Psycho-oncology*, *17*(10), 1032-1038.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rosenberg, S. M., Tamimi, R. M., Gelber, S., Ruddy, K. J., Kereakoglow, S., Borges, V. F., Come, S. E., Schapira, L., Winer, E. P., & Partridge, A. H. (2013). Body image in recently diagnosed young women with early breast cancer. *Psycho-Oncology*, *22*(8), 1849-1855.
- Rosenfeld, B., Roth, A. J., Gandhi, S., & Penson, D. (2004). Differences in health-related quality of life of prostate cancer patients based on stage of cancer. *Psycho-Oncology*, *13*(11), 800-807.
- Spielberger, C. D., Gorsuch, R. C., & Lushene, R. E. (1970). *Manual for the state-trait anxiety inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Stanton, A. L., & Snider, P. R. (1993). Coping with a breast cancer diagnosis: A prospective study. *Health Psychology*, *12*(1), 16-23.
- Stewart, A. L., & Ware, J. E. (1992). *Measuring functioning and wellbeing*. Durham, UK: Duke University Press.
- Taggard, L. & Ozolins, L. (2009). Look good feel better workshops: A "big lift" for women with cancer. *Journal of Cancer Education*, *24*(2), 94-99.
- Varni, J. W., Katz, E. R., Colegrove, R. Jr., & Dolgin, M. (1995). Perceived physical appearance and adjustment of children with newly diagnosed cancer: A path analytic model. *Journal of Behavioral Medicine*, *18*(3), 261-278.
- World Health Organization. (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

Yalom, I. D., & Leszcz, M. (1997). *Theory and Practice of Group Psychotherapy*. New York, NY: Basic books.

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## Chapter 9

# SOMATIC MARKERS IN CLINICAL PRACTICE

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### ABSTRACT

The body provides immediate and accurate information regarding the inner world, perceptions of the outer world, and the emotional state (de Becker, 2013). Through the five senses, the body takes in far more information than the conscious mind can perceive (Wilson, 2002; Norretranders, 1998). Some of this unconscious information registers as observable responses in the body, called somatic markers (Damasio, 1994). When the psychotherapist becomes more mindful of her own bodily responses, she gains access more quickly to this deep information regarding the therapeutic process. When she is aware of somatic markers, she has a reliable reference point during treatment to identify counter-transference, emotional triggers, and recognize somatic shifts in patients. This chapter discusses how to explore and deepen somatic awareness and apply this awareness in clinical practice. It examines the crucial relationship between somatic markers and emotional triggers. It also discusses the art of embodied self-awareness in the subjective emotional present (Fogel, 2009), and explores the role of body signals, or somatic markers, in witnessing and working with patients with a range of disorders.

*Keywords:* somatic, embodied self-awareness, somatic psychotherapy, clinical practice, emotional triggers, mindfulness.

### 1. INTRODUCTION

Emotions are increasingly recognized as embodied, accompanied by physiological changes (Mauss, Wilhelm, & Gross, 2004; Damasio, 2010; Kövecses, 2000). The lexicon for sensate indicators in various approaches to somatic psychotherapy, similar to challenges resulting from the many terms used for emotion-related processes, can be bewildering (Gross, 2014; Röhrich, 2009). Gut level feelings, body signals, embodied self-awareness (Fogel, 2013), the wisdom of the body (Rosen, 2011), the “embodied being” of mindfulness (Kabat-Zinn, 2010) and other references to informative, emotional, physical sensations are sometimes used interchangeably. When neuroscientist Antonio Damasio named and identified these informative sensations as “somatic markers”, he provided a language, a body of research and a scientific hypothesis for a fundamental human experience central to many somatic psychotherapy approaches including Somatic Experiencing (Levine, 2010), Rosen Method (Rosen, 2011), Huma Somatic Psychotherapy (Barrie, 2002), Hakomi (Fisher, 2011), numerous mindfulness-based psychotherapies (Dunn, Callahan, & Swift, 2013; Jazaieri et al., 2014; Goldin, Ramel, & Gross, 2009) and Dialectical Behavior Therapy (Linehan, 1993). Each of these addresses emotional responses that involve changes in experiential, behavioural, and neurobiological response systems (Gross, 2014).

Damasio describes spontaneous, unconscious physical sensations or changes that occur in response to the environment, as somatic markers. They arise as visceral sensations, increased heart rate, sweaty palms, tensed muscles, flushing, temperature changes, gut level feelings and others (Damasio, 1994, 1999, 2010). The term “somatic marker” describes an observable response in the body that is a uniquely useful tool to a clinical practice, and is directly tied to somatic awareness (Röhrich, 2009). This chapter is not based on Damasio’s ideas, but on direct clinical experience integrating emotionally-based bodywork and psychodynamic counseling. However, the language of somatic marker hypothesis aptly describes the felt, experiential, somatic awareness that is the focus of this chapter.

Somatic awareness aids the therapist in reading unconsciously generated somatic signals in both the patient’s body and the therapist’s body. A therapist who has developed her

somatic awareness has tools to teach patients to learn to recognize their own somatic markers as a means of better meeting their needs, to have more and better choices regarding habitual behaviours, to regulate their emotions (Ratener, 2014; Dunn et al., 2013), and to intentionally affect their emotional state by changing their posture (Carney, Cuddy, & Yap, 2010).

## **2. WHAT IS SOMATIC AWARENESS?**

Somatic awareness is proprioceptive and refers to the felt experience of the body. For this chapter, it is specifically related to muscle tension and relaxation, body posture, and emotional feelings. Each of these addresses responses that involve changes in experiential, behavioural, and neurobiological response systems (Gross, 2014). Heightened somatic awareness provides a vehicle for understanding what is being felt. A simple process that entails noticing the sensation of muscle tension, allowing the tension to be as it is, rather than resisting it, and maintaining awareness of the tension, can facilitate the muscle to relax, opening the “gateway to the emotions” (Mayland, 1985/2005), where our mental processes are clearly embodied (Mauss et al., 2004).

## **3. SOMATIC AWARENESS AND THE UNCONSCIOUS**

A human being unconsciously perceives 11 million bits of information every second and at most 40 of those bits can be perceived and made use of consciously (Norretranders, 1998). Clearly it is inefficient to pay attention to millions of little details that are a part of our everyday environment, and some of this information is filtered out through selective attention (Wilson, 2002). As Damasio wrote, the somatic marker “allows you *to choose from among fewer alternatives*” (Damasio, 1994). However, it does not account for the vast discrepancy between the 11 million bits perceived unconsciously and the paltry 40 bits perceived by the conscious mind. Deep, emotional, intuitive feelings register in the body as gut-level feelings. These feelings are cognitive processes that operate faster than we realize and are very different from the step-by-step thinking upon which we rely (de Becker, 1997). Fairly recently, the biochemicals of emotion have been isolated and the locations of their receptors have been mapped by biochemists including Candace Pert, Michael Ruff and Ed Blalock (Gerhardt, 2004). Their research has confirmed that “feelings come first”, and that reason and rational thought are initiated by emotion and, in fact, depend on it (Gerhardt, 2004). Understanding that reason *follows* emotion, and that the body responds to input with visceral, emotional signals, underscores the importance of increasing somatic awareness. Our bodies, our felt experiences, hold vital information that is not accessible to our thinking, rational minds. Once the information is accessed, it can be understood rationally, but rational thought alone will not take you there. The information is stored unconsciously in the body.

## **4. HOW IS SOMATIC AWARENESS RELEVANT TO CLINICAL PRACTICE?**

Somatic markers serve to bring unconscious processes to consciousness, providing the possibility of successfully navigating current conflicts and also of addressing early unresolved conflicts. They provide guideposts for the core features of emotion regulation (Ratener, 2014). Awareness of somatic markers enables the therapist to gain insight into herself as well as the patient. For example, the therapist may recognize physical signals in her body as early indicators of emotional triggers and counter-transference. A tangible early indicator provides the therapist with an opportunity to notice sooner what initiated the counter-transference. This can facilitate the therapy and help the therapist manage counter-transference more quickly. Conversely, it is maladaptive for the therapist to deny that she is experiencing emotion and suppress it. When she distances herself from awareness of her own emotions she becomes less able to recognize and respond to her counter-transference and emotional triggers. Physiological arousal associated with suppression and cognitive disengagement can lead to misdirection and burnout (Maroney & Gross 2014).

Therapists who learn this technique can then guide their patients in understanding signals in their own bodies. For example, a patient with borderline tendencies may learn to identify physical sensations that occur just before flying into a rage, and over time may learn to recognize the somatic marker that precedes the rage in time to remember that he has choices, and always feels worse after raging. The patient can learn to distinguish between the dual-processing modes of automatic or unconscious processing, and controlled or conscious processing to self-regulate his emotions (Barrett, Ochsner, & Gross, 2007). Further, the therapist can help the patient to work with posture to intentionally affect his emotional state (Carney et al., 2010).

More intimate than body language, the somatic marker makes apparent deeper, less conscious shifts as they occur in the patient through observable changes in his body. Tears are a familiar observable response to a somatic marker that informs the therapist the client may be experiencing distress. A softening of the breath may indicate a sense of understanding in the patient. A movement of retreat in the chest may indicate a feeling of resignation. Somatic markers call attention to a negative outcome, or become a beacon of incentive if the somatic marker is positive (Damasio, 1994). The therapist can't know for certain what a particular somatic marker means for a patient, but can learn to recognize the difference between responses to negative markers and positive ones. The somatic marker provides an index of change and is a starting point to explore the patient's awareness.

## 5. CLINICAL APPLICATIONS

Before working with somatic markers in a patient, a therapist must develop a kinesthetic or "felt" awareness of her own body, which requires practice and commitment and presents the greatest challenge to incorporating somatic awareness in clinical practice. Only then can the physical signals evident in the patient, such as muscle tension or relaxation, a quick intake of breath, or a change in his posture, have meaning for her. She understands that physical signals observed in the patient are the patient's responses to somatic markers. Signals such as these provide the therapist with valuable information that the patient may be entirely unaware of. A therapist familiar with her own somatic markers may notice the patient slightly lift his shoulders, and consider what this tension could mean. Perhaps she knows her shoulders raise a little when she feels dismissed, and can consider this while observing the patient. This is merely a starting point to explore what the patient could be experiencing. The tension involved in elevating the shoulders, for example, often is related to a feeling of vulnerability, a need for self-protection. In an emotionally tense situation, muscles correspondingly tighten. A person with a well-developed somatic sense will notice the muscle tension, pay close attention to what it might mean and make greater use of the information in the body's response. This is illustrated in the following two stories:

- A counselor greeted a new client at the door, expecting to escort the client directly up the stairs to her home office. When the client boldly walked past the counselor into the main part of the home, picked up items in the counselor's living room, commented on them and asked where they came from, the counselor froze. Later she reported that her chest and throat had tightened and she remembered feeling critical of herself for her response. Her self-talk included internal statements such as, "What is wrong with me that I am feeling this way? There is nothing wrong with what he's doing. I hope he can't tell that I don't know how to handle this!" The counselor desperately grasped at what she thought her reaction to this situation should have been. Later, she said, "I didn't know what to do!" If this counselor had taken a moment to notice the tension in her throat and chest, instead of judging it as the wrong response, she could have trusted the response and wondered what it was telling her. This would have helped her to consider, "My throat and chest just tightened up. Something is going on with me. I wonder what it is?". She might then have been able to recognize that she felt intruded upon. This could have made it possible for the counselor to say, "My office is upstairs. Let's go".

- During a therapy session a patient made a statement clearly seeking the therapist's approval. The therapist remained silent and noticed the patient's torso slightly collapse. She asked the patient what he felt in his body at that moment and he said that he felt awful, and spread his fingers across his breastbone. "Right here", he said. Under the therapist's guidance, and staying with the feeling in his body, he realized that every time he sought approval, he felt this same sensation. Eventually he was able to identify it as betrayal – his betrayal of himself, as he looked to others for his sense of adequacy.

The patient later noticed another somatic marker that he described as an "edge", that occurred immediately prior to saying something with the hope of gaining approval. He recognized it as an early warning that he was about to betray himself. The "edge" served as a guide for him to make a better choice, and perhaps withhold the approval-seeking statement.

A somatic marker can serve as a catalyst during therapy for the emergence of something held deep within the psyche. It can indicate the underlayment of certain behaviours, fears and insecurities (Fogel, 2009). During treatment, when a patient is guided to "allow" rather than to "resist" a detectable somatic marker, and to stay attentive to it, a number of things can happen. The patient might feel the emotion behind the tension. An image may appear in the patient's mind or he may have a memory. The patient may describe the physical sensation of the somatic marker as having form, texture, or substance. The key is for the patient to stay present, notice the sensation, and stay with it without an agenda. Then, the meaning behind the tension is sometimes revealed. As with other aspects of deep work, this process can be dream-like for the patient and the awareness he gains may not be linear or make apparent sense. Often, afterwards, the pieces fit together and the new awareness can be understood rationally. Although the end result makes sense logically, in many instances the information gleaned from this process could not be uncovered by thinking it through. Some examples of this process:

- A patient checked in with her body and identified a sensation in her abdomen. As she stayed with the sensation, she reported having an image of a drill. She stayed with the sensation awhile, and said, "It's like something is drilling to get out". Momentarily she realized that her own words, which she had always judged and curtailed, were "drilling" to get out of her; she wanted to speak and express herself and hadn't allowed it.
- A patient noticed a sensation that spread across his ribcage. "It feels like a wall", he reported. Upon staying with it, he told me, "It's protective. It's like a blanket and it feels safe". As the process unfolded he pointed out, "The wall feels comforting but at the same time, there's some fear in there". A few moments later his face crumpled and he started to cry. "I'm so afraid", he said, "that by protecting myself I've made a real mess of my life".
- One patient while staying present with a somatic sensation mentioned an image of a window. The therapist asked whether there was a person in the image, and the patient identified that there was someone sweeping. She then noticed a glittering archway going up and out of the window. Suddenly she realized how much it seemed to her as a child that what was important to her was swept out the window as though it had no value at all.

In each of these instances the patient experienced deeper understanding of a lifelong struggle and a subsequent opening to new possibilities. For example, for the man who described the "wall" sensation across his ribcage, awareness of his simultaneous feelings of safety and fear in the "wall" pieced together for him his struggle between understanding his need to wall himself off in response to sadistic parents and feeling self-hatred because he continued to wall off from others and himself. The sensation provided awareness of this struggle and made it possible for him to begin considering objectively whether to wall himself off in certain situations.

The somatic therapist can distinguish performance from authenticity by paying close attention to visible shifts in the patient's body that reveal whether he speaks from conceptual self-awareness or embodied self-awareness (Fogel, 2009). When the patient expresses himself from the sensory-motor aliveness of the True Self (Winnicott, 1960), his body responds with

unconscious but observable tension or ease. When he speaks from the False Self of conceptual self-awareness (Winnicott, 1960; Fogel 2009), the patient's body does not respond. The response in his body as he speaks reveals the emergence of something hidden, something tied to his unconscious. Lack of somatic response indicates inability or unwillingness in the moment to delve more deeply.

Questions that can be useful in introducing somatic awareness to therapy (for both patient and therapist) include:

- What does your body feel like to you at this moment?
- Can you tell you have a body? How can you tell?
- What do you notice? What stands out?
- Can you feel the weight of your body?
- What surfaces can you feel your body contacting?
- What is it like for you to pay attention to your body in this way?
- Can you feel your breath? What are the qualities of your breath – is it constrained? Shallow? Free and easy? Expansive? Something else?
- Does it seem that your body is telling you something?
- Find a place of tension in your body and stay with the feeling of it. Don't try to relax the tension or to amplify it – allow it to be as it is. Then, see if there is something associated with it such as an emotion or an image or a memory.
- Can you find a feeling of emotion in your body? What does it feel like? Can you tell what emotion it is? Does it have a shape or size, or an association?

## 6. ADDICTION AND DISSOCIATION

The following discussion on how to integrate somatic awareness in a clinical practice to facilitate treatment of two specific personality disorders, addiction and dissociation, introduces methods that can be modified and applied to treatment of numerous other disorders as well as to less severe social and emotional dysfunctional states.

### 6.1. Addiction

Somatic markers play a role in recovery from drug addiction and alcoholism by guiding the addict toward making a choice he knows he will feel good about later, and away from a choice that he knows he will regret (Damasio, 1994). Craving and compulsion are specific somatic markers that drive the practicing addict and alcoholic towards destructive behaviour, with the promise of a positive payoff, such as euphoria, or diminished pain or anxiety. Disruption of certain links in the brain can generate unrestrained cravings in an addict (Fogel, 2009). There is a tendency in an addict to “forget” about the negative consequences of substance abuse, such as physical pain of a hangover or withdrawal symptoms, for example, and emotional pain of shame or regret and possibly the horror of being responsible for an accident, causing injury or death (Bechara, Damasio, & Damasio, 2000; Fogel, 2009). Increased attention to somatic markers and embodied self-awareness can help remind the addict of the unpleasant results of drug and alcohol abuse (Damasio, 1999; Fogel, 2009). Including somatic self-awareness in addiction recovery treatment has been proven to be therapeutically beneficial (Fogel, 2009).

A recovering addict can learn to recognize the physical signal of compulsion as a red flag that indicates danger ahead, and can regulate his choices based on this. This is accomplished during treatment by discussing the patient's experience of the physical compulsion to use the drug. Possible questions to begin this discussion include, “What did you feel in your body when you felt compelled to take a drink?” or, “Do you remember what happened in your body just before you took the drug?” or, “What happened in your body just before the part of you that was saying, ‘Don't do it’, disappeared?” The associated physical feelings are unique to the patient and can range from numbing out to excitement, dread or betrayal, a moment of physical clenching, and others. He may experience excitement or anticipation, but these are likely to be accompanied by a background feeling (Damasio, 1994,

1999) such as disappointment. It can also be useful to discuss the somatic experience that occurs every time the addict chooses to *not* use. He may report relief, elation, a feeling of solidity or self-reliance. Noticing and comparing various possible outcomes and accompanying physical sensations provide a tangible reference point for making choices regarding his addiction. Recognizing this signal early on can help the patient to make the choice he knows will serve him best in the long run, that is, the choice that will ultimately, physically, feel the best. When the addict successfully avoids the compulsion to indulge his addiction, the physical sensation of his feeling of accomplishment and success can become an incentive for him to behave similarly (Damasio, 1994), when his compulsion to use reoccurs.

## 6.2. Dissociation

Somatic work is proven to facilitate therapy with dissociative patients (Fogel, 2009). In more extreme cases such as dissociative identity disorder, somatic elements in treatment support eventual integration. Embodied self-awareness promotes the ability to function in the subjective emotional present (Winnicott, 1960; Fogel, 2009). It can help the patient to feel somatic markers of safety, to directly experience that he can feel his body without precipitating danger, and that traumatic events of the past are no longer happening. The ability to bear feeling present in his body is healing for a dissociative patient. Because early childhood sexual abuse is the quintessence of DID and to some extent other dissociative disorders, somatic treatment can be extremely helpful. It can accelerate the therapy, but accelerating the patient's emotional experience can also re-traumatize the patient. For this reason, somatic work with dissociative patients must be undertaken with great care.

In my workshops, I often start a basic body awareness exercise with the question, "Can you tell, without looking, that you have a body?" During a program for early childhood educators, one young teacher raised her hand and said, "I couldn't tell I have a body! Does that mean something is wrong with me?" I suggested we speak after the workshop, and when she approached me, she explained, "My parents were very strict. In my family, what I felt didn't matter. I simply had to do what I was told." My impression of her was not that she had a serious dissociative disorder, but the way I addressed her body awareness may provide some ideas for how to bring this to a clinical practice with dissociative patients. First I asked her, "Can you tell me if you are sitting or standing?" "I know I am sitting", she said. "I know that I came over and sat down next to you". Note that she didn't tell me she could feel her body sitting in the chair, but rather what she knew rationally. Next, I asked her, "Can you tell whether there are shoes on your feet?" "I know I am wearing shoes", she told me. "I know that I got up this morning and put my shoes on". I observed her body for a few moments and then asked, "Can you tell me whether your feet are touching or apart?" She sat for a moment, and then her face lit up. "I can feel that my feet are touching!" she said.

If I were to continue to work with this woman in my practice, her ability to feel her feet touching would be the starting point for our work. I would build on that known awareness and explore with her whether she could feel other surfaces her body was touching – the chair she was sitting in, places where one part of her body contacted another part, such as a hand resting in her lap, the tightness or looseness of her clothing.

When asked what his body feels like to him, a person with a dissociative disorder is likely to respond similarly to the young educator mentioned earlier. He may well report that he can't feel his body. When asked about whether he can feel his hands or his feet, he is likely to say, "No." If he *can* feel his feet, he may experience them as very far away from his head or upper body.

A dissociative patient can benefit from being encouraged to feel his body, and then to dissociate to the point of not feeling it, and then to feel it again. Learning that he can direct whether he stays present in his body or dissociates, can be empowering and give him a sense of agency over his experience of his body. Ultimately, with a dissociative patient, the healing is in the experience of his body as his ally.

## 7. CONCLUSION

The drive to feel good about ourselves and our choices is hardwired into our central nervous systems (Keltner, 2009). Paying attention to somatic markers in clinical practice is an effective way for the therapist to gain self-awareness, particularly in identifying counter-transference, and for gaining insight into the patient's unconscious signals. Somatic markers serve as doorways to the unconscious and as accessible signals that provide practical guidance. They offer the therapist and patient tangible guidance that helps them relate to themselves and others with greater ease. Somatic awareness helps the patient to live his treatment.

## REFERENCES

- Barrie, L. (2002). About Huma transpersonal bodywork. In S. Munnis (Ed.), *Kali guide: A directory of resources for women* (pp. 45-47). Palo Alto, CA: Zenprint, Inc.
- Barrett, L. F., Ochsner, K. N., & Gross, J. J. (2007). On the automaticity of emotion. In J. Bargh (Ed.), *Social psychology and the unconscious: The automaticity of higher mental processes* (pp. 173-217). New York, NY: Psychology Press.
- Bechara, A., Damasio, H., & Damasio, A. R. (2000). Emotion, decision making and the orbitofrontal cortex. *Cerebral Cortex*, *10*(3), 295-307.
- Carney, D., Cuddy, A., & Yap, A. (2010). Power posing: Brief nonverbal displays affect neuroendocrine levels and risk tolerance. *Psychological Science*, *21*(10), 1363-1368.
- Damasio, A. R. (1994). *Descartes' error: Emotion, Reason, and the Human Brain*. New York, NY: G. P. Putnam's Sons.
- Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York, NY: Harcourt Brace.
- Damasio, A. R. (2010). *Self comes to mind: Constructing the conscious brain*. New York, NY: Pantheon Books.
- de Becker, G. (1997). *The gift of fear and other survival signals that protect us from violence*. New York, NY: Bantam Doubleday Dell.
- de Becker, G. (2013). *Protecting the gift: Keeping children and teenagers safe (and parents sane)*. New York, NY: Random House Publishing Group.
- Dunn, R., Callahan, J., & Swift, J. (2013). Mindfulness as a transtheoretical clinical process. *Psychotherapy*, *50*(3), 312-315.
- Fisher, R. (2011). Mindfulness in psychodynamic psychotherapy. *The Therapist CAMFT Journal*, *23*(5), 60-61.
- Fogel, A. (2009). *The psychophysiology of self-awareness: Rediscovering the lost art of body sense*. New York, NY: W. W. Norton & Company.
- Fogel, A. (2013). *Body sense: The science and practice of embodied self-awareness*. Norton Series on Interpersonal Neurobiology. New York, NY: W. W. Norton & Company.
- Gerhardt, S. (2004). *Why love matters: How affection shapes a baby's brain*. New York, NY: Taylor & Francis.
- Goldin, P., Ramel, W., & Gross, J. J. (2009). Mindfulness meditation training and self-referential processing in social anxiety disorder: Behavioral and neural effects. *Journal of Cognitive Psychotherapy: An International Quarterly*, *23*(3), 242-257.
- Gross, J. J. (2014). Emotion regulation: Conceptual and empirical foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (2nd ed., pp. 3-20). New York, NY: Guilford Press.
- Jazaieri, H., McGonigal, K. M., Jinpa, T. G., Doty, J. R., Gross, J. J., & Goldin, P. R. (2014). A randomized controlled trial of compassion cultivation training: Effects on mindfulness, affect, and emotion regulation. *Motivation and Emotion*, *38*(1), 23-35.
- Kabat-Zinn, J. (2010). *Letting everything become your teacher: 100 lessons in mindfulness*. New York, NY: Delta Trade Paperbacks.
- Keltner, D. (2009). *Born to be good: The science of a meaningful life*. New York, NY: W. W. Norton Company.
- Kövecses, Z. (2000). *Metaphor and emotion: Language, culture, and body in human feeling*. New York, NY: Cambridge University Press.
- Linehan, M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York, NY: Guilford Press.

- Levine, P. A. (2010). *In an unspoken voice: How the body releases trauma and restores goodness*. Berkeley, CA: North Atlantic Books.
- Maroney, T. A. & Gross, J. J. (2014). The ideal of the dispassionate judge: An emotion regulation perspective. *Emotion Review*, 6(2), 142-151.
- Mauss, I. B., Wilhelm, F. H., & Gross, J. J. (2004). Is there less to social anxiety than meets the eye? Emotion experience, expression, and bodily responding. *Cognition and Emotion*, 18(5), 631-662.
- Mayland, E. (2005). *Rosen method: An approach to wholeness and well-being through the body*. Santa Cruz, CA: 52 Stone Press. (Original work published 1985)
- Norretranders, T. (1998). *The user illusion: Cutting consciousness down to size*. New York, NY: Penguin books.
- Ratener, M. (2014, May 15). *Telephone interview*.
- Röhrich, F. (2009). Body oriented psychotherapy. The state of the art in empirical research and evidence-based practice: A clinical perspective. *Body, Movement and Dance in Psychotherapy: An International Journal for Theory, Research and Practice*, 4(2), 135-156.
- Rosen, M. (2011, June 9). *Personal interview*.
- Wilson, T. D. (2002). *Strangers to ourselves: Discovering the adaptive unconscious*. Cambridge, MA: Harvard University Press.
- Winnicott, D. W. (1960). *The maturational processes and the facilitating environment*. New York, NY: International Universities Press.

## ADDITIONAL READING

- Aldao, A., Jazaieri, H., Goldin, P., & Gross, J. J. (2014). Adaptive and maladaptive emotion regulation strategies: Interactive effects during CBT for social anxiety disorder. *Journal of Anxiety Disorders*, 28(4), 382-389.
- Berg, A. L., Sandell, R., & Sandahl, C. (2009). Affect-focused body psychotherapy in patients with generalised anxiety disorder: Evaluation of an integrative method. *Journal of Psychotherapy Integration*, 19(1), 67-85.
- Bowen, B. (2009). *Somatic resourcing: Psychotherapy through the body*. Portland, OR: PPT Publications.
- Clarkin, J., Yeomans, F., & Kernberg, O. (2006). *Psychotherapy for borderline personality: Focusing on object relations*. Arlington, VA: American Psychiatric Publishing.
- Davis, D. M., & Hayes, J. A. (2011). What are the benefits of mindfulness? A practice review of psychotherapy-related research. *Psychotherapy*, 48(2), 198-208.
- De Castella, K., Goldin, P., Jazaieri, H., Ziv, M., Heimberg, R. G., & Gross, J. J. (2014). Emotion beliefs in social anxiety disorder: Associations with stress, anxiety, and well-being. *Australian Journal of Psychology*, 66(2), 139-148.
- Field, T. (2003). *Touch*. Boston, MA: Massachusetts Institute of Technology.
- Gottschalk, G., & Boekholt, C. (2004). Körpertherapeutische Arbeit mit Borderline-Patienten [Body-therapeutic work with borderline patients]. *Personallichkeitsstörungen: Theorie und Therapie*, 8(3), 154-160.
- Krygier, J. R., Heathers, J. A., Shahrestani, S., Abbott, M., Gross, J. J., & Kemp, A. H. (2013). Mindfulness meditation, well-being, and heart rate variability: A preliminary investigation into the impact of intensive Vipassana meditation. *International Journal of Psychophysiology*, 89(3), 305-313.
- Langmuir, J. I., Kirsh, S. G., & Classen, C. (2012). A pilot study of body-oriented group psychotherapy: Adapting sensorimotor psychotherapy for the group treatment of trauma. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(2), 214-220.
- Lench, H. C., Darbor, K. E., Berg, & Berg, L. A. (2013). Functional perspectives on emotion, behavior, and cognition. *Behavioral Sciences*, 3(4), 536-540.
- Lench, H. C., Flores, S. A., & Bench, S. W. (2011). Discrete emotions predict changes in cognition, judgment, experience, behavior, and physiology: A meta-analysis of experimental emotion elicitations. *Psychological Bulletin*, 137(5), 834-855.
- Lindquist, K. A., Wager, T. D., Kober, H., Bliss-Moreau, E., & Barrett, L. F. (2012). The brain basis of emotion: A meta-analytic review. *Behavioral and Brain Sciences*, 35(3), 121-143.
- Marcher, L., & Fich, S. (2010). *Body encyclopedia: A guide to the psychological functions of the muscular system*. Berkeley, CA: North Atlantic Books.
- Radandt, D. (2002). Therapist's body awareness and strength of the therapeutic alliance. *USA Body Psychotherapy Journal*, 1(2) 52-56.



- Röhrich, F., Papadopoulos, N., & Priebe, S. (2013). An exploratory randomized controlled trial of body psychotherapy for patients with chronic depression. *Journal of Affective Disorders, 151*(1), 85-91.
- Sheppes, G., & Gross, J. J. (2014). Emotion generation and emotion regulation: Moving beyond traditional dual-process accounts. In J. W. Sherman, B. Gawronski, & Y. Trope (Eds.), *Dual-process theories of the social mind* (pp. 483-493). New York, NY: Guilford Press.
- Slochower, J. A. (2013). *Holding and psychoanalysis: A relational perspective*. Relational Perspectives Book Series: Book 5 (2nd ed.). East Sussex, UK: Routledge.
- Staples, J. K., Abdel Atti, J. A., & Gordon, J. S. (2011). Mind-body skills groups for posttraumatic stress disorder and depression symptoms in Palestinian children and adolescents in Gaza. *International Journal of Stress Management, 18*(3), 246-262.

## KEY TERMS & DEFINITIONS

**Body language:** nonverbal communication, often unconscious, including body posture, gestures, facial expressions and eye movements.

**Information bit:** the basic unit of information in computing and digital communications.

**Somatic:** of the body, bodily, physical.

**Somatic awareness:** felt perception of the body including kinesthetic, sensate and proprioceptive perception.

**Proprioception:** perception governed by proprioceptors, as awareness of the position of one's body.

**Somatic marker:** spontaneous, unconsciously generated physical sensation or change that occurs in response to the environment, and directs attention on a possible outcome.

**Somatic-marker hypothesis (SMH):** a hypothesis formulated by Antonio Damasio that proposes a mechanism by which emotional processes can guide or bias decision-making and other behaviour.

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## Chapter 10

# SOCIAL COGNITION IN SCHIZOPHRENIA CHRONIC OUTPATIENTS

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### ABSTRACT

Social cognition is one of the core impaired cognitive domains that characterize schizophrenia. At the same time it is one of the most relevant factors in the prediction of social functioning. However, although social cognition deficits are well established in the literature, most of the studies have focused on inpatients and less attention has been devoted to stable outpatients with many years since the illness onset. Social cognition includes four domains: emotion processing, Theory of Mind (ToM), social perception and social knowledge, and attributional bias (Green et al., 2008). Our goal was to compare a group of schizophrenic stable outpatients with a healthy control group in ToM, social knowledge and emotion processing (identification and discrimination of emotions). Fifteen outpatients and 15 healthy controls matched in age and education level were given the “Hinting task” to measure ToM, the “Schema component sequencing task-revised” to assess social knowledge, the “Face emotion identification” and “Face emotion discrimination” tests to assess emotion processing. Moreover both groups were compared in social functioning using the “Social Functioning Scale”. Results showed differences between the two groups in social knowledge and ToM but not in emotion identification and emotion discrimination.

*Keywords:* schizophrenia, social cognition, emotional processing, social perception, Theory of Mind.

## 1. INTRODUCTION

Schizophrenia is a severe mental disorder characterized, among other things, by the presence of a series of cognitive deficits that have received great attention in recent decades. Most studies have focused on nonsocial cognitive processes such as attention, memory and executive functioning. However, since the mid of the 90 decade research has largely shifted its focus towards the so called social cognition (Brüne, 2005).

Currently it is considered that social cognition is one of the core impaired cognitive domains that characterize schizophrenia (Savla, Vella, Armstrong, Penn, & Twamley, 2013). Social cognition has been defined as the sum of the cognitive processes required for social perception and social interaction (Brown, Tas, & Brüne, 2012). According to Striano and Reid (2009) and Green et al. (2008), social cognition involves our ability to predict, monitor, and interpret the behaviors and mental states of other people. Some of the most complete and most often used definitions of social cognition have been given by Ostrom (1984) and Brothers (1990). They define it as the mental operations needed in social interactions, which include processes involved in perceiving, interpreting and generating responses to the intentions, dispositions, and behaviors of others.

The Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS) project has focused on understanding the nature and extent of cognitive deficits in schizophrenia in order to promote the development of treatments that will hopefully improve this debilitating aspect of schizophrenia (Barch, 2005). MATRICS established seven cognitive domains where schizophrenic patients have deficits. These cognitive domains are: Speed of processing, working memory, attention/vigilance, verbal learning and memory, visual learning and memory, reasoning and problem solving, and social cognition (Green & Nuechterlein, 2004). The inclusion of social cognition between this set of domains involved the explicit recognition of the importance of social cognition as a specific area in which patients with schizophrenia have problems.

In summary the increasing attention devoted to social cognition in the last years can be explained by: The empirical evidence linking social cognition to social functioning (Brüne, 2005; Green & Nuechterlein, 1999; Green, Kern, Braff, & Mintz, 2000; Horan, Lee, & Green, 2013), its role as mediator between basic neurocognition and social cognition or social functioning (Brekke, Kay, Lee, & Green, 2005; Vauth, Rüsche, Wirtz, & Corrigan, 2004; Horan et al., 2013), the emergence of studies showing a neural substrate of social cognition (Adolphs, 2001; Insel & Fernald, 2004; Pinkham, Penn, Perkins, & Lieberman, 2003; Pinkham, 2013), and attention that is being given to the development of intervention programs for schizophrenic patients focused on social cognition (Andres, Brenner, Pfammatter, & Roder, 2001; Penn, Jones, & Munt, 2005; Fiszdon, 2013).

## 2. BACKGROUND

In the last 10 years social cognition has become a high-priority research topic because evidence has revealed that social cognition explains functioning and that deficits in social cognition have a direct impact on relapse rates (Brekke et al., 2005; Fett et al., 2011). Social cognition is a multicomponent concept including four key different domains: emotion processing, theory of mind, social perception and social knowledge, and attributional bias.

Emotional processing refers broadly to aspects of perceiving and using emotion. Emotion perception has been the most extensively studied social cognitive process and refers to the ability to infer emotional information from facial expressions, vocal inflections, or combination of both (Horan, Kern, Green, & Penn, 2008). Tasks to assess emotional processing include the recognition of both basic and complex emotions. Among the tasks to measure basic emotions is the classic Pictures of Facial Affect (Ekman & Friesen, 1976), consisting of 110 photographs of faces expressing different emotions. The goal of the task is to identify which is the emotion of the face in the picture: happy, sad, angry, afraid, surprised, disgusted, or neutral. Two tests developed from the work of Ekman and Friesen (1976) are the Face Emotion Identification Test (FEIT) (Kerr & Neale, 1993) and Face Emotion Discrimination Test (Kerr & Neale, 1993). The Cambridge Mindreading Face-Voice Battery-Adult version (CAM) (Golan, Baron-Cohen, & Hill, 2006) and the Reading the Mind in the Eyes Test (Baron-Cohen, Wheelwright, Spong, Scachill, & Lawson, 2001) can be used to evaluate complex emotions.

The findings in the area of emotional processing indicate that schizophrenics have a marked deficit in facial and vocal affect recognition (Baudouin, Martin, Tiberghien, Verlut, & Frank, 2002; Penn et al., 2000). These deficits are not related to age, gender, level of medication, or dosage of neuroleptics (Jaramillo, Fuentes, & Ruiz, 2009). In general, these deficits in facial affect recognition occur in both recognition and discrimination task (Penn, Combs, & Mohamed, 2001; Schneider, et al., 2006).

Theory of mind (ToM) is a name proposed by Premack and Woodruff (1978) for the component of social cognition that refers to the ability to understand that others have mental states that differ from one's own and the capacity to make correct inferences about the content of those mental states. Processes typically associated with ToM involve the ability to understand false beliefs, hints, intentions, humor deceptions, metaphor, and irony (Horan et al., 2008). The tests used in the study and measurement of ToM are usually cartoons that are read to each participant individually. Two of the instruments used in studies with patients with schizophrenia are the Faux Pas (Baron-Cohen, O'Riordan, Stone, Jones, & Plaisted, 1999) and the Hinting Task (Corcoran, Mercer, & Frith, 1995; Gil, Fernández-Modamio, & Arrieta, 2012).

The Hinting Task assesses the ability to infer the intentions behind speech. The test comprises 10 short stories that reflect the interaction between two characters. Each story ends with one of the characters "dropping a hint" and the participant has to explain what the character is trying to communicate. Several studies have shown that patients with schizophrenia present a diminution of their ability to infer the mental states of others and themselves (Brüne, 2003, 2005). Other authors suggest that it is necessary to have a non-impaired ToM to develop persecutory delusions (Bentall & Udachina, 2013; Drury, Robinson, & Birchwood, 1998; Watson, Blennerhassett, & Charlton, 2000).

Social perception refers to a person's ability to judge social cues from contextual information and communicative gestures that typically characterize social situations and guide social interactions. Social perception can also refer to one's perception of relationships between people, in addition to perception of cues that are generated by a single person. Social knowledge or Social schema is linked to social perception and refers to the ability to identify the components that characterize a social situation. The identification of the social signs requires the knowledge of what is typical in a social situation. It is the social schema that indicates the appropriate course of action, what is our role and the role of others in a social situation, and what rules to follow and the goal of that situation (Green & Horan, 2010; Ruiz-Ruiz, García-Ferrer, & Fuentes-Durá, 2006). Two tests can be used in the evaluation of social perception and social knowledge, the Schema Component Sequencing Task (SCRT) (Corrigan & Addis, 1995), or the Situational Feature Recognition Test (SFRT) (Corrigan, Buican, & Toomey, 1996).

Penn, Ritchie, Francis, Combs, and Martin (2002) state that people with schizophrenia do not use the context when processing social stimuli. They also spend more time in the less relevant features (Phillips & David, 1998), they have difficulty in grasping abstract type information (Nuechterlein & Dawson, 1984), and information that is not familiar to them (Ruiz-Ruiz et al., 2006). All this contributes to a poor perception of socially relevant stimuli and therefore of social knowledge.

Finally, attributional bias refers to how individuals characteristically explain the causes for positive and negative events in their lives (Horan et al., 2008). It has been observed that patients evaluate others more negatively and believe that others make negative assessments about them (Chadwick & Trover, 1997). In general, they tend to focus on a biased selection of the hostile or threatening aspects of others (Fenigstein, 1997). Attributional style is peculiar in paranoid symptomatology. People with delusions of persecution often show a tendency to attribute their poor performance to other (external personal attributions) rather than to the situation (situational external attributions). It is called "self-serving bias" when the person takes credit for positive outcomes and deny responsibility for negative (Kaney & Bentall, 1989) and "personalization bias" when the person attribute to others the negative outcomes rather than to the situation (Bentall, Corcoran, Howard, Blackwood, & Kinderman, 2001; Penn, Sanna, & Roberts, 2008). An instrument developed to study the attributional style in patients with schizophrenia is "The Ambiguous Intentions Hostility Questionnaire (AIHQ)" (Combs, Penn, Wicher, & Waldheter, 2007).

Social functioning impairment is also a hallmark characteristic of schizophrenia that has important implications for the development, course and outcome of this illness (Couture, Penn, & Roberts, 2006). Problems in social functioning represent a domain different from negative and positive symptoms (Lenzenweger & Dworkin, 1996). These social deficits, although present in other clinical groups (e.g. bipolar disorder), are more pronounced in patients with schizophrenia (Bellack, Morrison, Wixted, & Mueser, 1990) and are evident in children and adolescents who develop the disease later (Hans, Marcus, Henson, & Auerbach, 1992). Antipsychotic drugs are more effective against the positive symptoms than against social impairment. Moreover, social deficits frequently worsen during the course of the disease and likely contribute to relapse (Pinkham et al., 2003), and they are probably the most powerful predictors of prognosis in patients (Mueser, Bellack, Morrison, & Wixted, 1990; Tien & Eaton, 1992). A frequently used instrument to assess social functioning is the Social Functioning Scale (SFS) (Birchwood, Smith, Cochrane, Wetton, & Copetake, 1990). This scale consists of 79 items divided into 7 subscales: social engagement/withdrawal, interpersonal behavior, independence-competence, independence-performance, recreation, prosocial activities, and employment.

Several studies and meta-analyses have shown deficits in the different domains of social cognition across the different phases of the illness (Hedge's *g* effect sizes range from .50 to 1.00) (Green et al., 2012; Savla et al., 2013). However the profile of social cognition deficits in chronically stable outpatients still remains incomplete. Recent review studies focused in social cognition show that illness mean duration in the schizophrenic samples is twelve or fewer years.

The aim of this study is to compare a chronically stable outpatient sample of schizophrenic patients with a healthy control group in the social cognition domains of emotion processing, ToM and social knowledge. Additionally, scores in these domains were related with social functioning.

### 3. METHOD

#### 3.1. Participants

The study included 15 outpatients with the diagnosis of schizophrenia and 15 healthy controls. All patients were attending a Center for Rehabilitation and Social Integration in Castellón (Spain), and met the DSM-IV-TR criteria for schizophrenia according to the Structured Clinical Interview for DSM-IV Axis I Disorder (SCID-1). They were clinically stable, with an IQ above 85, no organic cerebral disease and no substance abuse or dependence. Antipsychotic medication type and dose was stable in the previous three months for all outpatients. They were evaluated in three areas: symptomatology, intellectual functioning, and social functioning, using the Brief Psychiatric Rating Scale (BPRS), the reduced version of the WAIS-III (Fuentes-Durá, Romero-Peris, Dasí-Vivó, & Ruiz-Ruiz, 2010), and the Social Functioning Scale.

Healthy control participants were recruited via advertisements in the community and were screened for exclusion criteria: history of psychotic or affective disorder, IQ below 85, substance abuse or dependence, and organic cerebral disease. Control participants were matched with regard to age, gender, and education to patient participants. Demographic and clinical characteristics of all participants are summarized in Table 1. Procedures were explained to all participants and gave written informed consent prior to participation.

*Table 1. Demographic and clinical characteristics of outpatient and healthy controls.*

	<b>Patients (n=15)</b>	<b>Controls (n=15)</b>	<b>t / <math>\chi^2</math></b>	<b>P</b>
	<b>Mean (SD)</b>	<b>Mean (SD)</b>		
<b>Age (years)</b>	38.07 (7.54)	38.60 (8.75)	0.18	0.859
<b>Years of Education</b>	10.67 (2.23)	9.67 (2.53)	-1.15	0.260
<b>IQ</b>	87.53 (11.17)	100.67 (11.26)	3.21	0.003
<b>Female/Male ratio</b>	3/12	5/10	0.68	0.409
<b>Illness onset (years)</b>	16.13 (8.76)			
<b>BPRS</b>	39.67 (10.14)			

#### 3.2. Social cognition and social functioning measures

Emotional processing was assessed with two tests: (1) The Face Emotion Identification Test (FEIT) (Kerr & Neale, 1993), in which subjects view 19 digital pictures of faces and select which emotion is expressed (happy, sad, angry, afraid, surprised, disgusted or neutral); and (2) The Face Emotion Discrimination test (FEDT) (Kerr & Neale, 1993) that comprises 30 pairs of digital pictures of faces, and the subject has to decide if the two faces express the same or a different emotion. In the two tests, items are presented using a computer for 15 seconds. ToM was assessed with the Hinting Task. This test contains ten short stories about a social interaction between two characters that are read aloud to subjects. Participants are required to make inferences about the intent behind a hint dropped by one of the characters.

Social knowledge was assessed with the Schema Component Sequencing Task-Revised (SCST-R). In this task participants have to arrange sequences of component actions corresponding to specific social situations. Functional outcome was assessed using the Spanish version of the Social Functioning Scale (SFS) (Vázquez & Jiménez, 2000). This measure covers 7 domains of psychosocial functioning and community adjustment: Social Withdrawal, Social Activities, Relationships, Independence (Competence), Recreational Activities, Employment, and Independence (Performance)

### 3.3. Results

Table 2 displays descriptive statistics. To determine if there were significant differences between patients, controls t-tests were performed. Results show that patients scored lower than healthy controls in ToM and social functioning, meanwhile the difference in social schema approached significance. No significant differences between the two groups were found in emotion identification and emotion discrimination tasks. Correlations between the four social cognition measures and social functioning in the patients group are shown in Table 3.

Table 2. Sample scores (mean and standard deviation) and group differences on social cognition tests.

	<b>Patients (n=15)</b>	<b>Controls (n=15)</b>	<i>t</i>	<i>P</i>
	<b>Mean (SD)</b>	<b>Mean (SD)</b>		
<b>Emotion identification</b>	13.67 (2.66)	13.33 (2.44)	-0.36	0.723
<b>Emotion discrimination</b>	25.80 (2.04)	25.33 (3.15)	-0.48	0.634
<b>ToM</b>	12.87 (4.12)	20.00 (0.00)	6.70	0.001
<b>Social knowledge</b>	42.93 (12.23)	50.80 (13.15)	1.70	0.101
<b>Social functioning</b>	99.40 (9.52)	115.71 (4.05)	6.10	0.001

Table 3. Linear correlations between social cognition measures and social functioning in the patient group.

	<b>Emotion identification</b>	<b>Emotion discrimination</b>	<b>ToM</b>	<b>Social knowledge</b>
<b>Emotion discrimination</b>	0.59 (*)			
<b>ToM</b>	0.28	0.35		
<b>Social knowledge</b>	0.68 (**)	0.45 (p<0.10)	0.34	
<b>Social functioning</b>	-0.28	-0.37	0.01	-0.09

(\*) p<.05 (\*\*) p<.01

## 4. CONCLUSIONS

The comparisons of chronically stable schizophrenic outpatients (mean duration of illness: 16.13 years) and healthy controls in the social cognition subdomains of emotion processing, ToM and social knowledge, showed differences in ToM. And the difference approached significance in social knowledge. Both groups scored at the same level in the two tests that measured emotion processing. This may be because the emotional processing tasks that have been used in this research, identification and discrimination of emotions, measure the most basic emotions: happiness, sadness, anger, disgust, surprise and fear. There are tests that assess emotional processing using more complex tasks, with more emotions and with varying degrees of emotional intensity expressed in the faces.

It is important to note that although these patients have never participated in a program to improve social cognition, they go regularly to a rehabilitation center where they participate in activity programs such as daily living and leisure time. Some of these activities try to integrate the patient in the society. Therefore, we hypothesize that there are patients with a social cognitive profile with less deficits, in line with the review of the literature described in the introduction which stated that an important factor to predict possible emotional processing deficits is the patient's profile (e.g. illness onset or illness phase) (Addington & Addington, 1998; Baudouin et al., 2002; Borod, Martin, Alpert, Brozgold, & Welkowitz, 1993; Edwards, Pattison, Jackson, & Wales, 2001).

The group of people with schizophrenia has a poorer performance than the control group in ToM. These results support Frith's theory (1992) about the genesis of the cognitive difficulties of people with schizophrenia. The theory states that the dysfunction in the ability to

ascribe mental states to others is a specific trait of the schizophrenia disorder. One more point tested in the study has to do with the relation between the deficit of emotion processing and performance on tasks of social schemas, assuming that low performance on tasks of emotional processing correlate with low performance in social schemas. The correlation matrix has confirmed this hypothesis. It should also be noted that performance of the control group was better in social knowledge and social schemas.

In summary, people with diagnoses of schizophrenia show a clear deficit in social cognition, although differences could be identified depending on sample characteristics like chronicity, attendance to social resources or family context.

## 5. FUTURE RESEARCH DIRECTIONS

A limitation in our study is the small sample size. Our immediate goal is to continue collecting data to allow us make a replication of the results obtained in this investigation. We have measured basic emotions and it could be interesting to extend the study of emotional processing to more complex emotions, like the ones measured by the Reading the Mind in the Eyes Test (Baron-Cohen et al., 2001).

From a more general point of view, our goal is to extend the study of social and cognitive deficits in patients with schizophrenia across several more lines, e.g. different schizophrenic patient subtypes, the quantification of the effects of the pharmacological treatments on cognition, and the study of the psychometric characteristics of the tests used to assess social cognition in Spanish population, because most of the existing ones are merely translations from the originals constructed for English or German contexts. Finally, it can be very useful for practitioners, to develop training guidelines to provide consistency in the application of treatments.

## REFERENCES

- Addington, J., & Addington, D. (1998). Facial affect recognition and information processing in schizophrenia and bipolar disorder. *Schizophrenia Research*, 32(3), 171-181.
- Adolphs, R. (2001). The neurobiology of social cognition. *Current Opinion in Neurobiology*, 11(2), 231-239.
- Andres, K., Brenner, H. D., Pfammatter, M., & Roder, V. (2001). Further advancement of the integrated psychological therapy program for schizophrenic patients: Intervention methods and results. In H. D. Brenner, W. Böker, & R. Genner (Eds.), *The treatment of schizophrenia-status and emerging trends* (pp. 121-136). Kirkland, WA: Hogrefe & Huber Publishers.
- Barch, D. (2005). The relationships among cognition, motivation, and emotion in schizophrenia: How much and how little we know. *Schizophrenia Bulletin*, 31(4), 875-881.
- Baron-Cohen, S., O'Riordan, M., Stone, V., Jones, R., & Plaisted, K. (1999). Recognition of faux pas by normally developing children and children with Asperger syndrome or high-functioning autism. *Journal of Autism and Developmental Disorders*, 29(5), 407-418.
- Baron-Cohen, S., Wheelwright, S., Spong, A., Scachill, V. L., & Lawson, J. (2001). Are intuitive physics and intuitive psychology independent? A test with children with Asperger syndrome. *Journal of Developmental and Learning Disorders*, 5, 47-78.
- Baudouin, J., Martin, F., Tiberghien, G., Verlut, I., & Frank, N. (2002). Selective attention to facial emotion and identity in schizophrenia. *Neuropsychologia*, 40(5), 503-511.
- Bellack, A. S., Morrison, R. L., Wixted, J. T., & Mueser, K. T. (1990). An analysis of social competence in schizophrenia. *The British Journal of Psychiatry*, 156, 809-818.
- Bentall, R. P., Corcoran, R., Howard, R., Blackwood, N., & Kinderman, P. (2001). Persecutory delusions: A review and theoretical integration. *Clinical Psychology Review*, 21(8), 1143-1192.
- Bentall, R. P., & Udachina, A. (2013). Social cognition and the dynamics of paranoid ideation. In D. L. Roberts, & D. L. Penn (Eds.), *Social cognition and Schizophrenia: From evidence to treatment* (pp. 215-244). New York, NY: Oxford University Press.
- Birchwood, M., Smith, J., Cochrane, R., Wetton, S., & Copestake, S. (1990). The social functioning scale: The development and validation of a new scale of social adjustment for use in family intervention programmes with schizophrenic patients. *The British Journal of Psychiatry*, 157, 853-859.

- Borod, J., Martin, C., Alpert, M., Brozgold, A., & Welkowitz, J. (1993). Perception of facial emotion in schizophrenia and right damaged patients. *Journal of Nervous and Mental Disease, 181*(8), 494-502.
- Brekke, J. S., Kay, D. D., Lee, K.S., & Green, M. F. (2005). Biosocial pathways to functional outcome in schizophrenia. *Schizophrenia Research, 80*(2-3), 213-225.
- Brothers, L. (1990). The social brain: A project for integrating primate behavior and neurophysiology in new domain. *Concepts in Neuroscience, 1*, 27-61.
- Brown, E. C., Tas, C., & Brüne, M. (2012). Potential therapeutic avenues to tackle social cognition in schizophrenia. *Expert Review of Neurotherapeutics, 12*(1), 71-81.
- Brüne, M. (2003). Theory of mind and the role of IQ in chronic disorganized schizophrenia. *Schizophrenia Research, 60*(1), 57-64.
- Brüne, M. (2005). Emotion recognition, “theory of mind” and social behavior in schizophrenia. *Psychiatry Research, 133*(2-3), 135-147.
- Chadwick, P., & Trower, P. (1997). To defend or not to defend: A comparison of paranoia and depression. *Journal of Cognitive Psychotherapy, 11*(1), 63-71.
- Combs, D. R., Penn, D. L., Wicher, M., & Waldheter, E. (2007). The ambiguous intentions hostility questionnaire (AIHQ): A new measure for evaluating hostile social-cognitive biases in paranoia. *Cognitive Neuropsychiatry, 12*(2), 128-143.
- Corcoran, R., Mercer, G., & Frith, C. D. (1995). Schizophrenia, symptomatology and social inference: Investigating “theory of mind” in people with schizophrenia. *Schizophrenia Research, 17*(1), 5-13.
- Corrigan, P. W., & Addis, I. (1995). The effects of cognitive complexity on a social sequencing task in schizophrenia. *Schizophrenia Research, 16*(2), 137-144.
- Corrigan, P. W., Buican, B., & Toomey, R. (1996). Construct validity of two tests of social cognition in schizophrenia. *Psychiatry Research, 63*(1), 77-82.
- Couture, S., Penn, D., & Roberts, D. (2006). The functional significance of social cognition in schizophrenia: A review. *Schizophrenia Bulletin, 32*(1), 44-63.
- Drury, V. M., Robinson, E. J., & Birchwood, M. (1998). “Theory of mind” skills during an acute episode of psychosis and following recovery. *Psychological Medicine, 28*(5), 1101-1112.
- Edwards, J., Pattison, P., Jackson, H., & Wales, R. (2001). Facial affect and affective prosody recognition in first episode schizophrenia. *Schizophrenia Research, 48*(2-3), 235-253.
- Ekman, P., & Friesen, W. V. (1976). *Pictures of facial affect*. Palo Alto, CA: Consulting Psychologists Press.
- Fenigstein, A. (1997). Paranoid thought and schematic processing. *Journal of Social and Clinical Psychology, 16*(1), 77-94.
- Fett, A., Viechtbauer, W., Dominguez, M., Penn, D.L., van Os, J., & Krabbendam, L. (2011). The relationship between neurocognition and social cognition with functional outcomes in schizophrenia: A meta-analysis. *Neuroscience and Biobehavioral Reviews, 35*(3), 573-588.
- Fiszdon, J. M. (2013). Introduction to social cognitive treatment approaches for schizophrenia. In D. L. Roberts, & D. L. Penn (Eds.), *Social Cognition and Schizophrenia: From evidence to treatment* (pp. 285-310). New York, NY: Oxford University Press.
- Frith, C. D. (1992). *The cognitive neuropsychology of schizophrenia*. Hillsdale, NJ : Lawrence Erlbaum.
- Fuentes-Durá, I., Romero-Peris, M., Dasí-Vivó, C., & Ruiz-Ruiz, J. C. (2010). Versión abreviada del WAIS-III para su uso en la evaluación de pacientes con diagnóstico de esquizofrenia [Abbreviated version of the WAIS-III for use in evaluation of patients with diagnosed schizophrenia]. *Psicothema, 22*(2), 202-207.
- Gil, D., Fernández-Modamio, M., & Arrieta, M. (2012). Adaptación al español de la prueba de la teoría de mente Hinting Task [Adaptation of the Hinting Task theory of the mind test to Spanish]. *Revista de Psiquiatría y Salud Mental, 5*(2), 79-88.
- Golan, O., Baron-Cohen, S., & Hill, J. (2006). The Cambridge Mindreading (CAM) face-voice battery: Testing complex emotion recognition in adults with and without Asperger syndrome. *Journal of Autism and Developmental Disorder, 36*(2), 169-183.
- Green, M. F., Bearden, C. E., Cannon, T. D., Fiske, A. P., Helleman, G. S., Horan, W. P., Kee, K., Kern, R. S., Lee, J., Sergi, M. J., Subotnik, K. L., Sugar, C. A., Ventura, J., Yee, C. M., & Nuechterlein, K. H. (2012). Social cognition in schizophrenia, part 1: Performance across phase of illness. *Schizophrenia Bulletin, 38*(4), 854-864.
- Green, M. F., & Horan, P. H. (2010). Social cognition in schizophrenia. *Current Directions in Psychological Science, 19*(4), 243-248.
- Green, M. F., Kern, R. S., Braff, D. L., & Mintz, J. (2000). Neurocognitive deficits and functional outcome in schizophrenia: Are we measuring the “right stuff”? *Schizophrenia Bulletin, 26*(1), 119-136.



- Green, M. F., & Nuechterlein, K. H. (1999). Should schizophrenia be treated as a neurocognitive disorder? *Schizophrenia Bulletin*, *25*(2), 309-318.
- Green, M. F., & Nuechterlein, K. H. (2004). The MATRICS initiative: Developing a consensus cognitive battery for clinical trials. *Schizophrenia Research*, *72*(1), 1-3.
- Green, M. F., Penn, D. L., Bentall, R., Carpenter, W. T., Gaebel, W., Gur, R. C., Kring, A. M., Park, S., Silverstein, S. M., & Heinssen R. (2008). Social cognition in schizophrenia: An NIMH workshop on definitions, assessment, and research opportunities. *Schizophrenia Bulletin*, *34*(6), 1211-1220.
- Hans, S. L., Marcus, J., Henson, L., & Auerbach, J. G. (1992). Interpersonal behavior of children at risk for schizophrenia. *Psychiatry: Interpersonal and Biological Processes*, *55*(4), 314-335.
- Horan, W. P., Kern, R. S., Green, M. F., & Penn, D. (2008). Social cognition training for individuals with schizophrenia: Emerging evidence. *American Journal of Psychiatric Rehabilitation*, *11*(3), 205-252.
- Horan, W. P., Lee, J., & Green, M. F. (2013). Social cognition and functional outcome in schizophrenia. In D. L. Roberts, & D. L. Penn (Eds.), *Social cognition and schizophrenia: From evidence to treatment* (pp. 151-172). New York, NY: Oxford University Press.
- Insel, T. R., & Fernald, R. D. (2004). How the brain processes social information: Searching for the social brain. *Annual Review of Neuroscience*, *27*, 697-722.
- Jaramillo, P., Fuentes, I., & Ruiz, J. C. (2009). Cognition, social cognition and social functioning in schizophrenia. *Psychology, Society & Education*, *1*(1), 13-24.
- Kaney, S., & Bentall, R. P. (1989). Persecutory delusions and attributional style. *British Journal of Medical Psychology*, *62*(2), 191-198.
- Kerr, S. L., & Neale, J. M. (1993). Emotion perception in schizophrenia: Specific deficit or further evidence of generalized poor performance? *Journal of Abnormal Psychology*, *102*(2), 312-318.
- Lenzenweger, M. F., & Dworkin, R. H. (1996). The dimensions of schizophrenia phenomenology: Not one or two, at least three, perhaps four. *The British Journal of Psychiatry*, *168*(4), 432-440.
- Mueser, K. T., Bellack, A. S., Morrison, R. L., & Wixted, J. T. (1990). Social competence in schizophrenia: Premorbid adjustment, social skill, and domains of functioning. *Journal of Psychiatric Research*, *24*(1), 51-63.
- Nuechterlein, K. H., & Dawson, M. E. (1984). Information processing and attentional functioning in the developmental course of schizophrenic disorders. *Schizophrenia Bulletin*, *10*(2), 160-203.
- Ostrom, T. M. (1984). The sovereignty of social cognition. In R. S. Wyer, & T. K. Srull (Eds.), *Handbook of social cognition: Vol. 1. Basic processes* (pp. 1-37). Hillsdale, NJ: Erlbaum.
- Penn, D. L., Combs, D., & Mohamed, S. (2001). Social cognition and social functioning in schizophrenia. In P. Corrigan, & D. Penn (Eds.), *Social Cognition and schizophrenia* (pp. 97-121). Washington, DC: American Psychological Association.
- Penn, D. L., Combs, D., Ritchie, M., Francis, J., Morris, S., & Townsend, M. (2000). Emotion recognition in schizophrenia: Further investigation of generalized versus specific deficits models. *Journal of Abnormal Psychology*, *109*(3), 512-516.
- Penn, D. L., Jones, N. & Munt, E. D. (2005). A pilot study of social cognition and interaction training (SCIT) for schizophrenia. *Schizophrenia Research*, *80*(2-3), 357-359.
- Penn, D. L., Ritchie, M., Francis, J., Combs, D., & Martin, J. (2002). Social perception in schizophrenia: The role of context. *Psychiatry Research*, *109*(2), 149-159.
- Penn, D. L., Sanna, L. J., & Roberts, D. L. (2008). Social cognition in schizophrenia: An overview. *Schizophrenia Bulletin*, *34*(3), 408-411.
- Phillips, M. L., & David, A. S. (1998). Abnormal visual scan paths: a psychophysiological marker of delusions in schizophrenia. *Schizophrenia Bulletin*, *29*(3), 235-245.
- Pinkham, A. E. (2013). The social cognitive neuroscience of schizophrenia. In D. L. Roberts, & D. L. Penn (Eds.), *Social cognition and schizophrenia: From evidence to treatment* (pp. 263-281). New York, NY: Oxford University Press.
- Pinkham, A. E., Penn, D. L., Perkins, D. O., & Lieberman, J. A. (2003). Implications of a neural basis for social cognition for the study of schizophrenia. *American Journal of Psychiatry*, *160*(5), 815-824.
- Premack, D. L., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavior Brain Sciences*, *1*(4), 515-526.
- Ruiz-Ruiz, J. C., García-Ferrer, S., & Fuentes-Durá, I. (2006). La relevancia de la cognición social en la esquizofrenia [The significance of social cognition in schizophrenia]. *Apuntes de Psicología*, *24*(1-2), 137-155.
- Savla, G. N., Vella, L., Armstrong, C. C., Penn, D. L., & Twamley, E. W. (2013). Deficits in domains of social cognition in schizophrenia: A meta-analysis of the empirical evidence. *Schizophrenia Bulletin*, *39*(5), 979-992.

- Schneider, F., Gur, R. C., Koch, K., Backes, V., Amunts, K., Shah, N. J., Bilker W, Gur, R. E., & Habel, U. (2006). Impairment in the specificity of emotion processing in schizophrenia. *American Journal of Psychiatry*, 163(3), 442-447.
- Striano, T., & Reid, V. (2009). *Social cognition: Development, neuroscience and autism*. Oxford, UK: Wiley-BlackWell.
- Tien, A. Y., & Eaton, W. W. (1992). Psychopathologic precursors and sociodemographic risk factors for the schizophrenia syndrome. *Archives of General Psychiatry*, 49(1), 37-46.
- Vauth, R., Rüschi, N., Wirtz, M., & Corrigan, P. (2004). Does social cognitive influence the relation between neurocognitive deficits and vocational functioning in schizophrenia? *Psychiatry Research*, 128(2), 155-165.
- Vázquez, A. J., & Jiménez, R. (2000). Social Functioning Scale: New contributions concerning its psychometric characteristics in a Spanish adaptation. *Psychiatry Research*, 93(3), 247-256.
- Watson, F., Blennerhassett, R. C., & Charlton, B. G. (2000). "Theory of mind", persecutory delusions and the somatic marker mechanism. *Cognitive Neuropsychiatry*, 5(3), 161-174.

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**Section 2**  
**Cognitive and Experimental Psychology**



## Chapter 11

# DEVELOPING A QUANTITATIVE TEST OF MEMORY-RELATED MILD COGNITIVE IMPAIRMENT IN INDIVIDUALS

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### ABSTRACT

The ability to quantify a developing memory related cognitive deficit in individuals is paramount. This becomes increasingly significant with modern society's growing aged population, who are at greater risk of developing memory deficit. In conditions such as Alzheimer's disease, early detection has significant implications for the quality and outcome of treatment. Quantification of deficit also has implications for a range of scenarios where its assessment is important in judging a patient's suitability for further treatment. Many of the current clinical tests for cognitive deficit are relatively insensitive, and struggle in individual measurements to differentiate between deficits in performance associated with learning impairment and those associated with increased rates of forgetting. We therefore argue that new tests are required that are better suited to this purpose. In this chapter we report our ongoing efforts to exploit a new theoretical advancement, to develop a new test (the Warhol Task) that has the potential to meet this requirement. More specifically we report what has been uncovered about the nature of learning and forgetting across life span, the noise inherent in the test, and the impact of error rates on parameter estimates. We also discuss the usability and the clinical potential of the test.

*Keywords:* mild cognitive impairment, memory, clinical, individual assessment, Warhol Task, memory related cognitive deficit.

## 1. INTRODUCTION

The ability to quantify a developing memory deficit in individuals is paramount. In conditions such as Alzheimer's disease, of which memory deficit is a pronounced symptom, early detection has significant implications for both the quality and outcome of treatment for those patients identified. Problems in early identification are also an obstacle for our further understanding of the disease. This points to the need to identify barely-detectable symptoms; often referred to as Mild Cognitive Impairment (MCI). Quantification of memory deficit also has implications for a range of medical scenarios as widely separated as open heart surgery and sleep apnea; where its assessment is both important in judging a patient's well-being as well as the suitability of further treatment. Such tests will also have value for those experiencing anxiety simply as a result of normal age-related decline (see Bishop, Lu, & Yanker 2010).

There are known difficulties with the tests currently in use (Cullen, O'Neill, Evans, Coen, & Lawlor, 2007). Many, such as the Mini-Mental State examination (MMSE; Folstein, Folstein, & McHugh, 1975; Tombaugh & McIntyre, 1992) are relatively insensitive, and generally are only applied when serious deficit is already apparent. Their ability to detect mild cognitive impairment, which characterizes the early stages of serious conditions such as Alzheimer's (Cui et al., 2011; Meyer, Huang, & Chowdhury, 2007; Fleisher et al., 2007; Petersen & Negash, 2008), is limited, and this renders these tests more confirmatory than predictive (Grundman et al., 2004).

Furthermore, many tests do not provide quantitative measurement at a grain of analysis suitable for tracking incremental changes in performance over time from a series of observations. This would be a desirable characteristic for general practitioners that want to have a more deductive diagnostic process (De Lepeleire & Heyrman, 1999). Many of the commonly used screening tests, like the MMSE or "General Practitioner Assessment of Cognition" (GPCOG), are based on cut-off points for when a sum of scores are sufficiently low to be

indicative of some clinical concern. These same tests are highly influenced by education, social class, age, gender, and ethnicity (Tombaugh & McIntyre, 1992). These influences make cut-off points ineffective for detailed monitoring over time, particularly for tests with a small total of scores, like the MMSE, where small amounts of variability can have significant interpretive implications.

Some tests for MCI do not measure memory at all, based on the argument that most clinical screening tests overemphasize memory dysfunction in dementia, referred to “Alzheimerisation” of screening tests (Knopman et al., 2001). The reasoning for this term is because memory dysfunction is the hallmark of Alzheimer’s disease. An example test is the Clock Drawing Task (CDT), which has been used for decades across many cultural contexts. Whilst it shows some capacity to discriminate between normal aging and MCI, it is largely understood to be insensitive and more confirmatory of whether the patient has moderate-severe dementia (Ehreke et al., 2009; Pinto & Peters, 2009). In this respect it shares the same insufficiency as commonly used cognitive screening instruments for MCI. We would argue a reason why memory deficit is questioned as a criterion is because current methods are not sophisticated enough to produce clinically valuable results. The lack of sophistication is further emphasized because, from a psychological point of view, most tests measuring individual performance struggle to differentiate between deficits associated with learning impairment and those associated with increased rates of forgetting.

Of course, many of the aforementioned tests continue to be used for what benefits they do bring, but we argue that new tests are required. A common virtue shared by all the tests mentioned above is that they are quick and easy to administer in the often brief and difficult scenario of a clinical consultation (Cullen et al., 2007). For this reason they are often chosen over more sensitive tests, such as the “Blessed test of Orientation, Concentration, and Memory” (Blessed, Tomlinson, & Roth, 1968). A different benefit is that many use a number of miniature tasks to target a range of cognitive faculties. For example, the “Modified Mini-Mental State Examination” and the “Cognitive Abilities Screening Instrument” (Cullen et al., 2007). Many of these tasks are classic experimental tests and have a wealth of evidence illustrating their content validity. An obvious example is the Digit Span test. Moreover this broad variety of small tests can provide data on a wide range of faculties. Despite benefits these tests are well known to be insensitive to mild cognitive impairments.

The requirements for a successful behavioral test for mild cognitive deficit (with emphasis on learning and memory components) would be sensitive, rigorously quantitative, informative on the status of cognitive faculties, and most importantly predictive. Bearing in mind the drawbacks of currently used tests we therefore argue that new tests are required that are better suited to these requirements. In this chapter we report our ongoing efforts to exploit a new theoretical advancement based on Population Dilution Theory (Lansdale & Baguley, 2008), to specifically develop a new test (the Warhol Task) that has the potential to meet this ideal.

## 2. BACKGROUND

The Population Dilution theory looks at memory not as a simple repository of facts, but as a population of discrete representations. These discrete representations preserve both basic information about the stimulus and the historical sequence by which that information was acquired. The population may also include erroneous representations. Learning is therefore represented in this theory in terms of how numerous this population is and the accuracy of the discrete representations that comprise it. Forgetting is modeled as a process in which that population is diluted by non-functional representations at a constant-rate in time. Space limitations preclude more detailed description of this theory here, but its key facility, as realized in the “Warhol Task” (described below), is that it enables the independent assessment of learning and forgetting rates in individuals in a simple task which monitors the ability to learn the sequence of common objects in an everyday setting.



### 3. METHODS

The Warhol Task and represents – in principal – this research team’s current design for meeting the requirements for improved identification of memory-inclusive MCI. As a consequence the results presented and discussed in this chapter will be focused around the development of this task. The Warhol Task is so-named because the memory stimuli are familiar food cans; alluding to Warhol’s famous painting. Participants are shown a row of 16 cans on a shelf for a fixed period; currently set at 15 seconds. After a short delay filled with tasks to suppress rehearsal, participants are tested on their memory for the sequence of 16 cans. This entails interaction with a specialized test software that presents pictures of the stimuli across a set of trials. In each of these, four pictures of cans are shown, arranged in a 2x2 matrix, and the participant is required to specify the relative order in which they appeared in the stimulus sequence. This test is called the “quartet test”. Over 20 such trials, it is possible to contrive a sequence of trials in which each can has been tested against every other can in the stimulus just once. Following a delay of 2 minutes, this sequence of stimulus presentation and test was repeated 3 more times to allow an assessment of the build-up of learning. Then, after 7 days, participants are unexpectedly tested in the same way, but without seeing the stimulus.

#### 3.1. Data preparation

At its most basic level this procedure tests whether the patient can correctly remember whether any two cans  $X$  and  $Y$  appeared in the sequence  $X$ - $Y$  or  $Y$ - $X$ . This binary judgment is made on four occasions that logically lead to 16 possible patterns of correctness over the four testing cycles; for example, this can range from all incorrect (eeee) to all correct (cccc) with 14 other possible combinations in-between (for e.g. ecce, cece, etc.). With 16 cans in the sequence, there are 120 such comparisons distributed across these 16 possible learning patterns. Given the putative probability of learning a particular sequence on any given presentation,  $L$ , and taking into account the possibility of correct guesses, a complex but relatively straightforward mathematical model can predict the distribution of the 120 comparisons between the 16 possible learning patterns. As a result, given such an observed distribution, we can estimate a learning rate  $L$  for that participant using standard parameter optimization methods.

Forgetting is estimated in a similar way. Within the learning model is the ability to estimate, for any learning pattern, a population of traces of total sum  $(C+E)$ , where  $C$  represents the number of traces that encode the correct sequence and  $E$  the number that are in error. At elapsed time  $t$ , the Population Dilution model predicts the probability of accurate recall to be  $C/(C+E+Ft)$ ; where  $F$  is the rate with which the population is diluted by blank traces as a function of unit time. The probability of correct recall tracks the proportion of accurate traces in the increasing population volume. Consequently, for a given value of  $F$ , we can predict the proportion of any specific learning patterns observed (e.g. ecce) that will produce a correct response after a given delay and we can estimate  $F$  from those proportions actually observed after the 7 day delay.  $L$  and  $F$  estimates derived thereby represent characteristics of the individual reflecting their rate of learning and forgetting.

Readers should be reassured that, with 120 comparisons distributed between 16 possible learning patterns, and each producing an observed probability of recall after delay, the estimation of the two free parameters  $L$  and  $F$  is far from over-prescribed and that all datasets tested thus far have produced satisfactory goodness-of-fit for the degrees of freedom so defined. The mathematical models underlying the Warhol Task are both parsimonious and statistically sufficient.

### 4. LEARNING AND FORGETTING ACROSS LIFE SPAN

Fifty-two participants aged from 18 years to 78 years participated in the Warhol Task. They were screened for health issues and matched for educational attainment. Overall, the relationship between age and cognitive performance is as might be expected. That is, a small

positive correlation with increasing age and forgetting rate is observed (Pearson's  $PM = 0.134$ ); as is a similar negative correlation with learning rate (Pearson's  $PM = -0.267$ ). More to the point, what is striking is the intrinsic variability between individuals; as illustrated in Figures 1 and 2 for learning and forgetting rates respectively, where each point represents the estimated rate for an individual. The variance associated with age is of second order in comparison to the differences between individuals of comparable age. Overall, this work endorses the findings of Petersen, Smith, Kokmen, Ivnik, and Tangalos (1992) that learning rates decline uniformly as a function of age whereas forgetting rates remain broadly stable when levels of initial learning have been taken into account. However, what this study reveals further is how significant the appraisal of individual differences is to the interpretation of that finding.

Figure 1. Parameter estimates of an individual's Learning rate derived from Population Dilution model for each individual plotted as function of age.

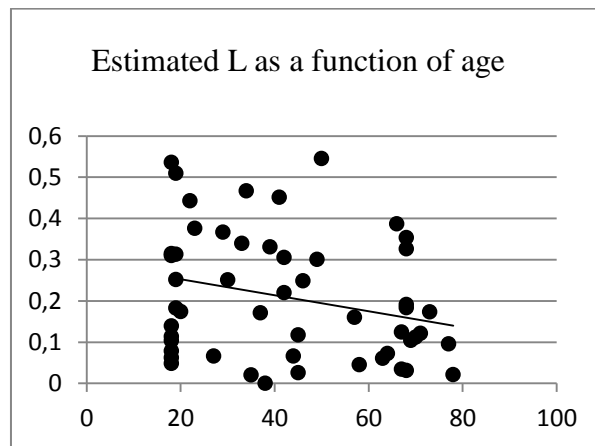
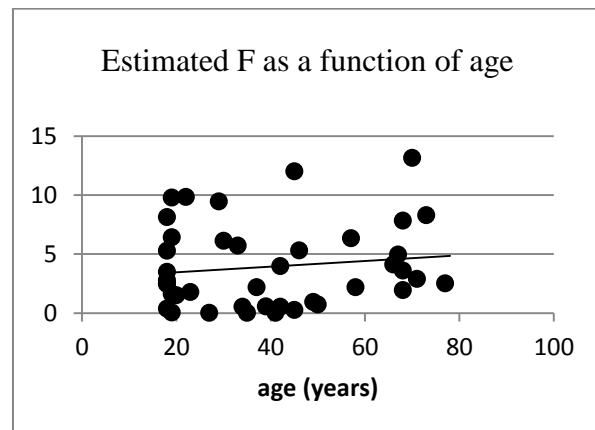


Figure 2. Parameter estimates of an individual's Forgetting rate derived from Population Dilution model for each individual plotted as function of age.



#### 4.1. Evaluating statistical noise in the Warhol Task

Given that parameter optimization takes place in the context of a task that allows for guessing, some noise must be expected in the estimates derived thereby. It is possible that this is reflected in Figure 1. It is therefore necessary to establish that the wide variation observed in Figures 1 and 2 is genuinely attributable to individual differences between participants. To evaluate this, we developed an extensive Monte Carlo simulation in which 250 pseudo-subjects were simulated repeatedly with different, and pre-determined, values of  $L$  and  $F$ . The data output from that simulation was then reoptimized for estimates of  $L$  and  $F$  in order to evaluate the variability intrinsic to the Warhol Task, which can be seen by comparing how closely the reoptimized values approximated to the original, predetermined, input values. For  $L$ , this reveals

a mean deviation of 0.031 from the true value with a standard deviation of 0.057. In essence, this means that individuals differing by more than 0.114 can be assumed to be performing at significantly different levels. On that basis, most of the variations we observe in Figure 1 reflect genuine performance differences between participants rather than the outcome of chance.

The equivalent calculation of  $F$  is rather more involved because, as a reciprocal element in the basic model ( $pr=C/(C+E+ Ft)$ ), the deviations from the expected value are heavily skewed towards overestimation. Further, when learning levels are low, smaller degrees of noise will drive the optimization falsely to boundary conditions (i.e. estimating  $F$  as 0 or infinity). This is because with very little learning, it is impossible to tell the difference between very high and very low levels of forgetting because they appear identical. Nevertheless, it has proven possible to demonstrate that the levels of forgetting observed between different participants do genuinely reflect different levels of performance. We can be reasonably confident that these individual differences reflect significant differences in performance.

## 5. CLINICAL POTENTIAL

### 5.1. Multivariate profiling of memory related deficit

Because the Warhol Task is aimed at detecting learning and memory related mild cognitive impairment, it is by necessity more complex than tests such as MMSE. The Warhol Task is rigorously quantitative, unlike the MMSE. For comparison, the MMSE provides an assessment of an individual's placement on a standardized distribution using performance measured by its 11 item questionnaire. Only 2 of these questions represent memory recall (Folstein et al., 1975). Whereas the PD model derives parametric estimates for multiple theoretical parameters representing underlying processes involved in memory and recall from 600 points of data across 5 tests. The Warhol Task's greater complexity has the virtue of being able to measure the finer details of memory on an individual level.

The greater volume of data collected in the Warhol Task provides a more comprehensive description of their ability to learn and recall sequential information. Building on this, detailed multivariate normative profiles can be established. The Warhol Task therefore places more emphasis on detailed quantitative profiles than cut-off points. That is in stark contrast to the MMSE, which has a threshold defining the point where performance is sufficiently low to be of clinical interest. Robust parametric statistical analyses can be used to establish a quantified level of certainty to an individual's distance from the average on specific multivariate profiles that are of clinical concern. This greater emphasis would lend better to a more deductive diagnostic mentality and towards monitoring incrementally across multiple observations (De Lepeleire & Heyrman, 1999). A drawback is that the Warhol Task currently takes 35 minutes to administer. But the potential for more detailed, sensitive, and accurate measurement of learning and memory related cognitive deficit arguably is worth the extra testing time.

### 5.2. Practical clinical utility

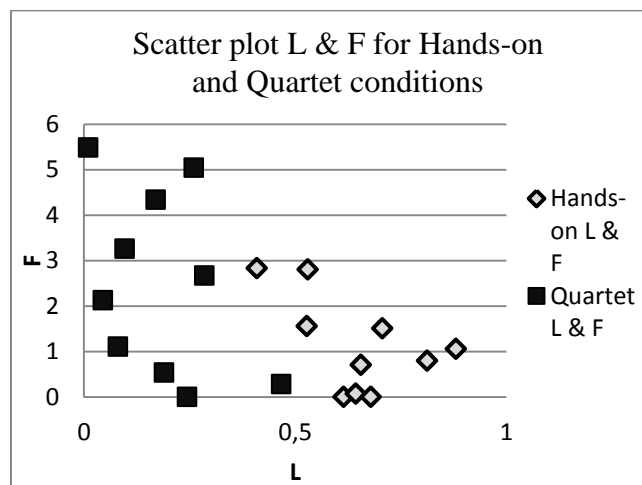
Bearing in mind the complications that come with multivariate profiling it is therefore important to establish its practical application in a quasi-clinical setting before starting clinical trials. Moore (2013) administered the test to 17 long-standing volunteer patients of the Leicester General Hospital Sleep Clinic, all having received treatment for sleep apnoea (SA) for a minimum of 12 months and of average age 65.8 years and whose condition can be said to have stabilized. Other than commenting that the results were comparable to age-matched participants (implying a successful treatment outcome given the self-report of new patients) we do not elaborate on that study here. However, in this study, participants also undertook an additional short qualitative interview to examine the test complexity and the patient's attitudes towards it and its outcome in a clinical setting. This revealed no significant usability issues in the test; nor in the participant's inclination to take part in it. We do note, however, that because the test is necessarily challenging, it requires reasonably sensitive and skilled administrators to explain to the participants why this is necessarily the case and to maintain the patients cooperation and effort in undertaking it.

## 6. THE ROLE OF ERRORS IN MEASUREMENT

The most recent development in this line of research concerns both the aforementioned usability issues of the test, and the issue of confidence in estimates showing individual differences. Even though the participants of the quasi-clinical experiment described above reported no usability issues, it was believed a more effective version of the test in the Warhol Task could be devised. This innovative version, referred to as “Hands-on test”, was designed to be more natural, quicker, and be a more theoretically exact test of *sequential* memory. More specifically, the Hands-on test requires that the participant, after the usual presentation and distraction part of the task, rearrange a second, identical, set of cans into the sequence they have just seen. This differs from the Quartet test by requiring the participants use their hands instead of interacting with computer software. Furthermore, the Hands-on test presents the participants with all the stimuli at once, rather than in sets of four. Finally the Hands-on test requires the participants reconstruct the whole sequence, not indicate where they thought each disconnected quartet was in a number line representing the sequence. While the Hands-on test differs in the way the participant interacts with the test, it is formally identical to the Quartet test in terms of the data it provides. The test in its Hands-on form becomes, arguably, more natural and less abstract.

We conducted an experiment to compare the effectiveness of both methods of testing. 10 participants conducted the Warhol Task and were tested with the quartet method, as described earlier, and 10 conducted the task and were tested with the hands-on method. This allowed a direct comparison of performance. The results found that the Hands-on test saw statistically significantly higher *L*,  $t = 7.801$ ,  $n = 10$ ,  $df = 8$ ,  $p = <0.005$  (two-tailed), and lower *F*,  $t = -1.881$ ,  $n = 10$ ,  $df = 8$ ,  $p = <0.038$  (two-tailed). The magnitude of difference in mean *L* between the Hands-on and Quartet tests, mean difference = 0.423, was substantial ( $\eta^2 = 0.772$ ; Cohen, 1988). Likewise, but to a lesser extent, the magnitude of difference in mean *F*, mean difference = -1.351, was strong ( $\eta^2 = 0.164$ ). This is illustrated obviously in Figure 3, which shows the bivariate distributions for both test designs. It appears that the Quartet version of the test has been encouraging lower performance, making it more difficult to establish the legitimacy of individual differences when parameter estimates have been calculated.

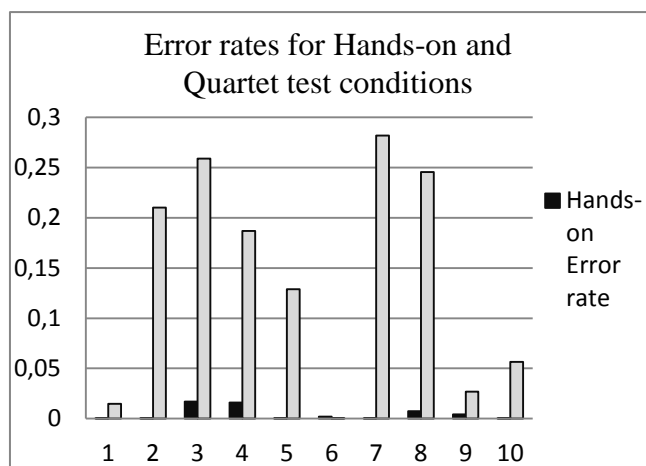
Figure 3. The Learning and Forgetting rates for each individual in each test condition plotted on a scatterplot.



Additionally we modeled a putative measure of error rate in these experiments. By this, we mean an estimate of the probability with which a sequence was uttered which the participant might otherwise, in perfect circumstances, have known was incorrect. Figure 4 illustrates the finding that error rates are significantly more frequent with quartet-style test ( $M = 0.141$ ) as opposed to the Hands-on procedure ( $M = 0.005$ ). Furthermore, there was substantial individual

differences in the higher rates of error seen in the Quartet test,  $SD = 0.109$ , in comparison to the Hands-on test,  $SD = 0.007$ . These two findings signify the possibility that high individual differences in error rates have been exaggerating the individual differences in learning rates. With this in mind, this experiment has revealed information about noise in the Warhol Task (PD model) that is introduced to the  $L$  and  $F$  parameter estimates at the very beginning, simply due to the usability of the test. The Hands-on test procedure is expected to be used in future experiments using the Warhol Task and represents a key development in creating a new test better suited to measuring individual performance and identifying deficits associated with learning impairment for use in a clinical setting.

Figure 4. A bar chart showing the error rate for each individual across both tests.



## 7. FUTURE DIRECTIONS AND CONCLUSION

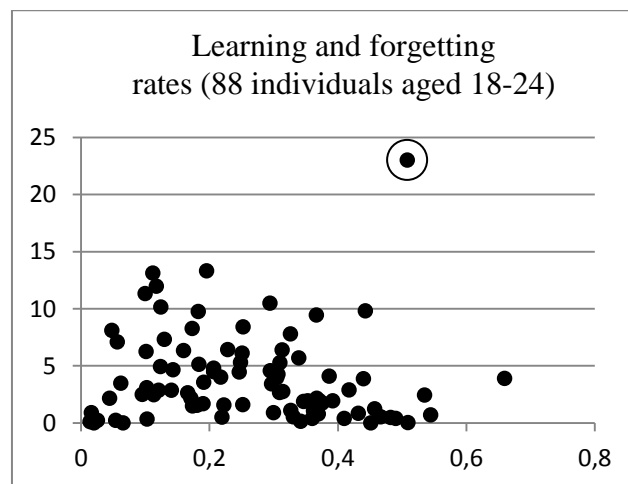
We have concentrated here upon the development of a test. Theoretical issues arising from this research are reported elsewhere. To date, we have: a) carried out an initial survey of performance in this test over the life span; b) developed techniques to establish the confidence levels in the results this provides; c) we have established the practical usability of the test in a, and outside of a, clinical setting; d) have identified conditions and performance levels where the test is problematic to interpret; and; e) have demonstrated very high levels of individual difference between participants carrying out the test; f) and that a portion of the individual differences were due to pollution in the test's data as a result of superficial usability of the test. We do not underestimate the technical difficulty of developing tests in this domain, where the reliable detection and quantification of mild cognitive deficit is a significant challenge.

Three key objectives, of many, are presently being focused upon to overcome this challenge. First, alongside the work previously described to establish confidence limits, a sufficiently large sample for each age group is required to establish normative levels within which the population at large can be expected to fall and against which individuals can be compared. Figure 5 illustrates the values of  $L$  and  $F$  for 88 participants of ages 18-24. This shows a) a general decline in forgetting rates with higher learning rates (a robust finding of some ongoing theoretical interest beyond the scope of the present chapter); b) substantial individual differences, as before, in both rates of learning and forgetting; but c) evidence of at least one participant (circled) whose forgetting rate is sufficiently high in comparison to the estimated learning rate to enable us to identify this as an outlier requiring further consideration.

Second, it is important to establish the test-retest reliability of this test as a precursor to longitudinal studies. At the time of writing, experiments are currently in progress to evaluate the degree to which the individual differences observed to date are preserved from one observation to the next. Third, and finally, we are planning a clinical trial of the test in a domain where mild cognitive impairment is to be expected; in this case in patients presenting for the first time to the

Sleep Apnoea Clinic at Leicester whose self-report and overt symptoms point towards mild to significant cognitive deficit (albeit usually reversible). These will be tested upon arrival and studied longitudinally over the onset of treatment. Such a trial will act both as a proof-of-concept (insofar as cognitive deficit is actually detectable in this group) and should also provide to the clinicians further information as to the degree and speed of recovery as a function of treatment.

Figure 5. Scatterplot for learning and forgetting rates for each individual from a sample of 88 aged between 18-24.



## REFERENCES

- Bishop, N. A., Lu, T., & Yanker, B. A. (2010). Neural mechanisms of ageing and cognitive decline. *Nature*, 464(7288), 529-535.
- Blessed, G., Tomlinson, B. E., & Roth M. (1968). The association between quantitative measures of dementia and of senile change in the cerebral grey matter of elderly subjects. *The British Journal of Psychiatry: The Journal of Mental Science*, 114(512), 797-811.
- Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cui, Y., Liu, B., Lou, S., Zhen, X., Fan, M., Liu, T., Zhu, W., Park, M., Jiang, T., & Jin, J. S. (2011). Identification of conversion from mild cognitive impairment to Alzheimer's disease using multivariate predictors. *PLoS ONE*, 6(7), 1-10.
- Cullen, B., O'Neill, B., Evans, J., Coen, R., & Lawlor, B. (2007). A review of screening tests for cognitive impairment. *Journal of Neurology, Neurosurgery and Psychiatry*, 78(8), 790-799.
- De Lepeleire, J., & Heyrman, J. (1999). Diagnosis and management of dementia in primary care at an early stage: the need for a new concept and an adapted procedure. *Theoretical Medicine and Bioethics*, 20(3), 215-228.
- Ehreke, L., Lippa, M., Luck, T., Wiese, B., Weyerer, S., Weeg, D., Olbrich, J., Van den Bussche, H., Maier, W., Pentzek, M., König, H., Riedel-Heller, S. (2009). Is the Clock Drawing Test appropriate for screening for Mild Cognitive Impairment? Results of the German Study on Ageing, Cognition and Dementia in Primary Care Patients (AgeCoDe). *Dementia and Geriatric Cognitive Disorders*, 28(4), 365-372.
- Fleisher, A. S., Sowell, B. B., Taylor, C., Gamst, A. C., Petersen, R. C., & Thal, J. (2007). Clinical predictors of progression to Alzheimer disease in amnesic mid cognitive impairment. *Neurology*, 68(19), 1588-1595.
- Folstein, M., Folstein, M., & McHugh, P. R. (1975). "Mini-mental state": A practical method for grading the cognitive state for the clinician. *Journal of Psychiatric Research*, 12(3), 189-198.
- Grundman, M., Petersen, R. C., Ferris, S. H., Thomas, R.G., Aisen, P. S., Bennett, D. A., Foster, N. L., Jack, C. R., Galasko, D. R., Doody, R., Kaye, J., Sano, M., Mohs, R., Gauthier, S., Kim, H. T., Jin, S., Schultz, A. N., Schafer, K. Mulnard, R., Van Dyck, C. H., Mintzer, J., Zamrini, E. Y., Cahn-Weiner, D., & Thal, L. J. (2004). Mild cognitive impairment can be distinguished from Alzheimer disease and normal aging for clinical trials. *Archives of Neurology*, 61(1), 59-66.

- Knopman, D. S., DeKosky, S. T., Cummings, J. L., Chui, H., Corey-Bloom, J., Relkin, N., Small, G. W., Miller, B., & Stevens, J. C. (2001). Practice parameter: Diagnosis of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology*, *56*(9), 1143-1153.
- Lansdale, M., & Baguley, T. S. (2008). Dilution as a model of long-term forgetting. *Psychological Review*, *115*(4), 864.
- Meyer, J. S., Huang, J., & Chowdhury, M. H. (2007). MRI confirms mild cognitive impairments prodromal for Alzheimers, vascular and Parkinson-lewy body dementias. *Journal of the Neurological Sciences*, *257*(1-2), 97-104.
- Moore, C. (2013). *Usability tests of the Warhol Task in a Defined Clinical Population* (Unpublished undergraduate BSC dissertation). University of Leicester, UK.
- Petersen, R. C., & Negash, S. (2008). Mild cognitive impairment: An overview. *CNS Spectrums*, *13*(1), 45-53.
- Petersen, R. C., Smith, G., Kokmen, E., Ivnik, R. J., & Tangalos, E. G. (1992). Memory function in normal aging. *Neurology*, *42*(2), 396-401.
- Pinto, E., & Peters, R. (2009). Literature review of Clock Drawing Test as a tool for cognitive screening. *Dementia and Geriatric Cognitive Disorders*, *27*(3), 201-213.
- Tombaugh, T. N., & McIntyre, N. J. (1992). The Mini-Mental State examination. A comprehensive review. *Journal of the American Geriatrics Society*, *40*(9), 922-35.

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## Chapter 12

# COMPARISON OF CHILDREN WITH READING COMPREHENSION DIFFICULTY AND CONTROLS USING NEUROPSYCHOLOGICAL TASKS

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### ABSTRACT

*Objective:* This study compared a group of children with reading comprehension difficulty and a group of competent readers using eight neuropsychological measures to find out which are related to performance in reading comprehension. *Design:* Quasi-experimental design. *Methods:* Participants: Seventy-seven Brazilian children in 4<sup>th</sup> to 6<sup>th</sup> grade, 19 with reading comprehension difficulty (high performance in word reading, but low performance in reading comprehension) and 58 good readers (high performance in word reading and reading comprehension). *Materials and measures:* Questionnaire about socioeconomic data, health and educational history, Conners Abbreviated Teacher Rating Scale, Raven matrices, word reading measures, reading comprehension measures (retelling and comprehension questions), Child Brief Neuropsychological Assessment Battery tapping eight neuropsychological functions in 26 tasks. *Analysis:* Linear regression. *Findings:* After adjusting values for grade and type of school, the tasks that showed a significant association with the variable group (poor comprehenders or good readers) were visuospatial working memory and verbal fluency. *Conclusions:* The impact of working memory and executive functions on reading comprehension suggests the importance of introducing these neuropsychological measures both in assessment and interventions with students who struggle with reading comprehension in the initial years of elementary education.

*Keywords:* reading comprehension difficulties, neuropsychological assessment, working memory, executive functions.

## 1. INTRODUCTION

The learning disabilities field recognizes reading comprehension [RC] difficulty as a specific learning disability where, despite intact word recognition, comprehension is not achieved (Fletcher, 2009; Fletcher, Lyons, Fuchs, & Barnes, 2007). Considering the importance of the ability for successful learning, RC difficulty affects school achievement (Meneghetti, Carretti, & De Beni, 2006). There are no epidemiological studies regarding this difficulty, but studies point to a high prevalence - between 5 to 10%, depending on the exclusion criteria and cutoff points used (Fletcher et al., 2007). The current knowledge base on RC is still limited, and the investigation of individual differences is one of the research priorities (Johnston, Barnes, & Desrochers, 2008).

### 1.1. Identification of specific learning disabilities: Psychometric Perspective *versus* Cognitive and Neuropsychological Approach

The psychometric perspective that has traditionally prevailed in addressing learning disabilities in general, and reading difficulties, in particular, has been gradually replaced by or complemented with a more cognitive approach. More and more studies converge to show that intelligence measures explain a small proportion of variance in reading ability (e.g., Jiménez, Siegel, O'Shanahan, & Ford, 2009). Whereas IQ might not be enough to understand or relevant to understanding what has gone wrong when a child has a learning disability, assessment of cognitive functions can be more informative and can make a real contribution to intervention planning (Fiorello et al., 2007; Fletcher et al., 2002; Francis et al., 2005). Pennington (2009) presents a hybrid model to describe learning and learning disorders, which includes both psychometric and cognitive neuroscience constructs. Both sets of constructs are considered



important for understanding developmental and cognitive differences. An evaluation of children with learning problems must consider measures of working memory, attention, and executive function (Semrud-Clikeman, 2005).

### **1.2. Neuropsychological aspects of RC difficulty and neuropsychological assessment in children**

There is evidence of the relationship between RC on one hand, and language, working memory and executive functions on the other hand. Most studies, however, addresses the relationship of RC with the neuropsychological functions taken in isolation. Neuropsychological batteries may provide a broader evaluation, as they investigate several functions together, which is especially important in children, because of the overlapping of dysfunctions often found in childhood (Argollo et al., 2009).

## **2. BACKGROUND**

In both theoretical models and empirical research, RC has been recognized as a complex activity that relies on a combination of perceptual, cognitive and linguistic processes (Kintsch & Rawson, 2005; Oakhill & Cain, 2006). Text processing begins with word recognition, from visual input (Perfetti, Landi, & Oakhill, 2005). From this initial, bottom-up, processing word meanings are activated, propositions are formed, and inferences and elaborations are produced. Simultaneously, top-down processes guide reading (Kintsch, 1988). In the context of this activity a network of meanings is built and integrated into a coherent overall structure. Thus, the mental representation of the text always results from the interplay of these two kinds of processes, which is established from the most basic linguistic level to the level of knowledge integration (Wharton & Kintsch, 1991).

It is easy to conclude that problems in decoding the word may impair, as a consequence RC, but not all children who have difficulties with understanding have problems with decoding. When decoding difficulties are excluded, the causes of problems in text comprehension may be many and diverse (Perfetti, 1994). It is only possible to consider the presence of a specific RC difficulty when the ability to recognize words is preserved, but, despite that, access to the meaning of the text read is not achieved. In research, one can only define a sample of this population after the word recognition has been formally evaluated and is in the normal range. (Fletcher et al., 2007).

Research from a neuropsychological approach has investigated the neuropsychological functions associated with RC, which might explain individual differences that determine difficulties in respect to this capacity. Linking underlying neuropsychological processes associated with different types of readers to the rich body of literature on RC is essential for ultimately understanding underlying neurobiological bases of RC, which may impact evaluation, treatment and prevention of RC difficulties (Cutting, Materek, Cole, Levine, & Mahone, 2009).

Neuropsychological functions relate to performance and difficulties in reading differently, depending on the level involved: word recognition or RC from a text (Salles & Corso, 2011). Specifically regarding RC it is quite evident its relationship with working memory (Nation, 2005). Models of RC assume that processing at the level of sentence, paragraph, and text as a whole must take place in a limited capacity working memory (Kintsch & Rawson, 2005). Evidence for the relationship between working memory and RC comes from numerous studies. While some conclude that what explains this correlation is the specific features of working memory that are specialized for language processing (Seigneuric, Ehrlich, Oakhill & Yuill, 2000), others identify the central executive system of working memory as a factor directly related to RC, specifically the updating and/or inhibition function of working memory (Carretti, Cornoldi, De Beni, & Romano, 2005; De Beni & Palladino, 2000; Swanson & Jerman, 2007). The working memory tasks that are most accurate at distinguishing between good and poor comprehenders are tasks that are demanding in terms of attentional control and that require verbal information processing (Carretti, Borella, Cornoldi, & De Beni, 2009).

Poor RC is often associated with weaknesses in oral language (Nation & Norbury, 2005; Clarke, Snowling, Truelove, & Hulme, 2010). Studies of children with difficulties in RC show that some children with problems in comprehension have poor vocabulary skills (Catts, Adlof, & Weismer, 2006) and syntactic awareness (Johnston et al., 2008). Morphological awareness may explain the variance in RC after controlling for word reading (Kirby et al., 2012). Lipka and Siegle (2012) conclude that a variety of cognitive processes, such as working memory and phonological, syntactic, and morphological awareness are important for RC and compromised in poor comprehenders.

There is increasing evidence in the literature that executive functions contribute to RC. In a study investigating the effects of word fluency, oral language and executive functions on RC performance with three groups (typically developing, general reading disability and specific RC deficits), Cutting et al. (2009) found significantly lower performance on executive function for the latter group. Sesma, Mahone, Levine, Eason, and Cutting (2009) found that executive function – particularly in the areas of working memory and planning skills – was significantly associated with RC skill, but not with single-word-reading accuracy. Executive function proved to be a contributor to comprehension ability after controlling for well-documented predictors of RC (attention, decoding skills, fluency and vocabulary).

There is enough evidence of the relationship between RC on one hand, and language, working memory and executive functions on the other hand. However, differently from prior research, in which the neuropsychological functions were taken in isolation, this study addresses several functions together, through the use of a neuropsychological battery. The joint investigation of various neuropsychological functions in the frames of reading comprehension difficulty has the advantage of offering a neuropsychological profile associated with these cases. Knowing the weaknesses and strengths of a particular clinical population, on the other hand, is important for a better characterization of this learning disability and for the outlining of rehabilitation strategies. Concomitant evaluation of different neuropsychological functions in children is especially important, considering the large modifications due to the child development (Lefèvre, 2004), and considering also that commonly there is overlap of dysfunctions (Argollo et al., 2009).

### **3. OBJECTIVES**

This study compared a group of students with RC difficulties (poor comprehenders: high performance in word reading and low performance in RC;  $n = 19$ ) and a group of competent readers (good comprehenders: high performance in word reading and RC,  $n = 58$ ) in terms of performance in a brief instrument of neuropsychological evaluation that assesses eight functions in children: orientation, attention, perception, memory, language, visual constructive ability, arithmetic abilities and executive functions.

Regarding our hypotheses, and due to the previous findings revised above, we expect the group with reading comprehension difficulty to perform in a low way in tasks involving working memory, executive functions and language. However, each one of those neuropsychological functions is evaluated through three or more different tasks, and we don't have hypotheses about which specific tasks will differentiate both groups. In addition, the battery involves other functions besides the three mentioned, and, again, we do not have hypotheses regarding a possible worse performance – on these other functions – among the participants with reading comprehension difficulties.

### **4. METHOD**

#### **4.1. Participants**

Seventy-seven children aged 9 to 12 years and studying in the 4<sup>th</sup> or 6<sup>th</sup> grade in public (PuS) and private (PrS) schools underwent tests to evaluate word reading and text comprehension. The group of poor comprehenders ( $n=19$ ) had an average or above average performance in word recognition, but a poor performance in RC simultaneously. The group of good readers ( $n=58$ ) had an average or above average performance in reading isolated words

along with a very good performance in RC tasks. Inclusion criteria were absence of neurological or psychiatric disorders, absence of uncorrected auditory or visual disabilities and performance equal to or higher than the 25<sup>th</sup> percentile in the Raven colored progressive matrices test (Angelini, Alves, Custódio, Duarte, & Duarte, 1999). According to the Fisher exact test, there were no significant differences in grade or type of school, nor among good readers, nor among poor comprehenders.

#### 4.2. Instruments

A questionnaire about socioeconomic, health and educational data was completed by parents, and used to check for inclusion criteria relating to children's medical and schooling history. The Conners abbreviated teacher rating scale - CATRS-10 (Brito, 1987) – a screening instrument for ADHD – was completed by teachers, and used as part of the inclusion criteria. The participants underwent the following tests: The Raven colored progressive matrices test (Angelini et al., 1999); evaluation of oral reading of isolated words and pseudo-words (Salles & Parente, 2007); RC measures based on retelling and questionnaire (Corso, Sperb, & Salles, 2012); Brief Neuropsychological battery for children (Salles et al., 2011) to assess the eight mentioned functions through 25 subtests.

#### 4.3. Data analysis

Regression analysis was used to check which neuropsychological functions were associated with the variable group (poor comprehenders versus good readers), controlling, at the same time, for grade and type of school.

### 5. RESULTS

Group homogeneity was confirmed for behavior, intelligence (Raven;  $p=0.122$ ) and isolated word reading ( $p=0.062$ ), as seen in Table 1.

Table 1. Comparison of groups on age, word reading, RC, CATRS e IQ.

	Good readers (n=58)		Poor Comprehenders (n =19)		U/t	p
	Median	IQI	Median	IQI		
Age <sup>a</sup>	10,5	1,1	10,9	1,0	-1,488	0,141
Word Reading (percentile)	75	(40;90)	50	(30;70)	706,5	0,062
CQ <sup>b</sup> – Literals	5,0	(5;5)	4,0	(3;5)	227,5	<0,001
CQ <sup>b</sup> - Inferentials	5,0	(4;5)	2,0	(1;3)	0,0	<0,001
Conners scale	1,0	(0;5)	0,0	(0;3)	460,5	0,495
RAVEN (percentile)	90,0	(60;99)	75,0	(50;90)	421,5	0,122

**Note:** Significance level of 0,05; <sup>a</sup> Values presented as mean and standard deviation, compared by Student's t test; <sup>b</sup> Comprehension questions.

Table 2 presents both descriptive statistics (mean and standard deviation) of the performance of groups in different tasks /functions, as beta coefficients resulting from the regression analysis that tested the effect of the group variable (poor comprehenders *versus* good readers) upon scores on neuropsychological tasks. Group (poor comprehenders *versus* good readers) was significantly associated with three of the eight neuropsychological functions evaluated: working memory, executive functions and written language. The specific tasks that had a significant beta coefficient were visuospatial working memory ( $\beta = 0.311$ ;  $p < 0.01$ ), verbal ( $\beta= 0.270$ ;  $p= 0.01$ ) and semantic ( $\beta= 0.279$ ;  $p= 0.01$ ) fluency, and written language – writing words and pseudo words ( $\beta = 0.246$ ;  $p < 0.05$ ).

Table 2. Performance of the groups on neuropsychological tasks and beta values.

Neuropsychological Functions /Tasks	Maximum score	Poor Comprehenders (N= 19) Mean (SD)	Good Readers (N = 58) Mean (SD)	Beta
Orientation	6	5,74 (0,56)	5,83(0,53)	0,07
Attention	59	53,68 (2,84)	54,77(3,83)	0,05
Perception	6	5,74 (0,45)	5,83 (0,42)	0,06
Verbal Episodic Memory	18	9,00 (2,02)	9,14(2,13)	0,01
Working Memory – Phonol. and Central Execut.	48	33,11 (5,13)	35,79(4,54)	0,18
Visuospatial working memory	28	22,63 (4,69)	25,31 (3,28)	0,31**
Semantic Memory	4	3,95 (0,22)	3,97 (0,18)	0,03
Oral Language – Naming	9	8,79 (0,41)	8,91 (0,33)	0,14
Oral Language – Phonological Awareness – Rime	5	3,79 (0,41)	3,86 (0,34)	0,04
Oral Language – Phonological Awareness – Phonemic subtraction	5	5,68 (0,74)	5,90 (0,30)	0,10
Oral Language – Oral Comprehension	5	4,95 (0,22)	4,76 (0,43)	-0,19
Oral Language – Inference Processing	8	6,58 (1,34)	6,66 (1,37)	-0,04
Written Language – Oral Reading	17	16,32 (0,58)	16,43 (0,56)	0,02
Written Language – Writing Comprehension	5	4,89 (0,31)	5,00 (0,00)	0,21
Written Language – Writing Words and Pseudo words	19	17,89 (0,99)	18,52 (0,78)	0,24*
Written Language – Spontaneous Writing	2	1,79 (0,41)	1,95 (0,22)	0,21
Written Language – Copy	2	2,00 (0,00)	1,98(0,13)	-0,05
Visual-Spatial Abilities – Copy from Figures	24	21,42 (1,53)	22,17 (1,45)	0,12
Arithmetic Abilities	25	23,83 (1,29)	24,55 (0,92)	0,20
Executive Function – Verbal Fluency	<sup>a</sup>	22,63 (5,09)	28,38 (5,92)	0,35**
Orthographic Verbal Fluency	<sup>a</sup>	7,74 (3,38)	10,28 (3,42)	0,01**
Semantic Verbal Fluency	<sup>a</sup>	14,89 (4,29)	18,10 (4,15)	0,01**
Executive Function – Go/No-go Task	60	56,89 (4,52)	58,05 (2,40)	0,11

Note: <sup>a</sup> Maximum score = number of words evoked; \* p < 0,05; \*\* p < 0,01

## 6. CONCLUSION/DISCUSSION

The aim of this study was to compare two groups – the good readers and the poor comprehenders – on their performance on different neuropsychological functions tasks. Thus, we tested the effect of the group variable upon participants' scores on tasks. Furthermore, we controlled for the variables of grade and type of school as prior research has shown that these variables may also affect performance. After adjusting values for grade and type of school, the tasks that showed a significant association with the variable group (poor comprehenders *versus* good readers) were visuospatial working memory, verbal fluency and writing words and pseudo words.

The visuospatial working memory task, of all the working memory tasks evaluated in this study, is the one that most intensely demands the activation of the executive component of the working memory: the participant should reproduce a sequence of cubes indicated by the examiner and invert the series at the same time. Trying to determine which specific component

of working memory explains its relationship to RC gave rise to different studies, some emphasizing the verbal domain of the task (Seigneuric, et al., 2000), others highlighting the presence of the executive component of the task, which involves not only storage, but manipulation of information (Swanson & Jerman, 2007). Our results confirm those that emphasized the presence of executive control in the tasks that differentiate poor and good comprehenders (Swanson & Jerman, 2007; Carretti et al., 2009). In contrast with other studies (Oakhill, Yuill, & Garnham, 2011), however, the verbal domain did not prevail, maybe because the executive component was demanded more intensively in the visuospatial task than in the verbal task used in the study (backward digit span).

Consistent with research findings that verified the involvement of executive functions among participants with specific difficulties in RC (Cutting et al., 2009), this study showed that performance on tasks of executive functions suffers the effect of the group variable (good readers *versus* poor comprehenders). The tasks that in this respect, helped differentiating between the two groups were the verbal fluency, both orthographic fluency (say words beginning with a specific letter in a given time) and semantic fluency (say words related to a particular category, such as animals). Performing tasks of verbal fluency activates several executive processes, such as attention, monitoring and working memory, and that is the reason why they are useful for detecting possible deficits in executive functions (Welsh, Pennington, Ozonoff, Rouse, & McCabe, 1990). From the perspective of Baddeley's (2007) model of working memory, it appears that besides the evident involvement of the executive component, each of the two tasks receive the specific contribution of one subcomponent: the phonological component contributes especially with the orthographic fluency task, while the visuospatial component is especially involved with semantic fluency (Rende, Ramsberger, & Miyake, 2002). Consistent with the verification of singularities that differentiate the two tasks, it is known that each of them activates different neural networks (Birn et al., 2010). The orthographic and semantic verbal fluency tasks involve the executive ability to coordinate attention, working memory, use of strategies and monitoring (McNamara & Scott, 2001; Schelble, Theriault, & Miller, 2012), which may explain lower performances among poor comprehenders.

As to the writing words/pseudo-words task, it is known that impairments in similar cognitive functions may explain the simultaneous presence of problems in reading and writing domains. Berninger, Nielsen, Abbott, Wijsman and Raskind (2008) found an association of inhibition failures and verbal fluency with spelling problems. Specific difficulties in RC are also associated with inhibition (Palladino, Cornoldi, De Beni, & Pazzaglia, 2001) and failure in verbal fluency (Miranda-Casas, Fernández, Robledo, & García-Castellar, 2010).

Taking into account the different cognitive and linguistic aspects present in the ability to understand a text, it is not difficult to understand that, due to various reasons, a difficulty in RC may exist. Investigating different neuropsychological functions together, along with word and text reading, enables the verification of functions that, when impaired, demand special attention in the evaluation of and intervention on these specific learning difficulties. The impact of working memory and executive functions on RC suggests the importance of introducing these neuropsychological measures both in assessment and interventions with students who struggle with RC in the initial years of elementary education.

The group with reading comprehension difficulty showed a low performance in one task, among three working memory tasks, and in one of two EF tasks. Different tasks may activate different components of those complex and multidimensional neuropsychological functions. Thus, a possibility in terms of future research would be exactly to verify the relationship between reading comprehension and the specific components of the neuropsychological functions in consideration, through the use of more tasks that assess both functions.

## REFERENCES

- Angelini, A. L., Alves, I. C. B., Custódio, E. M., Duarte, W. F., & Duarte, J. L. M. (1999). *Matrizes Progressivas Coloridas de RAVEN – Escala Especial* [RAVEN Colored Progressive Matrices – Special Scale]. São Paulo, Brazil: Centro Editor de Testes e Pesquisa em Psicologia.

- Argollo, N., Bueno O., Shayer, B., Godinho, K., Abreu, K., Durán, P., Assis, A., Lima, F., Silva, T., Guimarães, J., Carvalho, R., Moura, I., & Seabra, A. (2009). Adaptação transcultural da Bateria NEPSY – Avaliação neuropsicológica do desenvolvimento: Estudo-piloto [Cross-cultural adaptation of the NEPSY battery – Neuropsychological assessment of development: Pilot study]. *Avaliação Psicológica*, 8(1), 59-75.
- Baddeley, A. (2007). *Working Memory, Thought, and Action*. Oxford, UK: Oxford University Press.
- Berninger, V. W., Nielsen, K. H., Abbott, R. D., Wijsman, E., & Raskind, W. (2008). Writing problems in developmental dyslexia: Under-recognized and under-treated. *Journal of School Psychology*, 46(1), 1-21.
- Birn, R. M., Kenworthy, L., Case, L., Caravella, R., Jones, T. B., Bandettini, P. A., & Martin, A. (2010). Neural systems supporting lexical search guided by letter and semantic category cues: A self-paced overt response fMRI study of verbal fluency. *Neuroimage*, 49(1), 1099-107.
- Brito, G. N. (1987). The Conners abbreviated teacher rating scale: Development of norms in Brazil. *Journal of Abnormal Child Psychology*, 15(4), 511-518.
- Carretti, B., Borella, E., Cornoldi, C., & De Beni, R. (2009). Role of working memory in explaining the performance of individuals with specific reading comprehension difficulties: A meta-analysis. *Learning and Individual Differences*, 19(2), 246-251.
- Carretti, B., Cornoldi, C., De Beni, R., & Romanò, M. (2005). Updating in working memory: A comparison of good and poor comprehenders. *Journal of Experimental Child Psychology*, 91(1), 45-66.
- Catts, H. W., Adlof, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the simple view of reading. *Journal of Speech, Language, and Hearing Research*, 49(2), 278-293.
- Clarke, P. J., Snowling, M. J., Truelove, E., & Hulme, C. (2010). Ameliorating children's reading-comprehension difficulties: A randomized controlled trial. *Psychological Science*, 21(8), 1106-1116.
- Corso, H. V., Sperb, T. M., & Salles, J. F. (2012). Development of a reading comprehension instrument from retelling and questionnaire. *Neuropsicologia Latinoamericana*, 4(1), 22-28.
- Cutting, L. E., Materek, A., Cole, C. A. S., Levine, T. M., & Mahone, E. M. (2009). Effects of fluency, oral language, and executive function on reading comprehension performance. *Annals of Dyslexia*, 59(1), 34-54.
- De Beni, R., & Palladino, P. (2000). Intrusion errors in working memory tasks: Are they related to reading comprehension ability? *Learning and Individual Differences*, 12(2), 131-143.
- Fiorello, C. A., Hale, J. B., Holdnack, J. A., Kavanagh, J. A., Terrell, J., & Long, L. (2007). Interpreting intelligence test results for children with disabilities: Is global intelligence relevant? *Applied Neuropsychology*, 14(1), 2-12.
- Fletcher, J. M. (2009). Dyslexia: The evolution of a scientific concept. *Journal of the International Neuropsychological Society*, 15(4), 501-508.
- Fletcher, J. M., Foorman, B. R., Boudousquie, A., Barnes, M. A., Schatschneider, C., & Francis, D. J. (2002). Assessment of reading and learning disabilities: A research-based intervention-oriented approach. *Journal of School Psychology*, 40(1), 27-63.
- Fletcher, J. M., Lyons, G. R., Fuchs, L. S., & Barnes, M. A. (2007). *Learning disabilities: From identification to intervention*. New York, NY: Guilford Press.
- Francis, J. D., Fletcher, J. M., Stuebing, K. K., Lyon, G. R., Shaywitz, B. A., & Shaywitz, S. E. (2005). Psychometric approaches to the identification of learning disabilities: IQ and achievement scores are not sufficient. *Journal of Learning Disabilities*, 38(2), 98-108.
- Jiménez, J. E., Siegel, L., O'Shanahan, I., & Ford, L. (2009). The relative roles of IQ and cognitive processes in reading disability. *Educational Psychology*, 29(1), 27-43.
- Johnston, A. M., Barnes, M., & Desrochers, A. (2008). Reading comprehension: Developmental processes, individual differences, and interventions. *Canadian Psychology*, 49(2), 125-132.
- Kintsch, W. (1988). The role of knowledge in discourse comprehension: a construction-integration model. *Psychological Review*, 95(2), 163-182.
- Kintsch, W., & Rawson, K. A. (2005). Comprehension. In M. J. Snowling, & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 209-226). Oxford, UK: Blackwell.
- Kirby, J. R., Deacon, S. H., Bowers, P. N., Izenberg, L., Wade-Woolley, L., & Parrila, R. (2012). Children's morphological awareness and reading ability. *Reading and Writing*, 25(2), 389-410.
- Lefèvre, B. H. W. F. (2004). Avaliação neuropsicológica infantil [Child neuropsychological assessment]. In V. M. Andrade, F. H. Santos, & O. F. A. Bueno (Eds.). *Neuropsicologia hoje [Neuropsychology today]* (pp. 249-263). São Paulo, Brazil: Artes Médicas.

- Lipka, O., & Siegel, L. (2012). The development of reading comprehension skills in children learning English as a second language. *Reading & Writing, 25*(8), 1873-1898.
- McNamara, D. S., & Scott, J. L. (2001). Working memory capacity and strategy use. *Memory & Cognition, 29*(1), 10-17.
- Meneghetti, C., Carretti, B., & De Beni, R. (2006). Components of reading comprehension and scholastic achievement. *Learning and Individual Differences, 16*(4), 291-301.
- Miranda-Casas, A., Fernández, M. I., Robledo, P., & García-Castellar, R. (2010). Comprensión de textos de estudiantes con trastorno por déficit de atención/hiperactividad: ¿qué papel desempeñan las funciones ejecutivas? [Reading comprehension of students with attention deficit hyperactivity disorder: What is the role of executive functions?]. *Revista de Neurología, 50*(3), 135-142.
- Nation, K. (2005). Children's reading comprehension difficulties. In M. J. Snowling, & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 248-265). Oxford, UK: Blackwell.
- Nation, K., & Norbury, C. (2005). Why reading comprehension fails. *Topics in Language Disorders, 25*(1), 21-32.
- Oakhill, J., & Cain, K. (2006). Reading processes in children. In K. Brown (Ed.), *Encyclopedia of Language & Linguistics* (2nd ed.) (pp. 379-386e). Retrieved from <http://dx.doi.org/10.1016/B0-08-044854-2/04156-0>.
- Oakhill, J., Yuill, N., & Garnham, A. (2011). The differential relations between verbal, numerical and spatial working memory abilities and children's reading comprehension. *International Electronic Journal of Elementary Education, 4*(1), 83-106.
- Palladino, P., Cornoldi, C., De Beni, R., & Pazzaglia, F. (2001). Working memory and updating processes in reading comprehension. *Memory & Cognition, 29*(2), 344-354.
- Pennington, B. F. (2009). *Diagnosing learning disorders: A neuropsychological framework*. (2nd ed). New York, NY: Guilford Press.
- Perfetti, C. A. (1994). Psycholinguistics and reading ability. In M. A. Gernsbacher (Ed.), *Handbook of psycholinguistics* (pp. 849-894). San Diego, CA: Academic.
- Perfetti, C. A., Landi, N., & Oakhill, J. (2005). The acquisition of reading comprehension skill. In M. J. Snowling, & C. Hulme (Eds.). *The science of reading: A handbook* (pp. 227-247). Oxford, UK: Blackwell.
- Rende, B., Ramsberger, G., & Miyake, A. (2002). Commonalities and differences in the working memory components underlying letter and category fluency tasks: A dual-task investigation. *Neuropsychology, 16*(3), 309-321.
- Salles, J. F., & Corso, H. V. (2011). Funções neuropsicológicas relacionadas ao desempenho em leitura em crianças [Neuropsychological functions related to reading performance in children]. In L. M. Alves, R. Mousinho, & S. A. Capellini (Eds.), *Dyslexia: Novos temas, novas perspectivas* [Dyslexia: New themes, new perspectives] (pp. 107-129). Rio de Janeiro, Brazil: WAK Editora.
- Salles, J. F., Fonseca, R. P., Cruz-Rodrigues, C., Mello, C. B., Barbosa, T., & Miranda, M. C. (2011). Desenvolvimento do Instrumento de Avaliação Neuropsicológica Breve Infantil NEUPSILIN-INF [Development of the Child Brief Neuropsychological Assessment Battery NEUPSILIN-INF]. *Psico-USF, 16*(3), 297-305.
- Salles, J. F., & Parente, M. A. M. P. (2007). Avaliação da leitura e escrita de palavras em crianças de 2ª série: Sbordagem neuropsicológica cognitiva [Evaluation of reading and writing of words in 2nd grade children: Neuropsychological cognitive approach]. *Psicologia, Reflexão e Crítica, 20*(2), 218-226.
- Schelble, J. L., Theriault, D. J., & Miller, M. D. (2012). Classifying retrieval strategies as a function of working memory. *Memory & Cognition, 40*(2), 218-230.
- Seigneuric, A., Ehrlich, M. F., Oakhill, J., & Yuill, N. (2000). Working memory resources and children's reading comprehension. *Reading and Writing, 13*, 81-103.
- Semrud-Clikeman, M. (2005). Neuropsychological aspects for evaluating learning disabilities. *Journal of Learning Disabilities, 38*(6), 563-568.
- Sesma, H. W., Mahone, M., Levine, T., Eason, S. H., & Cutting, L. E. (2009). The contribution of executive skills to reading comprehension. *Child Neuropsychology, 15*(3), 232-246.
- Swanson, H. L., & Jerman, O. (2007). The influence of working memory on reading growth in subgroups of children with reading disabilities. *Journal of Experimental Child Psychology, 96*(4), 249-283.
- Welsh, M. C., Pennington, B. F., Ozonoff, S., Rouse, B., & McCabe, E. R. B. (1990). Neuropsychology of early-treated phenylketonuria: Specific executive function deficits. *Child Development, 61*(6), 1697-1713.
- Wharton, C. & Kintsch, W. (1991). An overview of the construction-integration model: A theory of comprehension as a foundation for a new cognitive architecture. *SIGART Bulletin, 2*(4), 169-173.

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## Chapter 13

# DECISION MAKING COMPETENCIES AND RISK BEHAVIOUR OF UNIVERSITY STUDENTS

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### ABSTRACT

Risk behaviour is the result of various social, demographic, motivational and cognitive factors. Social and personality characteristics are the focus in risk behaviour research. The role of cognitive characteristics is relatively less known. The aim of the present research was to examine different types of adolescent health-risk behaviour using gender and decision-making competencies as possible predictors. The role of decision-making competencies was investigated using regression within a cross-sectional design. University students from Slovakia (n=205) completed six components of the Adult- Decision Making Competence and reported on their substance use (cigarette, marijuana, LSD, amphetamines, excessive drinking) and risk sexual behaviour. Binary logistic and linear regression was performed to assess the relationship between decision-making competencies and risk behaviour. Some gender differences in risk behaviour were found and differences in two of the six decision-making competencies were present. A higher prevalence of risk behaviour was negatively associated with only a small number of decision-making competencies, which depended on the type of risk behaviour. The results show a limited effect of decision-making competencies on risk behaviour with a mixed pattern in different kinds of studied behaviour.

*Keywords:* risk behaviour, decision-making competencies, university students.

## 1. INTRODUCTION

Risk behaviour (drinking alcohol, taking illegal drugs, unprotected sex, engaging in delinquent activity) is more probable in adolescents than in older or younger individuals (Arnett, 2000). While most research on risk behaviour has focused on its social-demographic (age, gender, social class) or personality factors (extraversion, neuroticism, religiousness), cognitive factors such as decision-making skills have been omitted with a few exceptions (Parker & Fischhoff, 2005). Adolescence is a period with raising independence on others (mainly parents) and that poses higher demands on a skill to make decisions. The main aim of the present chapter is to investigate a part of variability of risk behaviour that can be explained by decision-making competencies - another broad term with a lot of skills included. They are an area of interest in the normative approach as they show how people perform in comparison with the norm (logic, statistical rules). Grisso and Appelbaum (1998) have named the ability to understand, appreciate, reason and express a choice, while Finucane and Lees (2005) have highlighted the ability to structure a decision problem, understand relevant information, integrate information and reason about it, appreciate the personal significance of information and the limits of one's decision skills. Parker and Fischhoff (2005) have mentioned belief assessment, value assessment, integration and metacognition.

## 2. BACKGROUND

Decision-making competencies as a broad group of skills were expected to be the predictors of risk behaviour. Decision-making competencies were found to be positively related to life outcomes (Bruine de Bruin, Parker, & Fischhoff, 2007). The middle and high level of risky decision-making is a risk factor in adolescent health risk behaviour (An et al., 2013). According to Hodne (1995) and Gittler, Quigley-Rick, and Saks (1990) the ability to judge risks is considered an essential element of decision-making competence related to the engagement in

health risk behaviour. One of the investigated decision-making competencies – belief assessment is considered to play a central role in risk behaviour (Vlek & Stallen, 1981; Yates, 1992). This indicates that at least some decision-making competencies are crucial in risk behaviour prevention. While risk-taking propensity measures have been found to be, although not equally, predictors of real behaviour (Szrek, Chao, Ramlagan, & Peltzer, 2012), the role of general decision-making competencies is still unknown.

Given that the Adult Decision-Making Competence (A-DMC, Bruine de Bruin et al., 2007) has been used in the present study, the decision-making competence model of its authors is used as the main theoretical framework. A-DMC tries to capture four fundamental decision-making skills in six types of tasks. Decision-making skills include belief assessment (judging the likelihood of outcomes), value assessment (how we can evaluate outcomes of a behaviour), integration (combining beliefs and values as a crucial step in matching a person and the environment) and metacognition (knowing the extent of one's abilities as a skill to evaluate not only decision tasks, but also our potential to cope with them). Performance in these skills can be evaluated as accuracy (relative to external criterion) or consistency (related judgements or choices). In the first use of the measure Bruine de Bruin et al. (2007) used seven components to identify decision-making skills although one of them (Path Independence) was later eliminated because of low factor loadings and correlations with other subscales. Thus only six tasks are now used (e.g. Del Missier, Mäntylä, & Bruine de Bruin, 2010).

The first of the decision-making competencies - belief assessment - involves judging the probabilities of events. Probability judgements are a prominent topic in judgement and decision-making (Kahneman & Tversky, 1972; Gigerenzer, Hoffrage, & Kleinbölting, 1991), often with the emphasis on perception of risk – possibility of negative events (Slovic, 1987; Sjöberg, 2000). Belief assessment is assessed by two tasks in the A-DMC. The first of them, Consistency in Risk Perception, consists of 20 events where subjects have to judge the probability of a given event (e.g. a car accident) in a specified time period (in one year, five years) on a linear scale from 0% (no chance) to 100% (certainty). Twenty pairs of events are assessed followed by the comparison of a) the probability in one and five years (10 pairs), b) the probability of subset and superset events (6 pairs – e.g. to die in a terrorist attack and to die from any cause) and c) the probability of complementary events (4 pairs – e.g. to get or not to get into a car accident). The resulting score is the percentage of the correct item pairs. A direct relationship with risk behaviour was hypothesized as risk assessment is an inherent part of this component. The second task tapping belief assessment is Recognizing Social Norms. Subjects answer 16 questions about whether they think it is sometimes acceptable to engage in different kinds of negative behaviour (e.g. drinking and driving, smoking cigarettes) and their answers serve to compute the actual proportion of people that would engage in this behaviour. They also estimate how many people out of 100 their age behave like this. A Spearman rank-order correlation is computed between the estimated and actual percentage. The accuracy of peers' perception was expected to be closely related to risk behaviour as this behaviour is often connected with peer pressure (Madarasová-Gecková et al., 2005; Bindah & Othman, 2011).

Value assessment is also assessed by two tasks. The first of them, Resistance to Framing, detects the vulnerability of being affected by the framing effect – the way a situation is described. Seven valence framing problems and seven attribute framing items are presented twice – as gains and as losses. The absolute differences between ratings for the loss and gain versions of each item are subtracted from 5 in order to report higher values as better performance (smaller framing effect). Higher resistance to the situation description was expected to be negatively related to risk behaviour. The higher competence to find substantial aspects of problem can be helpful, as this behaviour can be activated by peers, explaining it in a positive way and overpassing or modifying its negatives. The next task measuring insensitivity to irrelevant features is Resistance to Sunk Costs, which contains 10 situations where prior investments have been made. A choice between the sunk-cost option and normatively correct option is made on a six-point scale. Performance is indicated by the average rating. A higher ability to abandon spent resources was expected more in students with lower levels of risk behaviour as persons not able to terminate the behaviour with more negative than positive consequence (it is valid for risk behaviour mainly from the long-time perspective).

Combining beliefs and values is called integration. It is measured by one subscale in the present study – Applying Decision Rules. Participants are asked for the best choice out of five DVD players for a hypothetical consumer with certain preferences regarding five characteristics (e.g. picture quality, brand reliability). Performance is represented by the percentage of correct DVD players chosen. Deficiencies in this competence were expected to be connected to risk behaviour as this can be viewed as not following own preferences (although they can be unknown to the individual at that moment).

Metacognition is the view of one's own competence and is measured in the Over/underconfidence component involving 34 knowledge questions. Participants indicate the correctness of each statement (true/false – e.g. alcohol causes dehydration) and their confidence in that answer. The resulting score is computed as one minus the absolute difference between the mean confidence and percentage of correct knowledge answers. A proper assessment of own knowledge was hypothesized to be related to a lower level of risk behaviour.

Gender was studied as another predictor of risk behaviour to tap into the differences between males and females. Gender has often been approved as a significant factor with a higher prevalence of risk behaviour in males (Wilsnack et al., 2000; Nolen-Hoeksema & Hilt, 2006).

### 3. METHODS

#### 3.1. Objectives

The main aim of the study was to investigate the effect of gender and decision-making competence on various kinds of risk behaviour employing a cross-sectional design was used.

#### 3.2. Sample

205 university students from Slovakia (58.0% females, age 19-26, mean age 22.1) from two universities were contacted personally during their courses and asked to participate in the study. A paper-pencil measure of decision-making competence was filled out and risk behaviour prevalence and demographic data were collected.

#### 3.3. Measures

Decision-making competencies were assessed by the Adult Decision-Making Competence (Bruine de Bruin et al., 2007). The A-DMC consists of six subscales (Resistance to Framing, Recognizing Social Norms, Under/overconfidence, Applying Decision Rules, Consistency in Risk Perception, Resistance to Sunk Costs) differing in question and response mode. Although the range of possible scores is not unified, a higher score means a higher level of decision-making skill. A Slovak version of the scale was used (Bavolar, 2013).

Nicotine dependence was measured by the Fagerstrom test for nicotine dependence (Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991), which contains 8 questions detecting nicotine dependence. A higher score implies stronger dependence. The other kinds of risk behaviour (occurrence of smoking, alcohol and marijuana use) were detected by particular questions.

#### 3.4. Statistical analyses

Both a binary logistic and linear regression (depending on the risk behaviour questions response mode) were performed to assess the relationship between decision-making competencies and risk behaviour and the effect of gender.

### 4. FINDINGS

Neither the binary logistic regression (dependent variable smoking during last 3 months: never (124; 61.0%) – at least once (80; 39.0%)) nor the linear regression (DP Fagerstrom score by regular smokers: 0-7 (M = 2.05 (1.57))) showed a significant effect of decision-making competencies (DMC) on smoking (Tables 1, 2; abbreviations of decision-making competencies are used: RtF – Resistance to Framing, RSN – Recognizing Social Norms, UOC – Under/overconfidence, ADR – Applying Decision Rules,

CiRP – Consistency in Risk Perception, RtSC – Resistance to Sunk Costs).). In addition, neither gender no decision-making competence were found to be statistical significant. While the first model explained a very small portion of the variance ( $R^2 = .02$  (Cox & Snell),  $.03$  (Nagelkerke), the second one predicting nicotine dependence explained 16% of the variance. However, the sample in the second model (regular smokers) consisted of only 40 participants (24 females) and the whole model was not found to be significant.

Table 1. Binary logistic regression predicting occurrence of smoking.

	B	SE	Wald	df	p	Exp(B)
Constant	-1.08	2.17				
Gender (M=1)	-.33	.33	1.008	1	.315	.721
RtF	-.11	.35	.102	1	.750	.895
RSN	.76	.72	1.105	1	.293	2.143
UOC	.28	1.86	.023	1	.879	1.327
ADR	.39	.77	.262	1	.608	1.481
CiRP	-.59	1.06	.309	1	.579	.556
RtSC	.20	.20	.970	1	.325	1.222

$R^2 = .02$  (Cox & Snell),  $.03$  (Nagelkerke). Model  $\chi^2(7) = 4,137$ ,  $p = .764$

Table 2. Linear regression predicting nicotine dependence (Fagerstrom).

	Unstandardized coefficients		Standardized coefficients	t	p	r
	B	SE	$\beta$			
Constant	5.68	3.93				
Gender (M=1)	1.60	.52	.51	3.069	.004	.50
RtF	-.06	.69	-.01	-.086	.932	.17
RSN	.68	1.16	.09	.589	.560	.05
UOC	-2.42	3.30	-.11	-.735	.467	.06
ADR	-.11	1.40	-.01	-.079	.937	.21
CiRP	-.11	1.67	-.01	-.063	.950	.03
RtSC	-.48	.35	-.22	-1.344	.188	-.22

$R^2 = .31$ , adjusted  $R^2 = .16$ ,  $F(7,39) = 2,03$ ,  $p = .082$

Similar results were found in other types of risk behaviour (alcohol and marijuana use) with a very limited effect of DMC. 57 students (27.8%) had used marijuana at least once and two decision-making competencies (Recognizing Social Norms and Consistency in Risk Perception) were found to be significant predictors, while gender was not. No DMC was found to be a significant predictor of alcohol use (represented by being drunk at least once in the last four weeks; 91 students, 44.8%). Males were found to have higher occurrence of alcohol use than females.

Table 3. Binary logistic regression predicting occurrence of marijuana use (marijuana ever).

	B	SE	Wald	df	P	Exp(B)
Constant	-3.26	2.53				
Gender (M=1)	.42	.37	1.285	1	.257	1.520
RtF	.05	.41	.017	1	.897	1.055
RSN	2.01	.89	5.060	1	.024	7.443
UOC	1.82	2.25	.657	1	.418	6.182
ADR	.30	.87	.118	1	.731	1.350
CiRP	-3.49	1.21	8.308	1	.004	.031
RtSC	.42	.24	3.113	1	.078	1.529

$R^2 = .10$  (Cox & Snell),  $.14$  (Nagelkerke). Model  $\chi^2(7) = 20,818$ ,  $p = .004$

Table 4. Binary logistic regression predicting occurrence of alcohol use (drunk at least once in the last 4 weeks).

	B	SE	Wald	df	P	Exp(B)
Constant	4.72	2.24				
Gender (M=1)	.71	.323	4.718	1	.030	2.035
RtF	-.47	.35	1.753	1	.185	.626
RSN	1.23	.72	2.913	1	.088	3.430
UOC	-2.79	1.87	2.218	1	.136	.061
ADR	.34	.78	.192	1	.662	1.407
CiRP	-1.25	1.07	1.374	1	.241	.286
RtSC	-.14	.20	.511	1	.475	.865

$R^2 = .06$  (Cox & Snell),  $.08$  (Nagelkerke). Model  $\chi^2(7) = 12.079$ ,  $p = .098$

## 5. CONCLUSION

The university period (early adulthood) can be viewed as a time of rapid change and a higher risk of negative phenomena. Decision-making competencies and gender were examined as possible predictors of certain types of risk behaviour amongst university students. While decision-making characteristics are viewed as an important set of skills to make proper decisions about risk taking, the present results provide the opposite view. Decision-making competencies seem to be a poor predictor of risk behaviour, which is surprising in regard to the used subscales. All of them were expected to be negatively related to risk behaviour as hypothesised protective factors and skills helping to decide in ambiguous situations. The same is valid for gender when gender differences were confirmed only in half of the investigated models.

The first of the inspected competencies – Resistance to Framing – is the ability to not rely on event description but on real facts. While it was supposed to prevent risk behaviour as a skill helping to consider real consequences and not unrelated aspects, this was not confirmed by the current research. The same was found for the other subscales that examined information processing. Applying Decision Rules is the competence to use these rules (e.g. judgement according to more criteria) properly and was also supposed to help in risky situations. These two competencies seem to be very general and do not manifest in certain situations. The factors connected with risk behaviour are probably not purely cognitive and it is likely that personality and social ones play a more central role in the studied types of the risk behaviour. The same was found for Under/overconfidence as the ability to assess one's own knowledge. The absence of this relationship can perhaps be explained by the two opposite functions of this ability. People more confident in their own beliefs may refuse the persuasion of others to change their opinions in risk behaviour in a positive (engagement) as well as negative (rejection) way so higher levels of this competence can be related to the presence and also the absence of risk behaviour. This is in concordance with the well-known findings of McGuire (1968), which reported higher persuasibility in people with medium self-esteem and a lower, level in people with the extreme (low or high) self-esteem. A pattern similar to the previous ones can be seen in the next subscale – Recognizing Social Norms although it was a significant predictor in one case. Respondents with higher scores in this component have a higher probability to use marihuana in comparison with those with lower scores. The evaluation of this subscale as nonsignificant can probably explained similarly as by the under/overconfidence (understanding of peers' norms can mean the tendency to engage as well as to avoid risk behaviour). The competence of knowing other people's attitudes can lead to following them in either a positive or negative way as the influence of peer pressure on risk behaviour has often been confirmed (e.g. Lewis & Lewis, 1984; Cherie & Berhane, 2012).

The next subscale, Consistency in Risk Perception, seems to be very close to risk behaviour (and risk perception), although it is a slightly different construct. The main object of interest in this scale is not risk perception alone but the consistency of risk perception alongside

time or comparing general and specific situations. The observance of these rules does not reveal the inclination of risk behaviour, only about its concordance across situations or time. It is similar to Applying Decision Rules which was also found to be a nonsignificant predictor. Thus while protective function of this component was expected at first, its non-relevant role can probably be explained similarly like by other subscales above. High scores in Consistency in Risk Perception can mean consistency in assessing the same or similar risk behaviour – always as risk or always as safe situations. The last subscale – Resistance to Sunk Costs – is a measure of the ability to abandon invested resources (time, effort, money) when it is more profitable to start from the beginning. The direct effect of this component on the initialization of risk behaviour was expected, but its non-existence can maybe be explained by the inspected tendency, which is very distant from the decision-making in risk behaviour situations. Resistance to sunk costs can mean a trend not to try something new and risky (protective role) which can bring a loss of actual assets, but also a tendency to not quit risk behaviour after starting it.

Ambiguous results were found examining the role of gender in risk behaviour. Gender was found to be a significant predictor of the nicotine dependence and alcohol use (drunk at least once in the last 4 weeks) with a higher occurrence of risk behaviour in males, but not in the case of smoking and marijuana use.

To sum up, all of the present results indicate that the role of the examined decision-making competencies is not straightforward and the interaction with other factors is of more importance. The differences with previous studies can be a result of sample characteristics or risk behaviour questions allowing in most cases to treat with only dichotomous dependent variables. Only voluntary university students completed the measures and they can differ from the others in the risk behaviour as well as in decision-making competencies. Although decision-making skills have not previously been directly examined in relation to risk behaviour, Bruine de Bruin et al. (2007) have reported fewer negative life outcomes in subjects with higher scores in decision-making competencies. The present findings are in contrast with these results and also with Parker and Fischhoff (2005) who found fewer maladaptive (risk) behaviours (antisocial behaviour, alcohol and marijuana use, risky sexual behaviour) in male adolescents with higher decision-making competencies. Risk perception and the propensity to risk taking belong to the most studied factors of risk behaviour from the decision-making area (e.g. Brewer, Weinstein, Cuite, & Herrington, 2004) and most of the used subscales have inspected the process of judgement present in risk perception. Given that only a limited number of results have confirmed the expected relationships, it is a necessity to add other cognitive and mainly social and personality factors. The examination of situational and personality characteristics in interaction with the cognitive ones can probably change the direction of the relationships.

## REFERENCES

- An, J., Sun, Y., Wang, X., Zu, P., Mai, J. C., Liang, J. P., Xu, Z. Y., Man, X. J., Mao, Y., & Tao, F. B. (2013). Tóngbàn yǐngxiǎng, fēngxiǎn juécè yǔ qīngshàonián jiànkāng wéihài xíngwéi de xiāngguān xìng [Correlation of resistance to peer pressure and risky decision-making with adolescent health risk behaviors]. *Zhonghua Yu Fang Yi Xue Za Zhi*, 47(3), 238-244.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480.
- Bavolar, J. (2013). Validation of the Adult Decision-Making Competence in Slovak students. *Judgment and Decision Making*, 8(3), 386-392.
- Bindah, E. V., & Othman, M. N. (2011). The role of parental and peer smoking influences in the development of adolescents' smoking behavior: A review. *Journal of Applied Sciences Research*, 7(11), 1054.
- Brewer, N. T., Weinstein, N. D., Cuite, C. L., & Herrington, J. E. (2004). Risk perceptions and their relation to risk behavior. *Annals of Behavioral Medicine*, 27(2), 125-130.
- Bruine de Bruin, W., Parker, A. M., & Fischhoff, B. (2007). Individual differences in adult decision making competence. *Journal of Personality and Social Psychology*, 92(5), 938-956.
- Cherie, A., & Berhane, Y. (2012). Peer pressure is the prime driver of risky sexual behaviors among school adolescents in Addis Ababa, Ethiopia. *World Journal of AIDS*, 2(3), 159-164.

- Del Missier, F., Mäntylä, T., & Bruine de Bruin, W. (2010). Executive functions in decision making: An individual differences approach. *Thinking and Reasoning*, 16(2), 69-97.
- Finucane, M. L., & Lees, N. B. (2005, November). *Decision-making competence of older adults: Models and methods*. Paper presented at the National Research Council Workshop on Decision-making by Older Adults, Washington, D.C.
- Gigerenzer, G., Hoffrage, U., & Kleinbölting, H. (1991). Probabilistic mental models: A Brunswikian theory of confidence. *Psychological Review*, 98(4), 506-528.
- Gittler, J., Quigley-Rick, M., & Saks, M. J. (1990). *Adolescent health care decision making: The law and public policy*. Retrieved from ERIC database. (ED 302 619)
- Grisso, T., & Appelbaum, P. (1998). *Assessing competence to consent to treatment: A guide for physicians and other health care professionals*. New York, NY: Oxford University Press.
- Heatherington, T. F., Kozlowski, L. T., Frecker, R. C., & Fagerstrom, K. O. (1991). The Fagerstrom Test for Nicotine Dependence: A revision of the Fagerstrom Tolerance Questionnaire. *British Journal of Addiction*, 86(9), 1119-1127.
- Hodne, C. J. (1995). Medical decision making. In M. W. O'Hara, R. C. Reiter, S. R. Johnson, A. Milburn, & J. Engeldinger (Eds.), *Psychological Aspects of Women's Reproductive Health* (pp. 267-290). New York, NY: Springer.
- Kahneman, D., & Tversky, A. (1972) Subjective probability: A judgment of representativeness. *Cognitive Psychology*, 3(3), 430-454.
- Lewis, C. E., & Lewis, M. A. (1984). Peer pressure and risk-taking behaviors in children. *American Journal of Public Health*, 74(6), 580-584.
- Madarasová-Gecková, A., Stewart, R., van Dijk, J. P., Orosová, O., Groothoff, J. W., & Post, D. (2005). Influence of socio-economic status, parents and peers on smoking behaviour of adolescents. *European Addiction Research*, 11(4), 204-209.
- McGuire, W. J. (1968). Personality and susceptibility to social influence. In E. F. Borgatta, & W. W. Lambert (Eds.), *Handbook of Personality Theory and Research* (pp. 1130-1187). Chicago, IL: Rand McNally.
- Nolen-Hoeksema, S., & Hilt, L. (2006). Possible contributors to the gender differences in alcohol use and problems. *Journal of General Psychology*, 133(4), 357-374.
- Parker, A. M., & Fischhoff, B. (2005). Decision-making competence: External validation through an individual-differences approach. *Journal of Behavioral Decision Making*, 18(1), 1-27.
- Sjoberg, L. (2000) Factors in risk perception. *Risk Analysis*, 20(1), 1-11.
- Slovic, P. (1987). Perception of risk. *Science*, 236(4799), 280-285.
- Szrek, H., Chao, L.-W., Ramlagan, S., & Peltzer, K. (2012). Predicting (un)healthy behavior: A comparison of risk-taking propensity measures. *Judgment and Decision Making*, 7(6), 716-727.
- Vlek, C., & Stallen, P.-J. (1981). Judging risks and benefits in the small and in the large. *Organizational Behavior and Human Performance*, 28(2), 235-271.
- Wilsnack, R. W., Vogeltanz, N. D., Wilsnack, S. C., Harris, T. R., Ahlström, S., Bondy, S., Csémy, L., Ferrence, R., Ferris, J., Fleming, J., Graham, K., Greenfield, T., Guyon, L., Haavio-Mannila, E., Kellner, F., Knibbe, R., Kubicka, L., Loukomskaja, M., Mustonen, H., Nadeau, L., Narusk, A., Neve, R., Rahav, G., Spak, F., Teichman, M., Trocki, K., Webster, I., & Weiss, S. (2000). Gender differences in alcohol consumption and adverse drinking consequences: Cross-cultural patterns. *Addiction*, 95(2), 251-265.
- Yates, J. F. (Ed.). (1992). *Risk-taking behavior*. Chichester, UK: John Wiley & Sons.

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## Chapter 14

### THE GLOBAL FUNCTIONING EVALUATION: KENNEDY AXIS V COMPARED WITH WHODAS 2.0

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#### ABSTRACT

The study aims to compare psychometric properties and clinical utility of Kennedy Axis V (K Axis) and 12-items version of the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0), a comparable version of the 36-items one included in DSM-5, comparing them with other significant instruments for the assessment of personality. A sample of 25 clinical inpatients of a therapeutic community in Northern Italy was assessed with different tools: K Axis, WHODAS 2.0, IPO, SCL-90-R and SIPP-118. K Axis showed low internal consistency, unlike WHODAS 2.0. Moreover, significant correlations were found between both WHODAS 2.0 and K Axis and IPO and SIPP-118. However, no significant correlations emerged between K Axis and WHODAS 2.0. Even if further investigation will be needed, such as the increase of the sample and the update of the WHODAS version, K Axis and WHODAS 2.0 has proven to be useful tools for the evaluation of global functioning; however, while WHODAS is more consistent from a psychometric point of view, K Axis presents a multidimensional view of the functioning of the patient.

*Keywords:* global functioning, K Axis, Axis V, WHODAS, DSM.

#### 1. INTRODUCTION

For clinicians and researchers involved in the assessment of personality disorders, the severity of functioning is one of the most important predictors of consequent dysfunctions and of treatment outcome (Gunderson, Links, & Reich, 1991; Tyrer, 2005). The discrimination between global functioning evaluation and its severity has always been an elective issue because of the increasing diffusion of “difficult-to-treat” patients (Henggeler & Santos, 1997) and the related need to find specific and reproducible measures (Rey, Stewart, Plapp, Bashir, & Richards, 1988). Some authors have proposed to include the criteria of psychosocial functioning, personality style and degree of disability in order to classify psychiatric and personality disorders (Crawford, Koldobsky, Mulder, & Tyrer, 2011; Warren et al., 2003).

The first standardized measure of adaptive functioning was the Health-Sickness Rating Scale (HSRS – Luborsky, 1962), introduced in 1962 and later replaced by the Global Assessment Scale (GAS) through the revision made by Endicott, Spitzer, Fleiss, & Cohen (1976). The Global Assessment of Functioning scale (GAF – DSM-IV-TR, American Psychiatric Association [APA], 2000) included in Axis V of DSM-III-R (APA, 1987) and DSM-IV (APA, 1994; APA, 2000) has become the main and most widely used tool for the assessment of psychosocial functioning and symptomatic severity, despite some criticisms regarding its construct and concurrent validity (Goldman, Skodol, & Lave, 1992; Beitchman et al., 2001; Startup, Jackson, & Bendix, 2002). The latest edition of the Diagnostic and Statistical Manual of Mental Disorders, DSM-5 (APA, 2013), has encouraged further reflections on this issue, introducing a measurement of disability, the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0 – World Health Organization [WHO], 1988, 2001), as an alternative to GAF. WHODAS 2.0 is a self-administered and one-dimensional questionnaire for the evaluation of physical and mental disability. At the same time, DSM-5 has focused on the importance of the assessment of the level of impairment in personality functioning, which is requested in Criterion A of the alternative model for personality disorders proposed in Section III. However, the relationship between the level of impairment of the personality style and the



degree of disability, considered on a phenomenological level of severity in personality organization, hasn't been investigated yet.

## 2. BACKGROUND

Before the introduction of DSM-5, in order to overcome the limitations of the one-dimensional index of GAF, James Kennedy (2003, 2007) introduced the Kennedy Axis V (K Axis), as an alternative to GAF, for measuring the global functioning of psychiatric patients.

K Axis is a multidimensional instrument, consisting of seven subscales, that measures impairment, symptoms and social as well as professional abilities of the patient along a 100 points continuum and has already been tested as a good alternative to GAF in previous research (Kennedy, 2003, 2007; Bonalume, Crippa, & Giromini, 2007; Mundo, Bonalume, Del Corno, Madeddu, & Lang, 2010). Moreover, previous studies have also shown significant inter-raters reliability even in multi-professional teams (Higgins & Purvis, 2000; Bonalume et al., 2007, Mundo et al., 2010; Faay, Van de Sande, Gooskens, & Hafsteinsdóttir, 2013; Van de Sande et al., 2013).

Comparing K Axis with other instruments that measure global functioning, such as GAF, the Health of Nations Outcome Scale (HoNOS – Wing et al., 1998), the Brief Psychiatric Rating Scale (BPRS – Overall & Gorham, 1962) and the Skills Assessment and Definition of Goals (VADO – Morosini, Magliano, & Brambilla, 2002) demonstrated the concurrent validity of the tool. The results have shown high correlation of K Axis both with HoNOS and GAF, with an exception for the Substance Abuse, Medical and Ancillary Impairment Axis.

K Axis is therefore able to provide a complex and multidimensional assessment of the individual functioning and also a quick measurement of changes during the treatment.

The introduction of scales in order to assess the effects of substance abuse and physical impairment makes K Axis also very useful in residential treatment settings for patients with dual diagnosis (Mundo et al., 2010).

K Axis has introduced a multidimensional assessment that can express the complexity of the personality style and also its impairment in the daily life functioning of the patient. On the contrary, WHODAS 2.0 is still another one-dimensional measure of impairment of the patients' functioning and it does not investigate the complexity of the abilities and the resources of the patient itself.

Given the limitations of the WHODAS 2.0, the purpose of this study was to compare K Axis and WHODAS 2.0, and to examine their relationships with some measures of the level of impairment of the personality style.

## 3. OBJECTIVES

The main intent of the study was to investigate both WHODAS 2.0 and K Axis and their relationships with the level of severity and impairment of personality organization.

The first aim was to investigate and to compare psychometric properties of WHODAS 2.0 and K Axis. In particular, we analyzed reliability and validity of both tools. We have suggested significant correlations between some items of WHODAS 2.0 related to social and life activities and the scales of Social and Occupational Skills in K Axis.

The second aim was to explore the relationships between the level of psychosocial functioning and the level of impairment of personality organization, comparing both K Axis and WHODAS 2.0 measures with other self-reports for the assessment of symptoms and personality structure, such as the Inventory of Personality Organization (IPO – Kernberg & Clarkin, 1995), the Symptomatic Checklist (SCL-90R – Derogatis, 1977) and the Severity Indices of Personality Problems (SIPP-118 – Verheul et al, 2008). In this regard, we have assumed that K Axis might be able to describe the phenomenological level of those social and relational skills coming from intrapsychic functions of the personality organization (such as affect regulation, stability of self/other image and integration of identity, and level of defenses) evaluated by these self-reports. Especially, we have expected significant correlations between K Axis scales and other dimensions, measured by IPO and SIPP-118, such as interpersonal skills, level of identity

integration, stability of self-image and quality of defensive mechanisms. We also have estimated that Axis I - Psychological impairment would correlate with SCL-90-R global scales. On the contrary, we have assumed that WHODAS 2.0 would correlate with the measures of symptoms of SCL-90-R but not with the level of personality impairment, the level of defense and of the affect regulation measured by IPO and SIPP-118.

#### **4. PARTICIPANTS**

The sample of the study comprised 25 inpatients, from 16 to 53 years (Mean Age=38,14; SD=9.98; Male=17; Female=5), who were living in a therapeutic residential center, located in Northern Italy, specialized in Dialectical Behavioral Therapy (DBT – Linehan, 1993), a method structured according to a hierarchical organization of therapeutic goals and a specific monitoring during the therapeutic and residential treatment. Inpatients were mainly unemployed (61%) and single (66%); they mostly had a dual diagnosis of a psychiatric disorder and alcohol or drugs abuse (Dual Diagnosis=52%). The most of them had been diagnosed with a personality disorder: 32% NOS, 25% borderline and 13% antisocial disorders.

#### **5. METHODS**

All the clinical subjects were tested within the first month after the admission with K Axis, WHODAS 2.0, SCL-90-R, SIPP-118 and IPO. Patients, as required by the manuals, filled WHODAS 2.0 and the other self-reports while K Axis was scored according to the information collected both from the medical records and the clinical team. Brief descriptions of the administered tools are shown below.

##### **5.1. Kennedy Axis V (Kennedy, 2003, 2007)**

K Axis is an assessment measure of global functioning; it comprises seven subscales: (1) Psychological Impairment; it examines the severity of symptoms and coping skills, including the degree of motivation and social withdrawal; (2) Social Skills; it refers to the real capabilities of the patient, such as warmth, empathy and respect for social norms and not his reluctance to use them or the limitations resulting from symptoms; (3) Violence; intentional and self/against other directed behaviors, not in response to substance abuse or other psychopathological conditions such as depression or paranoia; (4) Occupational Skills; it includes employment and study; (5) Substance Abuse; (6) Medical Impairment; (7) Ancillary Impairment; it is due to environmental, legal or economic stressors.

Scores range from 0 to 100, with anchor points at each 10s, which describe specific level of functioning. K Axis also provides two global indexes: the GAF-Equivalent (GAF-Eq.), the average score of the first four scales, and the Dangerousness Level (DL), the lowest score of the seven scales. Its psychometric properties were demonstrated satisfactory in several studies (Higgins & Purvis, 2000; Bonalume et al., 2007; Mundo et al., 2010; Faay et al., 2013; Van de Sande et al., 2013).

##### **5.2. World Health Organization Disability Assessment Schedule 2.0 (WHO, 1988, 2001) – 12 items Version**

The World Health Organization Disability Assessment Schedule 2.0 is a questionnaire that assesses the patient's perception of physical and mental disability. The items refer to the last thirty days of life and treatment and explore six areas: (1) Cognition, (2) Mobility, (3) Self-care, (4) Getting along, (5) Life activities, (6) Participation. Measurement is performed using a 5-point Likert scale, rating from “none” to “extreme” difficulty perceived by the subject. WHODAS 2.0 is available both in a Self-administered and an Interviewer-administered version. DSM-5 includes the 36 items version, while this study, which began prior to its publication, has chosen the 12-items version (Federici, Meloni, & Lo Presti, 2009; Luciano et al., 2010).

##### **5.3. Symptom Checklist-90-R (Derogatis, 1977)**

SCL-90-R is a self-administered questionnaire that measures psychological and physical symptoms in the last week, on a 5-point scale, from “no symptoms” to “many

symptoms”. Scores are grouped in nine categories: somatization, obsessive-compulsive, social insecurity, depression, anxiety, hostility, phobic fear, paranoid thinking and psychoticism. It is also possible to obtain three global indexes: the Global Severity Index (GSI), corresponding to the average score of all the items, the Positive Symptom Total (PST), which is the number of items with a score different from zero, and the Positive Symptom Distress Index (PSDI), equivalent to the sum of the scores divided by the PST. The psychometric properties have been investigated in several studies and resulted satisfactory both in clinical and control populations (Derogatis, 1977; Müller, Postert, Beyer, Furniss, & Achtergarde, 2010).

#### **5.4. Inventory of Personality Organization (Kernberg & Clarkin, 1995)**

This self-report is an operationalization of the dimensions investigated in Kernberg’s structural model (1984). It consists of 155 items, 57 of which are grouped in three main subscales: Identity Diffusion, Primitive Defenses and Reality Testing. The other items measure additional aspects of personality’s functioning: aggression, coping strategies, moral values and object relations. In our study, we used the 57 items version, taking into account the three main subscales. Items are evaluated on a 5-point Likert scale, from “never true” to “always true”. In addition to the original version (Lenzenweger, Clarkin, Fertuck, Kernberg, & Foelsch, 2001), several translated versions of the IPO are available and are validated with satisfactory psychometric properties both within clinical and control populations (Normandin et al., 2002; Ben Dov et al., 2002; Igarashi et al., 2009). An abridged version of the tool has also been validated (IPO-R – Smits, Vernote, Claes, & Vertommen, 2009).

#### **5.5. Severity Indices of Personality Problems 118 (Verheul, et al., 2008)**

This self-report questionnaire consists of 118 items, measured with a 4-point Likert scale, where “4” indicates the maximum score correlation. The items intend to investigate the adaptive capacities of the subject during the last three months considering sixteen dimensions: emotion regulation, aggression regulation, effortful control, frustration tolerance, self-respect, stable self-image, self-reflexive functioning, enjoyment, purposefulness, responsible industry, trustworthiness, intimacy, enduring relationships, feeling recognized, cooperation and respect. Higher-level macro-dimensions are also highlighted: Self-control, Identity Integration, Relational Capacities, Responsibility and Social Concordance. One of the advantages of this instrument is its ability to discriminate clinical subjects from control groups according with the severity of global functioning. Reliability and validity of the tool have proven to be satisfactory (Verheul, et al., 2008; Feenstra, Hutsebaut, Verheul, & Busschbach, 2011).

## **6. DATA ANALYSIS**

Statistical analyses were performed using SPSS software (Barbaranelli & D’Olimpo, 2007). Internal consistency was investigated using Cronbach’s Alpha and Intraclass Correlation Coefficient (ICC). The comparisons between K Axis, WHODAS 2.0 and the other self-report measures were investigated through the Spearman’s Rho non-parametric correlation coefficient. Finally, the differences between WHODAS 2.0 and K Axis measures according to different diagnosis groups and between patients, with or without a dual diagnosis, were analyzed with the non-parametric test of Kruskal-Wallis for k-samples and the Mann-Whitney test for two independent samples.

## **7. RESULTS**

### **7.1. Basic statistics**

The mean values of K Axis scores ranged respectively from a moderate to a severe level of impairment (GAF-EQ: M=62.38, SD=11.11 – DL: M=46.25, SD=10.84), with the exception of the averages of occupational skills, medical and ancillary impairment subscales. WHODAS 2.0 and the other self-reports scores confirmed the level of severity.

### 7.2. K Axis and WHODAS 2.0 internal consistency

The internal consistency and the intraclass correlation coefficients of WHODAS 2.0 resulted both good (Cronbach's  $\alpha=0.893$ ; single measures ICC=0.410, average measures ICC=0.893). The same analyses for K Axis data were less satisfactory for GAF-Eq (Cronbach's  $\alpha=0.614$ ; single measures ICC=0.185, average measures ICC=0.614). The only significant correlations were found between Axis I – Psychological Impairment and Axis II – Social Skills ( $\rho_s=0.680, p=.000$ ) and between Axis III – Violence and Axis VII – Ancillary Impairments ( $\rho_s=0.638, p=.001$ ).

### 7.3. Construct validity's analysis: K Axis, WHODAS 2.0, SCL-90-R, IPO and SIPP-118

Neither significant correlations were found between K Axis scales and the items of WHODAS 2.0, nor between global indexes of SCL-90-R and the single subscales of K Axis.

According to the comparison between the K Axis scales and other measures, negative and significant correlations were found between GAF-Eq and all IPO's dimensions, while only the dimension of Identity Diffusion correlated negatively with Dangerousness Level in K Axis. In relation to the single-axis correlations, we found that Psychological Impairment, Social Skills and Violence negatively and significantly correlate with Primitive Defenses, while, in addition, only Axis I correlates with the remaining dimensions of IPO. Specific results are shown in Table 1.

Table 1. Spearman correlations between K Axis and IPO scores (n=25).

K AXIS SCORES		PRIMITIVE DEFENSES	IDENTITY DIFFUSION	REALITY TESTING
GAF Equivalent	$\rho_s^*$	-.709	-.531	-.459
	<i>p</i>	.000	.011	.032
Dangerousness Level	$\rho_s$	-.281	-.485	-.341
	<i>p</i>	.205	.022	.121
Psychological Impairment (Axis I)	$\rho_s$	-.645	-.539	-.534
	<i>p</i>	.001	.01	.01
Social Skills (Axis II)	$\rho_s$	-.527	-.366	-.337
	<i>p</i>	.012	.094	.125
Violence (Axis III)	$\rho_s$	-.439	-.29	-.196
	<i>p</i>	.041	.191	.382
Occupational Skills (Axis IV)	$\rho_s$	-.37	-.103	-.095
	<i>p</i>	.09	.649	.674
Substance Abuse (Axis V)	$\rho_s$	-.167	-.408	-.214
	<i>p</i>	.458	.06	.339
Medical Impairment (Axis VI)	$\rho_s$	-.269	-.311	-.264
	<i>p</i>	.226	.159	.235
Ancillary Impairment (Axis VII)	$\rho_s$	-.134	.17	.147
	<i>p</i>	.553	.45	.514

Note: \*  $\rho_s$ =Spearman's Rho

There were significant correlations between K Axis single scales and some SIPP-118 dimensions: Axis II correlated with "Frustration Tolerance" ( $\rho_s=0.519, p=0.013$ ), "Feeling Recognized" ( $\rho_s=0.611, p=0.003$ ), "Purposefulness" ( $\rho_s=0.446, p=0.038$ ) and "Enduring Relations" ( $\rho_s=0.554, p=0.007$ ), while Axis VI correlated with "Emotion Regulation" ( $\rho_s=0.430, p=0.046$ ) and "Enjoyment" ( $\rho_s=0.465, p=0.029$ ).

Some significant and positive correlations between the macro-dimensions of SIPP-118 and K Axis scales and indexes were found. These results are shown in Table 2.

Table 2. Spearman correlations between K Axis macro-dimensions and SIPP-118 scores (n=25).

SIPP-118 SCALES		GAF-Eq.	DL	Axis I	Axis II	Axis III	Axis IV	Axis V	Axis VI	Axis VII
Self-Control	$\rho_s$	.392	<b>.582**</b>	.291	<b>.434*</b>	.286	-.18	.401	.382	-.153
	<i>p</i>	.071	.004	.189	.044	.197	.424	.064	.08	.498
Social Concordance	$\rho_s$	.319	<b>.519*</b>	.226	.373	.197	.005	<b>.433*</b>	.216	.011
	<i>p</i>	.148	.013	.311	.087	.38	.098	.044	.335	.96
Identity Integration	$\rho_s$	.413	.42	<b>.454*</b>	.422	.21	.069	.342	.33	-.228
	<i>p</i>	.056	.052	.034	.05	.349	.761	.119	.133	.307
Relational Capacities	$\rho_s$	<b>.423*</b>	.248	.4	<b>.508*</b>	.279	.142	.184	.021	-.123
	<i>p</i>	.05	.266	.065	.016	.209	.528	.411	.926	.586
Responsibility	$\rho_s$	.371	.387	.281	<b>.429*</b>	.32	.04	.34	.161	.036
	<i>p</i>	.09	.075	.205	.046	.147	.86	.122	.475	.873

Note:  $\rho_s$  Spearman's Rho  
 \*\**p*<.01 \**p*<.05

According to the comparison between WHODAS 2.0 and the other measures, we found positive and significant correlations between WHODAS 2.0 total index and IPO's dimensions of Primitive Defenses and Reality Testing, as we can see in Table 3. WHODAS 2.0 was also negatively correlated with Self Control and Social concordance. No relevant correlations were found between WHODAS 2.0 and SIPP-118 sub-dimensions.

Table 3. Spearman correlations between WHODAS 2.0 and SIPP-118 and IPO indexes (n=25).

WHODAS 2.0 (TOTAL INDEX)		
	$\rho_s$	<i>p</i>
<b>IPO INDEXES</b>		
Identity	.407	<b>.067</b>
Primitive defenses	.560	<b>.008**</b>
Reality testing	.634	<b>.002**</b>
<b>SIPP-118</b>		
Self-Control	-.511	<b>.018*</b>
Social Concordance	-.496	<b>.022*</b>
Identity Integration	-.419	<b>.058</b>
Relational Capacities	-.340	<b>.131</b>
Responsibility	-.318	<b>.168</b>

Note:  $\rho_s$  Spearman's Rho  
 \*\**p*<.01 \**p*<.05

#### 7.4. K Axis scores differences in diagnostic groups

The results of Mann-Whitney measures for two independent samples of “dual diagnosed” and of patients with single diagnosis, demonstrated no significant differences both in the global index and subscales scores of the K Axis and in the WHODAS 2.0 measures.

In the same way, the results of Kruskal-Wallis analysis revealed no relevant differences in both K Axis and WHODAS 2.0 scores, according to the specific personality disorders.

## 8. CONCLUSION/DISCUSSION

The limitations of the study, associated with the scarce size of the sample, forced to use mainly non-parametric tests and did not allow generalizing our results. However, as expected,

the results demonstrate that the “global functioning” measures, for both K Axis and WHODAS 2.0 scores, are significantly correlated with specific aspects of the personality structure and its level of impairment measured by IPO and SIPP-118.

These results demonstrate that the construct of “global functioning” is related to different aspects of personality functioning, resources, functions, impairment and abilities. Therefore, global functioning seems to be less associated with dual diagnosis or type of personality disorders.

In details, K Axis global score, GAF-Equivalent, correlates with all the dimensions of IPO, as well as, more specifically, the Axes I (Psychological Impairment), II (Social Skills) and III (Violence) with the measure of Primitive Defenses. On the contrary, WHODAS 2.0 global score correlates with Primitive Defenses and Reality testing indexes. Similarly, both K Axis and WHODAS 2.0 significantly correlate with some of the personality dimensions and resources investigated by SIPP-118. Specifically, K Axis global scores and its subscales correlate both with global measures of SIPP-118 (Self-Control, Social Concordance, Relational Capabilities) and its micro-dimensions (Frustration Tolerance, Feeling Recognized, Purposefulness, Enduring Relations, Emotion Regulation).

The dimensions of enjoyment and emotion regulation seem to change according to medical impairment; improvements in daily life functioning may include most enjoyable activities and greater management of emotions that may improve clinical conditions. The data reveals that the Dangerous Level (DL) may be associated with the abilities of these patients to control themselves and to create conditions for good social concordance. In line with that, K Axis DL measure may be very useful in clinical setting in order to measure independently symptomatic and maladaptive functioning and to be able to discriminate those from the adaptive structure, according to the personality functioning Similarity; on the other hand, WHODAS 2.0 results related to the Self Control and Social Concordance, but it is not associated with the sub dimensional scores of SIPP-118. We hypothesized that the multidimensional structure of K Axis would also allow it to capture associations with more specific functions of personality organization. However as expected, from a psychometric point of view, as expected, K Axis displayed very low levels of internal consistency, probably because of its multidimensionality and due to the specificity of its axis in discriminating different areas of the individual global functioning.

On the contrary, WHODAS 2.0 seems to provide a more valid and consistent measure, even if it uses a one-dimensional view of the impairment of the patient and it is limited to the evaluation of the impairment and the disability of the patient. According to that, although both K Axis and WHODAS 2.0 could potentially measure behavioral and phenomenological aspects of the dynamic organization of personality, as investigated by IPO, and the personality functions, as evaluated by SIPP-118, the results reveal the absence of significant correlations between them: thus K Axis and WHODAS 2.0 probably measure different constructs and dimensions of functioning. According to this, they may be useful both in psychiatric and non-psychiatric settings. However, K Axis may better describe both the level of abilities and impairment in a multidimensional way, while WHODAS may be more consistent than K Axis, but limited in measuring disabilities.

## 9. FUTURE RESEARCH DIRECTIONS

This study offers different clinical information in the area of psychological assessment, but it is limited by the small size of the sample; it is our purpose to increase the sample in order to explore more data and to be able to generalize them.

This WHODAS 2.0 version could also be updated with the new one included in DSM-5 (APA, 2013).

Another purpose of investigation might be to explore the significant results found between single scales, such as “Emotional Regulation” and “Enjoyment”, in SIPP-118, and the “Medical Impairment” in K Axis. This aim might be really interesting and useful due to its promising clinical applications.

## REFERENCES

- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders, DSM-III-TR* (3rd ed, text. rev.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders, DSM-IV* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, DSM-IV-TR* (4th ed., text. rev.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders, DSM-5* (5th ed.). Washington, DC: Author.
- Barbaranelli, C., & D'Olimpo, F. (2007). *Analisi dei dati con SPSS I: Le analisi di base* [Data Analysis with SPSS I: The basic analysis]. Milan, Italy: LED Edizione Universale di Lettere Economia e Diritto.
- Beitchman, J. H., Adlaf, E. M., Douglas, L., Atkinson, L., Young, A., Johnson, C. J., Escobar, M., & Wilson, B. (2001). Comorbidity of psychiatric and substance use disorders in late adolescence: A cluster analytic approach. *American Journal of Drug and Alcohol Abuse*, 27(3), 421-440.
- Ben Dov, P., Martínez, C., Núñez, C., Ortega, P., Oksenberg, T., Morales, A. M., & Florenzano, R. (2002). El Inventario de Organización de la Personalidad (IPO): Sus características y aplicaciones [The Inventory of Personality Organization (IPO): Its characteristics and applications.]. *Terapia Psicológica*, 20(1), 41-51.
- Bonalume, L., Crippa, F., & Giromini, L. (2007). L'applicazione dell'Asse K a un campione di soggetti italiani [The application of the Axis K in a sample of Italian subjects.]. In Kennedy, J. A. (Ed.). *Il funzionamento del paziente psichiatrico: Manuale di valutazione* [The functioning of the psychiatric patient: Assessment manual] (pp. 279-286). Milan, Italy: Raffaello Cortina Editore. (Original work published 2003)
- Crawford, M. J., Koldobsky, N., Mulder, R., & Tyrer, P. (2011). Classifying personality disorder according to severity. *Journal of Personality Disorders*, 25(3), 321-330.
- Derogatis, L. R. (1977). *SCL-90: Administration, scoring and procedures manual-I for the R(evised) version and other instruments of the psychopathology rating scale series*. Baltimore, MD: Clinical Psychometrics Research Unit, Johns Hopkins University School of Medicine.
- Endicott, J., Spitzer, R., Fleiss, J., & Cohen, J. (1976). The Global Assessment Scale. A procedure for measuring overall severity of psychiatric disturbance. *Archives of General Psychiatry*, 33(6), 766-771.
- Faay, M. D. M., Van de Sande, R., Gooskens, F., & Hafsteinsdóttir, T. B. (2013). Kennedy Axis V: Clinimetric properties assessed by mental health nurses. *International Journal of Mental Health Nursing*, 22(5), 453-464.
- Federici, S., Meloni, F., & Lo Presti, A. (2009). International literature Review on WHODAS II (World Health Organization Disability Assessment Schedule II). *Life Span and Disability*, 12(1), 83-100.
- Feenstra, D. J., Hutsebaut, J., Verheul, R., & Busschbach, J. J. (2011). Severity Indices of Personality Problems (SIPP-118) in adolescents: Reliability and validity. *Psychological assessment*, 23(3), 646-655.
- Goldman, H. H., Skodol, A. E., & Lave, T. R. (1992). Revising Axis V for DSM-IV: A review of measures of social functioning. *American Journal of Psychiatry*, 149(9), 1148-1156.
- Gunderson, J. G., Links, P. S., & Reich, J. H. (1991). Competing models of personality disorders. *Journal of Personality Disorder*, 5(1), 60-68.
- Henggeler, S. W., & Santos, A. B. (1997). *Innovative approaches for "difficult-to-treat" populations*. Washington, DC: American Psychiatric Press.
- Higgins, J., & Purvis K. (2000). A comparison of the Kennedy Axis V and the Global Assessment of Functioning Scale. *Journal of Psychiatric Practice*, 6(2), 84-90.
- Igarashi, H., Kikuchi, H., Kano, R., Mitoma, H., Shono, M., Hasui, C., & Kitamura, T. (2009). The Inventory of Personality Organization: Its psychometric properties among student and clinical population in Japan. *Annals of General Psychiatry*, 8(9), 1-21.
- Kennedy, J. A. (2003). *Mastering the Kennedy Axis V: A new psychiatric assessment of patient functioning*. Arlington, VA: American Psychiatric Publishing.
- Kennedy, J. A. (2007). *Mastering the Kennedy Axis V* (2nd ed.). Washington, DC: American Psychiatric Publishing.
- Kernberg, O. F. (1984). *Severe personality disorders: Psychotherapeutic strategies*. New Haven, CT: Yale University Press.
- Kernberg, O. F., & Clarkin, J. F. (1995). *The Inventory of Personality Organization*. White Plains, NY: The New York Hospital-Cornell Medical Center.

- Lenzenweger, M. F., Clarkin, J. F., Kernberg, O. F., & Foelsch, P. A., & (2001). The Inventory of Personality organization: Psychometric properties, factorial composition, and criterion relations with affect, aggressive dyscontrol, psychosis proneness, and self-domains in a nonclinical sample. *Psychological Assessment*, 13(4), 577-591.
- Linehan, M. (1993). *Cognitive behavioral treatment of borderline personality disorders*. New York, NY: Guilford Press.
- Luborsky, L. (1962). Clinicians' judgments of mental health: A proposed scale. *Archives of General Psychiatry*, 7(6), 407-417.
- Luciano, J. V., Ayuso-Mateos, J. L., Aguado, J., Fernandez, A., Serrano-Blanco, A., Roca, M., & Haro, J. M. (2010). The 12-item World Health Organization Disability Assessment Schedule II (WHO-DAS II): A non-parametric item response analysis. *BMC Medical Research Methodology*, 10, 45-53.
- Morosini, P., Magliano, L., & Brambilla, L. (2002) *Vado. Manuale per la riabilitazione in psichiatria* [Vado. Manual for rehabilitation in psychiatry]. Centro Studi Erickson.
- Müller, J. M., Postert, C., Beyer, T., Furniss, T., & Achtergarde, S. (2010). Comparison of eleven short versions of the Symptom Checklist 90-Revised (SCL-90-R) for use in the assessment of general psychopathology. *Journal of Psychopathology Behavior Assessment*, 32(2), 246-254.
- Mundo, E., Bonalume, L., Del Corno, F., Madeddu, F., & Lang, M. (2010). L'applicazione dell'Asse V di Kennedy a un campione clinico italiano [Kennedy Axis V assessment in an Italian outpatient and inpatient population]. *Rivista di Psichiatria*, 45(4), 214-220.
- Normandin, L., Sabourin, S., Diguier, L., Dupont, G., Poitras, K., Foelsch., P., & Clarkin, J. (2002). Évaluation de la validité théorique de l'Inventaire de l'organisation de la personnalité [Evaluation of the theoretical validity of the Inventory of Personality Organization]. *Revue Canadienne des Sciences du Comportement*, 34(1), 59-65.
- Overall, J. E., & Gorham, D. R. (1962). The Brief Psychiatric Rating Scale. *Psychological Reports*, 10, 799-812.
- Rey, J. M., Stewart, G. W., Plapp, J. M., Bashir, M. R., & Richards, I. N. (1988). Validity of Axis V of DSM-III and other measures of adaptive functioning. *Acta Psychiatrica Scandinavica*, 77(5), 535-542.
- Smits, D. J. M., Vermote, R., Claes, L., & Vertommen, H. (2009). The Inventory of Personality Organization-Revised. *European Journal of Psychological Assessment*, 25(4), 223-230.
- Sturtup, M., Jackson, M.C., & Bendix, S. (2002). The concurrent validity of the Global Assessment of Functioning (GAF). *British Journal of Clinical Psychology*, 41(pt. 4), 417-422.
- Tyrer, P. (2005). The problem of severity in the classification of personality disorder. *Journal of Personality Disorders*, 19(3), 309-314.
- Van de Sande, R., Noorthoorn, E., Wierdsma, A., Hellendoorn, E., van der Staak, C., Mulder, C. L., & Nijman, H. (2013). Association between short-term structured risk assessment outcomes and seclusion. *International Journal of Mental Health Nursing*, 22(6), 475-484.
- Verheul, R., Berghout, C. C., Dolan, C., Busschbach, J. J. V., van der Kroft, P. J. A., Bateman, A. W., & Fonagy, P. (2008). Severity Indices of Personality Problems (SIPP-118): Development, factor structure, reliability, and validity. *Psychological Assessment*, 20(1), 23-34.
- Warren, F., Preedy-Fayers, K., McGauley, G., Pickering, A., Norton, K., Geddes, J., & Dolan, B. (2003). *Review of treatments for severe personality disorder* (Home Office Online Report 30/03). London, UK: Home Office. Retrieved from [http://www.researchgate.net/publication/242477147\\_Review\\_of\\_treatments\\_for\\_severe\\_personality\\_disorder/links/0c960528bf93435399000000](http://www.researchgate.net/publication/242477147_Review_of_treatments_for_severe_personality_disorder/links/0c960528bf93435399000000)
- Wing, J. K., Beevor, A. S., Curtis, R. H., Park, S. B. G., Hadden, S. & Burns, A. (1998). Health of Nation Outcome Scales (HoNOS). Research and development. *British Journal of Psychiatry*, 172, 11-18.
- World Health Organization. (1988). *WHO Psychiatric Disability Assessment Schedule*. Geneva, Switzerland: Author.
- World Health Organization. (2001). *International classification of functioning disability and health (ICF)*. Geneva, Switzerland: Author.

## ADDITIONAL READING

- Bowling, A. (2005). *Measuring health: A review of quality of life measurement scales*. Maidenhead, UK: Open University Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.



- Dixon, S. (2004). Mastering the Kennedy Axis V: A new psychiatric assessment of patient functioning? Fundamentals of psychiatric treatment planning, second edition. *Psychiatric Services*, 55(2), 196-197.
- Hay, P., Katsikitis, M., Begg, J., Da Costa, J., & Blumenfeld, N. (2003). A two-year follow-up study and prospective evaluation of the DSM-IV Axis V. *Psychiatric Services*, 54(7), 1028-1030.
- Mezzich, J. E. (2002). Comprehensive diagnosis: A conceptual basis for future diagnostic systems. *Psychopathology*, 35(2-3), 162-165.
- Morosini, P. L., Magliano, L., Brambilla, L., Ugolini, S., & Pioli, R. (2000). Development, reliability and acceptability of a new version of the DSM-IV Social and Occupational Functioning Assessment Scale (SOFAS) to assess routine social functioning. *Acta Psychiatrica Scandinavica*, 101(4), 323-329.
- Posternak, M. A., Zimmerman, M., & Solomon, D. A. (2002). Integrating outcomes research into clinical practice. *Psychiatric Services*, 53(3), 335-336.
- Spitzer, R. L., Gibbon, M., Williams, J. B. W., & Endicott, J. (1996). Global Assessment of Functioning (GAF) scale. In L. J. Sederer, & B. Dickey (Eds.), *Outcome assessment in clinical practice* (pp. 76-78). Baltimore, MD: Williams & Wilkins.
- Stein, M. B., Hilsenroth, M., Pinsker-Aspen, J. H., & Primavera, L. (2009). Validity of DSM-IV Axis V Global Assessment of Relational Functioning Scale: A multimethod assessment. *The Journal of Nervous and Mental Disease*, 197(1), 50-55.
- Stelt, A., van der Baars, A., Mulder, C. L., & Kennedy, J. A. (2012). *Kennedy Axis V: Reliability and validity including comparisons to Axis V (GAF), HoNOS, and the BPRS*. Retrieved from <http://www.kennedymd.com/K%20Axis%20Article%20Interrater%20Reliability%202012-08-31.pdf>
- Valenstein, M., Adler, D. A., Berlant, J., Dixon, L. B., Dulit, R. A., Goldman, B., Hackman, A., David, W. O., Samuel, G. S., & Sonis, W. A. (2009). Implementing standardized assessments in clinical care: Now's the time. *Psychiatric Services*, 60(10), 1372-1375.

## KEY TERMS & DEFINITIONS

**Cronbach's Alpha:** statistical coefficient that estimates the internal consistency of a test.

**Disability:** results from an impairment that may involve different areas (e.g. physical, cognitive, emotional).

**Dual diagnosis:** condition that involves both a mental illness and a comorbid substance abuse disorder.

**Global functioning:** refers to different levels of psychological, social and occupational functioning of adults.

**Intraclass Correlation Coefficient:** descriptive statistic that describes correlations between data organized in groups.

**Personality disorder:** defines a class of mental disorders characterized by maladaptive and enduring patterns of behaviour, cognition and inner experience exhibited in several contexts and differing significantly from those recognized by the individual's culture.

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## Chapter 15

# PREDICTING BEHAVIOR: THE COGNITIVE ORIENTATION APPROACH

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### ABSTRACT

The chapter deals with the relation of attitudes and beliefs to behavior, in particular their predictive power in regard to behavior. This issue is of importance in democratic societies, especially in view of the frequent failure to demonstrate relations between attitudes and behavior. Following the description of various attempts to bridge the gap of attitudes and behavior, the cognitive orientation (CO) theory is presented. This is a cognitive-motivational approach with theoretical assumptions and a methodology that enable predicting different kinds of behavior. The prediction is based on cognitive contents representing four types of beliefs (about oneself, reality, norms and goals) referring not directly to the behavior in question but to its underlying meanings, identified by means of a standard procedure. Three studies are described which demonstrate the advantage of the CO theory in predicting behavior over self-reports and personality questionnaires. The studies deal with: initiating contact with others, concentration, and addictive behaviors. In each study a CO questionnaire, specific for the particular behavior, was administered, and the behavior was assessed independently. In all three studies the four belief types predicted significantly the behavior in question. The themes in the CO questionnaire provide insights about the motivational roots of the behavior and thus contribute to the possibility of planning targeted interventions for its prevention and treatment.

*Keywords:* beliefs, predicting behavior, cognitive orientation, concentration, addiction, social interaction.

## 1. INTRODUCTION

### 1.1. The problem

Changing attitudes and beliefs is a common theme in social psychology and is mainly of interest for investigators dealing with public opinion, persuasion and rhetoric. However, in the present context we will deal with changing attitudes and beliefs for the purpose of changing behavior. This should not come as a surprise to anyone who has followed the long history of what came to be called in psychology “attitudes and behavior”. This has become an issue because while beliefs and attitudes are considered as important in all ideologies, religions, and socio-political systems, for a long time studies in psychology have not been able to support the expectation that attitudes and beliefs are related to the behaviors to which they apparently refer. Thus, students who claim that it is dishonest to copy in exams have been observed copying in exams (Corey, 1937), restaurant owners who claimed one should not serve an ethnic group like the Chinese have been observed serving Chinese people when they showed up in the restaurant (LaPiere, 1934). The negative findings have been highly disturbing because they imply that the effort to teach values in education or the struggle for free access to information may be of no importance on the social scene (Kreitler, 2004).

The significance of the negative findings was exacerbated by the theoretical biases rooted in the two major theoretical approaches that dominated the scene at the same time: the behaviorist approach and the dynamic approach, both of which – for very different reasons – relegated cognitive contents to a secondary status, and denied its role in guiding behavior.

Due to the significance of the issue, valiant attempts were made to overcome the disturbing inconsistency by defining conditions under which attitudes could be expected to be related to behavior, for example, reducing maximally the time interval between the assessment of attitudes and behaviors (Davidson & Jaccard, 1979); basing attitudes on direct experience (Fazio & Zanna, 1978); and selecting participants low in self-monitoring (Snyder & Monson,

1975). Studies of this kind, focused on filling the gap between attitudes and behavior with different additional variables have not made much progress in resolving the problem. Neither have the different models of cognitive motivation, all of which assumed that cognitions are related to behavior (see Table 1).

*Table 1. Characterization of major models of cognitive motivation.*

<b>The Cognitive Motivation Model</b>	<b>Major Assumptions</b>	<b>The Variables that the Model Intends to Account for</b>	<b>Major Explanatory Variables</b>
Expectancy theory (Vroom, 1964)	Choice of a behavioral option depends on rational goal striving	Selecting one behavioral option over another	Valence, Expectancy, and instrumentality define "motivational force"
Expectancy-value theory of achievement (Atkinson & Feather, 1966; Wigfield & Eccles, 2000)	Behavioral choices are the calculated function of expectancy of success and the value placed on success	Achievement behavior in different domains (e.g. education, business)	Expectation of success, subjective task value (incl. value of success), ability beliefs
Goal-setting theory (Locke & Latham, 2002)	Performance is a function of goals (the degree to which they are specific and realistic)	Good execution of tasks	Goals (characterized by being specific, measurable, realistic, attainable, time-bound)
Self-regulation theory (Bandura, 1991)	Optimal performance depends on personal agency	Intentional purposive action, controlled by the self-regulatory system	Self-regulation, self-efficacy, self-monitoring, judgment of one's behavior, affective self-reaction
Theory of reasoned action (Ajzen & Fishbein, 1980)	Behavioral intentions are based on beliefs	Predicting behavior, which is often operationalized as reports about behavior or behavioral intention	Behavioral intention, normative beliefs, behavioral beliefs and control beliefs
Health belief model (Becker, 1974)	Health behavior is a function of a rational weighing of benefits and barriers	Health-related behavior	Perceived susceptibility for illness, benefits of health behavior, barriers, modifying variables
Social Cognition approach (Dweck & Leggett, 1988)	Cognition determines affect that determines behavior, whereby goals are the major factor	Major patterns of adaptive and maladaptive behaviors	Implicit theories, goals and patterns of behavior

A major shortcoming of the models presented in Table 1 and of similar ones is that they do not deal with predicting actual behaviors but with self-reports of behavior or with intentions for behavior, both of which were shown not to be identical with actual behavior (e.g., Heckhausen & Kuhl, 1985). Further, the models are based on unrealistic and empirically unsupported assumptions about the production of behavior, for example, that "humans are reasonable animals who, in deciding what action to take, systematically process and utilize the information available to them" (Fishbein & Middlestadt, 1989), that behavior is based on a person's deliberate decision, and that cognitive motivation has to be conscious and rational.

### **1.2. Cognitive orientation: The Theory**

Cognitive orientation (CO) is a cognitively-based theory of motivation but it differs from the other models in its assumptions, components, methodology and empirical basis. It provides an account of major processes intervening between input and output designed to enable understanding, predicting and changing behavior. It shares with the other cognitive models the basic assumption that cognitive contents, viz. beliefs, meanings or attitudes guide behavior (see Table 1). But unlike the other models it does not assume that behavior is guided by logical decision-making, or is subject to conscious voluntary control. Instead, it focuses on the major construct of meaning, and shows how behavior proceeds from meanings and clustered beliefs (Kreitler & Kreitler, 1976, 1982). The beliefs may orient toward rationality but also in other directions, and the outcome may seem rational or not regardless of the beliefs that oriented

toward it. Further, the theory focuses on actual, observable overt behaviors as distinct from intentions, self-reported behaviors and commitments or decisions to act.

The CO theory consists of a central core model that refers to molar observable behavior but includes also further specific models that deal with physical health, emotional behavior, cognitive behavior and psychopathology. In the present context we will focus on the original model of molar behavior. There is a large body of data demonstrating the predictive power of the CO theory in regard to a great variety of behaviors, including achievement, responses to success and a failure, coming on time, undergoing tests for the early detection of breast cancer, smoking cessation etc. in different kinds of individuals (Kreitler & Kreitler, 1988), differing in age (4 to over 90), gender, ethnic background, education and IQ level (i.e., retarded individuals) and mental health (e.g., schizophrenics, paranoids) (Kreitler & Kreitler, 1997; Kreitler, Schwartz, & Kreitler, 1987).

The CO is a cognitive theory of motivation designed to enable understanding, predicting and changing behaviors and other outputs in different domains. The major theoretical assumption of the CO approach is that cognitive contents and processes play an active-dynamic role in regard to behaviors. Behavior is considered a function of a motivational disposition, which determines the directionality of behavior, and a performance program, which determines the manner in which the behavior is carried out.

According to the CO theory, the processes intervening between input and output can be grouped into four stages, characterized by metaphorical questions and answers. The first stage is initiated by an external or internal input and is focused on the question “What is it?” which guides the processes enabling the identification of the input by a limited ‘initial meaning’ as either a signal for a defensive, adaptive or conditioned response, a molar action, an orienting response, or as irrelevant.

The second stage is devoted to further elaboration of the meaning of the input. It focuses on the question “What does it mean in general and what does it mean to or for me?” which results in an enriched generation of interpersonally-shared and personal meanings in terms of beliefs, designed to determine whether these beliefs require a behavioral action.

A positive answer initiates the third stage focused on the question “What will I do?” The answer is based on relevant beliefs of the four following types: a) Beliefs about goals, which refer to actions or states desired or undesired by the individual (e.g., “I want to be respected by others”); b) Beliefs about rules and norms, which refer to social, ethical, esthetic and other rules and standards (e.g., “One should be assertive”); c) Beliefs about oneself, which express information about the self, such as one’s traits, behaviors, habits, actions or feelings (e.g., “I often get angry”) and d) General beliefs, which express information about reality, others and the environment (e.g., “The world is a dangerous place”). The beliefs refer to deep underlying meanings of the involved inputs rather than their obvious and explicit surface meanings. The scoring of the beliefs is based on assessing the extent to which they support or do not support the indicated action. If the majority of beliefs in at least three belief types support the action, a cluster of beliefs is formed (“CO cluster”), orienting toward a particular act. It generates a unified tendency which represents the motivational disposition orienting toward the performance of the action.

When a motivational disposition has been formed, the next stage is focused on the question “How will I do it?” The answer is in the form of a behavioral program, which is a hierarchically structured sequence of instructions specifying the strategy and tactics governing the performance of the act. There are four basic kinds of programs: a) Innately determined programs, e.g., controlling reflexes; b) Programs determined both innately and through learning, e.g., controlling instincts or language behavior; c) Programs acquired through learning, e.g., controlling culturally shaped behaviors and d) Programs constructed ad hoc, in line with relevant contextual requirements

### **1.3. Cognitive orientation: The methodology of behavior prediction**

In the present context we will focus on a major advantage of the CO theory which is that it provides the theoretical and methodological tools for predicting behavior.

A large body of research demonstrates the predictive power of the CO theory in regard to a great variety of behavioral domains and types of participants. Predicting behavior by means of the CO theory enables mostly correct identification of 70%-90% of the participants manifesting the behavior of interest (Drechsler, Brunner, & Kreitler, 1987; Figer, Kreitler, Kreitler, & Inbar, 2002; Kreitler & Casakin, 2009; Kreitler, Bachar, Cannetti, Berry, & Bonne, 2003; Kreitler & Kreitler, 1991; Kreitler, Shahar, & Kreitler, 1976; Tipton & Riebsame, 1987). The success of the predictions is based on applying the standard procedure based on the CO theory (Kreitler, 2004). The theoretical construct applied for predicting behavior is the motivational disposition. The strength of the motivational disposition for a behavior is assessed by means of a CO questionnaire, which examines the degree to which the participant agrees to relevant beliefs orienting toward the behavior in question. The relevant beliefs are characterized in terms of form and contents. In form, they refer to the four types of beliefs, namely, beliefs about goals (e.g., "I would like never to come late"), about rules and norms (e.g., "One should try never to be late"), about oneself (e.g., "Sometimes I come late to a lesson or meeting"), and general beliefs (e.g., "Coming late produces a bad impression on others. In contents, the beliefs refer to the meanings underlying the behavior in question (called "themes").

The themes of a particular CO questionnaire are identified by means of a standard interviewing procedure applied in regard to pretest subjects who manifest the behavior in question and to control subjects who do not manifest it. The procedure consists of interviewing the participants about the meanings of relevant key terms of the behavior followed by sequential (three times) questions about the personal-subjective meanings of the given responses (Kreitler & Kreitler, 1990). Repeating the questions about the meanings reveals deeper-layer meanings. Those meanings that recur in at least 50% of the interviewees with the behavior of interest and in less than 10% of those without it are selected for the final questionnaire. The outcome of this procedure is that the beliefs in a CO questionnaire do not refer directly or indirectly to the behavior in question but only to the themes that represent the underlying meanings of this behavior. Validity of the CO questionnaire is confirmed if it enables the prediction of the behavior also in the second sample. For example, themes that concern coming late are "respect for others", and "deciding on priorities".

The themes and belief types define together a prediction matrix, with the belief types as headings of the columns and the themes in the rows. Thus, a CO questionnaire usually consists of four parts presented together in random order. Each part represents one of the four belief types, and contains beliefs referring to different theme-contents. Participants are requested to check on a 4-point scale the degree to which each belief seems true (or correct) to them. The major variables provided by the CO questionnaire are scores for the four belief types and for each of the themes.

## **2. STUDIES OF PREDICTING BEHAVIOR BY THE COGNITIVE ORIENTATION METHOD**

The following descriptions of studies are designed to demonstrate the predictive power of the CO theory in regard to behavior as compared with other alternatives.

### **2.1. Study 1: Predicting the initiation of contacts with others**

**2.1.1. Introduction.** Initiating contact with others is an indispensable although insufficient component of social relations. As emphasized by Levinger (1983), who described the life-line of relationships, it is the first step toward creating a relationship or some kind of a social interaction. Making contact consists in rendering acquaintance possible. It includes a presentation of oneself as at least a potential partner for some kind of interaction; it expresses interest in the other and provides an arena for manifesting various interpersonal skills, such as verbal and nonverbal communication, listening and decision making (Berscheid, 1999). Major factors affecting the formation of contacts are physical proximity (Festinger, Schachter, & Back, 1950) and similarity (Harvey & Pauwels, 2009), both of which were used in shaping the

experimental situation (see 2.1.3.). Promoting the formation of contacts is of prime importance in different domains of life, including getting social support, creating families, working in groups, etc.

**2.1.2 Objectives of the study.** The objectives of the study were first, to test the hypothesis that belief variables defined in terms of the CO theory would enable predicting the behavior of initiating contacts with others; and secondly, to examine the predictive power of two further measures in regard to the same behavior: The Affiliative Tendency Scale, which is a personality measure assessing positive manifestations of affiliation, and the Social Interaction Anxiety Scale assessing the negative impact of an emotional barrier like anxiety on social interactions.

**2.1.3. Methods of the study.** The participants were 15 students, undergraduates of the faculty of social sciences at Tel-Aviv University (mean 23.2 yrs,  $SD=2.2$ ) of both genders (8 women, 7 men). They were invited to participate in a psychological study. The first part consisted in asking them to sit in a waiting room waiting to be invited to the lab. The waiting lasted for 10 minutes and took place in a room in the presence of other students whom they did not know. In each group there was one experimental subject and nine non-experimental students who were simply asked to play a passive role (i.e., respond when addressed but not to initiate contacts). The non-experimental subjects resembled the experimental ones in being students in the faculty of social sciences, as well as in age (mean 22.9 yrs,  $SD=2.6$ ) and gender (8 women and 7 men). They participated in the 15 groups that were formed for the assessment of initiated contacts. An experimenter, who was a hidden observer outside that room, noted the number of occasions when the experimental subjects initiated communications with the other students. This provided the data for the dependent variable. The subjects were then invited into the lab and examined on a perception task that was irrelevant in regard to the present study. Two months later three questionnaires that provided the independent measures of the study were administered to the subjects by other experimenters in the context of various questionnaires of other studies. The three additional measures were: (a) CO Questionnaire of forming relationships, which included 10 items in each of the belief types referring to 10 themes (e.g., trust, self-disclosure) (Azuri, Tabak, & Kreitler, 2013) [the Cronbach's alpha reliability coefficients of the four belief types were in the range of .80-.88]; (b) The Affiliative Tendency Scale by Mehrabian (1994) which included 26 items with responses on a 9-point scale; and (c) The Social Interaction Anxiety Scale (Mattick & Clarke, 1998) which included 20 items with responses on a 5-point scale. Only in the disclosure session after the completion of the whole experiment the subjects and experimenters were told about the hypotheses of the study and the relations between its different parts. .

**2.1.4. Results of the study.** No significant differences were found between the genders in any of the variables. The results showed significant correlations between the number of initiated contacts and the four belief types ( $r$  ranging .52-.67) (see Table 2). There were nonsignificant correlations between the number of initiated contacts and the scores on the Affiliative Tendency scale, the self-report questionnaire and Social Interaction Anxiety Scale, as well as between the latter and the scores of the CO questionnaire. Additionally, the experimental subjects were divided into two groups: those who initiated contacts above the group's mean, and those who initiated contacts below it ( $M=2.53$ ,  $SD=1.50$ ). In line with the CO theory and previous studies (see 1.3), the hypothesis was that the subjects with above-mean contacts should score in at least 3 of the belief types above the group's mean. The means were 3 ( $SD=.89$ ) and 1.22 ( $SD=.67$ ), respectively [ $t=4.42$ ,  $p<.05$ ].

Table 2. Pearson correlation coefficients of scores on the four CO belief types, affiliative tendency and self-report of forming relations with the number of observed contact formations.

CO: Beliefs about Self	CO: Beliefs about Norms	CO: Beliefs about Goals	CO: General Beliefs	Affiliative Tendency	Social Interaction Anxiety Scale
.52*	.67**	.59*	.64**	.40	-.33

\*p<.05 \*\*p<.01

**2.1.5. Conclusions of the study.** The study on predicting initiation of communication with others should be considered as preliminary and serves mainly the purpose of demonstrating the predictive power of a questionnaire constructed according to the CO methodology. The results show that the behavior of communicating with unfamiliar others in a waiting-room situation was correlated significantly with the scores of four belief types defined by the CO theory, whereas it was not correlated with two personality measures of affiliation and anxiety of social interactions.

## 2.2. Study 2: Predicting the behavior of concentration

**2.2.1. Introduction.** Concentration is the ability to coordinate action parts in a conscious manner despite internal and external distractions so that both quick and accurate performance of a task is made possible (Westhoff & Hagenmeister, 2005). Some investigators assume that it is a subprocess of attention (Kinchla, 1992; Mikulas, 2002), others consider it as a cognitive effort preceding performance, independent of attention (Westhoff & Hagemeister, 2005), and still others consider it as a combination of different kinds of attention, such as divided attention, control and switching (Moosbrugger, Golghammer, & Schweizer, 2006; Schweizer, 2006). It has been shown to be related positively to mindfulness (Mikulas, 2002) and negatively with boredom (Kass, Wallace, & Vodanovich, 2003) and ADHD (Shaw & Giambra, 1993). In any case, concentration is viewed increasingly as a kind of behavior or skill that can be enhanced through learning (Krawietz, Mikulas, & Vodanovich, 2007). It is of great importance in a variety of domains, including sport (Moran, 1996), and creativity (Jackson & Csikszentmihalyi, 1999). Despite being called by James (1890/1950, p. 424) “the very root of judgment, character and will”, little is known about its motivational bases.

**2.2.2. Objectives of the study.** The objectives of the study were first, to test the hypothesis that the four belief types of the CO theory would predict concentration as assessed by a standard test and secondly, to examine the predictive power of a validated and reliable questionnaire assessing concentration. The hypotheses were that the four belief types would be correlated with the scores on the concentration test, whereas the self-report questionnaire assessing concentration tendencies would not.

**2.2.3. Method of the study.** Forty students, 20 men and 20 women, 17-18 years old participated in the study. The performance and questionnaire measures were administered separately, 2-3 weeks apart, in random order, in a classroom group session. The dependent measures were scores obtained on a standard cancellation test (Mesulam, 2000). This test has the advantage that its performance variables do not depend on cognitive and educationally-determined skills (Brucki & Nitrini, 2008). The subjects were presented an A-4 sheet of paper on which there were 60 small nonverbal randomly arranged stimuli and were asked to cross each empty (i.e., non-filled) circle with a single slanted line and not to cross any other stimuli. After 3 minutes the task was interrupted and the sheets were collected. The scores were the number of correct responses (i.e., number of empty circles crossed) and the number of mistakes (i.e., the number of stimuli other than the empty circle that were crossed). In addition two questionnaires were administered. One was the CO questionnaire of concentration (Kreitler & Yaniv, 2013) which included four parts, referring to the four types of beliefs with 15 items in each. The Cronbach’s alpha reliability coefficients of the four belief types were in the range of .79 to .85. The items referred to themes, such as missing out opportunities, being constantly aware of everything that happens around you, sticking to one’s decisions, and wasting time, that



were identified in a prior study as meanings underlying concentration. The second questionnaire was the Concentration Scale by Krawietz and colleagues (2007) which included 49 items, with a 7-point response format, assessing the quality of one's concentration abilities.

**2.2.4. Results of the study.** There were no significant differences between the genders in any of the variables of the study. The dependent measures were the number of correct responses and the number of mistakes computed as a proportion of the total number of responses. The mean of correct responses was 22 (SD=3.4). Pearson correlation coefficients between the four belief types and the total number of responses were all positive and significant ( $p < .01$ ): .45, .38, .54, .50 for beliefs about self, norms, goals and general beliefs, respectively. The correlation with the score on the concentration scale was lower and barely significant ( $r = .31$ ,  $p = .051$ ). A regression analysis with the four belief types as predictors yielded a significant F value (4.57,  $df = 3, 38$ ,  $p < .01$ ) and  $R^2 = .54$ . The results for the measure of proportion of mistakes out of the total number of responses were similar for the four belief types: all correlation coefficients were significant and negative, as expected: -.39, -.43, .52, -.49,  $p < .01$ , for beliefs about self, norms, goals and general beliefs, respectively, but the score of the concentration scale was not correlated with it significantly.

**2.2.5. Conclusions of the study.** The dependent measure in this study reflected performance. The higher the number of correct responses within the time allotted to the task, the higher the concentration of the subject. Accordingly, as expected, this performance measure was predicted by the four belief types. All four belief types were correlated with the number of correct responses. Also the questionnaire measure was correlated significantly with the performance measure. The four belief types provided information about the underlying motivation for the concentration score. However, the correlation with the concentration questionnaire provided information that the extent of concentration the subject manifested in the cancellation task matched to a certain degree the extent of concentration that he or she manifested usually in other domains of daily life, e.g., watching television, or listening to someone talk. Hence, the two questionnaires provided different kinds of information about the tendency for concentration.

### 2.3. Study 3: The cognitive orientation of addictive behaviors

**2.3.1. Introduction.** Addiction is defined by the DSM-IV as a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifested in behaviors concerning work, family and social interactions (American Psychiatric Association, 2000). Addiction consists in recurrent exposure to some substance, whereby its absorption is experienced as pleasurable and its withdrawal as unpleasant. The major characteristics of addiction are increasing tolerance for the substance, continued compulsive use of the substance despite possible awareness of its negative consequences, and inability to stop the ingestion of the substance by means of a personal decision. This definition applies to various substances, including alcohol, tobacco and some psychoactive drugs. In recent years the concept of addiction has been expanded to include also behavioral dependency which may be manifested in regard to gambling, work, sex, the internet and exercise.

The major theories of addiction may be summarized in terms of the four following approaches. According to the medical approach, addiction is due to neurotransmitter imbalance in the brain and should be treated by eliminating drugs or using antagonist drugs. According to the social approach addiction is a learned behavior due to peer pressure and conformity so that its reduction may be attained by changing social norms, including legal means. According to the personality-based approach addiction reflects tendencies, such as impulsivity and weak self-control (Thombs, 2006). According to the psychodynamic approach, addiction is an inadequate coping strategy with underlying psychological problems that need to be treated for abolishing the addiction (Robinson & Berridge, 2003; Shaffer, LaPlante, & Nelson, 2012).

It is evident that addiction has biological, social and psychological components. The purpose of the present chapter is to describe the cognitive orientation (CO) approach to

addiction that may enable an integration of the different approaches to addiction and shed light on the phenomenon from a new perspective.

**2.3.2. Objectives of the study.** The purpose of the study was to test the construct validity of the CO questionnaire of addictive behaviors in terms of its ability to discriminate between a group of individuals with addictive behaviors and a control group. This procedure is based on the “known-groups” validation method described already in Cronbach and Meehl’s (1955) seminal paper on construct validity. The hypothesis was that the scores of the CO questionnaire would differentiate significantly between the two groups. It was expected that this would provide insights into the motivational sources of addictive behavior, which could be applied in targeted interventions.

**2.3.3. Method of the study.** The study sample included 124 individuals, 62 of whom were addicted to alcohol or drugs and 62 who were not addicted. Each of the two groups included 31 males and 31 females, in the age range of 25 to 40, who had over 12 years of education.

The items in the CO questionnaire referred to the following 10 themes, identified in a pretest sample in line with the standard procedure (see 1.3.): (a) rejection of limitations concerning oneself (e.g., avoiding restrictions, rejecting self-control, striving for complete freedom); (b) rejection of the possibility of changes in oneself; (c) avoidance of external emotional expressions (e.g., of anger expressions); (d) unclarity in self-definition (e.g., unclarity in regard to gender identification, self-identification, or differentiation between the external and internal self); (e) identification with the other (e.g., extreme empathy, to the limit of blurring the boundaries of the self); (f) boredom (e.g., most things are uninteresting); (g) total absorption in one's activity (e.g., absorption to the point of forgetting one's physical needs); (h) responsibility only toward oneself (e.g., no sense of responsibility in regard to one's parents or society); (i) withdrawal from coping (e.g., sense of helplessness in regard to life); (j) focusing on pleasure and enjoyment (e.g., Pleasure is the very essence of life; I would not like to live if I lost my ability to enjoy).

The themes were phrased as beliefs of the four types. The questionnaire included four parts, with 15 beliefs in each of the belief types (e.g., “I would like to be free of any obligations in life”). Each belief had four response alternatives: very true, true, not true, not at all true. The Cronbach's alpha reliability coefficients of the four belief types ranged from .85 to .96. The intercorrelations of the four belief types ranged from  $r=-.10$  to  $r=.33$ . The subjects were recruited from three centers for the treatment of addiction and conformed to the criteria of addiction by the DSM. The controls were selected from individuals in the same environment (students and workers) who resembled the group with addictions in age, gender distribution and level of education. The questionnaires were administered unanimously.

**2.3.4. Results of the study.** The data for the whole sample was analyzed together because there were no significant differences between the genders in any of the variables of the study. The mean scores of the four belief types differed significantly between the groups of the addicted and the controls (see Table 3). As expected, the scores of the addicted group were higher than those of the control group.

*Table 3. Means, SDs and t-test values for the four belief types in the groups of addicted and control subjects.*

Beliefs	Group with Addiction		Control Group		t-test
	Mean	SD	Mean	SD	
About self	48.2	5.3	42.2	4.2	6.986****
About norms	66.9	8.7	58.3	5.4	6.647****
About goals	60.5	8.6	55.3	7.7	5.700***
General beliefs	40.5	5.6	36.6	4.7	4.200****

\*\*\* $p < .001$  \*\*\*\* $p < .0001$

A stepwise discriminant analysis with the four belief types as predictors yielded a correct identification of membership in one or the other group of 88.3%, which constitutes an improvement of 38.3% over the 50% correct identification on the basis of chance alone. The predictors with the highest contribution to the discriminant function were the beliefs about self and norms, followed by beliefs about goals and general beliefs in the fourth rank.

The themes that proved to differentiate most significantly between the addicted and control groups were rejection of limitations concerning oneself, rejection of the possibility of changes in oneself and unclarity in self-definition. A comparison of the means of the 10 themes in the two subsamples of drug and alcohol addicted in the addiction group showed that the drug-addicted subjects tended to score higher on the themes of rejection of limitations, boredom, and focusing on pleasure and enjoyment; the alcohol-addicted subjects tended to score higher on the themes of rejection of the possibility of changes in oneself, avoidance of external emotional expressions and withdrawal from coping.

**2.3.5. Discussion and conclusions of the study.** The results show that the CO questionnaire differentiated significantly between the groups of the addicted and non-addicted subjects. This finding provides support for the construct validity of the CO questionnaire in terms of the “known-groups” procedure. It also suggests that the CO questionnaire represents adequately the underlying motivationally-relevant themes for addiction. The themes provide insight into the psychological dynamics of addictive behaviors. These seem to be mainly rejection of limitations and obligations, which include denying responsibilities and duties toward others, and a blurred self-identity, which includes unclarity about one's gender, identity and even one's internal emotional world. Notably, the findings suggest the ability to differentiate by means of scores on the themes of the CO questionnaire between different types of addiction – drug and alcohol addiction. Future studies may confirm this possibility also in regard to other kinds of addiction and examine the conception of a general core tendency for addiction, relevant in regard to addictions in general.

One important implications of the study is that there is a cluster of motivationally-relevant beliefs orienting toward addiction. Hence, it may be possible to use the questionnaire in order to identify individuals or groups at risk for becoming addicted. The early identification could help in applying preventive interventions. Another implication is that the identified cluster of motivationally-relevant beliefs enables developing targeted psycho-social interventions for treating successfully addicted individuals, either as a prime therapeutic tool or as an adjunct to other treatments.

### 3. CONCLUSIONS

The three described studies deal with three kinds of behavior – a one-time situational-bound behavior, behavior reflecting test performance, and habitual prolonged behavior. The CO approach enabled predictions of behavior in the three cases. Thus, the studies demonstrate the validity of the major conclusion that the prediction of behavior may indeed be made on the basis of cognitive contents, but that these contents need to be of a special kind, namely, they need to represent beliefs of the four different kinds and to refer to themes of meanings underlying the behavior in question rather than directly to that behavior. Further, since actual behavior is not identical to self-reported behavior, the cognitive predictors of the latter cannot be the same as of the former. Notably, a careful analysis of the early attitude-behavior studies showed that in cases when the attitude questionnaires included statements referring to at least three of the belief types defined in the framework of the CO theory the predictions of behavior were at least partly significant (Kreitler, 2004).

The three studies show that the prediction of behavior is better when it is based on the methodology of the CO theory as compared with standard personality questionnaires in the investigated domains. Moreover, the CO questionnaires provide information about motivational bases of the investigated behavior that may improve both the theoretical models of the behaviors, as well as be applied for targeted intervention, when necessary.

## REFERENCES

- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, DSM-IV-TR* (4th ed., text rev.). Washington, DC: Author.
- Atkinson, J. W., & Feather, N. T. (Eds.) (1966). *A theory of achievement motivation*. New York, NY: Wiley.
- Azuri, P., Tabak, N., & Kreitler, S. (2013). Contact between deceased donors' families and organ recipients. *Progress in Transplantation*, 23(4), 342-349.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248-287.
- Becker, M. H. (1974). The health belief model and personal health behavior. *Health Education Monographs*, 2(4), 324-508.
- Berscheid, E. (1999). The greening of relationship science. *American Psychologist*, 54(4), 260-266.
- Brucki, S. M. D., & Nitrini, R. (2008). Cancellation task in very low educated people. *Archives of Clinical Neuropsychology*, 23, 139-147.
- Corey, S. M. (1937). Professed attitudes and actual behavior. *Journal of Educational Psychology*, 28(4), 271-280.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302.
- Davidson, A. R., & Jaccard, J. (1979). Variables that moderate the attitude-behavior relation: Results of a longitudinal survey. *Journal of Abnormal and Social Behavior*, 37(8), 1364-1376.
- Drechsler, I., Brunner, D., & Kreitler, S. (1987). Cognitive antecedents of coronary heart disease. *Social Science and Medicine*, 24(7), 581-588.
- Dweck, C. S., & Legget, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256-273.
- Fazio, R. H., & Zanna, M. P. (1978). Attitudinal qualities relating to the strength of the attitude-behavior relationship. *Journal of Experimental Social Psychology*, 14(4), 398-408.
- Festinger, L., Schachter, S., & Back, K., (1950). The spatial ecology of group formation. In L. Festinger, S. Schachter, & K. Back (Eds.), *Social pressure in informal groups* (pp.33-59). Stanford, CA: Stanford University Press.
- Figer, A., Kreitler, S., Kreitler, M. M., & Inbar, M. (2002). Personality dispositions of colon cancer patients. *Gastrointestinal Oncology*, 4(2), 81-92.
- Fishbein, M., & Middlestadt, S. E. (1989). Using the theory of reasoned action as a framework for understanding and changing AIDS-related behaviors. In V. E. Mays, G. W. Albee, & S. F. Schneider (Eds.), *Primary prevention of AIDS: Psychological approaches* (pp. 93-110). Newbury Park, CA: Sage.
- Harvey, J. H., & Pauwels, B. G. (2009). Relationship connection: A redux on the role of minding and the quality of feeling special in the enhancement of closeness. In C. D. Snyder, & S. J. Lopez (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 385-392). Oxford, UK: Oxford University Press.
- Heckhausen, H., & Kuhl, J. (1985). From wishes to action: The deadends and short cuts on the long way to action. In M. Frese, & J. Sabini (Eds.), *Goal-directed behavior: The concept of action in psychology* (pp. 134-159). Hillsdale, NJ: Erlbaum.
- Jackson, S. A., & Csikszentmihalyi, M. (1999). *Flow in sports*. Champagne, IL: Human Kinetics.
- James, W. (1950). *Principles of psychology*. New York, NY: Dover. (Original work published 1890)
- Kass, S. J., Wallace, J. C., & Vodanovich, S. J. (2003). Boredom proneness and sleep disorders as predictors of adult attention deficit scores. *Journal of Attention Disorders*, 7(2), 83-91.
- Kinchla, R. A. (1992). Attention. *Annual Review of Psychology*, 43, 711-742.
- Krawietz, S. A., Mikulas, W. L., & Vodanovich, S. J. (2007). *Concentration: Construct refinement and scale development* (Unpublished master's thesis). University of West Florida, Pensacola, FL.
- Kreitler, S. (2004). The cognitive guidance of behavior. In J. T. Jost, M.R. Banaji, & D.A. Prentice (Eds.), *Perspectivism in social psychology: The Yin and Yang of scientific progress* (pp. 113-126). Washington, DC: American Psychological Association.
- Kreitler, S., Bachar, E., Canetti, L., Berry, E., & Bonne, O. (2003). The cognitive orientation theory of anorexia nervosa. *Journal of Clinical Psychology*, 59(6), 651-671.
- Kreitler, S., & Casakin, H. (2009). Motivation for creativity in design students. *Creativity Research Journal*, 21(2), 282-293.
- Kreitler, H., & Kreitler, S. (1976). *Cognitive orientation and behavior*. New York, NY: Springer.

- Kreitler, H., & Kreitler, S. (1982). The theory of cognitive orientation: Widening the scope of behavior prediction. In B. A. Maher, & W. A. Maher (Eds.). *Progress in experimental personality research: Vol. 11. Normal Personality Processes* (pp.101-169). New York, NY: Academic Press.
- Kreitler, S., & Kreitler, H. (1988). The cognitive approach to motivation in retarded individuals. In N. W. Bray (Ed.), *International Review of Research in Mental Retardation: Vol. 15* (pp. 81-123). San Diego, CA: Academic Press.
- Kreitler, S., & Kreitler, H. (1990). *The cognitive foundations of personality traits*. New York, NY: Plenum.
- Kreitler, S., & Kreitler, H. (1991). Cognitive orientation and physical disease or health. *European Journal of Personality*, 5(2), 109-129.
- Kreitler, S., & Kreitler, H. (1997). The paranoid person: Cognitive motivations and personality traits. *European Journal of Personality*, 11(2), 101-132.
- Kreitler, S., Schwartz, R., & Kreitler, H. (1987). The cognitive orientation of expressive communicability in schizophrenics and normals. *Journal of Communication Disorders*, 20(1), 73-91.
- Kreitler, S., Shahar, A., & Kreitler, H. (1976). Cognitive orientation, type of smoker and behavior therapy of smoking. *British Journal of Medical Psychology*, 49, 167-175
- Kreitler, S., & Yaniv, A. (2013). Cognitive and motivational correlates of ADHD in children and young adults (Unpublished master's thesis). Tel-Aviv University, Israel.
- LaPiere, R. (1934). Attitudes vs. actions. *Social Forces*, 13(2), 230-237.
- Levinger, G. (1983). Development and change. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. R. Peterson (Eds.), *Close relationships*. (pp. 315-359). New York, NY: W. H. Freeman and Company.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705-717.
- Mattick, R. P., & Clarke, J. C. (1998). Development and validation of social phobia scrutiny fear and social interaction anxiety. *Behavior Research and Therapy*, 36(4), 455-470.
- Mehrabian, A. (1994). Evidence bearing on the Affiliative Tendency (MAFF) and Sensitivity to Rejection (MSR) scales. *Current Psychology*, 13(2), 97-116.
- Mesulam, M. M. (2000). *Principles of behavioural neurology* (2nd ed.). New York, NY: Oxford University Press.
- Mikulas, W. L. (2002). *The Integrative helper: Convergence of eastern and western traditions*. Pacific Grove, CA: Brooks/Cole.
- Moosbrugger, H., Goldhammer, F., & Schweizer, K. (2006). Latent factors underlying individual differences in attention measures: Perceptual and executive attention. *European Journal of Psychological Assessment*. 22(3), 177-188.
- Moran, A. P. (1996). *The psychology of concentration in sports performers*. East Sussex, UK: Psychology Press.
- Robinson, T. E, & Berridge, K. C. (2003). Addiction. *Annual Review of Psychology*, 54(1), 25-53.
- Schweizer, K. (2006). *Leistung und Leistungsdiagnostik [Performance and performance diagnostic]*. Heidelberg, Germany: Springer.
- Shaffer, H. J., LaPlante, D. A., & Nelson, S. E. (Eds.). (2012). *APA addiction syndrome handbook: Vol. 1. Foundations, influences, and expressions of addiction* (1st ed.). Washington DC: American Psychological Association.
- Shaw, G. A., & Giambra, L. (1993). Task-unrelated thoughts of college students diagnosed as hyperactive in childhood. *Developmental Neuropsychology*, 9(1), 17-30.
- Snyder, M., & Monson, T. C. (1975). Persons, situations and the control of social behavior. *Journal of Personality and Social Psychology*, 32(4), 637-644.
- Thombs, D. (2006). *Introduction to addictive behaviors*. New York, NY: Guilford Press.
- Tipton, R. M, & Riebsame, W. E. (1987). Beliefs about smoking and health: Their measurement and relationship to smoking behavior. *Addictive Behaviors*, 12(3), 217-223.
- Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.
- Westhoff, K., & Hagemester, C. (2005). *Konzentrationsdiagnostik [Concentration diagnostic]*. Langerich, Germany: Pabst.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68-81.

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## Chapter 16

# TRAINING INTERACTIVE PSYCHO-STIMULATOR FOR THE POLICE

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### ABSTRACT

In December 2012, the Police Academy in Szczytno started a research project entitled “Development of a training interactive psycho-stimulator for the Police”. Its purpose is to develop and implement an innovative diagnostic and training system to evaluate and stimulate the cognitive competencies and psychomotor skills of police officers. Cognitive assessment of competence is essential to the operation of both police officers and other uniformed services (including officers of the Military Police). The diagnostic-training system implemented under the project will allow automated assessment of the current efficiency level of cognitive and psychomotor functions, and then it will be possible to offer various forms of exercise for these functions in the form of games that will be implemented on both desktop computers and mobile devices such as smart phones or tablets. The key tasks of the project should include the development of: a set of psychological tests to monitor the efficiency of the cognitive processes (i.e. memory, perception, concentration and divisibility of attention, the ability of inference); game set – exercises that stimulate the development of selected cognitive processes; a psychophysiological recorder to aid training; a set of psychological tests to assess the state of cognitive and psychomotor efficiency. The essential innovation is the introduction of ongoing research systems used to stimulate the cognitive competencies of police officers by designing exercises in the form of computer games and to enable the verification of the current mental condition of policemen before assigning tasks requiring special predisposition. Implementation of the solution developed, by developing the personal skills of police officers, will have a positive impact on the operational readiness of the officers, which will be translated directly into the security of the state (Suchodolski, 2002; Lachowicz, 1995). At the same time, widening the field of application to other entities, it may contribute to the increase of the efficiency and safety, particularly in occupational groups performing work requiring specific cognitive predispositions and psychomotor skills.

*Keywords:* psycho-stimulator, cognitive psychology, psychophysiology, polygraph.

## 1. INTRODUCTION

Ensuring public order is one of the key issues for the state in respect of the security of its citizens. This task is performed by a number of entities, which, in their essence, focus on simultaneously supervising compliance with the law in the life of society, in many areas of activity. The parties responsible for protecting the safety of people and property, for the maintenance of public order, for the prevention of offenses against threats to human health and life are the uniformed services. The officers of these services – especially Police officers, but also Military Police officers – often face difficult tasks.

## 2. THEORETICAL RATIONALE. THE CONCEPT OF THE RESEARCH PROJECT

Many factors have an influence on the effectiveness of their actions; however, the cognitive competences are the most crucial. In response to the new challenges posed by constantly changing dynamic situations, there is a need to develop the necessary cognitive functions in the work of police officers that have fundamental meaning to the proper functioning of their duties. The efficiency of most organizations is determined by all subsystems and relationships, but human resources seem to be the key issue and that is why it is so important to properly select officers to perform tasks arising from the provisions of law, statutory

requirements and needs. To meet the needs in the development of these cognitive skills, the Police Academy in Szczytno has conceived the concept of a development project entitled *Development of a training interactive psycho-stimulator for the Police* which has been submitted for the contest No. 3/2013 announced by the National Centre for Research and Development for the implementation of projects in the field of research and development for national defence and security. The Director of the National Centre for Research and Development granted the Academy funds for the implementation of this project. It is worth noting that the National Centre for Research and Development (established in Warsaw, Poland) is an executive agency of the Minister of Science and Higher Education. It is a unit implementing the tasks of science policy, technology and innovation. The Centre provides a platform for effective dialogue between the science and business environments. The Centre is funded by the State Treasury and European Union funds.

The project fits in with the strategic objectives of the National Security Strategy of the Republic of Poland, i.e. creation of a strong scientific and research base, combined with generation capacity, improving the competitiveness of the economy and ensuring the safety of citizens, and the main objectives of the Europe 2020 Strategy<sup>i</sup>. It also corresponds with the OECD Innovation Strategies (Nowak, 2004) by promoting science and new technology solutions that can contribute to economic development and employment growth.

The project started in December 2012 and will last for three years. The Police Academy in Szczytno (Poland) is implementing this project in cooperation with the National Defence Academy (Poland). It should be noted that the Military Police officers carry out tasks to ensure organizational and legal order of sub-units of the military at home and abroad. In particular, it is the actions of investigative and operational compliance in the field of military order. In general, the analysis of the legal provisions, the provisions of statutory and practical examples show that there are many situations in which the armed forces are essential to ensure public safety. The third partner in the project is the company ALTA Ltd., which is one of the leading staffing companies operating in Poland. Since 1991, it supports its customers with expertise and design experience in the field of psychological research and human capital management. ALTA is known in particular from a wide range of proven psychometric methods and tools to support the daily work of the personnel and line managers.

### **3. AIMS OF THE PROJECT**

The main objective of the project is to develop and implement an innovative system of diagnosis and training to evaluate and stimulate the cognitive competencies and psychomotor skills of officers. Product specific objectives, in turn, consist of:

- development of a diagnostic (assessment) and training (psycho-stimulation) system;
- development of psychophysiological module (necessary to extend the training to coping with stress);
- development of an advanced cognitive and psychomotor test;
- testing system for optimization and application of the technology demonstrator developed under the expected conditions.

Each stage of the project will be subject to testing standardization, optimization and validation of the system.

The developed system will enable an assessment of the efficiency of cognitive processes and psychomotor skills and their online training. An additional function of this system will be psychophysiological module designed for training to cope with stress and an advanced system enabling a short and efficient evaluation of the efficiency of the psychological functions of officers before assigning them to particularly difficult and dangerous tasks.

Due to the novelty of the project, in the literature there are no data on the effectiveness of similar systems and diagnostic training in the police. Therefore, the study will provide knowledge of specific needs in terms of training, as well as opportunities for training of cognitive skills in the desired form in the environment of police officers.



## 4. STAGES OF IMPLEMENTATION

The research work carried out under the project relates to the effectiveness of modern methods of computer diagnosis of cognitive processes and online training of mental functions. The project started from research of a fundamental nature. The first task was devoted to the identification of key features determining the efficiency of an officer. In this task, we gathered knowledge and data used to construct the optimal psychological workout efficiency online. The architecture of the system was determined and then we checked whether it is congruent with the needs of future users. The criterion for assessing the usefulness of the technology (algorithm) was to verify the following assumptions:

- there is a need for training of cognitive functions among police officers;
- individual police positions require specific skills, which may be subject to training;
- police officers are active on the Internet;
- police officers use computer games spontaneously which favourably affects the efficiency of cognitive stimulation.

An important issue at the beginning of the project was to determine the psychophysical key features that affect the effective implementation of official duties, i.e. features with which the development may be useful in the work of the officer and consequently determine its efficiency. The study focused on basic cognitive functions necessary for the proper performance of duties by officers in executive positions.

### 4.1. The collection of data used to develop the diagnostic and training system

The diagnostic-training system will consist of a test module (evaluating the efficiency of cognitive processes and regulations), training algorithm and games developing cognitive skills. Combining the design of this system required exploratory research in two areas. The first area concerned the training needs. The second area of interest was, in turn, the officers. It was assumed that exercises stimulating cognitive processes must correspond to the real interests of officers.

**4.1.1. Analysis of documents.** Collecting the data needed to develop a system of diagnostic training started from the analysis of the records that consisted of job descriptions of officers from the selected organizational cells in the police. We analysed job descriptions and requirements of policemen performing investigative and operational reconnaissance tasks, police prevention, riot police, counter-terrorism and forensic experts. These documents were analysed for the tasks (and the specificity of these tasks), the powers and responsibilities of the job.

The Military Police in its essence and specifics of functioning is, in a manner, similar to the Police Force. The main areas of functional and organizational activities of the Military Police, among others, are in terms of investigation and operational-investigative activities. From that angle we analysed the specificity of tasks of officers in this formation.

**4.1.2. Surveys.** Information on psychological traits and cognitive skills relevant to particular positions were collected by surveys. In the study a group of 120 officers (80 police officers and 40 military police officers) participated. The aim of the survey was to diagnose the characteristics of psychomotor and cognitive competencies needed during conducting official duties. The results of the survey confirmed the theoretical assumptions that perception, concentration, persistence and divided attention, speed and accuracy in the analysis of the problem, logical thinking and drawing conclusions and working memory are of particular importance as key psychophysical features for the work of an officer. The separated components are important in the service of the Police and the Military Police, and, as studies have shown, they are not differentiated in officers due to the nature of their service.

At this stage of the project preferences for spending free time by officers, their interests, and in particular the involvement of computer games were also diagnosed. The data collected by the survey involving a group of 120 officers (80 police officers and 40 military police officers). Information obtained about the time spent on video games and gaming activities, as well as

preferences in this regard are important because individual cognitive training is to be based just on computer games. Results of this study indicated that 60% of respondents are willing to play computer games. Most often they mentioned strategy and logical games, adventure and role-playing games a little less. The data collected also identify the significant involvement of police officers in social activity; what is important is that the commitment focuses on specialized sites and police forums. It is also interesting that the most active group that use specialized portals are not young people, but people who are in the age group of between 41-50 years.

**4.1.3. Development of computerized versions of tests included in the diagnostic and training system – A pilot study.** The list of psychological functions which are of particular importance for the effective performance of official duties by officers became a part of the output for the next step of research, and was developed based on the results of the analysis of job descriptions and results of the survey. The list included the following functions: perception (detection functions and approximate visual attention); executive attention (concentration, divisibility and durability); working memory (range of material and processing speed of imaging, verbal, spatial and episodic material); decision making (speed and accuracy in the analysis of the problem and the forecasting of events); and efficiency of logical thinking and drawing conclusions.

At this stage the sets of psychological tests of cognitive performance monitoring for officers had been developed. The task of testing was to check the output level as well as monitoring progress in the development of selected components of cognitive skills. Two sets of tests were prepared. The first of these sets include numerical, verbal and logical exercises. The second set – consisting of two subtests – contain tests on concentration and test examining the level of working memory. The concentration and attention test consists of 80 tasks, in which subjects have to respond in an appropriate manner to emerging stimuli. In turn, a test examining the efficiency of working memory contains 40 tasks and relies on memorizing the position of letter symbols on a matrix, and then answering questions about their original location on the matrix. According to reports in the literature, tasks of storing spatial information turn out to be good tests of working memory, highly correlated with other more standard measures (Orzechowski, 2012).

Further research activities consisted of the pilot studies, in which the generated test was used. The study involved a 120-person research group (80 police officers and 40 officers of the Military Police). The tests were prepared on the online platform, the survey was anonymous (no personal information was collected) and lasted about one hour. Each of the participants logged on to the test by using the generated individual access code. Before the start of the tasks, the subjects got acquainted with the manual test execution, in case of doubt things were explained by the trainers. Each subject solved tasks individually; during the trial in the courtroom a trainer who motivated them to perform the test and monitored their progress was present. While solving the test the subjects could use pencil and paper sheets to make calculations. After the test, each person participating in the pilot study received information about the test result and duration of action.

The results of the pilot studies are the basis for selection of the most relevant and differentiating tasks to appropriately test, among others, perceptiveness, concentration of attention, working memory and analytical thinking. These tests will be developed within the next project tasks.

Parallel to the task entitled “Developing computerized versions of tests included in the diagnostic-training system”, diagnostic sets of interactive games to develop listed cognitive processes at different levels were produced.

## **4.2. Development of psycho-physiological module recorder**

One of the specific objectives of the project is to develop a psychophysiological recorder module that will expand training for coping with stress. It was assumed that the user can be connected to simple sensors clipped to the fingers of the left hand and complete the task in the game requiring rapid action and high reflexes, yet some errors are associated with

exposure to a strong, unpleasant sound via the headphones. The system reads the psycho-physiological parameters and, after the game, presents a report describing the level of stress and the measures to facilitate its reduction. After performing several tasks, one will be able to assess the effects of the training. The tasks will change so that the user will not only learn the weakening response to specific stimuli, but also will develop a general habit of reducing pressure in stressful situations. The result of the task is to be a device to assess changes in the intensity of psychophysiological reactions (heart rate and galvanic skin response) integrated with games and software for analysis of results. It was assumed that some of the tasks would be performed under significant time pressure, resulting in rushing and (at least some) stress and disorganization of action.

The purpose of the module is, therefore, a psychophysiological measurement of the intensity of emotional reactions through the analysis of galvanic skin response and heart rate, and provide test feedback. In contrast to the classical biofeedback it will not be possible to monitor their performance on a regular basis (i.e. during the game), and only after its completion. It is expected that people actively training should focus on the task rather than on emotions. Interpretation of the results of the test will help to develop effective ways of coping in a stressful situation.

The work on the concept of psychophysiological recorder module was inspired by solutions used in the polygraph device. In a few words, we shall now refer to the essence of the polygraph test and the polygraph device itself (Krapohl & Sturm, 2012). The polygraph test is a method of human identification based on memory trace. It consists of summoning, registration (as a function of time) and the interpretation of the physiological effects of emotions associated with this track. In this procedure a device called the polygraph camera is used (developed in the 20s of the twentieth century in the United States), and which is now used to varying degrees in dozens of countries around the world (Konieczny, 2009). The object of study of the polygraph processes are emotional and physical correlates – physiological responses (Matté, 1996; Kleiner, 2002). Among the physiological correlates of emotions there may be mentioned, among others, temperature changes, changes in blood chemistry, change in the course of respiration, changes in the galvanic skin response in the cardiovascular system. For polygraph tests there were selected such physiological correlates of emotions that were easiest to record and observe, i.e. changes in breathing, blood pressure changes and changes in galvanic skin response (Widacki, 2011).

In modern polygraphs data are recorded with the following sensors:

- breathing patterns are recorded by pneumographs;
- by means of GSR sensors (galvanic skin response) the ectodermal activity is recorded reflecting the relative change in conductivity or resistivity of current in the tissue of the epidermis;
- the relative changes in the speed and pulse amplitude and relative blood volume are recorded by the cardiograph (Kleiner, 2002; Handler, Nelson, Krapohl, & Honts, 2010; Stern, Ray, & Quigley, 2001).

In the developed prototype module psychophysiological recorder two sensors are used, i.e. electrodes to measure the GSR and a sensor to measure heart rate (by fotoplethysmography) (Stern et al., 2001).

## 5. FUTURE DIRECTIONS AND CONCLUSION

The end result of the project will be a fully functional web platform with the functions of the test and a training module, and an advanced test of cognitive and psychomotor skills.

Within each stage of the implementation of the established testing standards there will be optimization and validation of the system.

From the purely technological point of view, the innovative solutions, which are the result of the project, relate to the study of control algorithms and psychological training and psychophysiological data integration with the psychological system operating online.

From the psychological point of view the innovation of the project lies in the precise identification of cognitive and intellectual functions – which are crucial in the work of

uniformed officers – and the development of methods to foster these functions by training online as it has already been mentioned.

The proposed system is characterized by the following elements: it is set to develop the skills of people with at least average cognitive and psychomotor potential; its design is based on a task base developed on the achievements of modern cognitive science, and further verified in additional basic research, forming part of the project; the functionality of the system will be dedicated to the development of cognitive and psychomotor skills needed in the work of officers of the uniformed services; advanced test function will support the optimal selection of officers for difficult and dangerous tasks; the system will be equipped with a module of psychophysiological training support to cope with stress.

Implementation of the project should bring two major benefits. The first of these will be to improve the efficiency and effectiveness of the cognitive coping with stress for the Police and Military Police officers. Moreover, it will enable raising the quality of human resources, improvement of self-esteem and efficiency of mental work to increase the potential of these services. The second advantage is related to the implementation of the advanced testing features of cognitive and psychomotor efficiency. It will be done through enabling rapid and objective assessment of current predispositions to improve the efficiency and safety of groups performing difficult and dangerous tasks. Efficient law enforcement authorities have a strong influence on the security of the state and its citizens. Therefore, properly selected and trained officers, having insight into their potential and having opportunities to maintain a high level of cognitive abilities (through adequate training of the mind), provide a solid basis for the proper functioning of the organization.

## REFERENCES

- Handler, M., Nelson, R., Krapohl, D., & Honts, C. R. (2010). An EDA primer for polygraph examiners. *Polygraph*, 39(2), 68-100.
- Kleiner, M. (Ed.). (2002). *Handbook of polygraph testing*. San Diego, CA: Academic Press.
- Konieczny, J. (2009). *Badania poligraficzne: Podręcznik dla zawodowców* [Polygraphic research: Handbook for professionals]. Warsaw, Poland: Wydawnictwa Akademickie i Profesjonalne.
- Krapohl, D., & Sturm, S. (2012). Terminology reference for the science of psychophysiological detection of deception. *Polygraph*, 31(3), 154-239.
- Lachowicz, Z. (1995). *Trening potencjału kierowniczego* [Training of managing potential]. Wrocław, Poland: Wydawnictwo Akademii Ekonomicznej.
- Matté, J. A. (1996). *Forensic psychophysiology using the polygraph: Scientific truth verification, lie detection*. Williamsville, NY: J.A.M. Publications.
- Nowak, A. (2004). Organizacja współpracy gospodarczej i rozwoju [Organization for economic cooperation and development]. In T. Łoś-Nowak (Ed.), *Organizacje w stosunkach międzynarodowych. Istota mechanizmy działania zasięg* [Organizations in international relations. The essence of the mechanisms of action reach] (4th ed., pp. 364-365). Wrocław, Poland: Wydawnictwo Uniwersytetu Wrocławskiego.
- Orzechowski, J. (2012). *Magiczna liczba jeden czyli co jeszcze zmieści się w pamięci roboczej* [The magic number one or what else will fit in the working memory]. Kraków, Poland: Wydawnictwo Uniwersytetu Jagiellońskiego.
- Stern, R. M., Ray, W. J., & Quigley, K. S. (2001). *Psychophysiological recording*. New York, NY: Oxford University Press.
- Suchodolski, A. (2002). Rozwój i zarządzanie karierą pracowników [Development and management of employees' careers]. In T. Listwan (Ed.), *Zarządzanie kadrami* [Human resources management] (pp. 211-234). Warsaw, Poland: Wydawnictwo C.H. Beck.
- Widacki, J. (2011). Kierunki poszukiwań nowych technik detekcji nieszczerości [Guidelines for searching for new techniques to detect insincerity]. In Agencja Bezpieczeństwa Wewnętrznego (Org.), *Normy prawne i standardy branżowe w zakresie badań poligraficznych w wybranych krajach: Materiały z Międzynarodowego Sympozjum Poligraferów, Emów 21-24 czerwca, 2010* [Legal and industry standards for polygraphic research in selected countries: Materials of the First International Polygraphy Symposium, Emów, 21-24 June, 2010]. Emów, Poland: Agencja Bezpieczeństwa Wewnętrznego.

## ADDITIONAL READING

Kahneman, D. (2012). *Pułapki myślenia. O myśleniu szybkim i wolnym* [Pitfalls of thinking. About thinking fast and slow]. Poznań, Poland: Wydawnictwo Media Rodzina.

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<sup>i</sup> “Europe 2020 - A strategy for smart, sustainable and inclusive growth” is a new, long-term programme of socio-economic development of the European Union 2010-2020. The strategy was approved by the European Council on 17 June 2010. It replaced the Lisbon Strategy implemented in 2000-2010. The new strategy opens the discussion on the future of the Community economy and future direction of the European Union, based on the experience and achievements of the Lisbon Strategy. [http://ec.europa.eu/eu2020/index\\_en.htm](http://ec.europa.eu/eu2020/index_en.htm)



**Section 3**  
**Educational Psychology**





## Chapter 17

# PARENT AND TEACHER AGREEMENT ON EMOTIONAL AND BEHAVIORAL PROBLEMS IN CHILDREN WITH READING PROBLEMS

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### ABSTRACT

The purpose of this study was to investigate parent and teacher agreement on emotional and behavioral problems of children with reading problems. This study was conducted in Milopotamos Province, in the municipality of Rethimnon, in Crete, where many behavioral problems in boys including school drop-out, violence and rule-breaking have been reported. Reading tests were given to 318 students from 18 schools from third and fourth grade (8+ to -10). Eighty schoolchildren, whose reading performance was under 25% of distribution rates, comprised the group of schoolchildren with reading problems. Their parents (N=65) and teachers (N=79) assessed each child using the Greek parent and teacher version of the Child Behavior Checklist respectively. Results revealed higher correlation on narrow and broad scales for externalizing problems than internalizing and total problems. High level of agreement is important for two reasons: first, because it maximizes parents' acceptance of children's difficulties and consequently this maximizes the agreement for appropriate intervention. Second, it is necessary in the planning of intervention programs at the early stages of a child's academic development in order to reduce the incidents of students dropping out of school and perhaps to diminish the increasing rate of violence and rule-breaking activity in the area of Milopotamos.

*Keywords:* reading problems, internalizing problems, externalizing problems, parent – teacher agreement, intervention programs.

## 1. INTRODUCTION

Parent and teacher necessity of information utilization on emotional and behavioral problems has long been pointed out (Rutter, Tizard, & Whitmore, 1970). Researchers and educators rely heavily on parents' and teachers' ratings of children's emotional and behavioral problems, because young children are not able to provide reliable information about their behavior. There are different perceptions between parents and teachers regarding children's behavioral problems and this is due to the different settings, in which such behavior is exhibited. For example, one child may exhibit extreme anxiety at school but not at home, and vice versa. Another reason for the different perceptions is due to various cultural beliefs about which behavior is considered appropriate either at home or at school. Nevertheless, if parents and teachers agree that "specific" behaviors have arisen in both settings, it seems that this behavior is serious and an intervention is needed.

Children's behavior evaluation is accomplished through questionnaires constructed by Achenbach (1993), which have been standardized in many countries. The parent and teacher complement of Achenbach's questionnaires enable the possibility of comparing the evaluation results. Emotional and behavior problems constitute two broad dimensions, being equal to internalizing and externalizing behavior problems.

Although there is a plethora of studies concerning emotional and behavioral problems, fewer studies have been conducted to exploring parent – teacher agreement on this field. Most of the studies conducted thus far in different countries and different age groups indicate that parents rate more internalizing and externalizing problems than teachers (Cai, Kaiser, & Hancock, 2004; Deng, Liu, & Roosa, 2004; Satake, Yoshida, Yamashita, Kinukawa, & Takagishi, 2003), and only a few studies indicate teachers rate more problems than parents

(e.g. Handwerk & Marshall, 1998; Shin, Nhan, Crittenden, Valenti, & Hong, 2008). In Greece, Roussos and colleagues (1999), found in a large random community sample from 1200 schoolchildren (6-12 years old) that Greek parents consider their children more aggressive, delinquent, anxious and depressed than children of American parents. In the same study, Greek teachers agreed with Greek parents that their schoolchildren are more anxious and depressed at school.

## **2. BACKGROUND**

The magnitude of parent and teacher agreement on internalizing and externalizing problems has been low to moderate (Achenbach, McConaughy, & Howell, 1987; Satake et al., 2003; Stanger & Lewis, 1993). The agreement with regard to externalizing problems fluctuates between moderate to high and is higher for children aged 6–11 than for adolescents (Achenbach et al., 1987). These problems are visible, serious, and easier to determine and maybe cause trouble to adults. On the contrary, the agreement on internalizing problems tends to be low, because they may not often be visible and the adults may not be aware of them. Most of these studies investigating parent-teacher agreement on internalizing and externalizing problems use samples from the general population and only a few use selective samples, such as schoolchildren with reading or learning problems.

The relation between learning or reading problems and emotional problems has long been proven in schoolchildren (for a review see Arnold et al., 2005; Beitchman & Young, 1997; Carroll, Maughan, Goodman, & Meltzer, 2005; Hinshaw, 1992; McGee, Williams, Share, Anderson, & Silva, 1986; Prior, Smart, Sanson, & Oberklaid, 1999; Rutter, et al., 1970; Smart, Sanson, & Prior, 1996; Willcutt & Pennington, 2000). Even though there are so many studies in this field, only a few studies investigate parent – teacher agreement.

The first study concerned with the relation between reading difficulties and emotional and behavior problems was conducted by Rutter and his colleagues (Rutter, et al., 1970). In this study, parent and teacher agreement was low but statistically significant. The closest agreement was concerned with antisocial characteristics, such as stealing and disobedience. On the contrary, the lowest levels of agreement were neurotic characteristics, such as worries, twitches, irritability, misery, fear and fussiness (Rutter et al., 1970). This study designated the necessity of utilizing parent and teacher information on behavior assessment.

The results tend to be the same in other studies using selective samples. Parents and teachers tend to agree more on externalizing behavior of children with learning problems, while this agreement decreases on internalizing behavior (Rosenberg, Harris, & Reifler, 1988). As it occurs in most studies of the general population, the agreement between parents' and teachers' ratings of children with learning disabilities is higher to externalizing-type behavior, but it is difficult to agree on internalizing-type behavior (Rosenberg et al., 1988). Other studies using selective samples, (for example Miranda, Soriano, Fernández, & Melia, 2008) show high correspondence between parents-teachers in rating the problems of noticeable behaviors, while agreement on invisible behaviors is much lower.

However, the high levels of agreement between parents' and teachers' ratings are important, because schoolchildren with reading problems often exhibit emotional and behavior problems or children with emotional and behavior problems often exhibit learning problems. However, the small number of studies regarding parent and teacher agreement on emotional and behavior problems of schoolchildren with reading problems restricts the utilization of the results of studies in this field.

## **3. OBJECTIVES**

The aim of the present study was to investigate the agreement between parents' and teachers' ratings on narrow and broad scales of internalizing and externalizing problems of schoolchildren with reading problems, in the province of Milopotamos, in the municipality of Rethimnon, in Crete. The province of Milopotamos was selected because many behavioral problems have been reported including school drop-out, violence and rule-breaking. As it is

known, this is the first study in Greece, which investigates parent and teacher agreement in schoolchildren with reading problems and particularly in an area where it is difficult to carry out an interview with parents because of cultural beliefs.

## 4. METHODS

### 4.1. Participants and procedure

Two reading tests (decoding and reading comprehension) were given to all students (N=322) in third and fourth grade (8+ to -10 years old) from 18 schools in the Milopotamos Province. Only two schools (18 from 20 schools in total) were excluded from the research because there were no children attending third and fourth grade. Four schoolchildren with mental retardation were excluded from the study too (N=318). The subjects were classified according to their performance, ranging from highest to lowest ratings. From this classification, eighty schoolchildren (N=80), (58 boys and 22 girls), whose reading performance fell into the lowest rating distribution (scoring under 25%) comprised the group of schoolchildren with reading problems. The reliability concerning reading problems, based on low reading performance in children of the same age has been confirmed by Fletcher et al. (1994).

Parents (n=65) and teachers (n=79) corresponded and assessed each child with reading problems. All tests were given to parents and completed in the presence of the conductor of the research so that they would be completed appropriately without mistakes and misunderstandings. It was necessary for parents because most of them do not read well or even at all. It was also necessary for teachers in order to avoid misunderstandings and any bias resulting from the children's behavior, because most teachers, who work as teachers in the Milopotamos Province, come from other parts of Crete and Greece and were either afraid of completing a questionnaire on a child's behavior or reluctant to report any behavior problems especially those displayed by male children.

### 4.2. Instrument

*Reading tests.* The decoding and reading comprehension test is a set composed of four subtests: A) The decoding test is composed of a subtest of words and a text (Venianaki, 2009). B) The reading comprehension test composed of a subtest of a passage comprehension (Test of Reading Performance-TORP) (Padeliadu & Sideridis, 2000; Sideridis & Padeliadu, 2000) and a subtest containing a cloze (Venianaki, 2009). Reading tests' reliability and validity was high (Venianaki, 2009). Both the decoding and reading comprehension test were adapted in another rural area in Crete, in order to be given to all schoolchildren from third and fourth grade. We preferred using adaptive reading tests instead of standardized tests (with the exception of TORP) because more children in rural areas are not in a school grade appropriate for their age. Consequently, they could not be given a standardized reading test and each schoolchild's performance was compared to their classmates' reading performance, who were the same age and grade.

*Intelligence test.* The Raven's test (Coloured Progressive Matrices) is a nonverbal group intelligent test typically used in educational settings (Raven, Raven, & Court, 2003). It was given, in order to exclude children with mental retardation, The Raven test, rather than another intelligence test e.g., WISC, was selected because it is not affected by intercultural differences.

*Emotional and behavioral problems.* In order to assess behavioral and emotional problems, we used the Greek version of Achenbach's Child Behavior Checklist (CBCL) and Teachers' Report Form (TRF). The CBCL and TRF are two standardized questionnaires designed to obtain parents' and teachers' reports of behavioral and emotional problems of children aged 6-18. Both instruments have 118 items concerning children's behavioral and emotional problems and yield scores on five subscales, which are grouped into broadband scales of internalizing and externalizing behaviors. The internalizing scale is the sum of items from three subscales: anxious/depressed, withdrawn/ depressed and somatic complaints. The externalizing scale is the sum of two subscales: rule-breaking behavior and aggressive behavior. Parents and teachers rate how true each item is now or within the past 6 months using the

following scale: 0 = not true (as far as you know); 1 = somewhat or sometimes true; 2 = very true or often true.

### 4.3. Statistical analysis

To examine differences between parents' and teachers' ratings both on narrow and broad scales of the CBCL and TRF, we used raw scores for the analysis on each scale, because the use of T scores would mask differences in base rates and the level of perceived problems (Satake et al., 2003). We examined the correlations between scores rated by parents and teachers. Not all scores of each scale showed normal distribution; therefore we used Spearman's rank correlations.

## 5. RESULTS

The results of the CBCL and TRF questionnaires indicated that parents rated more children as having internalizing ( $M=8.58$ ,  $Sd=5.10$ ) and externalizing problems ( $M=11.88$ ,  $Sd=9.91$ ) than teachers ( $M=7.73$ ,  $Sd=5.90$ ), ( $M=9.17$ ,  $Sd=11.13$ ), respectively, but without statistically significant differences ( $p>.05$ ) (see table 1). Teachers rated more children as being withdrawn/ depressed and having total problems ( $M=38.13$ ,  $Sd=24.46$ ) than parents ( $M=37.38$ ,  $Sd=16.64$ ) but once again without statistical differences ( $p>.05$ ).

Table 1. Mean (SD) of narrow and broad scales on internalizing/externalizing and total problems rated by parents, teachers and agreement.

Emotional and Behavioral problems	Parent	Teacher	Correlation
	Mean (SD)	Mean (SD)	p
<b>Narrow scales</b>			
Anxiety/depression	5.49 (3.39)	3.34 (3.67)	ns
Withdrawn/depression	2.25 (2.35)	2.76 (2.93)	.487***
Somatic complaints	.85 (1.08)	.63 (.93)	-
Rule-breaking behavior	3.02 (3.20)	2.50 (3.23)	.557***
Aggressive behavior	8.85 (7.09)	6.67 (8.35)	.635***
<b>Broad scales</b>			
Internalizing problems	8.58 (5.10)	7.73 (5.90)	.296*
Externalizing problems	11.88 (9.9)	9.17 (11.13)	.612***
Total problems	37.38 (16.64)	38.13 (24.46)	.324**

\*\*\* $p<.001$  \*\* $p<.01$  \* $p<.05$

To determine the magnitude of correlations between parents and teachers' rating we conducted the Spearman correlation test. The correlations in broad scales were higher for externalizing problems ( $r=.612^{***}$ ,  $p<.001$ ) than internalizing ( $r=.296^*$ ,  $p<.05$ ) and total problems ( $r=.324^{**}$ ,  $p<.01$ ).

In the narrow scales on externalizing problems, the correlations were high in both scales (rule-breaking behavior and aggressive behavior:  $p<.001$ ). Although the magnitude of parents and teachers' agreement has been low for internalizing problems, the findings in narrow scales are needed to explain. Parents and teachers do not agree on anxiety/depression scale ( $p>.05$ ), but the magnitude of agreement increases on withdrawn/depression scale ( $p<.001$ ). Analysis on somatic complaints could not be carried out because both parents and teachers assessed that somatic complaints do not exist and there was no schoolchild with high ratings in this scale. Consequently, parent and teacher agreement on internalizing problems is restricted to withdrawn and depressive behaviors, and total problems is low to moderate ( $p<.01$ ) because it is affected by scores from narrow scales in internalizing problems.

## 6. DISCUSSION/CONCLUSION

The aim of the present study was to investigate the agreement between parents' and teachers' ratings on internalizing and externalizing problems of children with reading problems, in the province of Milopotamos, in Crete.

The examination of broad and narrow scales in CBCL and TRF indicates that the good agreement is limited to externalizing problems. This finding almost exists in most studies, which either refers to general population (e.g., Roussos et al., 1999) or to selective samples (Rutter et al., 1970; Rosenberg et al., 1988). The agreement between the ratings of the parents and teachers with regard to externalizing problems indicates that these problems cannot be ignored. Parent and teacher agreement on both aggressive and rule-breaking behavior indicates that adults are aware of these behaviors. Certainly, we cannot support the view that parents or teachers are aware of the severity of the behavior and they just mention it without worrying about it.

Furthermore, high agreement on externalizing problems is deemed serious when reading problems arise at the early stages (8+ to -10 years old). This finding may explain high level of school dropout after elementary school and rule breaking behavior in teenagers and adults, since reading problems coexisting with externalizing problems are not being confronted. The significance of the coexistence of reading problems with externalizing problems in adolescence and adult life has long been reported (Goodman & Scott, 2005). Parent and teacher agreement on externalizing type-behavior in schoolchildren with reading problems must be taken into consideration by educational and health committees.

The low level of agreement on internalizing problems indicates that parents and teachers give different information about children's behavior. Information gained from each informant is important, unique and cannot be substituted for information gained from another informant (Achenbach et al., 1987).

Internalizing problems are more inner directed, not obvious and appear to be more difficult for both parents and teachers to agree upon (Rosenberg et al., 1988). The analysis of the results on the narrow scales on internalizing problems reveals parents tend to rate different items concerning emotional items as problematic. Children react differently to settings and adults (Cai et al., 2004) and existing problems may be expressed otherwise in different contexts. For example, some parents consider that their children's behavior is appropriate and not problematic at home, but teachers consider this behavior as problematic, or vice versa. Another illustrative example of low agreement is when some parents consider their children's behavior as appropriate and it is, while the same children demonstrate different behavior at school, as they are more anxious, and nervous owing to reading problems and lack of incentives for learning. Hence, the high level of agreement on withdrawn and depressed children's behavior indicates that this behavior is detected and potentially is the result or the root cause of reading problems. Nevertheless, this finding has to be interpreted with caution because of cultural beliefs about appropriate behavior.

Generally, behavior is perceived and interpreted differently. Teachers' ratings on schoolchildren's total problems are more than parents and this is expected, because school is a more demanding and restrictive setting than home. Teachers also tend to report problem behaviors affecting academic performance, classroom management, and peer relationships. This is evidence that the differences between teacher and parent ratings of behavioral problems are at least partly due to differences in the environments in which adults observe children's behavior.

## 7. FUTURE RESEARCH DIRECTIONS

This is the first Greek study examining the parent and teacher agreement on emotional and behavior problems of children with reading problems. Furthermore, this study was conducted in a province, where many behavioral problems in boys including school drop-out, violence and rule-breaking have been reported.

Teacher ratings for externalizing problems are the best predictor of referral for mental health services (Stanger & Lewis, 1993) and also for learning difficulties. Without there being an intention of diagnosis, we must take into account that schoolchildren with reading problems which co-exist with externalizing problems are at high risk for rule-breaking behavior. Consequently, further behavior problem evaluation is needed by educational services. This can be accomplished by Public Educational Institutions which exist in each municipality. Intervention programs can be designed for the prevention of behavior problems. Hence, further analysis of the behavioral problems that have been reported in this province is necessary. These findings may reflect problems coming from dysfunctional families but it also may be purely an artifact generated by cultural factors affecting responses to the questionnaires (Roussos et al., 1999). Even if it is an artifact, the combination of reading problems with high levels of externalizing problems explains school drop-out after elementary school, which is acceptable from the local community, as well as the incidents of violence and rule-breaking being reported. By this, we have to consider that the causes of school-dropout and violence in this area are deeper and multifactorial. However, regardless of the causes collaboration is needed not only between home and school but also collaboration on an even wider level. It is essential that there be involvement and support of local society, school consultants, and university faculties. Furthermore, teacher training is required for the application of the intervention programs. But it also requires development control and readjustment, if it is necessary.

Considering the existing economic and social circumstances, the planning of intervention programs at the early stages of a child's academic development is necessary in order to deal with reading problems and to increase reading skills. Besides, there are more dimensions that have to be considered. The Greek educational system has an academic orientation, while families' expectations are different. Curriculum, books, goals, aims and demands do not differ from urban, semi-urban or rural areas. Parents cannot help their children in their daily homework, since parental educational levels in rural areas are lower (Roussos et al., 1999). Results point to the need for multiple resources of assessing children and this is particularly necessary for children from rural areas, and of different cultural beliefs (Phillips & Lonigan, 2010). Consequently, high level of agreement in this study is important: firstly, because it maximizes parents' understanding and acceptance of children's difficulties and consequently this understanding and acceptance of children's difficulties maximizes the agreement for appropriate intervention. Increased communication between parents and teachers can lead to a greater understanding of children's behavior but also social-emotional protective factors (Winsler & Wallace, 2002). Secondly, because it is necessary for there to be planning of intervention programs at the early stages of a child's academic development in order to reduce the incidents of students dropping out of school and perhaps diminish the increasing rate of violence and rule-breaking activity in the area of Milopotamos.

## 8. LIMITATIONS

This study has several methodological limitations. Firstly, the effect of gender, father-mother occupation, type of school has not been considered up to now. Secondly, we only focused on narrow and broad scales on internalizing and externalizing problems, but not on other problems, such as ADHD. Our results should be interpreted with caution.

## REFERENCES

- Achenbach, T. M. (1993). *Empirically based taxonomy: How to use syndromes and profile types derived from the CBCL/4-18, TRF and YSR*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implication of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*(2), 213-232. doi:10.1037/0033-2909.101.2.213

- Arnold, E. M., Goldston, D. B., Walsh, A. K., Rebossin, B. A., Daniel, S. S., Hickman, E., & Wood, F. B. (2005). Severity of emotional and behavioral problems among poor and typical readers. *Journal of Abnormal Psychology, 33*(2), 205-217. doi:10.1007/s10802-005-1828-9
- Beitchman, J., & Young, A. (1997). Learning disorders with a special emphasis on reading disorders: A review of the past 10 years. *Journal of American Academy Child and Adolescent Psychiatry, 36*(8), 1020-1032. doi:10.1097/00004583-199708000-00009
- Cai, X., Kaiser, A., & Hancock, T. (2004). Parent and teacher agreement on child behavior checklists items in a sample for preschoolers from low-income and predominantly African American families. *Journal of Clinical Child and Adolescent Psychiatry, 33*(2), 303-312. doi:10.1207/s15374424jccp3302\_12
- Carroll, J. M., Maughan, B., Goodman, R., & Meltzer, H. (2005). Literacy difficulties and psychiatry disorders: Evidence for comorbidity. *Journal of Child Psychology and Psychiatry, 46*(5), 524-532. doi:10.1111/j.1469-7610.2004.00366.x
- Deng, S., Liu, X., & Roosa, M. W. (2004). Agreement between parent and teacher reports on behavioral problems among Chinese children. *Journal of Developmental and Behavioral Pediatrics, 25*(6), 407-414. doi:10.1097/00004703-200412000-00004
- Fletcher, J. M., Shaywitz, S. E., Shankweiler, D. P., Katz, L., Liberman, I. Y., Stuebing, K. K., Francis, D. J., Fowler, A. E., & Shaywitz, B. A. (1994). Cognitive profiles of reading disability: Comparisons of discrepancy and low achievement definitions. *Journal of Educational Psychology, 86*(1), 6-23. doi:10.1037/0022-0663.86.1.6
- Goodman, R., & Scott, S. (2005). *Child and adolescent psychiatry* (2nd ed.). Wiley-Blackwell.
- Handwerk, M. L., & Marshall, R. M. (1998). Behavioral and emotional problems of students with learning disabilities. Serious emotional disturbance or both conditions. *Journal of Learning Disabilities, 31*(4), 327-338. doi:10.1177/002221949803100402
- Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin, 111*(1), 127-155. doi:10.1037/0033-2909.111.1.127
- Miranda, A., Soriano, M., Fernández, I., & Melia, A. (2008). Emotional and behavioral problems in children with attention deficit-hyperactivity disorder: Impact of age and learning disabilities. *Learning Disability Quarterly, 31*(4), 171-185.
- McGee, R., Williams, S., Share, D. L., Anderson, J., & Silva, P. A. (1986). The relationship between reading retardation, general reading backwardness and behavioral problems in a large sample of Dunedin boys: A longitudinal study from five to eleven years. *Journal of Child Psychology & Psychiatry, 27*(5), 597-610. doi:10.1111/j.1469-7610.1986.tb00185.x
- Padeliadu, S., & Sideridis, G. (2000). Discriminant validation of the Test Of Reading Performance (TORP) for identifying children at risk of reading difficulties. *European Journal of Psychological Assessment, 16*(2), 139-146.
- Phillips, B., & Lonigan, C. (2010). Child and informant influences on behavioral ratings of preschool children. *Psychology in the Schools, 47*(4), 374-390. doi:10.1002/pits.20476
- Prior, M., Smart, D., Sanson, A., & Oberklaid, F. (1999). Relationships between learning difficulties and psychological problems in preadolescent children from a longitudinal sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*(4), 429-436. doi:10.1097/00004583-199904000-00016
- Raven, J., Raven, J. C. P., & Court, J. H. (2003). *Manual for Raven's Progressive Matrices*. The Psychological Corporation.
- Rosenberg, L., Harris, J., & Reifler, J. (1988). Similarities and differences between parents' and teachers' observations of the behavior of children with learning problems. *Journal of Learning Disabilities, 21*(3), 189-191. doi:10.1177/002221948802100313
- Roussos, A., Karantanos G., Richardson, C., Hartman, C., Karajiannis, D., Kyprianos, C., Lazaratou, H., Mahaira, O., Tassi, M., & Zoubou., V. (1999). Achenbach's Child Behavior Checklist and Teachers' Report Form in a normative sample of Greek children 6-12 years old. *European Child & Adolescent Psychiatry, 8*(3), 165-172. doi:10.1007/s007870050125
- Rutter, M., Tizard, J., & Whitmore K. (1970). *Education, Health and Behaviour*. London, UK: Longman Group Ltd.
- Satake, H., Yoshida, K., Yamashita, H., Kinukawa, N., & Takagishi, T. (2003). Agreement between parents and teachers on behavioral/emotional problems in Japanese school children using the Child Behavior Checklist. *Child Psychiatry and Human Development, 34*(2), 111-127.

- Shin, J., Nhan, N., Crittenden, K., Valenti, S., & Hong, H. (2008). Agreement on childhood disability between parents and teachers in Vietnam. *International Journal of Disability, Development and Education*, 55(3), 239-249. doi:10.1080/10349120802268370
- Sideridis, G., & Padeliadu, S. (2000). An examination of the psychometric properties of the test of reading performance using structural equation modeling. *Psychological Reports*, 86(3), 789-802. doi:10.2466/pr0.2000.86.3.789
- Smart, D., Sanson, I., & Prior, M. (1996). Connections between reading disability and behavior problem: Testing temporal and causal hypotheses. *Journal of Abnormal Child Psychology*, 24(3), 363-383. doi:10.1007/BF01441636
- Stanger, C., & Lewis, M. (1993). Agreement among parents, teachers and children on internalizing and externalizing behavior problems. *Journal of Clinical Child Psychology*, 22(1), 107-115. doi:10.1207/s15374424jccp2201\_11
- Venianaki, A. (2009). *Literacy difficulties and emotional and behavioral problems* (Doctoral dissertation). Department of Primary Education, University of Crete: Greece.
- Willcutt, E. G., & Pennington, B. F. (2000). Psychiatric comorbidity in children and adolescents with reading disability. *Journal of Child Psychology and Psychiatry*, 41(8), 1039-1048. doi:10.1111/1469-7610.00691
- Winsler, A., & Wallace, G. L. (2002). Behavior problems and social skills in preschool children: Parent-teacher agreement and relations with classroom observations. *Early Education & Development*, 13(1), 41-58. doi:10.1207/s15566935eed1301\_3

## ADDITIONAL READING

- Achenbach, T. M. (2006). As others see us: Clinical and research implications of cross-informant correlations for psychopathology. *Current Directions in Psychological Science*, 15(2), 94-98. doi:10.1111/j.0963-7214.2006.00414.x
- Achenbach, T. M., & Rescorla, L. A. (2003). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Fletcher, J. M., Lyon, G. R., Barnes, M., Stuebing, K. K., Francis, D. J., Olson, R. K., Shaywitz, S. E., & Shaywitz, B. A. (2002). Classification of Learning Disabilities: An Evidence-Based Evaluation. In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice* (pp. 185-250). Mahwah, NJ: Erlbaum.
- Hartley, A. G., Zakriski, A. L., & Wright, J. C. (2011). Probing the depths of informant discrepancies: Contextual Influences on Divergence and Convergence. *Journal of Clinical Child & Adolescent Psychology*, 40(1), 54-66. doi:10.1080/15374416.2011.533404.
- Lundervold, A. J., Heimann, M., & Manger, T. (2008). Behaviour-emotional characteristics of primary-school children rated as having language problems. *British Journal of Educational Psychology*, 78(4), 567-580. doi:10.1348/000709908X320480
- Mattison, R. E., Carlson, G. A., Cantwell, D. P., & Asarnow, J. R. (2007). Teacher and parent ratings of children with depressive disorders. *Journal of Emotional and Behavioral disorders*, 15(3), 184-192. doi:10.1177/10634266070150030501

## KEY TERMS & DEFINITIONS

**Reading problems:** students' difficulties in accuracy and/or speed of reading and also in reading comprehension, as a result of decoding difficulties.

**Internalizing and externalizing problems:** empirical syndrome scales, according to the dimensional classification of emotional and behavioral problems.

**Intervention programmes:** appropriate supportive programmes for prevention of dropout and behavioral problems.

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## Chapter 18

# CROSS-INFORMANT AGREEMENT AND TEACHER NOMINATION TECHNIQUE IN THE ASSESSMENT OF CHILDREN BEHAVIOR PROBLEMS

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### ABSTRACT

The aim of our study was to (1) examine the degree of agreement among children, parents and teachers on the scales and items of the Czech version of the Child Behavior Checklist, and (2) to assess a teacher nomination technique as a short and simple tool for the recognition of children with higher levels of self-reported problems. The first part of the study was conducted on a sample of 300 children (aged 11-16). The overall degree of cross-informant agreement was low, particularly for ratings of boys. The highest correlations were found between the ratings of parents and teachers (median correlation 0.336), followed by the correlations between the ratings of parents and children (median correlation 0.316). The agreement between teachers and children's ratings was generally poor (median correlation 0.115), with the exception of moderate agreement on the Externalizing Behavior scales. The nomination technique was mainly based on the TRF scales and contained nine short descriptions; the sample consisted of 145 children from non-clinical population (aged 11-12). Only a low proportion of children were named by the teachers at each problem child description. Four significant associations were found between the teacher's ratings in the nomination technique and the categorical ratings based on children self-reports (YSR). Results of both parts of the study are consistent with previous findings and emphasize the importance of utilizing multiple sources in the assessment of children behavior problems.

*Keywords:* CBCL, informant's agreement, nomination technique, teachers, child problem behavior.

## 1. INTRODUCTION

In the past, the assessment of a child's behavior problems frequently relied on a single informant, typically a parent. However, assessment methods have increasingly demanded the utilization of multiple sources of information, including the children themselves. Multiple informants may each contribute unique information about the child's behavior: Parents may not be aware of their child's intrapsychic symptoms or concealed conduct problems and they may only be able to observe their child in a limited range of situations. Children's behavior varies from one context and interaction partner to another; and many child problems are not consistently present across different settings but may occur exclusively at home or at school (Cantwell, Lewinsohn, Rohde, & Seeley, 1997; Achenbach & McConaughy, 1997).

## 2. BACKGROUND

Achenbach, McCounaghy, & Howell (1987) conducted a meta-analysis of studies that used various assessment instruments and found only moderate correlations between different informants' ratings of child behavior problems. Poor concordance between parent ratings, peer ratings and self-ratings of social behavior – the Social Competence section of the CBCL and related instruments – has also been reported (Schneider & Byrne, 1989). However, Achenbach et al. (1987) do not equate the low cross-informant agreement in child assessment with unreliability; instead, they see it as reflecting the cross-situational specificity of the children's emotional and behavioral problems.

Therefore, different sources of information do not always provide consistent reports. Proper choice of informants for particular categories of child problems may lead to improved

diagnostic and predictive validity of the assessment. The reports of different informants may differ in terms of reliability (i.e. test-retest stability) and predictive power; certain informants may be superior to others in assessing specific child behaviors. Loeber, Green, Lahey, and Stouthamer-Loeber (1990) surveyed mental health professionals' perceptions of relative usefulness of children, their mothers and teachers as informants on children's problem behavior. Children and their mothers were perceived as more useful informants than teachers on children's internalizing behavior, teachers were seen as the most useful informants on children hyperactivity and attention problems, and children were perceived as the least useful informants on their own attention and hyperactivity problems and oppositional behavior. The study of Loeber and colleagues (1990) has been limited to comparisons involving 7-to-12-year-old children. The authors suppose that the usefulness of informants changes from late childhood to adolescence, expecting adolescents to be the best informants on their own internalizing problems and on concealed conduct problems. Phares (1997) examined mothers' and fathers' opinions on the accuracy of various types of informants (mothers, fathers, teachers, peers, and children themselves) of children's emotional and behavioral problems. Mothers were both by themselves and by fathers perceived as the best informants on children's internalizing problems; mothers and teachers were seen as the most accurate in reporting externalizing behavior; and mothers, fathers, and children themselves were perceived as superior in reporting family problems.

Several studies identified teacher ratings of children problems as good predictors, for example, of referral for mental health services. The ability of parents, teachers, and self-reports to predict symptoms of maladjustment in 11-to-14-year-old children over a 4-year interval were examined in the study by Verhulst, Dekker, and Van der Ende (1997). Each of the three informants made a unique contribution to the prediction of maladjustment. Factors that predicted actual referral and parental need for professional help were different from the factors that predicted children's own perceptions of having problems or of needing professional help. Surprisingly, teachers' ratings of internalizing problems, often viewed as less accurate compared to those of parents, were found to be highly useful in predicting the child's own perceptions of having problems. This finding is consistent with the results of another longitudinal study (Mesman & Koot, 2000), which attempted to identify parent- and teacher-reported behaviors indicating the presence of child-reported depression and anxiety. Results showed that child-perceived depression and anxiety were only slightly related to parental ratings of the child's problems, while they were moderately related to teacher-reported problems. The authors inferred that teachers were more likely than parents to notice internalizing problems and related problems in children reporting depression or anxiety. These findings are contradictory to those of Crowley and colleagues (1992), who examined the relationship between self-report, peer-report, and teacher-report measures of childhood depression on item level; they concluded that those three types of measures yielded scores that were primarily independent and thus measured generally uncorrelated constructs. These contradictory findings suggest that it is essential to include both children and adults as informants on internalizing problems.

Research studies have shown that adult-child agreement on externalizing behaviors is lower than adult-adult agreement on the same behavior (e.g., Edelbrock, Costello, Duclan, Calabro Conover, & Kalas, 1986). Moreover, the study of Stanger and Lewis (1993) on agreement among parents, teachers, and children identified teacher ratings of externalizing problems as the best predictors of referral for mental health services. Children may underreport conduct problems because they forget about them, especially when the reference period is long, or because they do not identify the behavior as problematical. As children grow older, their ability to assess their own behavior improves and their assessment becomes more concordant with that of adults (Edelbrock et al., 1985, 1986). On the other hand, children's ability to hide problem behaviors (e.g. theft, drinking, or drug use) improves with increasing age as well. Achenbach et al. (1987) in their meta-analysis found that concordance between adults and children's ratings decreased slightly from late childhood to adolescence. There is also some evidence that the more antisocial children are, the lower are their ratings of their own problematic behavior, compared with the assessment of others (Loeber et al., 1990; Sawyer,

Baghurst, & Mathias, 1992). For aggressive and anti-social behavior, assessment by peers might be the most accurate, even at an early age. In their longitudinal study, Clemans, Musci, Leoutsakos, and Ialongo (2014) compared the predictive validity of teacher, parent, and peer reports of aggressive behavior in the first grade for maladaptive outcomes (such as antisocial personality, substance use, incarceration history, risky sexual behavior, and failure to graduate from high school on time) in late adolescence and early adulthood. Peer reports were found to be the most accurate predictors of all outcomes.

Research studies indicate that teacher reports may show high accuracy and predictive validity for some types of problem behavior. However, long inventories, questionnaires, or even short screening tools might be very demanding and time consuming when the teacher is asked to assess a high number of students (often all students in the class). There has been an effort to simplify the teacher's assessment in those cases. Understandably, the accuracy and validity of such simplified assessments has been examined. One of the more promising methods is the nomination technique: One or more short descriptions of problem behavior are presented to the teachers, who are asked to nominate (name) children who in their opinion match the description.

One of the first studies of the teacher nomination method for identifying child behavior problems was conducted by Green, Beck, Forehand, and Vosk (1980). The nomination captured conduct vs. withdrawal problems (the rest of the children were classified as normal). The results were validated against sociometric ratings by peers, behavioral observations and academic achievement measures. The children identified by teachers as having conduct problems differed from normal children in all of these criteria, whereas the children identified as withdrawn differed from normal pupils only in sociometric ratings and academic achievement scores. More importantly, the groups of children with conduct problems and withdrawal problems did not differ from each other significantly in any of the measures. These findings lead the authors of the study to the conclusion that teachers are able to recognize a child with a problem but they might find it difficult to identify the type of the problem.

Henry, Miller-Johnson, Simon, Schoeny, and The Multisite Violence Prevention Project (2007) used the teacher nomination method to identify socially influential, aggressive adolescents for participation in a violence prevention program. They compared the teacher's nominations with peer nominations and found significant correlations between them. Dwyer, Nicholson, and Battistutta (2006) used a very simple form of the nomination technique: a single question asking if either parents or the child's teacher believed the child was at a higher-than-average risk of developing a mental health problem in the future. They tested the predictive validity of this method as well as the more extensive Family Risk Factor Checklist (FRFC) for children's internalizing, externalizing, and total behavior problems scores after one year. Both parents' and teachers' predictions were more valid for externalizing than internalizing problems, with teacher nominations showing greater predictive validity than parent nominations. The teacher nomination method had higher sensitivity for predicting all three scores than the FRFC had.

### 3. OBJECTIVES

The first purpose of our study was to examine the degree of agreement between children, parents and teachers on the scales and items of the Czech version of the Child Behavior Checklist. The instrument was translated into the Czech language and introduced in the Czech Republic by Ivo Čermák and it has been used mainly in research studies so far (e.g. Čermák & Urbánek, 1998; Čermák & Klimusová, 2000). In the present study, we decided to examine the agreement between categorical as well as continuous ratings of emotional and behavioral problems. This dual approach is recommended, for example, by Stanger and Lewis (1993). The second objective was to assess a short instrument of our own construction – a teacher nomination technique based on TRF scale descriptions. Our aim was to explore whether teachers are able to identify children with higher levels of self-reported problems by means of a short and simple instrument.

## 4. METHODS

The Czech versions of the Child Behavior Checklist (CBCL), the Youth Self-Report (YSR) and the Teacher Report Form (TRF) were administered to a sample of 300 young adolescents (aged 11-16 years;  $M = 13.41$ ;  $SD = 0.95$ ; 58 % boys). The correlations between informants' ratings were analyzed, as well as the patterns of conditional agreement among informants (Kappa coefficients).

The nomination technique consisted of nine short descriptions, and the teachers were to name children who matched each description. They could match any number of children to each description, and every child could be associated with any number of descriptions. The descriptions were to a large extent based on the items of TRF scales. For example, the description based on the Anxious/Depressed scale was as follows: *Child B often fears that he/she might have done something wrong; he/she seems to be unhappy, sad or depressed. He/she gives the impression that he/she feels guilty or inferior or that he/she feels that nobody likes him/her.* The sample consisted of 145 children of non-clinical population (11 and 12 years of age;  $M = 11.17$ ;  $SD = 0.38$ ; 41% boys). Since parent ratings were not available for this sub-sample, only comparisons with self-reports were possible.

## 5. RESULTS

### 5.1. CBCL scales cross-informant agreement

The Pearson correlation coefficients reflecting the agreement between parents' and children's reports, children's and teachers' reports, and parents' and teachers' reports on behavior problem scales are presented in Figure 1. The highest correlations were found between the ratings of parents and teachers (median correlation 0.336), followed by the correlations between the ratings of parents and children (median correlation 0.316). Parents' rank orders of children agreed with those of teachers mainly on Somatic Complaints, Attention Problems, and the scales belonging to the Externalizing Behavior scale – Delinquent Behavior and Aggressive Behavior scales. The agreement between parents' and children's ratings was lowest on the Social Problems scale; the correlations for the rest of the scales varied slightly around  $r = 0.350$ . The agreement between teachers' and children's ratings was generally poor; the median correlation was 0.115 and only four of the eleven correlations were significant. Correlation coefficients higher than 0.200 were found only for the Externalizing Behavior scales.

The cross-informant agreement was generally better for assessment of girls than of boys. Regarding the agreement between parents and children's ratings, the median correlations for the assessment of girls and the assessment of boys were 0.366 and 0.246, respectively. The median correlations between parents and teachers' ratings were 0.346 for girls and 0.307 for boys. The lowest agreement was found between the children and teachers' ratings of boys (median correlation 0.078); the median correlation for ratings of girls was somewhat higher (0.257). A very similar pattern of cross-informant agreement can be seen in Table 1 presenting the Kappa coefficients. The Kappas indicated that the degree of agreement in classifying the child among the 15% highest scoring children by particular informants was low. The highest agreement was obtained for parents-children ratings (median Kappa of 0.240) and for parents-teachers ratings (median Kappa 0.186).

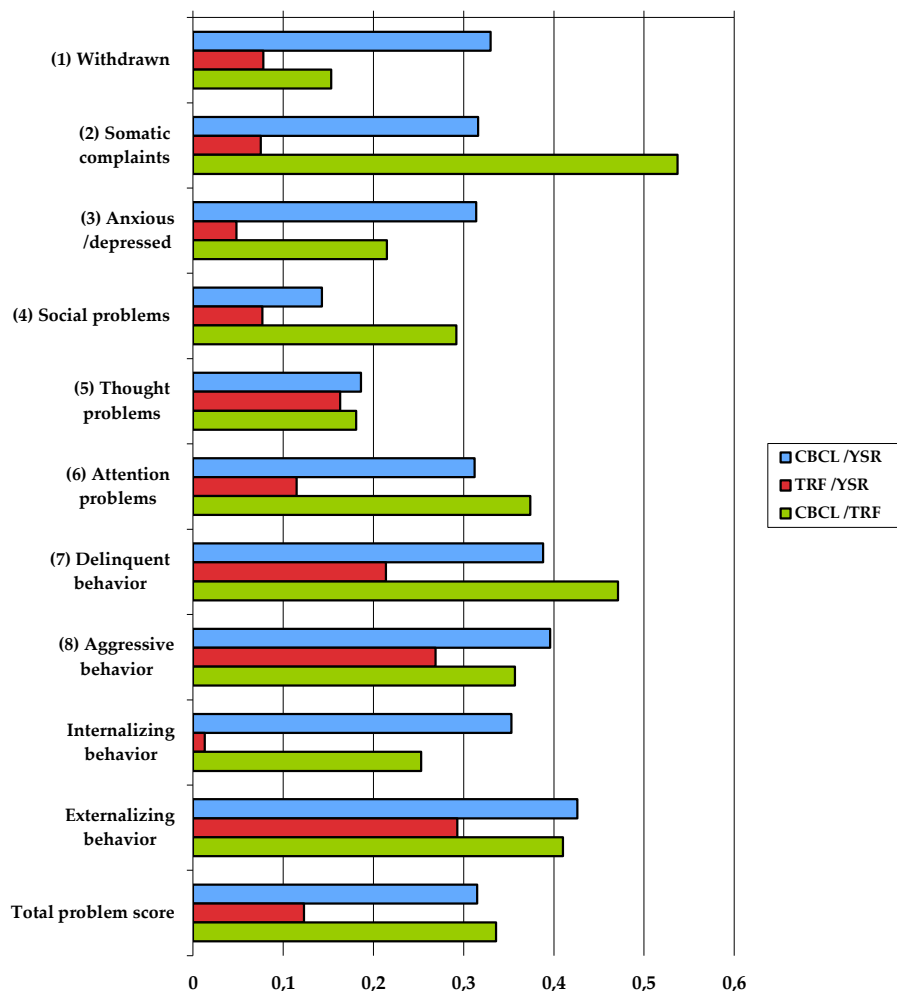
Table 1. Kappa coefficients for the CBCL, TRF, and YSR scales.

	Parents-Children (N=201)	Teachers-Children (N=238)	Parents-Teachers (N=293)
<i>CBCL/YSR/TRF narrowband scales</i>			
(1) Withdrawn	0.111	0.026	0.049
(2) Somatic complaints	0.259**	0.003	0.291**
(3) Anxious/depressed	0.196**	0.026	0.113
(4) Social problems	0.010	0.074	0.216**
(5) Thought problems	0.162*	0.073	0.176*
(6) Attention problems	0.026	0.039	0.186*
(7) Delinquent behavior	0.296**	0.051	0.304**
(8) Aggressive behavior	0.305**	0.263**	0.123
<i>CBCL/YSR/TRF broadband scales</i>			
Internalizing behavior	0.240**	0.064	0.193**
Externalizing behavior	0.266**	0.226**	0.132
Total problem score	0.240**	0.078	0.273**

Note: \*Kappa coefficient is significant at the 0.05 level

\*\*Kappa coefficient is significant at the 0.01 level

Figure 1. Correlation coefficients for the CBCL/YSR, TRF/YSR, and CBCL/TRF scales.



## 5.2. Nomination technique

The teachers generally named only a low proportion of children at each child problem description. Most of the children (75.2 %) were not ascribed to any description. The ‘Aggressive Child’ description was most frequently ascribed, followed by the ‘Child with Social

Problems' description. The Kappa coefficients were then computed as coefficients of agreement between the dichotomous variables based on the YSR scales (indicating whether a score did or did not belong to the 15 % of cases with highest scores) and the presence or absence at a particular description. Four significant associations were found between the teacher's ratings in the nomination technique and the categorical ratings based on the YSR. The Kappa of 0.171 ( $p < 0.01$ ) was obtained for Description B and the Anxious/Depressed scale of the YSR: out of the five children marked as depressed by the teacher, three children scored above the 85th percentile in the self-reported Anxious/Depressed scale. The rest of the significant Kappas were found for the ratings in Description E – Aggressive Child, which was associated with the Aggressive Behavior scale ( $\kappa = 0.232, p < 0.01$ ), Delinquent Behavior scale ( $\kappa = 0.162, p < 0.01$ ), and the broadband Externalizing Behavior scale ( $\kappa = 0.194, p < 0.01$ ). For all three associations, four of the twelve children nominated by the teacher scored above the 85th percentile in the self-report scales.

A current or past referral to counseling or child psychiatrist was reported by teachers for 15 children. It was associated with high self-rated scores in five narrowband scales: Withdrawn ( $\kappa = 0.178, p < 0.01$ ), Thought Problems ( $\kappa = 0.217, p < 0.01$ ), Attention Problems ( $\kappa = 0.180, p < 0.01$ ), Aggressive Behavior ( $\kappa = 0.190, p < 0.01$ ), and Delinquent Behavior ( $\kappa = 0.251, p < 0.01$ ). The referral status was also associated with the broadband Externalizing Behavior scale ( $\kappa = 0.228, p < 0.01$ ) and the Total Problem score ( $\kappa = 0.223, p < 0.01$ ).

## 6. FUTURE RESEARCH DIRECTIONS

To further assess the utility of the nomination technique as a potential screening instrument, the measure should be administered concurrently with the TRF – the method on which the nomination descriptions were based. Hepburn et al. (2008) chose this approach in their pilot study of the nomination technique as a screening method for autism spectrum disorders in general education classes: Teachers were asked to first nominate students who best fitted a description of a person with an autism syndrome disorder, and then complete the Autism Syndrome Screening Questionnaire for every student in their classroom. Very high agreement was found between the two methods (more than 90 %); however, the nomination method took 15 min per class on average, which is considerably less than the several hours teachers spent completing the screening questionnaires.

Nomination strategies and factors affecting the nomination results should be examined more thoroughly. The wording of the descriptions could be further modified to capture more than the small fraction of children with the most serious problems. As Dowdy, Doane, Eklund, and Dever (2013) demonstrated in their comparison of the teacher nomination method and universal screening, teacher nominations tend to identify less students with behavioral and emotional problems than universal screening does. They also pointed out that male gender, office discipline referrals, lower study habits and cooperation grades resulted in higher probability of the student being identified by either of the methods. Kroes, Veerman, and De Bruyn (2004) explored possible distortions of the child behavior evaluation stemming from the informant's personality characteristics. The level of neuroticism of the teacher (as an informant) was positively associated with his/her ratings of child behavior problems.

## 7. CONCLUSION/DISCUSSION

To summarize the results obtained on the population-based sample and to compare them with previous findings, the overall degree of cross-informant agreement was low, particularly for ratings of boys. The highest degree of agreement both on problem behavior scales and on single items was found for parent-teacher pairs. The median correlation of 0.34 for the problem scales was even higher than the mean parent-teacher ratings correlation of 0.27 found by Achenbach et al. (1987) in their meta-analysis.

The overall agreement between teachers and children's ratings was very low, with the exception of moderate agreement on the Externalizing Behavior scales. The median correlation

of 0.12 did not even reach the mean correlation of 0.20 for teacher-child pairs in the meta-analysis by Achenbach et al. (1987). Because teachers report fewer problems – and this is particularly the case for the internalizing problems – than children do, the low agreement between teachers and children may be due to a lack of variance in teachers' ratings. Moreover, the children may be more likely to display internalizing behaviors in presence of their parents than in front of their teachers. This result is in accordance with previous findings (e.g. Stanger & Lewis, 1993; Achenbach et al., 1987) suggesting better agreement on externalizing behaviors than on internalizing behaviors, especially between teachers and other raters.

In spite of a limited validity of the Kappa coefficients due to low frequencies of teacher's ratings in the nomination technique, we may assume that teachers were able to identify a certain proportion of children who rated themselves as having problems. This was particularly true for externalizing behaviors. This finding is consistent with our findings on the teacher-child agreement on the scales and items of the TRF and the YSR as described and discussed above. Our findings about the nomination technique are consistent with the conclusion of the above mentioned study by Dwyer et al. (2006), which found higher predictive power of a simple nomination question for externalizing problems score than for the internalizing problems and total problems scores. Correspondingly, Cunningham and Suldo (2014) found around 50% missing rates when identifying children with elevated levels of internalizing problems like depression and anxiety by the teacher nomination technique. As cost-efficient and timesaving the teacher nomination technique might be, for most problems it should not be used as the only screening method. The risk of misclassification can be lowered by complementing the data with peer nominations, self-reports, or parent reports.

Our findings emphasize the importance of obtaining information on children's emotional and behavioral problems from multiple informants. The agreement between parents', teachers' and self-reports is too low to suggest that one source can substitute for another; the assessment of children must take account of variance across situations and informants on which the assessment depends.

## REFERENCES

- Achenbach, T. M., & McCounaghy, S. H. (1997). *Empirically based assessment of child and adolescent psychopathology: Practical applications*. Newbury Park, CA: Sage Publications.
- Achenbach, T. M., McCounaghy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*(2), 213-232.
- Cantwell, D. P., Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1997). Correspondence between adolescent report and parent report of psychiatric diagnostic data. *Journal of the American Academy of Child and Adolescent Psychiatry*, *36*(5), 610-619.
- Čermák, I., & Klimusová, H. (2000). Vývoj sebeposouzení u dětí na škálách Achenbachova a Edelbrockova dotazníku poruch chování dítěte [The development of the self-assessment of children on the scales of Achenbach's and Edelbrock's CBCL]. In M. Blatný, M. Svoboda & I. Ruisel, & J. Výrost (Eds.), *Sociální procesy a osobnost* [Social processes and personality] (pp. 35-41). Brno, Czech Republic: Masarykova Univerzita.
- Čermák, I., & Urbánek, T. (1998). Výzkumné a diagnostické možnosti Achenbachova a Edelbrockova testu poruch chování dítěte [Research and diagnostic possibilities of Achenbach and Edelbrock test of child behaviour]. In M. Svoboda, & M. Blatný (Eds.), *Sociální procesy a osobnost* [Social processes and personality] (pp. 32-37). Brno, Czech Republic: Masarykova Univerzita.
- Clemans, K. H., Musci, R. J., Leoutsakos, J. S., & Ialongo, N. S. (2014). Teacher, parent, and peer reports of early aggression as screening measures for long-term maladaptive outcomes: Who provides the most useful information? *Journal of Consulting & Clinical Psychology*, *82*(2), 236-247.
- Crowley, S. L., Worchel, F. F., & Ash, M. J. (1992). Self-report, peer-report, and teacher-report measures of childhood depression: An analysis by item. *Journal of Personality Assessment*, *59*(1), 189-203.
- Cunningham, J. M., & Suldo, S. M. (2014). Accuracy of teachers in identifying elementary school students who report at-risk levels of anxiety and depression. *School Mental Health*, *5 April*, 1-14.
- Dowdy, E., Doane, K., Eklund, K., & Dever, B. A. (2013). A comparison of teacher nomination and screening to identify behavioral and emotional risk within a sample of underrepresented students. *Journal of Emotional and Behavioral Disorders*, *21*(2), 127-137.



- Dwyer, S. B., Nicholson, J. M., & Battistutta, D. (2006). Parent and teacher identification of children at risk of developing internalizing or externalizing mental health problems: A comparison of screening methods. *Prevention Science, 7*(4), 343-357.
- Edelbrock, C., Costello, A. J., Duclan, M. K., Calabro Conover, N., & Kalas, R. (1986). Parent-child agreement on child psychiatric symptoms assessed via structured interview. *Journal of Child Psychology and Psychiatry, 27*(2), 181-190.
- Edelbrock, C., Costello, A. J., Duclan, M. K., Kalas, R., & Calabro Conover, N. (1985). Age differences in the reliability of the psychiatric interview of the child. *Child Development, 56*(1), 265-275.
- Green, K. D., & Beck, S. J., Forehand, R., & Vosk, B. (1980). Validity of teacher nominations of child behavior problems. *Journal of Abnormal Child Psychology, 8*(3), 397-404.
- Henry, D. B., Miller-Johnson, S., Simon, T., Schoeny, M., & The Multisite Violence Prevention Project (2007). Validity of teacher nominations and ratings for selecting influential high risk students for a targeted intervention. *Prevention Science, 7*(1), 31-41.
- Hepburn, S. L., DiGuseppi, C., Rosenberg, S., Kaparich, K., Robinson, C., & Miller, L. (2008). Use of a teacher nomination strategy to screen for autism spectrum disorders in general education classrooms: a pilot study. *Journal of Autism Developmental Disorders, 38*(2), 373-382.
- Kroes, G., Veerman, J. W., & De Bruyn, E. E. J. (2004). The impact of the Big Five personality traits on reports of child behaviour problems by different informants. *Journal of Abnormal Child Psychology, 33*(2), 231-240.
- Loeber, R., Green, S. M., Lahey, B. B., & Stouthamer-Loeber, M. (1990). Mental health professionals' perception of the utility of children, mothers, and teachers as informants on childhood psychopathology. *Journal of Clinical Child Psychology, 19*(2), 136-143.
- Mesman, J., & Koot, H. M. (2000). Child-reported depression and anxiety in preadolescence: I. associations with parent- and teacher-reported problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(11), 1371-1378.
- Phares, V. (1997). Accuracy of informants: Do parents think that mother knows best? *Journal of Abnormal Child Psychology, 25*(2), 165-171.
- Sawyer, M. G., Baghurst, P., & Mathias, J. (1992). Differences between informants' reports describing emotional and behavioural problems in community and clinic-referred children: A research note. *Journal of Child Psychology and Psychiatry, 33*(2), 441-449.
- Schneider, B. H., & Byrne, B. M. (1989). Parents rating children's social behavior: How focused the lens? *Journal of Clinical Child Psychology, 18*(3), 237-241.
- Stanger, C., & Lewis, M. (1993). Agreement among parents, teachers, and children on internalizing and externalizing behavior problems. *Journal of Clinical Child Psychology, 22*(1), 107-115.
- Verhulst, F. C., Dekker, M. C., & Van der Ende, J. (1997). Parent, teacher and self-reports as predictors of signs of disturbance in adolescents: whose information carries the most weight? *Acta Psychiatrica Scandinavica, 96*(1), 75-81.

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## Chapter 19

# EFFECTIVENESS OF COPING WITH STRESS PROGRAM (CWSP) ON ANXIETY LEVELS: THE CASE OF SECONDARY SCHOOL STUDENTS

## Effects of CWSP on anxiety of students

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### ABSTRACT

Children are in a different position to overcome anxiety and cope with stressors because they have less learning and experience about the ways of coping with stress. The study aims to (a) develop a group guidance program on enhancing the skills of coping with stress (CWSP) and (b) evaluate its effects on the anxiety levels of 5th grade students. Data were collected by State-Trait Anxiety Inventory for Children which was developed by Spielberger and Edwards (1973) and standardized by Özusta (1995) with a questionnaire. In order to determine the groups, the inventory was applied to whole 90 students in school and 24 students, who had high anxiety and volunteer, were selected and distributed randomly to the groups. CWSP was developed for six sessions, 40 minutes per session. This program consisted of structuring the group process, understanding the concept of stress, its resources, physiological symptoms and emotions, relaxation training and training of transforming knowledge and skills to daily life. Results showed that the anxiety levels of experimental group statistically decreased and this effect lasted for three months.

*Keywords:* coping with stress, anxiety, secondary school students, coping with stress program.

### 1. INTRODUCTION

Currently, there is an information overload about stress, its resources and management ways towards adults by media tools and self-help books. Competitive environment and weakened social ties (Kasser, 2002), unemployment (McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Probst & Sears, 2009), the work load which trace people at home (Weiten, Hammer, & Dunn, 2012), issues about time management and search for meaning (Dolby, 2005; Emmons, 2003) increased distress. Weiten et al. (2012) indicated that APA shows in 2007 “for many of us, stress levels are high and are on the rise” (p. 71). Accordingly, stress of parents and significant adults such as teachers affect children (Conger & Donnellan, 2007; Jones, Eisenberg, Fabes, & MacKinnon, 2002). Children also confronts with stressors either at home, or in school. The most common ones are divorce or conflict between family members (Cummings, Vogel, Cummings, & El-Sheikh, 1989), frequent movements, disadvantaged neighbourhoods (Attar, Guerra, & Tolan, 1994), parental or peer pressure to success, long lasting illness, physical injuries and traumatization (Weiten et al., 2012). Specifically for Turkey (a) test anxiety, (b) the need to establish cumulative academic success; (c) less career planning studies; (d) increasing and changing expectations of parents in line with employers; (e) internal migration, conflicting values between peers may be added to previously mentioned stressors.

Adults may tend to believe that children don't experience stress or anxiety as seen in adults. This point of view is dangerous and may limit the adults' awareness to notice the needs. Children may present symptomatic feelings, attacks or acts when they feel unidentified or unhelped. However, children's ability to deal with stressors was proven to have positive effects on their psychosocial adjustment (Pincus & Friedman, 2004).

Actually, children are in a different position to overcome anxiety and cope with stressors because they have less learning and experience. Higher levels of social support and problem-solving skills moderated the relation between stressful life events and behavior

problems in elementary school children (Dubow & Tisak, 1989). They react to the current situation differently according to their age, intellectual and social capabilities (Band & Weisz, 1988). They may be vulnerable to addictions, may be aggressive or nervous, may be unsuccessful and may internalize or externalize these experiences when they don't feel social support from parents, teachers and peers (Ikiz & Savi Cakar, 2012).

School-based intervention for preventing and reducing children's stress-related symptoms (Berger, Pat-horenczyk, & Gelkopf, 2007), stress reduction applications as an educational program (Wall, 2005), trends for developing positive youth development by scholar programs (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002), mindfulness training (Napoli, Krech, & Holley, 2005; Wall, 2005) and examining common characteristics of successful prevention programs to reduce symptoms of psychopathology (aggression, depression, or anxiety) and factors commonly associated with an increased risk for later mental disorders (Garmezy, Masten, & Tellegen, 1984; Greenberg, Domitrovich, & Bumbarger, 2000) have been examined worldwide. A Meta analytic review on the effectiveness of stress management programs in schools done by Kraag, Zeegers, Kok, Hosman, and Abu-Saad (2006) corroborated that stress management or coping skills programs conducted in schools are effective in reducing stress symptoms and enhancing coping.

This study proposes a group guidance program for enhancing coping with stress and to investigate its effects on the anxiety levels of 5th grade students. The problem is stated as follows: Does Coping with Stress Program have significant effect on anxiety levels of fifth grades?

## **2. BACKGROUND**

### **2.1. Anxiety**

Anxiety is defined as an adjustment mechanism to cope with danger, as a basic humanitarian feeling and as a multi-dimensional state of feeling (Özusta, 1995), and as a way of life which is consciously felt and in which psychological changings such as sweating and growing pale following it and which arises from the conflict between what we want to do and the conditions, from the conflict between what we want to express and not to do it or from the conflict between a value group (Horney, 1995).

According to psycho-analytical approach, anxiety is a state of tension that motivates individuals to mobilize, do a job and to take part in activities. Anxiety arises from the conflict occurring from the control of existing psychic energy among the id, ego and superego. The function of anxiety is to stimulate the organism against a possible threat (Corey, 2005). The anxiety of reality is a fear felt against the threat from the external World and the level of anxiety is proportional to the degree of real threat. Neurotic anxiety is the fear felt as to the fact that instincts may take the individual under control and may cause him/her to be punished for what s/he did, and moral anxiety is the fear which the individual feels against his/her conscience (Corey, 2005).

Some individuals live in constant unhappiness and they generally become unhappy. Spielberg emphasizes that the individuals who think that their values are threatened and who consider the situations s/he experiences stressful feel anxious. He also stresses that this kind of anxiety stems from the person himself/herself and states that these people experience "trait anxiety". Situational anxiety is the other one, state anxiety, created by dangerous situations, and it is temporary and circumstantial which each individual generally experiences momentarily (Julian, 2011; Özusta, 1995).

Children cannot express the state of being anxious in general, fail to put their feelings into words and have difficulty in talking about their fears and problems. Therefore, the anxious children are generally tensed, ready to cry, being uneasy and have difficulty in gathering their thoughts. Physical complaints such as insomnia, fearful dreams and not being able to sleep alone accompanying this. Some children become introverted and do not join the peer groups in order to get rid of anxiety, they exhibit such attitudes as sticking together, being dependent and shyness. In school children, the anxiety of not being approved by his/her peers and environment become prominent. The child may hesitate to say his/her opinions, may not want to attempt to

do something without someone's help and support and has difficulty in starting a friendship. His/her participation in lessons may decrease with the fear that s/he may tell something wrong. S/He may not want to come to school due to the anxiety that s/he will not succeed in his/her courses. Confrontation with relationship problems such as having problems related to attending school and concentration, experiencing conflict with teachers, having anxieties about the school, and behaving aggressively in the relationships with the peers can be the symptoms for stress.

## 2.2. Stress

Psychological stress is defined through daily troubles, pressures, preventions, conflicts and changings that arise via stress-causing events (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus, 1991b; Lazarus & Folkman, 1984; Morris, 2002; Skinner, Edge, Altman, & Hayley, 2003; Westen, 1999; Woolfolk, 1998). Indeed, adjustment processes developed against the stress-causing situation and conditions reflect the reactions in the state of stress and they may be of physiological, emotional, behavioral and cognitive quality (Baum, Singer, & Baum, 1981; Lazarus, 1991a; Lazarus, 1991b).

The first factor playing a role in individual's being open to stress is the frequency of encountering with stress and is the quality of the confronted stress in terms of its duration and meaning. The second factor, on the other hand, is the individual's skill s/he acquired in his/her developmental period as to being able to cope with stress and s/he possesses in terms of personality. As a matter of fact, stress belongs to the person who bears it in his/her mind. The reaction for stress appears not depending on what is there in the environment but depending on how individual perceives what is happening and how s/he reacts to it (Weiten et al., 2012).

## 2.3. Symptoms of stress

According to Selye's (1977) theory of General Adjustment Syndrome, when an individual faces a source of stress, body shows the reaction of "fight or run away" because sympathetic nerve system becomes active and the process of generating reaction for the new situation consists of three stages, including the stage of alarm, the stage of resistance and the stage of exhaustion (as cited in Weiten et al., 2012). Generally, the *physical symptoms* regarding stress are denoted as headache, irregular sleep, backaches, jaw spasm or teeth grinding, constipation, diarrhea, change in appetite, tiredness or loss of energy, increase in the accidents; *emotional symptoms* as anxiety, depression or immediate crying, rapid and continual change in mental state, nervousness, being tensed, decrease in self-confidence or feeling of lack of confidence, extreme sensitiveness or being easily offended, burst of rage aggression or enmity, feeling of exhaustion emotionally, regression, adoption, resistance or fear; *mental symptom* as lack of concentration, difficulty in making decision, dysmnnesia, extremely dreaming, loss of sense of humor increase in mistakes, becoming weak in reasoning; and *social symptoms* as distrust, putting the blame for others, verbal offending and the conflicts in the interpersonal relationships (Braham, 1998).

A child's reaction to stress is not similar to others and may show difference according to age. Loss of appetite, stomach ache, staying away from activities, sadness, depression and complaining can be seen in the children of school age. Some children show their reactions directly, while some others suppress and some act out their feelings of stress by exhibiting abnormal behaviors (Longo, 2000).

## 2.4. The significance of coping with stress

The effect of stress should be kept at positive level to motivate the person. Thus we mention coping with stress. What an individual exhibits in the face of the compulsion and exhaustion of his/her physio-psychological sources is defined as the cognitive and behavioral efforts that are intended for adjusting and are continually changing (Aldwin, 2007; Baum et al., 1981; Lazarus, 1991a; Lazarus and Folkman, 1984). Many fields of educational process are largely affected from anxiety and stress, it will be useful to provide education about the techniques for coping with stress and managing anxiety to the students (Greenberg et al., 2000; Napoli et al., 2005; Skinner et al., 2003).

### 3. METHOD

#### 3.1. Objectives

The purpose of this study is to (a) develop a group guidance program on enhancing coping with stress of fifth grade students and (b) investigate its effects on the anxiety levels of 5th grade students. Hypotheses are given below:

1. There will be a statistically significant decrease on the post-test anxiety levels of experimental group after the application of Coping with Stress Program.
2. There will be no statistically significant change on the post-test anxiety levels of control group after experiment process completed.
3. There will be no statistically significant change between post-test and following test anxiety levels of experimental group.

#### 3.2. Design

Pre-test and post-test with a following test experimental model with experimental and control group was used. Research design is given on Table 1.

*Table 1. Research design.*

Group	Before Experiment	Experiment Process	After Experiment	Following Experiment after 3 Months
	Pre-test		Post-test	Following
Experimental	STAIC Questionnaire	Coping with Stress Program	STAIC	STAIC
Control	STAIC Questionnaire	Watching films and book discussions	STAIC	STAIC

#### 3.3. Participants

Research was conducted in Izmir Bayraklı Talatpasa Secondary School at 2010-2011 education periods with 24 students. Participants were selected according to their accessibility and the school contact with the university. The counsellor of the school was one of the researchers in this study. In order to determine the groups, inventory applied to whole 90 students in school and 24 students (15 (62,5%) girls, 9 (37,5%) boys), who had high anxiety and volunteer, were selected and distributed randomly to the experimental group as 12 students and control group as 12 students regarding their similarities. The pre-test means of groups were assessed for normal distribution and no statistically significant difference was obtained.

According to sibling number, 2 of students (8,3%) indicate they are the only child, 16 of them (66,7%) indicate they have one sibling, 6 of them (25%) indicate they have more than one sibling. According to mother education level, 1 of them (4,2%) indicated as analphabetic, 13 of them (54,2%) indicate as primary school graduate, 10 of them (41,7%) indicated as high school graduate. According to father education level, 1 of them (4,2%) indicated as analphabetic, 8 of them (33,3%) indicate as primary school graduate, 3 of them (12,5%) indicate as secondary school graduate, 10 of them (41,7%) indicate as high school graduate, 2 of them (8,3%) indicate as university graduate. Students indicate that 20 of them (83,3%) take the advantage of school counselling service and 4 (16,7%) of them don't.

#### 3.4. Data collection tools and data analysis

**3.4.1. State-Trait Anxiety Inventory for Children (STAIC).** The State-Trait Anxiety Inventory for Children (STAIC) distinguishes between a general proneness to anxious behavior rooted in the personality and anxiety as a fleeting emotional state, based on the same theory as the STAI. The instrument is designed to be used with upper elementary or junior high school aged children and consists of two twenty-item scales. It was adapted to Turkish population by Özusta (1995). Studies offer suitability for 9-13 years old age. Reliability studies indicate .82 Cronbach Alpha coefficient for S-Anxiety scale and .81 Cronbach Alpha coefficient for

T-Anxiety scale. Test-retest reliability coefficient for whole group .60 for S-Anxiety scale and .65 for S-Anxiety scale.

**3.4.2. Questionnaire.** This form was established by researchers as five close ended questions, in order to obtain data about participants' gender, sibling number, education level of parents, and usage of school counselling service, perceptions about academic achievement levels. In order to see whether there was a statistically significant difference between the pre-test anxiety levels of groups before the application of the program or not, t-test was conducted. After the program was conducted to the experimental group and after the post-test and following test results obtained, the effects were analysed by oneway Anova.

### 3.5. Design of Coping with Stress Program (CWSP)

This program was established by the researchers especially for this study through one year before applications. The construction and objectives of the program were given below on Table 2.

Table 2. General structure and objectives of CWSP.

Objectives	Activities	Sessions
1.Part: Introducing stress concept with whole dimensions (what it is, its resources, physical and emotional symptoms)	1.1. Helping group members meet and introduce each other 2. Establishing group process 3. Establishing rules with members	Introduction activity, meeting play, establishing rules Session 1
	2.1. Understanding "stress" construct 2. Differentiating stress evoking cases	Using pictures and vignettes Session 2
	3.1. Learning the resources of stress	Discussing and filling in the form about stress evoking or avoiding phrases Session 3
	4.1. Understanding physical symptoms of stress moment 2. Understanding emotions and feeling of stress moment	Using pictures to differentiate physical and emotional physical symptoms, scanning written media, establishing bulletin and creating a catchphrase Session 4
2.Part: Learning coping strategies	5.1. Applying and teaching relaxation training 2.Understanding and using coping skills	Relaxation training and applying other strategies Session 5
	6. Transferring obtained knowledge and coping skills to real life situations	Role playing, question and answer activity on vignettes Session 6

Activities and its order are all original because cognitive therapies, mindfulness research, positive psychology and preventive counselling approaches establishes our source of inspiration and we emphasize cooperative play, role playing, analysing pictures and newspapers, relaxation training, examining vignettes which are suitable for the cognitive and psychosocial developmental levels of fifth grade students.

### 3.6. Results

Pre-test, post-test and following test results of groups are given on Table 3. First and third hypothesis verified and Anova results are given on Table 4.

Table 3. Pre-test, post-test and following test means and standart deviations of both groups.

Groups	N	Pretest		Post test		Following	
		$\bar{x}$	Ss	$\bar{x}$	ss	$\bar{x}$	ss
Experimental	12	40.00	2.000	33.08	1.08	32.25	1.35
Control	12	40.16	2.85	37.75	1.60	40.08	2.10

Table 4. Pre-test, post-test and following test anxiety means significance of experimental group.

Source of Variance	Sum of Squares	sd	Means of Squares	F	p	Significant Difference
Among the subjects	20.22	11	1.83			
Measurement	434.38	2	217.19	83.911	.000*	Pre-test-Post-test
Mistake	56.94	22	2.58			Pre-test-permanence
Total	510.55	35	221.62			

\*p< .01

According to Table 4, it was discovered that anxiety score means of the individuals taking part in the Program of Coping with Stress show difference at significant level and the effects of repetitive measurements factors (pre-test, post-test, following) present in the procedure on the anxiety were statistically meaningful [ $F_{(1-22)}=83,911$  p<.05]. It was observed that there was statistically no significant difference between the means of post-test anxiety level of the students in the subject group and the following test anxiety score means. This result reveals that the applied program reduces the anxiety score averages of students and this effect continues for three months, which puts emphasis on the permanence of program.

Second hypothesis verified and Anova results are given on Table 5. As it is seen in Table 5, according to Anova test results of the control group [ $F_{(1-22)}=7,360$  p<.05], it was observed that there is a significant difference in the anxiety score means of the students in the control group after applying the Program of Coping with Stress. However, this difference occurred between the post-test and permanence. No statistically meaningful difference was observed between the pre-tests and post-tests. Decrease of anxiety in the process of post-test and its being at the level in the time of pre-retest in the process of following can be regarded as a natural fluctuation.

Table 5. Anova results of the control group's anxiety pre-test, post-test and following test scores for repetitive measurements.

Source of Variance	Sum of Squares	sd	Means of Squares	F	p	Significant Difference
Among the Subjects	99.333	11	9.030			
Measurement	45.167	2	22.583	7.360	.004*	Post-test/following test
Mistake	67.500	22	3.068			
Total	212.000	35				

\*p< .01

#### 4. FUTURE RESEARCH DIRECTIONS

We experience stress since we are searching for the most effective ways to cope with stress and manage anxiety through 35 years worldwide. Current modern life and rapid technological innovations are inclined to create new stressors. However, it is proved that coping with stress programs or anxiety reduction studies, no matter what are their approaches, are



effective. For undergraduate teacher and counselor education programs and for the counseling curriculum of schools, curriculum development study including stress management is suggested.

According to positive psychology and positive youth development movement, preventive studies in school counseling become crucial. Besides, school counselors need application studies. In-service trainings for educators and principals are suggested.

The effects of general and social media; environmental circumstances; increased modernization; shifting values and customs; and stereotypical thinking patterns about self in children may be valuable variables for future stress studies.

## 5. CONCLUSION/DISCUSSION

In present study, a coping with stress program was developed for 5<sup>th</sup> grade students to understand the concept of stress, its sources, physiological symptoms, relaxation training and training of transforming knowledge and skills to daily life. A statistically significant decrease was seen on their anxiety levels after the program experience. Also, there was no statistically significant difference between their post-test and the following test results indicating permanence. Moreover, there was no statistically significant difference between the pre-test and the post- test anxiety levels of the control group. These results are parallel with Sheehy and Horan (2000), and Iglesias et al. (2005). Besides, there are supporting findings in literature indicating the benefits of coping programs (Berger et al., 2007; Catalano et al., 2002; Garmezy et al., 1984; Greenberg et al., 2000; Heimberg et al., 1990; Kraag et al., 2006; Napoli et al., 2005; Wall, 2005). Consequently, results showed that Coping with Stress Program reduced the anxiety levels of secondary school students and this effect lasted three months. Aforementioned studies and the results of present research revealed that in schools children should be educated on managing stress and controlling their interpretations of relations and events in order to avoid anxiety. This study brings in a developmental educational counselling program and enriches the efforts for coping anxiety and stress.

## REFERENCES

- Aldwin, C. M. (2007). *Stress, coping and development: An integrative perspective*. New York, NY: The Guilford Press.
- Attar, B. K., Guerra, N. G., & Tolan P. H. (1994). Neighborhood disadvantage, stressful life events and adjustment in urban elementary-school children. *Journal of Clinical Child Psychology*, 23(4), 391-400.
- Band, E. B., & Weisz, J. R. (1988). How to feel better when it feels bad: Children's perspectives on coping with everyday stress. *Developmental Psychology*, 24(2), 247-253. doi:10.1037/0012-1649.24.2.247
- Baum, A., Singer, J. E., & Baum, C. S. (1981). Stress and the environment. *Journal of Social Issues*, 37(1), 4-33.
- Berger, R., Pat-Horenczyk, R., & Gelkopf, M. (2007). School-based intervention for prevention and treatment of elementary-students' terror-related distress in Israel: A quasi-randomized controlled trial. *Journal of Traumatic Stress*, 20(4), 541-551. doi:10.1002/jts.20225
- Braham, B. J. (1998). *Stres yönetimi - Ateş altında sakin kalabilmek*. [Stress Management]. Istanbul, Turkey: Hayat Publishing.
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2002). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Prevention & Treatment*, 5(1). doi:10.1037/1522-3736.5.1.515a
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, 127(1), 87-127. doi:10.1037/0033-2909.127.1.87
- Conger, R. D., & Donellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology*, 58, 175-199.
- Corey, G. (2005). *Psikolojik danışma, psikoterapi kuram ve uygulamaları* [Counselling, psychotherapy theory and applications]. Ankara, Turkey: Mentis Publishing.

- Cummings, E. M., Vogel, D., Cummings, J. S., & El-Sheikh M. (1989). Children responses to different forms of expression of anger between adults. *Child Development, 60*(6), 1392-1404. doi:10.2307/1130929
- Dolby, S. K. (2005). *Self-help books: Why Americans keep reading them*. Urbana, IL: University of Illinois Press.
- Dubow, E. F., & Tisak, J. (1989). The relation between stressful life events and adjustment in elementary school children: The role of social support and social problem-solving skills. *Child Development, 60*(6), 1412-1423. doi:10.2307/1130931
- Emmons, R. A. (2003). Personal goals, life meaning and virtue: Wellsprings of a positive life. In C. L. M. Keyes, & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived*. Washington, DC: American Psychological Association. Retrieved May, 2014, from [http://www.psychology.hku.hk/ftbcstudies/refbase/docs/emmons/2003/53\\_Emmons2003.pdf](http://www.psychology.hku.hk/ftbcstudies/refbase/docs/emmons/2003/53_Emmons2003.pdf)
- Garnezy, N., Masten, A. S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development, 55*(1), 97-111. doi:10.2307/1129837
- Greenberg, M. T., Domitrovich, C., & Bumbarger, B. (2000). *Preventive Mental disorders in school-age children: A review of the effectiveness of prevention programs*. Retrieved from Pennsylvania State University, College of health and Human Development, Prevention Research Center for the Promotion of Human Development website: <http://www.prevention.psu.edu/>
- Heimberg, R. G., Dodge, C. S., Hope, D. A., Kennedy, C. R., Zollo, L., & Becker, R. E. (1990). Cognitive behavioral group treatment for social phobia: Comparison with a credible placebo control. *Cognitive Therapy and Research, 14*(1), 1-23.
- Horney, K. (1995). *Neurotic personality of our times*. Ankara, Turkey: Öteki Publishing.
- Iglesias, S., Azzara, S., Squillace, M., Jeifetz, M., Lores Arnais, M. R., Desimone, M. F., & Diaz, L. E. (2005). A study on the effectiveness of a stress management program for college students. *Pharmacy Education, 5*(1), 27-31.
- İkiz, F. E., & Savi Çakar, F. (2012). Behavior problems in relation with perceived support. In L. Barış, & Ö. Uzun (Eds.), *Psychology of Adolescence: New Research* (pp. 1-48). Hauppauge, NY: Nova Science Publishing.
- Jones, S., Eisenberg, N., Fabes, R. A., & MacKinnon, D. P. (2002). Parents' reactions to elementary school children's negative emotions: Relations to social and emotional functioning at school. *Merrill-Palmer Quarterly, 48*(2), 133-159. doi:10.1353/mpq.2002.0007
- Julian, L. J. (2011). Measures of anxiety. *Arthritis Care & Research, 63*(11), 467-472.
- Kasser, T. (2002). *The high prices of materialism*. Cambridge, MA: MIT Press. Retrieved May 5, 2014, from <http://ase.tufts.edu/gdae/CS/Personal%20Well-Being.pdf>
- Kraag, G., Zeegers, M. P., Kok, G., Hosman, C., & Abu-Saad, H. H. (2006). School programs targeting stress management in children and adolescents: A meta-analysis. *Journal of School Psychology, 44*(6), 449-472.
- Lazarus, R. S. (1991a). *Emotion & adaptation*. New York, NY: Oxford University Press.
- Lazarus, R. S. (1991b). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist, 46*(8), 819-834.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York, NY: Springer.
- Longo, M. F. (2000). Lightening the load for the pressured child. *The Education Digest, 66*(1), 47-49.
- McKee-Ryan, F., Song, Z., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and physical well-being unemployment: A meta analytic study. *Journal of Applied Psychology, 98*(1), 53-76.
- Morris, C. G. (2002). Stres ve sağlık psikolojisi [Health and health psychology]. In H. B. Ayvaşık, & M. Sayıl (Eds.), *Psikolojiyi Anlamak* [Understanding psychology] (pp. 491-524). Ankara, Turkey: Turkish Psychological Association Publishing.
- Napoli, M., Krech, P. R., & Holley, L. C. (2005). Mindfulness training for elementary school students. *Journal of Applied School Psychology, 21*(1), 99-125. doi:10.1300/J370v21n01\_05
- Özusta, Ş. (1995). Çocuklar için Durumlu-Süreklili Kaygı Envanteri uyarlama, geçerlik ve güvenilirlik çalışması [Standardization study of State-Trait Anxiety Inventory for Children]. *Psikoloji Dergisi, 10*, 32-34.
- Pincus, D. B., & Friedman, A. G. (2004). Improving children's coping with everyday stress: Transporting treatment interventions to the school setting. *Clinical Child and Family Psychology Review, 7*(4), 223-240.
- Probst, T. M., & Sears, L. E. (2009). Stress during the financial crisis. *Society for Occupational Health Psychology Newsletter, 5*(1), 3-4.

- Sheehy, R. S., & Horan, J. J. (2000). *The effects of stress-inoculation training on the anxiety and academic performance of first year law students*. Paper presented at the annual meeting of the American Psychological Association, Washington, D .C.. Retrieved from <http://horan.asu.edu/d-rs-apa-y2k.htm>
- Skinner, E. A., Edge, K., Altman, J., & Hayley, S. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, *129*(2), 216–269. doi:10.1037/0033-2909.129.2.216
- Spielberger, C. D., & Edwards, C. D. (1973). STAIC preliminary manual for the State-Trait Anxiety Inventory for Children (“How I Feel Questionnaire”). Palo Alto, CA: Consulting Psychologist Press.
- Wall, R. B. (2005). Tai Chi and mindfulness-based stress reduction in a Boston Public Middle School. *Journal of Pediatric Health Care*, *19*(4), 230-237.
- Weiten, W., Hammer, E. Y., & Dunn, D. S. (2012). *Psychology and contemporary life: Human adjustment* (10th ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Westen, D. (1999). *Psychology: Mind, brain, & culture* (2nd ed.). USA: John Wiley & Sons.
- Woolfolk, A. E. (1998). *Educational psychology* (7th ed.) [Interactive edition]. Boston, MA: Allyn & Bacon.

## ADDITIONAL READING

- Compas, B. E. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin*, *101*(3), 393-403.
- Compas, B. E., & Wagner, B. M. (1991). Psychosocial stress during adolescence: Intrapersonal and interpersonal processes. In M. E. Colten, & S. Gore (Eds.), *Adolescent stress. Causes and consequences*. New York, NY: Aldine de Gruyter.
- Horoz, B. (2011). *Stresle başa çıkma programının ilköğretim 5. sınıf öğrencilerinin kaygı düzeyleri üzerindeki etkisi* [The effects of coping with stress program on the anxiety levels of 5th grade students]. (Master’s thesis, Dokuz Eylül University, Izmir, Turkey). Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>
- Ikiz, F. E. (2000). *Farklı liselerdeki ergenlerin benlik saygısı, akademik başarı ve sürekli kaygı düzeyi arasındaki ilişki* [The relationship between self-esteem, academic achievement and trait anxiety levels of adolescents from different high schools] (Master’s thesis, Dokuz Eylül University, Izmir, Turkey). Retrieved from <http://teav.ankara.edu.tr/browse/1109/1109.rtf>
- Karaca, R., & Ikiz, F. E. (2010). *Psikolojik danışma ve rehberlikte çağdaş bir anlayış etkisi* [Contemporary psychological counseling and guidance] (2nd ed.). Ankara, Turkey: Nobel Publishing.
- Korkut, F. (2004). *School-based preventive counseling and guidance*. Ankara, Turkey: Anı Publishing.
- Morales, J. R., & Guerra, N. G. (2006). Effects of multiple context and cumulative stress on urban children's adjustment in elementary school. *Child Development*, *77*(4), 907-923. doi:10.1111/j.1467-8624.2006.00910.x
- Patel, G., Patel, P. M., & Patel, N. M. (2011). A review on industrial safety and health. *International Journal of Research in Ayurveda & Pharmacy*, *2*(5), 1505-1509. Retrieved from [http://ijrap.net/admin/php/uploads/643\\_pdf.pdf](http://ijrap.net/admin/php/uploads/643_pdf.pdf)

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## Chapter 20

# PERFECTIONISM AND ACADEMIC ACHIEVEMENT IN A SAMPLE OF CHILDREN FROM A REGULAR SCHOOL PROGRAM CONTEXT

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### ABSTRACT

Perfectionism is a multidimensional construct conceptualized as an excessive need in meeting high standards, striving for flawlessness and harsh self-criticism. Past studies have shown that positive perfectionism is related to a better school performance whereas negative perfectionism is often associated with social and emotional difficulties such as anxiety, depression and lower self-esteem. The current study investigated the associations between negative perfectionism and the performance in reading, mathematics and IQ performance in children from regular classroom who are applying to an international schooling program. Correlation analyses show that a high score on the negative perfectionism scale is related to a lower performance in mathematics, reading and on three IQ subscale tests. These results are important since negative perfectionism seem to affect negatively the performance in mathematics and in reading and thus may lead to negative long term outcomes such as drop out. These findings highlight the significance of developing the research on perfectionism and the importance of prevention and intervention among children.

*Keywords:* perfectionism, children, mathematics, reading performance.

## 1. INTRODUCTION

Perfectionism is a multidimensional construct often conceived as a personality trait, mainly characterized by an excessive need in meeting high standards, striving for flawlessness and accompanied by harsh self-criticism (Hewitt & Flett, 1991a, 1991b). More than three decades ago, Hamachek (1978) challenged the one-dimension dominant model and proposed a new conceptualization comprising of two forms of perfectionism, a positive one referred as “normal perfectionism” and a negative one named “neurotic perfectionism”. Normal perfectionism is defined as a set of realistic goals and in which endeavours tend to bring positive feelings such as pleasure. Neurotic perfectionism is related to the set of unrealistic goals that comes along with negative feelings and poor flexibility in regards of their own standards.

Even though the existence of a positive and a negative form of perfectionism is becoming commonly accepted (Bieling, Israeli, & Anthony, 2004; Hill, Huelsman, & Araujo, 2010), some concerns about the existence of positive perfectionism remains. For instance, “positive or functional” have strong connotations and may be deemed inappropriate to define perfectionism (Flett & Hewitt, 2002). Stoeber and Otto (2006) pointed out that the use of different facets to create specific conceptualization could partially explain the lack of agreement and the mixed results. The scientific literature on perfectionism tends to illustrate two main conceptualizations; a dimensional and a categorical conception (Stoeber & Otto, 2006). Accordingly, Slade and Owens (1998) proposed a dualistic model comprising of two types of perfectionism, positive and negative. Their conceptualization is derived from the principles of reinforcement theory. In their model, positive and negative perfectionisms do not refer to the common concept of “good” and “bad” but translate into avoidance or approaching behaviours. More precisely, negative perfectionism is driven by the fear of failure and results in avoiding behaviours (negative reinforcement) whereas positive perfectionism is described as the desire to attain success (positive reinforcement).

In accordance with Slade and Owens (1998) conceptualization, Terry-Short, Owens, Slade, and Dewey (1995) proposed the positive and negative perfectionism scale (PNPS) which aims to capture both negative and positive aspects of perfectionism, in regards to the self and

social dimensions which are captured by two subscales, self-oriented perfectionism and socially prescribed perfectionism. Self-oriented perfectionism translates into constant efforts in order to attain perfection. These individuals tend to set high goals for themselves and to display self-criticism. Socially prescribed perfectionism refers to the beliefs that one individual's have towards others expectations. They believe that others are expecting nothing less than perfection and they are striving to meet those "goals" and to obtain social approbation.

Many studies have focused on the link between perfectionism and its antecedents (Enns, Cox, & Clara, 2005; Soenens, Vansteenkiste, Luyten, Duriez, & Goossens., 2005). Some studies tend to demonstrate that the family context (e.g. parenting style, parents' characteristics, family system) play a role in the emergence of perfectionism (Cook & Kearney, 2009; Craddock, Church & Sands, 2009) whereas other studies have emphasis on the relationship between perfectionism and personality traits. Numerous studies pointed out that perfectionism relates to the Big five personality traits (Dunkley, Blankstein, Zuroff, Lecce, & Hui, 2006 ; Rice, Ashby & Slaney, 2007; Stoeber, Otto, & Dalbert, 2009; Stumpf & Parker, 2000). As reported in Stoeber and colleagues (2009), consistent findings have been reported across studies for conscientiousness and neuroticism. More precisely, conscientiousness is positively associated with self-oriented perfectionism whereas neuroticism is positively correlated to socially prescribed perfectionism. Similarly, Stumpf and Parker (2000) investigated the relationship between perfectionism and personality traits in accordance with the NEO Five-Factor Inventory. Results showed that healthy perfectionism is associated with conscientiousness and that unhealthy perfectionism showed correlation with lack of self-esteem (Stumpf & Parker, 2000).

Other studies have investigated the consequences of perfectionism among youths and/or adults (Bulik et al., 2003; Stoeber & Rambow, 2007; Turgeon, Forget, & Sénécal, 2011). Negative perfectionism has been associated with anxiety (Saboonchi & Lundh, 1997), eating disorder conducts (Bulik et al., 2003; Pratt, Telch, Labouvie, Wilson, & Agras, 2001; Turgeon et al., 2011), depression (Hewitt & Flett, 1991a; Kawamura, Hunt, Frost, & DiBartolo, 2001; Turgeon et al., 2011), and higher level of anxiety towards statistics (Onwuegbuzie & Daley, 1999) whereas positive perfectionism has been related with better outcomes such as higher level of motivation, better academic achievement (Accordino, Accordino, & Slaney, 2000; Gilman & Ashby, 2003; Rice & Slaney, 2002; Stoeber & Rambow, 2007), better performance in laboratory test's setting (Slade, Newton, Butler, & Murphy, 1991) and higher scores at aptitudes tests, which are often used in a selection contest (Stoeber & Kersting, 2007). To date, most studies have been conducted with adolescents (Dixon, Lapsley, & Hanchon, 2004; Nounopoulos, Asbhy, & Gilman, 2006; Stoeber & Rambow, 2007), undergraduates (Ashby & Kottman, 1996; Enns, Cox, Sareen, & Freeman, 2001; Hewitt & Flett, 1991b; Landa & Bybee, 2007; Stoeber & Kersting, 2007; Zhang, Gan, & Cham, 2007) and adults (Cheng, 2001; Stoeber & Stoeber, 2009). Few studies have been carried on adolescents and children and, when it was the case, most of them were conducted with gifted children (Chan, 2007; McArdle, 2010; Tsui & Mazzocco, 2006), which might not be representative of the general population.

## **2. BACKGROUND AND OBJECTIVES**

To our knowledge, there are few studies assessing perfectionism in children who are part of a regular school program. For instance, the study of Stornelli, Flett, and Hewitt (2009), which aimed to assess the link between academic achievement and the social dimension of perfectionism among middle aged children, who were part of different schooling programs (gifted, regular and arts programs), showed a positive association between mathematics achievement and perfectionism in gifted children only. Negative perfectionism was also associated with negative feelings such as sadness and anxiety. Notwithstanding the previous results, Stornelli and her colleagues (2009) found little evidence of group differences in levels of perfectionism and were mostly unrelated to levels of reading and mathematics achievement. Given that Stornelli and her colleagues (2009) only used the social dimension of perfectionism and that little is known on perfectionism in younger children who are part of a regular school program and on its possible negative outcomes, our study aims to investigate the associations

between negative perfectionism and the performance in reading and mathematics among children from regular elementary (6<sup>th</sup> grade) school in regards to the Slade and Owens model (1998).

### 3. METHODS

The study was lead in the context of an agreement between a high school and our laboratory. The school has an international schooling program in which all 6<sup>th</sup> graders children could apply. They requested our assistance in order to conduct the assessment. It is worthy to note that our team did not determine the selection of the children. Our results were sent to the school direction and were reviewed according to their own selection criteria (e.g., reports).

#### 3.1. Participants

Participants consisted of 140 French-speaking children applying for an international schooling program. They were in 6<sup>th</sup> grade (aged between 10 to 12 years old) at the time of the study. They were recruited from elementary schools in Quebec, Canada. The sample consisted of 89 girls and 51 boys taken from two cohorts (73 students in the first one and 67 in the second one). No significant differences between the cohorts were found. No restriction regarding admission to the study was imposed; any child from 6<sup>th</sup> grade level could participate. Children and their parents needed to have completed a written consent form to participate in the study.

#### 3.2. Measures

**3.2.1. Mathematic and reading tests.** To assess their academic performances, children completed mathematic and reading tests. Tests were in accordance with the regular curriculum of the Ministry of Education in Québec. The mathematic test included seven short-answers and twenty-two multiple-choice items appropriate for the 6<sup>th</sup> grade level. Each item was a success/failure question with a maximum score of 29 for the complete test. Observed minimum and maximum scores were 0 and 27, with a mean of 16.6 and a standard deviation of 4.43. The reading test consisted of eight short-answer questions based on a text about skunks. These tests assess several abilities such as capacity to recall, gather, and infer information as well as their abilities to exercise judgment. Each item has a unique scoring method with a maximum score of 50 for the complete test. Observed minimum and maximum scores were 0 and 50, with a mean of 30.66 and a standard deviation of 11.

**3.2.2. Chené-Daigle's intellectual quotient group test.** Intellectual quotient was measured by the *Chené-Daigle's intellectual quotient group test*, a validated measurement within French speakers (Chené & Daigle, 1983). The test is composed of eight subscales. Only three subtests were retained: similarities, blocks and construction subscales, assessing respectively abstraction and visual-spatial skills. Given the time constraint and considering that children had other tests to complete throughout the day, only these three subscales were retained, because they correlate well with the global score. Observed minimum and maximum scores were 60 and 136 with a mean of 100.34 and a standard deviation of 14.67. Its constancy was .85 and its homogeneity was .91.

**3.2.3. Perfectionism.** Positive and negative perfectionism (PNPS) were measured by the *Échelle de Perfectionnisme Positif et Négatif* (Seidah, Bouffard, & Vezeau, 2002) which is a French version of the *Positive and Negative Perfectionism Scale* (Terry-Short et al., 1995). The positive and negative perfectionism scale is both composed of two subscales: self-oriented perfectionism and socially prescribed perfectionism. Each subscale includes 10 items based on a 6-point Likert-like scale, for a total of 40 items. The individual scores for each scale were the average score on all items of the scale. Observed minimum and maximum scores for the positive scale were 2.2 and 5.85, with a mean of 4.18 and a standard deviation of 0.79. Observed minimum and maximum scores for the negative scale were 1 and 5.4, with a mean of

2.68 and a standard deviation of 0.83. Cronbach’s alphas for positive and negative perfectionism subscales were respectively from .74 to .80 and from .78 to .85 and their test-retest reliability were both .70 (Seidah et al., 2002).

### 3.3. Procedure

Prior to the study, school direction distributed consent forms to children who brought them home to their parents. Only children who obtained their parents’ signatures were included in the analysis of the study. Children without a signed consent form or refusing to participate in the data collection were still included in the selection process but their data was not comprised in the study. The evaluation took place in classrooms. This evaluation period was split into two sessions: a morning session and an afternoon session with a one hour lunch period between both.

The intellectual quotient group test (Chené & Daigle, 1983), a time task assessment, along with the PNPS scale were administered during the morning, on a two hours period. Considering the classroom format in which the testing took place, directives were given to the entire group and children were required to listen before answering each test or subtest.

The afternoon period consisted of the mathematic and reading assessments. Research assistants explained all evaluations, but there was no specific structure or order completion. Children were instructed that they had 2 hours to complete all tests and they were free to start with either one of the tests, at their own pace. Research assistants advised the children of the remaining time twice (one hour and half an hour before the end).

## 4. RESULTS

Pearson correlation coefficients were carried out for all five assessments. Table 1 shows the result for all correlations. Mathematics and reading showed a significant positive medium correlation ( $r = .384, p < .001$ ), as for reading and IQ ( $r = .397, p < .001$ ). Mathematics and IQ showed a positive high correlation, which was expected ( $r = .512, p < .001$ ). Positive perfectionism did not show correlations with other assessment, except for a positive medium correlation with negative perfectionism ( $r = .460, p < .001$ ). Negative perfectionism showed negative low correlation with reading ( $r = -.246, p < .001$ ), mathematics ( $r = -.257, p < .001$ ) and IQ ( $r = -.213, p < .01$ ).

Table 1. Correlations between reading, mathematics, IQ, positive and negative perfectionism assessment.

	Math	IQ	PP	PN
Reading	.384***	.397***	.054	-.246***
Math	-	.512***	.087	-.257***
IQ		-	.012	-.213**
PP			-	.460***

Note: PP = positive perfectionism, NP = negative perfectionism  
 \* =  $p < .05$  \*\* =  $p < .01$  \*\*\* =  $p < .001$

Based on the result, partial correlations were computed between negative perfectionism and reading and between negative perfectionism and mathematics, controlling for IQ. After controlling for the influence of IQ and positive perfectionism, the correlation between negative perfectionism and reading ( $r = -.180, p < .05$ ) and the correlation between negative perfectionism and mathematics ( $r = -.177, p < .05$ ) were significant.

## 5. FUTURE RESEARCH DIRECTIONS

The current study assessed the relation between academic performance and perfectionism in a sample of children aged from 10 to 12 years old. This study found a relation



between perfectionism and school achievement showing that perfectionism can be present among young children in a regular school program. This result appeals for more extensive and comprehensive researches.

Our results share additional support for a dualistic model comprising of positive and negative perfectionism (Slade & Owens., 1998). More insights can be gain by dividing perfectionism into two poles (approaching and avoidance behaviours). For instance, we have found that they were differently related to academic achievement, which was not supported by previous studies (Stornelli et al., 2009). These results directly contradict the work of Stornelli and her colleagues (2009) who showed that perfectionism was mostly unrelated to levels of reading and mathematics achievement. Specifically, their results suggested no significant correlations among children in regular school program. By using the Slade and Owens model (1998) of perfectionism, the current study found that negative perfectionism was negatively related to school achievement. Our results showed that a high score on the negative perfectionism scale was related to a lower performance in mathematics and reading.

One possible explanation is that these tests were administered under time limits (two hours to complete all the tests). In other words, students needed to manage their time. It might be hypothesised that students showing higher level of negative perfectionism do not manage their time effectively. For instance, Klibert, Langhinrichsen-Rohling, and Saito (2005) found that individuals who tend to have a more positive type of perfectionism possessed effective time management skills compared to others. In disagreement with this hypothesis, the current study did not find a significant relationship between positive perfectionism and academic skills. However, individuals who tend to have a more negative type of perfectionism were less likely to have good academic skills. Further studies should investigate this relation among children since it could lead to important clinical interventions such as time management skills.

Another possible and related explanation for these results may be that negative perfectionism increased the level of anxiety when confronted with evaluation, thus altering their performance. The level of anxiety was not measured in the current study and we cannot examine this hypothesis further. However, one can conceptualise that anxiety and poor time management are closely related to each other. Saboonchi and Lundh (1997) showed that negative perfectionism was positively correlated with anxiety. Since they both imply a negative reinforcement mechanism, a positive relationship is expected. Future studies could assess which one, between poor time management or anxiety, accounts for the lower level of performance of children with higher level of negative perfectionism. However, given that negative perfectionism was also negatively correlated to the three IQ subscale tests, we favoured the time-management hypothesis.

Contrary to previous studies (Accordino et al., 2000); Gilman & Ahsby, 2003; Rice & Slaney, 2002; Stoeber & Rambow, 2007), the current study did not identify better academic achievement associated with positive perfectionism. In disagreement with Stoeber and Kersting (2007), no higher scores at aptitudes tests were related to neither positive nor negative perfectionism. The contradictory results may be due to the choice of the measurement. The PNPS distinguishes perfectionism on the basis of perceived consequences, which is derived from a behavioural distinction between approaching (positive perfectionism) and avoidance (negative perfectionism) behaviours, may have led to the discrepancy because of its inherent conceptualization (Terry-Short et al., 1995). Herein, positive and negative perfectionism did not refer to their etymological root. This distinction could possibly explain the confusion and the lack of agreement on perfectionism.

The correlation between both perfectionism rise questions about the orthogonal structure of the two scales. The validation study by Seidah and colleagues (2002) did not found that the positive and negative perfectionism scales were related. Similarities between Seidah and her colleagues' study and the current results remain unclear. It may be hypothesis that an oblique structure, where both variables share some common variance, is more appropriate to represent the model. No correlation between positive perfectionism and others variables were found whereas negative perfectionism was correlated with mathematics and reading performance. This result suggests that another dimension may enable to distinguish between both types of perfectionism.

A second hypothesis is that the current sample was younger than most studies and was not composed of specifically gifted children. They were also in an evaluation context. Considering that assessments were contingent to the admission to the international schooling program, an alternative hypothesis could be that children may have felt pressure from their parents to perform well during the evaluation and therefore may have increased their anxiety. Again, since no measures of stress were taken, the influence that could have mediated the relation between evaluation and perfectionism cannot be assessed. Nevertheless, the current results show that perfectionism can be present among young children in a regular school program and have an association with performance.

One strength of the present study is that children came from a regular elementary school program and this program was open to any child (gifted and ungifted children). This is a better representation of the population in general, especially when most previous studies have focused on gifted children. Our study also contains some limitations. First, our analysis is based on self-report responses which might be subject to social desirability. This factor certainly has a non-negligible influence, since the respondents were in an assessment context for their future high school admission. Thus, children may have felt pressure by their parents to perform well. Second, we used a correlational approach, which cannot infer causality. Further longitudinal studies should examine the link between academic performance and perfectionism.

## 6. CONCLUSION/DISCUSSION

In conclusion, our study shed light on the negative outcomes which accompanied negative perfectionism, and which may eventually lead to drop out, a diminution of motivation towards school or a lower sense of worth. The results sustain the importance to intervene among these children by teaching them appropriate coping skills to help them manage the emotional distress and negative outcomes that often accompanied negative perfectionism. Considering that negative perfectionism is associated with negative outcomes, school psychologist should be involved in the development of prevention programs in order to ensure their academic pursuit but also to prevent psychological distress. Considering the influence of parents on children, developmental studies should also investigate the transmission of perfectionism between family members in order to better understand its root and guide clinician towards the best type of intervention (e.g., family intervention versus individual counselling).

## REFERENCES

- Accordino, D. B., Accordino, M. P., & Slaney, R. B. (2000). An investigation of perfectionism, mental health, achievement, and achievement motivation in adolescents. *Psychology in the Schools, 37*(6), 535-545.
- Ashby, J. S., & Kottman, T. (1996). Inferiority as a distinction between normal and neurotic perfectionism. *Journal of Adlerian Theory, Research & Practice, 52*(3), 237-245.
- Bieling, J. B., Israeli, A. L., & Anthony, M. M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36*(6), 1373-1385.
- Bulik, C. M., Tozzi, F., Anderson, C., Mazzeo, S. E., Aggen, S., & Sullivan, P. F. (2003). The relation between eating disorders and components of perfectionism. *The American Journal of Psychiatry, 160*(2), 366-368.
- Chan, D. W. (2007). Positive and negative perfectionism among Chinese gifted students in Hong Kong: Their relationships to general self-efficacy and subjective well-being. *Journal of Education of the Gifted, 31*(1), 77-102.
- Chené, H., & Daigle, G. (1983). *Examen d'habileté mentale* [Examination of mental ability]. Quebec, Canada: Les Presses de l'Université Laval.
- Cheng, S. K. (2001). Life stress, problem solving, perfectionism, and depressive symptoms in Chinese. *Cognitive Therapy and Research, 25*(3), 303-310.
- Cook, L. C., & Kearney, C. A. (2009). Parent and youth perfectionism and internalizing psychopathology. *Personality and Individual Differences, 46*(3), 325-330. doi:10.1016/j.paid.2008.10.029
- Craddock, A., Church, W., & Sands, A. (2009). Family of origin characteristics as predictors of perfectionism. *Australian Journal of Psychology, 61*(3), 136-144.

- Dixon, F. A., Lapsley, D. K., & Hanchon, T. A. (2004). An empirical typology of perfectionism in gifted adolescents. *Gifted Child Quarterly*, *48*(2), 95-106. doi:10.1177/001698620404800203
- Dunkley, D. M., Blankstein, K. R., Zuroff, D. C., Lecce, S., & Hui, D. (2006). Self-critical and personal standards factors of perfectionism located within the Five-Factor Model of Personality. *Personality and Individual Differences*, *40*(3), 409-420. doi:10.1016/j.paid.2005.07.020
- Enns, M. W., Cox, B. J., & Clara, I. P. (2005). Perfectionism and neuroticism: A longitudinal study of specific vulnerability and diathesis-stress models. *Cognitive Therapy and Research*, *29*(4), 463-478. doi:10.1007/s10608-005-2843-04
- Enns, M. W., Cox, B. J., Sareen, J., & Freeman, P. (2001). Adaptive and maladaptive perfectionism in medical students: A longitudinal investigation. *Medical Education*, *35*(11), 1034-1042.
- Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5-13). Washington, DC: American Psychological Association.
- Gilman, R., & Ashby, J. S. (2003). Multidimensional perfectionism in a sample of middle school students: An exploratory investigation. *Psychology in the Schools*, *40*(6), 677-689.
- Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology: A Journal of Human Behavior*, *15*(1), 27-33.
- Hewitt, P. L., & Flett, G. L. (1991a). Dimensions of perfectionism in unipolar depression. *Journal of Abnormal Psychology*, *100*(1), 98-101.
- Hewitt, P. L., & Flett, G. L. (1991b). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*(3), 456-470.
- Hill, R. W., Huelsman, T. J., & Araujo, G. (2010). Perfectionistic concerns suppress associations between perfectionistic strivings and positive life outcomes. *Personality and Individual Differences*, *48*(5), 584-589.
- Kawamura, K. Y., Hunt, S. L., Frost, R. O., & DiBartolo, P. M. (2001). Perfectionism, anxiety, and depression: Are the relationships independent? *Cognitive Therapy and Research*, *25*(3), 291-301. doi:10.1023/A:1010736529013
- Klibert, J. J., Langhinrichsen-Rohling, J., & Saito, M. (2005). Adaptive and maladaptive aspects of self-oriented versus socially prescribed perfectionism. *Journal of College Student Development*, *46*(2), 141-156. doi:10.1353/csd.2005.0017
- Landa, C. E., & Bybee, J. A. (2007). Adaptive elements of aging: Self-image discrepancy, perfectionism, and eating problems. *Developmental Psychology*, *43*(1), 83-93. doi:10.1037/0012-1649.43.1.83
- McArdle, S. (2010). Exploring domain-specific perfectionism. *Journal of Personality*, *78*(2), 493-508. doi:10.1111/j.1467-6494.2010.00624.x
- Nounopoulos, A., Asbhy, J. S., & Gilman, R. (2006). Coping resources, perfectionism, and academic performance among adolescents. *Psychology in the Schools*, *43*(5), 613-622.
- Onwuegbuzie, A. J., & Daley, C. E. (1999). Perfectionism and statistics anxiety. *Personality and Individual Differences*, *26*(1), 1089-1102.
- Pratt, E. M., Telch, C. F., Labouvie, E. W., Wilson, G. T., & Agras, W. S. (2001). Perfectionism in women with binge eating disorder. *The International Journal of Eating Disorders*, *29*(2), 177-186. doi:10.1002/1098-108X(200103)29:2<177::AID-EAT1007>3.0.CO;2-X
- Rice, K. G., Ashby, J. S., & Slaney, R. B. (2007). Perfectionism and the five-factor model of personality. *Assessment*, *14*(4), 385-398.
- Rice, K. G., & Slaney, R. B. (2002). Clusters of perfectionists: Two studies of emotional adjustment and academic achievement. *Measurement and Evaluation in Counseling and Development*, *35*(1), 35-48.
- Saboonchi, F., & Lundh, L. G. (1997). Perfectionism, self-consciousness and anxiety. *Personality and Individual Differences*, *22*(6), 921-928.
- Seidah, A., Bouffard, T., & Vezeau, C. (2002). La mesure de perfectionnisme: Validation canadienne-française du Positive and Negative Perfectionism Scale. [Measuring perfectionism: French-Canadian validation of the Positive and Negative Perfectionism Scale]. *Canadian Journal of Behavioural Science*, *34*(3), 168-171. doi:10.1037/h0087169
- Slade, P. D., Newton, T., Butler, N. M., & Murphy, P. (1991). An experimental analysis of perfectionism and dissatisfaction. *British Journal of Clinical Psychology*, *30*(2), 169-176.
- Slade, P. D., & Owens, R. G. (1998). A dual process model of perfectionism based on reinforcement theory. *Behavior Modification*, *22*(3), 372-390.
- Soenens, B., Vansteenkiste, M., Luyten, P., Duriez, B., & Goossens, L. (2005). Maladaptive perfectionistic self-representations: The mediational link between psychological control and adjustment. *Personality and Individual Differences*, *38*, 487-498. doi:10.1016/j.paid.2004.05.008

- Stoeber, J., & Kersting, M. (2007). Perfectionism and aptitude test performance: Testees who strive for perfection achieve better test results. *Personality and Individual Differences, 42*(6), 1093-1103.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review, 10*(4), 295-319.
- Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences, 42*(7), 1379-1389.
- Stoeber, J., & Stoeber, F. S. (2009). Domains of perfectionism: Prevalence and relationships with perfectionism, gender, age, and satisfaction with life. *Personality and Individual Differences, 46*(4), 530-535.
- Stoeber, J., Otto, K., & Dalbert, C. (2009). Perfectionism and the Big Five: Conscientiousness predicts longitudinal increases in self-oriented perfectionism. *Personality and Individual Differences, 47*(4), 363-368.
- Stornelli, D., Flett, G. L., & Hewitt, P. (2009). Perfectionism, achievement, and affect in children: A comparison of students from gifted, arts, and regular programs. *Canadian Journal of School Psychology, 24*(4), 267-283.
- Stumpf, H., & Parker, W. D. (2000). A hierarchical structural analysis of perfectionism and its relation to other personality characteristics. *Personality and Individual Differences, 28*(5), 837-852. doi:10.1016/S0191-8869(99)00141-5
- Terry-Short, S., Owens, R. G., Slade, P. D., & Dewey, M. E. (1995). Positive and negative perfectionism. *Personality and Individual Differences, 18*(5), 663-668.
- Tsui, J. M., & Mazzocco, M. M. (2006). Effects of math anxiety and perfectionism on timed versus untimed math testing in mathematically gifted sixth graders. *Roeper Review, 29*(2), 132-139. doi:10.1080/02783190709554397
- Turgeon, M.-E., Forget, J., & Sénécal, C. (2011). Troubles des conduites alimentaires, dépression, estime de soi et perfectionnisme chez les enfants [Eating disorders, depression, self-esteem and perfectionism in children]. *Pratiques Psychologiques, 17*(4), 315-328. doi:10.1016/j.prps.2009.11.002
- Zhang, Y., Gan, Y., & Cham, H. (2007). Perfectionism, academic burnout and engagement among Chinese college students: A structural equation modeling analysis. *Personality and Individual Differences, 43*(6), 1529-1540.

## ADDITIONAL READING

- Flett, G. L. & Hewitt, P. L. (2002). *Perfectionism: Theory, research and treatment*. Washington, DC: American Psychological.
- Flett, G. L., & Hewitt, P. L. (2005). The perils of perfectionism in sports and exercise. *Current Directions in Psychological Science, 14*(1), 14-18. doi:10.1111/j.0963-7214.2005.00326.x
- Flett, G. L., & Hewitt, P. L. (2006). Positive versus negative perfectionism in psychopathology: A comment on Slade and Owens's dual process model. *Behavior Modification, 30*(4), 472-495. doi:10.1177/0145445506288026
- Rice, K. G., Ashby, J. S., & Gilman, R. (2011). Classifying adolescent perfectionists. *Psychological Assessment, 23*(3), 563-577
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review, 10*(4), 295-319.

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## Chapter 21

# INVESTIGATING THE CULTURAL, SOCIAL, AND PSYCHOLOGICAL ATTITUDES TOWARDS SCHOOL COUNSELLING PRACTICES IN THE KINGDOM OF SAUDI ARABIA

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### ABSTRACT

This research study examines the existing cultural, social, and psychological attitudes towards school counselling and school counsellors in schools located in the Kingdom of Saudi Arabia (Saudi Arabia). The research study used a mixed methods design with qualitative data consisting of semi-structured interviews of school counsellors, and quantitative data consisting of questionnaires completed by a sample of head teachers and school counsellors working in secondary schools based in the city of Afif in Saudi Arabia. It was found that: (1) school counsellors faced a number of difficulties preventing them from effectively carrying out school counselling duties, including negative perspectives of school counsellors by head teachers, teachers, parents, students, and even school counsellors themselves; (2) there was a lack of understanding regarding the role of school counsellors, as well as a distinct lack of cooperation from teachers and parents influenced by Saudi cultural traditions; and (3) school counsellors were unqualified, given insufficient training, or were given work beyond their expected roles. The research study proposes theories why cultural, social, and psychological attitudes towards school counselling in Saudi Arabia are hindering progress in developing the field of school counselling in general. It attempts to differentiate and understand cultural, social, and psychological attitudes of teachers, head teachers, parents, and school counsellors to school counselling.

*Keywords:* school counselling, childhood disorders, parenting, social support, social and national culture.

## 1. INTRODUCTION

According to Mcleod (2013), counselling is an activity that emerged during the twentieth century and which reflects the pressures and values of modern-day life. Counselling is therefore something that has only recently developed and is still undergoing change, and it may also be developing in different ways and at different speeds in various countries. In terms of the counselling role itself, Mcleod (2013, p.3) notes that:

“A counsellor is someone who does his or her best to listen to you and work with you to find the best ways to understand and resolve your problem. Counsellors do not diagnose or label people, but instead do their best work within whatever framework of understanding makes sense for each client.”

In practice this framework of understanding may also differ according to the particular context, which a counsellor is working in. For instance, counselling at work may be different to counselling undertaken in schools. In fact, Bor, Ebner-Landy, Gill, and Brace (2002) observe that the school is actually a much more recent setting for the provision of psychological treatment of young people in the United Kingdom. They note that up until about ten years ago, most mental health problems in schools were referred to specialists outside the school setting, and that there are a number of reasons for this change in attitudes towards school counselling (Bor et al., 2002). In practice these have been shown to include:

- increasing challenges for school children, such as abuse, bullying, competitiveness, family crises, homophobia, peer pressure, racism, sibling rivalry, scholastic underachievement, social exclusion, and substance misuse;

- a growing shortage of specialist educationalist psychologists;
- an increasing awareness of the role that that schools play in identifying, managing, and preventing health problems in schools;
- early identification of psychological problems can help to prevent major and more permanent behavioral problems in children;
- counseling as a profession is now better managed and regulated; and
- schools are considered a primary context for nurturing and supporting development (educational, moral, social) in children (Bor et al., 2002).

Counselling within schools can therefore be seen as something that has developed because of the increased range of mental health, behavioral, and psychosocial concerns and issues that have developed in modern-day schools. These include new issues that have arisen mainly because of modern social developments and activities such as substance abuse, physical and sexual abuse, and gang violence. But it also includes more “traditional” problems such as school attendance and delinquency problems, emotional and development problems, and problems with new relationships. But modern social developments and activities (e.g. single parent families, families on income support, full time working parents) have also sometimes made it difficult for parents or legal guardians to provide the full range of personal emotional and social support that young children and adolescents need. Consequently there has been a rise in the use of counsellors within the school setting in order to provide additional emotional and social support to students that may need it. Indeed according to Williams, (1973, p.2), the school counsellor is supposed to be

“(…) the specialist on the school staff who is uniquely qualified to help students work out increasingly complex problems of vocational choice, help them plan and carry through meaningful and suitable educational programmes, and help them classify more satisfactory solutions to personal-social problems which may be having an adverse effect upon their lives.”

Therefore in practice counselling in schools can actually assist parents in helping their children by showing students where they can receive specialized help, and by providing consultation with parents (Hitchner & Hitchner, 1996). School counselling can also assist teachers by helping them to understand their students and by helping them to deal with them in suitable and appropriate ways according to their abilities, and any behavioral or mental health problems (King, 1999). This increased use of school counsellors (school counsellors) in schools has resulted in a range of benefits. Firstly, past research has demonstrated that different types of psychotherapies (e.g. behavioral, psychodynamic, person-centred) are effective and beneficial to clients (Smith, Glass, and Miller, 1980). Secondly, counselling as a form of psychotherapy within schools has been shown to be effective as it:

- helps to improve the overall attendance, attainment, and behaviour of students (Pybis, Hill, Cooper, & Cromarty, 2012; British Association for Counselling and Psychotherapy [BACP], 2013b);
- is effective for bullied students (McElearney, Adamson, Shevlin, & Bunting, 2013);
- positively impacts students' learning and studying habits (Rupani, Haughey, & Cooper, 2012);
- reduces different types of psychological distress in young people (McArthur, Cooper, and Berdondini, 2012); and
- is a prevalent form of psychological therapy for young people (around 70,000-90,000 sought counselling) (BACP, 2013a).

## 2. THEORETICAL FRAMEWORK OF THE RESEARCH STUDY

In light of these proven practices in schools in developed countries across the world, the development of a strong and robust school counselling framework for a developing country like the Kingdom of Saudi Arabia (Saudi Arabia) holds many attractions. The British

Association for Counselling and Psychotherapy (BACP) has defined school counselling in the UK as “a professional activity delivered by qualified practitioners in schools. Counsellors offer troubled and/or distressed children and young people an opportunity to talk about their difficulties, within a relationship of agreed confidentiality” (Cooper, 2013, p. 3). Teenagers are at the most critical stage in their lives where they are in need of direction both in their personal and academic lives. They need qualified and skilled people to guide them in their behaviour and the direction they are going and also to help them discover their abilities. In practice it is therefore necessary to determine if the role of the school counsellor is effective and that counsellors are given sufficient financial, social, and educational support they need, and are not impeded by problems that may unfairly affect the overall quality of school counseling services provided to students. The Saudi Ministry of Education as has defined school counseling in Saudi Arabia as:

“(…) the reactive process set up between a counsellor and a student through which the counsellor gives help to the student to understand himself and recognize his capabilities and potentialities and to give him an enlightened approach to his problem and how to encounter him. He also helps him to enhance his responsive behaviour and to prove self-conformity with the community.” (The Ministry of Education, 1995).

There would therefore seem to be some similarities in the underlying objectives of school counselling in some developed countries in the West, and school counselling in some developing countries in the Middle East. But in practice there are also specific differences in Saudi culture compared to Western school counselling methods, and there may also be financial and social barriers that may affect schools in developing countries like Saudi Arabia. For example in Saudi Arabia there is religious oversight within schools undertaken by the Saudi Ministry of Education. Counselling in Saudi Arabia is also carried out according to official guidelines, which identify four main areas for counselling in schools. These include religious and moral counselling; educational counselling; vocational counselling; and preventive counselling (The Ministry of Education, 1995). Islamic (Shari’ah) law also requires separate male and female schooling (Al Rawaf & Simmons, 1991). There are also specific problems that have previously been noted in relation to school counselling in Saudi Arabia, including the lack of clearly defined roles, the lack of administrative support, and the lack of a professional identity and status of school counsellors (Al-Ghamdi, 1999). A potential for ambiguity and role conflict in school counselors’ roles has also been noted owing to differences among school principals regarding the role of the SC in the school setting (Alghamdi & Riddick, 2011).

### **3. RESEARCH AIM AND RESEARCH QUESTIONS**

The overall aim of the research study was to investigate and explore the challenges and problems encountered by school counsellors in secondary schools located in Afif, a city in the Najd region of Saudi Arabia. The research study adopted the following research questions.

- What problems are encountered by school counsellors in Afif secondary schools for boys?
- What problems are encountered by the school counsellor in relation to the Saudi Ministry of Education?
- What problems are encountered by the school counsellor in relation to school teachers and head teachers?
- What problems are encountered by the school counsellor in relation to their role?
- What problems are encountered by the school counsellor in relation to the parents and the students?

Overall, the research aimed to explore the roles of the school counsellors, as well as school counselling from the point of view of head teachers, teachers, parents, students, the Saudi Ministry of Education, and the school counsellors themselves. In particular the research sought to examine the different cultural, social, and psychological attitudes to school counselling that could be identified and differentiated within the context of school counselling. This was



undertaken in order to investigate the extent of the impact that different cultural, social, and psychological attitudes had on school counselling in Saudi schools, as well as their relative influence within the school setting.

#### 4. RESEARCH DESIGN

The research design adopted by the research study can be described as a flexible, exploratory, descriptive study using a mixed methods methodology. The rationale behind this research design is the dearth of information and literature on school counselling in Saudi Arabia. This in turn has led to a lack of current existing knowledge regarding the operating framework for school counselling in Saudi schools. It can be argued that this situation therefore favours a flexible, as opposed to a fixed or theory driven, research design. In addition, the lack of available research also lends itself less to the testing of pre-existing hypotheses through confirmatory research, and more to the generation of post-research hypotheses through exploratory research (Nebeker, n.d.). Nebeker (n.d.) has also proposed that descriptive studies are usually the best methods that can be used for collecting information that will demonstrate relationships, and describe the world as it exists. Bickman and Rog (2008) add that the overall purpose of descriptive research is to provide an overall 'picture' of a phenomenon as it occurs naturally, instead of studying its effects.

#### 5. RESEARCH METHODS

The research method used was mixed methods. Creswell (2013, p. 217) notes that mixed methods collects and analyses both qualitative (*open-ended*) and quantitative (*closed-ended*) data. Data collection and analysis procedures such as sampling are conducted rigorously, and the two data forms are integrated together in the research design (Creswell, 2013). Both types of qualitative and quantitative data obtained were used to complement any proposed findings or themes. The research study adopted mixed methods to avoid the limitations of a single method and to take advantage of a combination of methods. Thus, both questionnaires and interviews were adopted as the data collection instruments for both quantitative and qualitative data. Data collected from the questionnaires should give a wider overview of the counsellor's problems and data collected from the interview provided an in-depth understanding of why they were facing problems.

The research spanned 2008–2009 and used a total population of 44 head teachers and school counsellors (Figure 1) who were based in secondary schools for boys in Afif (participants).

Figure 1. The population of the research study.

Participant	Number	Percentage
Head teachers	21	47.7%
Counsellors	23	52.3%
<b>Total</b>	44	100%

For the questionnaire the sample consisted of 12 head teachers and 18 school counsellors who were chosen randomly from the schools in the study area. The questionnaire was distributed to the sample and Figure 2 presents the distribution and percentage of the participants in the sample.

Figure 2. The research study sample.

Participant	Number	Percentage (%) from the sample	Percentage from the population
Head teachers	12	40	57.1%
School counsellors	18	60	78.3%
<b>Total</b>	<b>30</b>	<b>100</b>	<b>68.2%</b>

### 5.1. Qualitative research data

The researcher undertook semi-structured interviews with five participants located within various Afif secondary schools. The interviews were used to gather qualitative data from five school counsellors at various secondary schools, in Afif city in Saudi Arabia. In regard to their qualifications, all the interviewed school counsellors had bachelor degrees in various subjects, such as art, religion, psychology, sciences and sociology. Only one of them had a psychological counselling and guidance diploma. Therefore, it is apparent that four out of the five counsellors in the sample had no background in counselling or had little training in the field of counselling. In regard to age and experience, the interviewees' age ranged between 29–45 years old. Four of the counsellors had between 5–8 years of experience as teachers, and additionally between 9–14 years as counsellors. The interviewees were chosen because of their various backgrounds and levels of experience in counselling. Reliability of the research questions was increased by individuals experienced in the field of education, reviewing and pre-testing the questions in order to avoid ambiguity and ensure clarity. The participants were asked questions including the following:

- To what extent do you think that all student counsellors in Afif schools are properly qualified and receive adequate training to do their task?
- How does the head teacher perceive the student counsellor's role?
- What support does the counsellor receive from all the people and officers he deals with?
- What are the significant challenges and problems that student counsellors face in schools?
- What ideas do you suggest to improve the student counsellor's role?
- Do you perform any work not related to the student counsellor's role?

The qualitative data analysis process adopted six steps as proposed by Creswell (2013). For the first step, the data was organised by transcribing it from the interviews. Once the interviews were in for the second step, the researcher gained a general understanding of the meaning of the interviewees' responses by intently listening to each interview. The third step was the coding of the information. The data was then grouped into four categories each of which was allocated a different name and colour. In the fourth step the coded data was used to derive an in-depth meaning from the responses. For the fifth step the data was classified according to the dimensions. The obtained data was compiled into a tabular format with calculated figures. The sixth and final step was the interpretation of the information, and deriving meaning from data by again listening carefully and intently to the interviews.

### 5.2. Quantitative research data

Figure 3. Closed-questionnaire format.

Statements		Always	Often	Sometimes	Rarely	Never
<b>No.</b>	<b>In your opinion, please circle the appropriate response</b>					
1	The Ministry of Education appreciates the role of the student counsellor.	5	4	3	2	1

A research questionnaire was designed and piloted, and was then distributed to a random sample of 12 HTs and 18 SCs. It covered a range of potential challenges and problems encountered by SCs from the point of view of the HTs and the SCs.

The 22-item questionnaire was designed to employ a five-point scale (*always, often, sometimes, rarely, never*) as responses to the various issues, which were represented as statements (Figure 3). The 22 statements (Figure 4) were divided over four dimensions relating to the problems that student counsellors encounter (Figure 5).

Figure 4. Twenty-two item questionnaire format.

Statements		Always	Often	Sometimes	Rarely	Never
No.	In your opinion,					
1	The Ministry of Education appreciates the role of the student counsellor.	5	4	3	2	1
2	Unqualified counsellors are employed to work in schools.	5	4	3	2	1
3	There is support from the Ministry of Education for counselling programmes and counsellors.	5	4	3	2	1
4	There are training courses for counsellors.	5	4	3	2	1
5	There is a shortfall in the number of school counsellors compared to the number of students who needs counselling.	5	4	3	2	1
6	Head teachers have a good understanding of the role of the counsellor in schools.	5	4	3	2	1
7	Head teachers offer good support to school counsellors.	5	4	3	2	1
8	The school counsellor is asked to do extra work not related to his main counselling role.	5	4	3	2	1
9	Teachers understand the role of the school counsellor.	5	4	3	2	1
10	Teachers co-operate with the school counsellors.	5	4	3	2	1
11	The counsellors lack awareness and knowledge about his own job in the school.	5	4	3	2	1
12	There is a lack of practical preparation for the counsellor to carry out his work.	5	4	3	2	1
13	There are suitable places for the school counsellor to meet students/clients.	5	4	3	2	1
14	There are suitable places for the school counsellor to keep his records.	5	4	3	2	1
15	The amount of record keeping carried out by the school counsellor is unnecessary.	5	4	3	2	1
16	The Ministry of Education offers encouragement to school counsellors.	5	4	3	2	1
17	There is a lack of continuous coordination between the counsellor and the school administration.	5	4	3	2	1
18	The students understand the role of the counsellor.	5	4	3	2	1
19	The students co-operate with the school counsellor.	5	4	3	2	1
20	Parents are aware of the role of the school counsellor.	5	4	3	2	1
21	The parents co-operate with the school counsellors.	5	4	3	2	1
22	It is difficult for the counsellor and parents to communicate.	5	4	3	2	1

Figure 5. Distribution of statements across the four dimensions.

No.	Dimension	No. of Items
1	The problems encountered by the school counsellors in relation to the Saudi Ministry of Education	8
2	The problems encountered by the school counsellors in relation to the school administration and the teachers	6
3	The problems encountered by the school counsellors in relation to the school counsellors themselves	3
4	The problems encountered by the school counsellors in relation to the students and parents	5
<b>Total</b>		<b>22</b>

From the above-mentioned four dimensions the research items were developed. The following procedures were conducted in order to design each statement of the study. Firstly, questionnaire statements were adapted from previous studies that were found in the literature. Secondly, questionnaire statements were developed from the researcher's point of view as an experienced Saudi school counsellor. The items were framed in a way that clearly reflected each variable, and they were made understandable in order to avoid any repetition and confusion. The questionnaire was pre-tested by interviewing six postgraduate students and requesting that they indicate any unclear wording or ambiguity. Also, three experienced students from the University of Nottingham were requested to review the questionnaire and to present their opinions and suggestions in relation to the validity of the content; whether it was appropriate for the objectives of the study; and the clarity and appropriateness of the language. The research questionnaire was then distributed to a random sample of 12 head teachers and 18 school counsellors. It covered a range of potential challenges and problems encountered by school counsellors from the point of view of the head teachers and the school counsellors. Reliability of the questionnaire instrument was tested using SPSS and measured by the split half (0.845). It should be noted that the reliability of the questionnaire should not be less than (0.70). Internal validity was tested using SPSS and measured using Pearson's correlation coefficients. Figure 6 show that the internal validity of the questionnaire was sufficiently high, which would indicate that there was correlation between items of the study and its dimensions.

Figure 6. Closed-questionnaire measurements.

Variable	Items	Reliability	Validity (Pearson's <i>r</i> )
The problems related to the Ministry of Education	8	0.801	0.640
The problems related to the school administration and the teachers	6	0.792	0.701
The problems related to the counsellors themselves	3	0.824	0.720
The problems related to the students and the parents	5	0.783	0.681
Total / Reliability for the whole instrument	22	0.815	0.700

## 6. RESEARCH FINDINGS

In order to answer questions about problems that school counsellors encountered, arithmetic means, standard deviation and percentages were calculated for all statements in each dimension of such problems encountered. Then, the mean average was calculated for each dimension. After the data was collected, the quantified responses were coded into a ranking scale from 1 (*never*) meaning the respondents completely disagree with the statement, to 5 (*always*) meaning the respondents completely agreed with the statement. The responses on the scale numbered 2, 3, and 4 represent the responses *rarely*, *sometimes* and *often*, respectively. The data was then analysed using the statistical package SPSS. Each statement was statistically analysed individually to discover the respondents' opinion about each aspect. Statistical analysis of the responses was carried out for each of the following four dimensions (Figure 7).

Figure 7. Statements listed within each variable.

Variable	Statements
The problems encountered by the school counsellors in relation to the Saudi Ministry of Education	1, 2, 3, 4, 5, 13, 15, 16
The problems encountered by the school counsellors in relation to the school administration and the teachers	6, 7, 8, 9, 10, 14
The problems encountered by the school counsellors in relation to the school counsellors themselves	11, 12, 17
The problems encountered by the school counsellors in relation to the students and parents	18, 19, 20, 21, 22
<b>Total</b>	<b>22</b>

Mean values and percentages were calculated for all responses to each statement within each dimension. For the purpose of data analysis and interpretation of the results, the researcher adopted the specific criteria as a representation of the level of agreement with the statements set out in Figure 8.

Figure 8. Distribution of statements across the four dimensions.

Measurement (%)	Grade	Explanation
67% or above	High	Where the grade 'high' represents a high agreement from the respondents with the statement (or group of statements) under investigation, the middle and low grades represent middle and low agreements to the related statements, respectively.
62% – 67%	Middle (high)	
57% – 61%	Middle (medium)	
51% – 56%	Middle (low)	
40% – 50%	Low	
39% and below	Significantly Low	

### 6.1. Problems related to the Saudi Ministry of Education

From the results in Figure 9 it can be observed that the statements with the highest percentage were Statement numbers (5), (2) and (16). Statement number (5) was in the first position with a mean of 3.41, a percentage of 68. This statement states: “There is a shortfall in the number of the student counsellors compared to the number of students who need counselling”. Statement number (2) was in second position, with a mean of 3.30, a percentage of 66.2, it states that: “Unqualified counsellors are employed to work in schools.” Statement number (16) was in third position, with a mean of 3.21, a percentage of 64.2. It states: “The Ministry of Education offers encouragement to school counsellors.” However, the three statements with the lowest percentage were statement numbers (15), (1) and (4). Statement number (15) was in the sixth position with a mean of 2.85, a percentage of 57. It states: “The amount of record keeping carried out by the school counsellor is unnecessary.” In the seventh position was statement number (1) with a mean of 2.74, a percentage of 54.8. It states: “The Ministry of Education values the role of the counsellor.” Statement number (4) was in the eighth position, with a mean of 1.77, a percentage of 35.4. It states: “There are training courses for school counsellors.”

Figure 9. Quantitative results for Dimension 1 statements.

Statement number	Descending order of the statements according to mean	Mean	Percentage	Standard Deviation	Grade
5	There is a shortfall in the number of school counsellors compared to the number of students who need counselling.	3.41	68	0.901	High
2	Unqualified counsellors are employed to work in schools.	3.30	66.2	0.712	Middle (high)
16	The M.o.E. offers encouragement to school counsellors.	3.21	64.2	0.912	Middle (high)

Figure 10. Quantitative results for Dimension 1 statements (cont.).

13	There are suitable place for the school counsellor to meet students/clients.	3.20	64	0.873	Middle (high)
3	There is support from the Ministry of Education for counselling programmes and counsellors.	3.10	62	0.910	Middle (high)
15	The amount of record keeping carried out by the school counsellor is unnecessary.	2.85	57	0.681	Middle (medium)
1	The Ministry of Education values the role of the counsellor.	2.74	54.8	1.101	Middle (low)
4	There are training course for school counsellor	1.77	35.4	0.821	Low (sign)
<b>Mean Average</b>		<b>2.94</b>	<b>58.95</b>	<b>0.865</b>	<b>Middle (medium)</b>

### 6.2. Problems related to the administration and the school teachers

The means for the statements of the dimension ranged between 2.09–2.81, a percentage of between 41.8–56.2. The mean average for the phrases of this dimension was 2.52, a percentage of (50.5). According to the criterion, the grade for the responses was “Middle (low)” for this dimension. The results show that there are a variety of different responses from the sample of individuals of the study in relation to the statements of this dimension according to the criterion adopted by the researcher. From the results in Figure 11 it can be observed that the two statements with the highest percentage were statement numbers (7) and (6). Statement number (7) was in the first position with a mean of 2.81, a percentage of 56.2, it states: “Head teacher's offer good support to school counsellors”. Statement number (6) was in second position, with a mean of 2.80, a percentage of 56, it states: “Head teachers have a good understanding of the role of the counsellor in schools.” Statement number (9) was in fifth position with a mean of 2.11, a percentage of 42.2, it states that: “Teachers understand the role of the school counsellors.” Statement number (10) was in sixth position, with a mean as low as 2.09, a percentage of 41.8, it states that: “Teachers co-operate with the school counsellor.”

Figure 11. Quantitative results for dimension 2 statements.

Statement number	Descending order of the statements according to mean	Mean	Percent	Standard Deviation	Grade
7	Head teachers offer good support to school counsellors.	2.81	56.2	0.882	Middle (medium)
6	Head teachers have a good understanding of the role of the counsellor in schools.	2.80	56	1.100	Middle (low)
8	The school counsellor is asked to do extra work not related to his main counselling role.	2.74	54.8	0.912	Middle (low)
14	There are suitable places for the school counsellors to keep his records.	2.60	52	1.080	Middle (low)
9	Teachers understand the role of the school counsellor.	2.11	42.2	0.742	Low
10	Teachers co-operates with the school counsellor.	2.09	41.8	0.870	Low
<b>Mean average</b>		<b>2.52</b>	<b>50.5</b>	<b>0.931</b>	<b>Middle (low)</b>

### 6.3. Problems relating to the school counsellors

The means of the statements for this dimension range between 1.92–2.70, a percentage of between 38.4–54. The mean average for the statements of this dimension was 2.35, a percentage of 46.93. According to the criterion, the grade for this dimension was 'low'. The results show clear differences in the responses from the sample regarding the statements of this dimension. From Figure 11, the statement with the highest percentage was number (12) with a mean of 2.70, a percentage of 54, it states: “There is a lack of practical preparation for the counsellor to carry out his work.” The statement with the lowest percentage was number (17)

with a mean of 1.92, a percentage of 38.4, it states: “There is a lack of continuous coordination between the counsellor and the school administration.”

Figure 12. Quantitative results for dimension 3 statements.

Statement number	Descending order of the statements according to mean	Mean	Percent	Standard Deviation	Grade
12	There is a lack of practical preparation for the counsellor to carry out his work	2.70	54	0.700	Middle (low)
11	The school counsellor lacks awareness of knowledge about his own job in the school.	2.42	48.4	0.682	Low
17	There is a lack of continuous coordination between the counsellor and the school administration	1.92	38.4	0.712	Low (significant)
<b>Mean average</b>		<b>2.35</b>	<b>46.93</b>	<b>0.698</b>	<b>Low</b>

#### 6.4. Problems relating to the students and the parents

The means of the responses for this dimension the range was between 2.10 - 2.78, a percentage range between 42–55.6. The mean average for this dimension was 2.52, a percentage of 50.52. According to the criterion, the grade was 'middle (low)' for this dimension. Again there are clearly differences in the responses from the sample regarding the statements of this dimension. The results show that the statement with the highest percentage was number (22) with a mean of 2.78, a percentage of 55.6, which states: “It is difficult for counsellors and parents to communicate.” This was followed by statement (19) with a mean of 2.65, a percentage of 53, which states: “Students co-operate with the school counsellors.” At the other end of the scale was statement (18) with a mean of 2.50, a percentage of 50, it states: “The students understand the role of the counsellor.” Also statement (21) with a mean of 2.10, a percentage of 42, it states: “The parents co-operate with the counsellor.”

Figure 13. Quantitative results for dimension 4 statements

Statement number	Descending order of the statements according to mean	Mean	Percent	Standard Deviation	Grade
22	It is difficult for counsellors and parents to communicate.	2.78	55.6	1.100	Middle (low)
19	Students co- operate with the school counsellor	2.65	53	0.801	Middle (low)
20	Parents are aware of the role of the school counsellor	2.60	52	0.793	Middle (low)
18	The students understand the role of the school counsellor.	2.50	50.0	0.895	Low
21	The parents co-operate with the counsellor.	2.10	42	0.810	Low
<b>Mean average</b>		<b>2.52</b>	<b>50.52</b>	<b>0.879</b>	<b>Middle (low)</b>

## 7. DISCUSSION

The quantitative and qualitative research findings taken together demonstrated a broad range of factors and attitudes that were either hindering or preventing effective counselling in Afif schools. These were differentiated according to the general type of attitude that they reflected towards school counselling.

### 7.1. Cultural attitudes towards school counselling

Overall cultural attitudes towards school counselling and school counsellors tended to be negative. There seemed to be a lack of trust between students and counsellors and there was evidence that students viewed discussing problems with counsellors as a sign of weakness. In practice this may be because of a closed culture and society in Saudi Arabia, where close knit

tribal and familial bonds mean private matters stay private, i.e. Saudi Arabia is a dominant patriarchal and collectivist society, with a high level of uncertainty avoidance, and conservatism. In practice it is difficult to differentiate between cultural attitudes and psychological attitudes of students and parents. This may be because many students were open to counselling but parents disapproved, perhaps because they wanted to keep what they see as private matters private, or they are reluctant to discuss private matters with persons who are not close family members. For instance, Interviewee C5 noted the reluctance of parents to involve school counsellors: “We only see parents when their sons have a problem or are in trouble”, and Interviewee C4 tried to explain this attitude: “(...) because of the culture and society in Saudi Arabia it is common for parents to be uncomfortable with the involvement of the counsellor in their son's life because they are considered private for the family”. This may also reflect different cultural attitudes towards counselling in the Saudi culture. Whereas counselling is a well-established practice and profession in open and developed Western countries, it may be less widely accepted in less developed and arguably more closed Middle Eastern countries such as Saudi Arabia. Another potential explanation was offered by Interviewee C1, who stated that one of the main problems school counsellors faced was “the ignorance of parents about the job we do for their sons”. Interviewee C1 indicated that it might be a cultural phenomenon because parents did not seem to enquire about the behaviour of their children in schools, and there was a lack of regular meetings held. The problem was made worse by other cultural attitudes reflected by a lack of co-operation from other teachers, with Interviewee C1 stating that: “We try to work collaboratively with our colleagues [teachers] to solve the students’ troubles. Unfortunately, in most of the cases the teachers are not cooperative with us, because they think that it’s our duty to solve all the behavioural troubles of the students, which makes life difficult for us in school”.

### **7.2. Social attitudes towards school counselling**

Whilst there seemed to be some evidence highlighting positive social attitudes towards school counsellors from the students, overall social attitudes towards school counsellors also tended to be negative. There was evidence that head teachers and other teachers severely misunderstood the role of school counsellors, or did not view them as “professional”, potentially because they viewed them as unqualified, lacking sufficient training, or because they believed the job to be easy. For example, Interviewee C1 stated “teachers think that the counsellor has an easy job with a comfortable office”, and Interviewee C2 stated “the teachers consider that the role of the counsellors is to simply give out punishments, if the student misbehaves or neglects their homework, they are referred to the counsellor by the teacher”. There was also evidence showing a general lack of social and financial support from the Saudi Ministry of Education, and from the schools in terms of sufficient or adequate training. For example Interviewee C1 stated “if we had more training then we would be more able to overcome the problems that we encounter”. Interviewee C4 noted that his job would be much easier with an increased budget which would allow him to purchase tools that he needed as well as providing additional counselling programs for students. Additionally Interviewee C1 noted that counselling courses were too short and did not provide suitable materials reflecting real life student problems. This may actually significantly affect the competence of school counsellors in practice, as well as their own approach to counselling in schools. For example, Interviewee C1 stated: “What can you expect me to do when you know that my background is art, I have never attended any counselling training courses, or even read about the topic until I worked in this position, I am very much in need of training for this role, otherwise my position is meaningless”.

### **7.3. Psychological attitudes towards school counselling**

The psychological attitudes of other teachers towards school counsellors seemed to generally reflect a lack of overall professional respect. It would seem to be the case that parents may also have been reluctant to involve school counsellors in what they saw as their personal affairs, to accept the input or viewpoints of school counsellors in 'private' student matters, or to co-operate in general. Given the general attitudes towards school counsellors it may be that parents of students see school counsellors as strangers and there is a lack of trust between them.



Alternatively, it may be that there are strong cultural barriers that must be first overcome in order to subsequently develop a closer relationship with parents and students, i.e. closed tribal bonds or close knit familial ties. This, together with other factors (e.g. limited budgets, lack of training, understaffing), may have significantly contributed to school counsellors feeling isolated and de-motivated. For instance Interviewee C3 stated “There are those counsellors who are not motivated which can be detrimental to their performance as student counsellors”. School counsellors also felt they were given work beyond their expected roles and found little administrative support from the schools to help with administrative workloads. It is noted that Interviewee C3 stated “there is difficulty in the job because there are too many students to deal with in the school”. These types of developments are unsettling from a 'psychoeducational' viewpoint. For example, Smith, Jones, and Simpson (2010, p. 147) have stated that most clinicians would agree that patients with any chronic disorder should, as part of their routine care, “be given accurate information about their diagnosis, treatment and prognosis and about how they can help themselves to stay well”. They also note that in broad terms this type of information is what is considered to be “psychoeducation” (Smith et al., 2010, p. 147). Therefore providing accurate information about an individual's condition or behaviour is supposed to be beneficial in the overall treatment of that individual. But in some Saudi schools there would seem to be a type of “negative” workspace, where other teachers and some head teachers view school counsellors as unqualified or lacking training. In addition to this, parents do not trust or co-operate with school counsellors, and school counsellors themselves feel de-motivated. These types of circumstances mean that school counsellors are not provided with an effective opportunity to provide students with sufficient information about their condition, behaviour, or situation, and therefore traditional psychoeducational approaches to school counselling in these Saudi schools are therefore likely to fail.

## 8. CONCLUSION

There is a considerable amount of quantitative and qualitative research that has investigated the roles, impacts, and perceptions of school counsellors in Western countries (Harris, 2013). This type of research has often demonstrated the benefits of school counselling and school counsellors, as well as positive attitudes of students and teachers towards school counselling and its conceptualisation. Yet there has been very little similar research undertaken in developing countries in the Middle East, especially in countries with arguably more traditional or closed cultures such as Saudi Arabia. There are potentially many reasons why this is so, including, for example, the more conservative and closed culture in Saudi Arabia, close-knit familial ties, and the high power-distance relationships inherent in a predominantly tribal culture. The research study aimed to develop this area further by investigating this area in greater depth. The research study showed that school counsellors in secondary schools in Afif faced numerous difficulties, which potentially obstructed their work, as well as psychoeducational approaches to school counselling. These were investigated and differentiated into key themes relating to cultural, social, and psychological attitudes, including cultural (*negative views of school counsellors, lack of trust, acceptance and cooperation from teachers and parents*), social (*lack of understanding of school counsellors' role, unqualified school counsellors*), and psychological (*understaffed, burdened and de-motivated counsellors*) attitudes. It can be concluded that all these cultural, social, and psychological attitudes are to some extent potentially hindering progress in the development of successful school counselling initiatives and programmes in boys secondary schools located in Saudi Arabia.

## 9. RESEARCH LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

There are a number of limitations that exist in the research that will be identified here. The *first* limitation relates to the small sample size. The sample size was limited and may not be fully representative of school counselling perspectives in all Saudi schools or universities,

thereby limiting the generalizability of the findings. The *second* limitation is that the research was cross-sectional in nature, and focused on counselling perspectives at a single point in time. It would be interesting to undertake further studies which were longitudinal in nature, and which might help to provide a deeper insight into cultural, social, and psychological attitudes towards school counselling. The *third* limitation is that owing to Saudi culture and traditions, there is gender separation throughout society, meaning that males and females attend separate schools. Consequently, the research study was limited to male perspectives of school counselling, and future research into cultural, social, and psychological attitudes towards school counselling might alternatively seek to investigate whether female perspectives differed to existing male perspectives. The research findings also demonstrate that there would currently seem to be a lack of effective school counselling practices in some Saudi schools. Therefore future research might seek to investigate ways of improving the practices of school counsellors and school counselling in Saudi schools.

## 10. IMPLICATIONS FOR SAUDI SCHOOL COUNSELLING PRACTICES

The research findings would seem to indicate that there are significant problems that school counsellors currently face in Saudi schools. Many research studies relating to school counselling theory and practice tend to concentrate on the effects that school counselling practices have on children and adolescents, and how they impact their behaviour. They tend to assume that school counsellors are well-equipped and resourced, and sufficiently trained in school counselling skills. But the research showed that in developing countries such as Saudi Arabia, school counselling theory and practice is still in a stage of early development, and there needs to be a greater emphasis on improving the quality of school counselling theory and practice and its application in Saudi Arabia. One of the main difficulties is that it would seem to be the case that school counsellors as well as school counselling practices are marginalised in Saudi Arabia. Until they are integrated into the mainstream educational framework, it is likely to continue to be the case that the quality of school counselling practices in Saudi schools will suffer, and Saudi school counsellors may feel demoralised.

The research findings would also seem to indicate that there is much that could potentially be done to improve school counselling practices and service delivery in schools. Minimum levels of qualifications for school counsellors might be set, with qualifications relating to areas such as sociology, psychology, or education. Saudi national school counselling qualifications and training could be developed. A Saudi national school counselling organisation or body could be set up to promote school counselling practices and standards throughout Saudi Arabia. School counselling standard guidelines for school counselling practices in Saudi schools could be developed. Saudi head teachers might look at providing more opportunities for school counsellors to give open and honest feedback and criticism of existing school counselling practices. Saudi head teachers could strive to develop new school initiatives to improve existing negative perceptions of school counsellors by other teachers or school workers. These could all potentially help to improve the mutual trust and respect that is needed by Saudi school counsellors in schools in order for them to be able to provide high quality school counselling services to those students that really need them.

## REFERENCES

- Alghamdi, N. G., & Riddick, B. (2011). Principals' perceptions of the school counsellor role in Saudi Arabia. *International Journal for the Advancement of Counselling*, 33(4), 347-360.
- Al-Ghamdi, S. A. (1999). *Perceptions of the role of the secondary school counsellor in Saudi Arabia* (Doctoral dissertation, The University of Hull, UK). Retrieved from <https://hydra.hull.ac.uk/resources/hull:8039>
- Al Rawaf, H. S., & Simmons, C. (1991). The education of women in Saudi Arabia. *Comparative Education*, 27(3), 287-295.
- Bickman, L. & Rog, D. (2008). *The SAGE handbook of applied social research methods*. California, CA: Sage.

- British Association for Counselling and Psychotherapy. (2013a). *School-based counselling – What it is and why we need it* (Research Report). Retrieved from [http://www.bacp.co.uk/admin/structure/files/pdf/11791\\_sbc\\_may2013.pdf](http://www.bacp.co.uk/admin/structure/files/pdf/11791_sbc_may2013.pdf)
- British Association for Counselling and Psychotherapy. (2013b). *Written evidence: Children and Young People Committee Inquiry into the attendance and behaviour of pupils in Wales* (Inquiry into Attendance and Behavior – ABO3 Evidence from BACP). Retrieved from <http://www.senedd.assemblywales.org/documents/s13295/Consultation%20Response%20AB03.%20British%20Association%20for%20Counselling%20and%20Psychotherapy.pdf>
- Bor, R., Ebner-Landy, J., Gill, S., & Brace, C. (2002). *Counselling in schools*. London, UK: Sage.
- Cooper, M. (2013). *School-based counselling in UK secondary schools: A review and critical evaluation*. Glasgow, UK: University of Strathclyde.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.
- Hitchner, K., & Hitchner, A. T. (1996). *Counselling today's secondary students: Practical strategies, techniques and materials for the school counsellor*. San Francisco, CA: Jossey-Bass.
- King, G. (1999). *Counselling skills for teachers talking matters*. Buckingham, UK: Open University Press.
- McArthur, K., Cooper, M., & Berdondini, L. (2012). School-based humanistic counselling for psychological distress in young people: Pilot randomized controlled trial. *Psychotherapy Research, 23*(3), 355-365.
- McElearney, A., Adamson, G., Shevlin, M., & Bunting, B. (2013). Impact evaluation of a school-based counselling intervention in Northern Ireland: Is it effective for Pupils who have been bullied? *Child Care in Practice, 19*(1), 4-22.
- McLeod, J. (2013). *An Introduction to counselling*. Berkshire, UK: Open University Press.
- Nebeker, C. (n.d.). Descriptive studies. Retrieved from: [http://ori.hhs.gov/education/products/sdsu/res\\_des1.htm](http://ori.hhs.gov/education/products/sdsu/res_des1.htm)
- Pybis, J., Hill, A., Cooper, M., & Cromarty, K. (2012). A comparative analysis of the attitudes of key stakeholder groups to the Welsh Government's school-based counselling strategy. *British Journal of Guidance & Counselling, 40*(5), 485-498.
- Rupani, P., Haughey, N., & Cooper, M. (2012). The impact of school-based counselling on young people's capacity to study and learn, *British Journal of Guidance & Counselling, 40*(5), 499-514.
- Smith, M., Glass, G., & Miller, T. (1980). *The Benefits of psychotherapy*. Baltimore, MD: John Hopkins University Press.
- Smith, D., Jones, I., & Simpson, S. (2010). Psychoeducation for bipolar disorder. *Advances in Psychiatric Treatment, 16*, 147-154.
- The Ministry of Education. (1995). *Education policy in the Kingdom of Saudi Arabia*. Riyadh, Saudi Arabia.
- Williams, K. (1973). *The school counsellor*. London, UK: Methuen.

## ADDITIONAL READING

- Abu-Rasain, M. H., & Williams, D. I. (1999). Peer counselling in Saudi Arabia. *Journal of Adolescence, 22*(4), 493-502.
- Al-Ghamdi, N. G. (2010). *An Investigation into perceptions of the actual and ideal role of school counsellors in Saudi Arabia girls' schools* (Unpublished doctoral dissertation). Durham University: UK.
- Alhossaini, M. (2007). The role of the school counsellor within gifted and talented elementary students in the Kingdom of Saudi Arabia. *ARECLS e-journal, 4*. Retrieved from <http://research.ncl.ac.uk/ARECLS>
- Harris, B. (2013). *International school-based counselling*. (Counselling MindEd Scoping Report). Retrieved from [http://counsellingminded.com/wp-content/uploads/2013/10/harris\\_MindEd\\_report.pdf](http://counsellingminded.com/wp-content/uploads/2013/10/harris_MindEd_report.pdf)
- Saleh, M. A. (1987). Counselling and guidance in the Kingdom of Saudi Arabia. *International Journal for the Advancement of Counselling, 10*(4), 277-286.

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## Chapter 22

# USE OF COMMUNICATIVE BEHAVIOR AND CULTURE FRAMEWORK TO UNDERSTAND TEACHERS' NOTIONS IN PEDAGOGICAL SITUATIONS

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### ABSTRACT

The aim of this research was to examine teachers' implicit notions in difficult pedagogical situations. Two empirical studies were conducted. The first study was carried out using an anonymous poll method with 196 secondary school teachers, who previously indicated modes of behavior in ten difficult (conflict) situations for the "ideal" and "real" (ordinary, typical) teacher, and after that it was offered to them to point out which of the behavior modes they would use in each situation. The second study was carried out using a poll method with 40 secondary school teachers. They were offered to put 109 modes of behavior in 10 difficult pedagogical situations in compliance with the types of communicative behavior and the levels of communicative culture. To the data obtained correlation analysis was applied. For 55 modes of behavior, statistically significant coefficients of correlation between reference of these modes of behavior to the types of communicative behavior and to the levels of communicative culture of the teacher were found. These modes of behavior (both positive and negative ones) can be considered as a kernel of teachers' notions about communicative culture.

*Keywords:* teachers' notions, communicative culture, communicative behavior.

### 1. INTRODUCTION

This research is devoted to examining teachers' implicit notions about communicative behavior and culture in conflict situations. The theoretical framework of this study is based on the concept of teacher's communicative culture (Aukhadeeva, 2012; Glotova & Wilhelm, 2013). Teacher's communicative culture is a multilevel construct that includes moral values, cultural norms and behavior modes, which are used in communication. Teacher's modes of behavior in difficult pedagogical situations have a great influence upon emotional conditions of pupils and psychological climate in a classroom community. Researchers consider a problem of teacher's communication with pupils in the context of ensuring teacher's support to pupils in educational process (Frisby & Martin, 2010; Short, 2013), creation of positive climate in the classroom (Cefai & Cavioni, 2014; Patrick, Ryan, & Kaplan, 2007), and solution of arising conflicts between classmates (Afnan-Rizzuto, 2011; Wang, et. al. 2014). It is noted that teacher's support has a positive effect on pupils' feeling of happiness and communication satisfaction (Wang et al., 2014). Studies have shown that supportive teacher-pupil relationship increases considerably both, emotional and behavioral development of pupils, as well as, although to a lesser extent, their educational achievements (Short, 2013; Wentzel, Battle, Russell, & Looney, 2010), influences pupils' motivation, interests and pursuit of social objectives (Wentzel et. al., 2010), emotional and cognitive aspects of learning (Frisby & Martin, 2010).

There are grounds to believe that teacher's choice modes of behavior in conflict pedagogical situations are influenced by his/her social representations and implicit theories of communicative culture and communicative behavior. Teachers' social representations and implicit theories about communicative culture and behavior are formed of many sources: knowledge acquired in the course of occupational training at higher educational institutions, reading relevant materials, refresher courses on pedagogical communication, direct interaction with students in class and after hours, communication with colleagues as a part of occupational

associations (methodological councils, etc.), and direct personal discussions (exchange of opinions and impressions, as well as discussions dedicated to complicated situations).

In our research, it was offered to allocate four levels of teacher's communicative culture (communicative illiteracy, literacy, competence, and creativity) and three types of communicative behavior in difficult pedagogical situations (destructive, ambivalent, and constructive ones) to which specific modes of teacher's behavior in conflict situations can be correlated according to teachers' representations (Glotova & Wilhelm, 2013).

Communicative *illiteracy* is the lowest level of development of teacher's communicative culture. Communicative *literacy* allows working effectively in standard situations. Communicative *competence* allows the teacher to cope with non-standard situations. Communicative *creativity* gives a chance to interact with pupils effectively in extraordinary situations.

The *destructive* type of teacher's behavior means that the teacher ignores interests of the pupils or uses the condemned methods of communication. The *constructive* type of teacher's behavior leads to cooperation between the teacher and pupils. The *ambivalent* type contains destructive and constructive elements of teacher's behavior.

Studying teachers' representations about their modes of behavior in difficult (conflict) pedagogical situations and their representations about communicative culture and of themselves as communicators is a topical issue for educational psychology and teacher training practice at higher educational institutions.

## 2. BACKGROUND

This research is based on the concepts of social representations (Moscovici, 1988) and implicit theories (Kelly, 1970; Kover, 1995; Dweck, Chiu & Hong, 1995; Dweck & Ehrlinger, 2006; Leroy, Bressoux, Sarrazin, & Trouilloud, 2007). Social representations are a specific form of individual's ordinary collective knowledge, where scientific knowledge and common sense are combined. Several researchers have indicated that social representations are stable formations, although changeable in the process of communication and that social representations have cognitive, regulatory, and adaptive functions (Farr & Moscovici, 1984; Moscovici, 1988).

Now, social representations of various phenomena connected with pedagogical activity are actively studied. It is possible to call such researches the studies of teachers' notions about the pupils (Hamilton, 2006; Rubie-Davies, 2005), about pupils' intellect and abilities (Hamilton, 2006; Blackwell, Trzesniewski, & Dweck, 2007); teachers' notions of their professional role and of themselves as professionals (Kuzmenkova, 2005). Teacher's abilities to choose the most effective modes of behavior in difficult pedagogical situations were studied in research conducted by Aukhadeeva (2006). Teachers' notions about what modes of behavior testify to professionalism can have a great impact on a teachers' behavior in conflict pedagogical situations and seems to be most topical.

## 3. OBJECTIVES

The first research objective consisted in revealing and describing features of teachers' representations about specific modes of behavior in difficult (conflict) pedagogical situations. One more research objective was to study how representations of specific modes of behavior in difficult pedagogical situations correspond to teachers' representations about types of communicative behavior: destructive, ambivalent and constructive. The third research objective was to study teachers' notions about levels of communicative culture, such as communicative illiteracy, literacy, competence and creativity, and also about what specific modes of behavior in difficult pedagogical situations correspond in their consciousness to implicit representations of each of the levels of teacher's communicative culture mentioned above. And finally, the last research objective consisted in revealing as far as teachers' implicit notions about types of communicative behavior are coordinated with their notions about the levels of teacher's communicative culture.

## 4. DESIGN

The mixed research design (Onwuegbuzie & Johnson, 2006) that means combination of quantitative and qualitative methods was used. The explanation for use of such design is connected with lack of information on teachers' implicit representations of specific modes of behavior in difficult pedagogical situations, three types of communicative behavior, and four levels of communicative culture which have been entered into scientific use by the authors of this article (Glotova & Wilhelm, 2013). In addition, descriptions of original pedagogical situations were used as stimuli in the research. That demanded application not only quantitative, but also qualitative methods of processing of data obtained in the research. A poll method was applied to data collection. In addition, the content analysis was used. Statistical processing of the data obtained was carried out by means of criterion  $\phi^*$  – Fischer's angular transformation and the correlation analysis according to Spearman.

## 5. METHODS

Two empirical studies were carried out for the purpose of studying teachers' implicit representations about communicative behavior and communicative culture of the teacher.

### 5.1. Methods of the first study

On the basis of results of the preliminary poll with participation of 42 secondary school teachers concerning the most typical and difficult pedagogical situations, which were found in their pedagogical activity, and also on the basis of analysis of psychology and pedagogical literature, 10 situations were selected and included into the list for the subsequent poll for teachers (Rean & Kolominskij, 1999: situations 1-4; Glotova & Wilhelm, 2013: situations 5-10). Situations were selected by two criteria: those met rather often in pedagogical activity; possessing complexity for permission.

The first study was conducted by means of an anonymous poll with participation of 196 secondary school teachers. At first, the participants were offered the descriptions of ten difficult pedagogical situations, with regard to which they were supposed to indicate how the "ideal" teacher and the "real" (ordinary, typical) teacher would behave in an each specific situation. With the purpose to minimize the effect of social desirability of examinees' answers, to reduce uneasiness and to increase the interest, the poll took place in an anonymous form (to each examinee the code was appropriated). In addition, it was offered to participants to specify their sex, age, the subject they teach and their experience in this profession. To the data obtained, the content analysis was applied. After that, the teachers were supposed to indicate how they would behave in such situations. This helps find out who each teacher identifies him/herself with – the "ideal" teacher or the "real" teacher. The respondents were allowed not to answer some questions, so, while processing of the results, out of 196 research participants, the number of teachers who identified themselves with the "ideal" teacher or the "real" teacher in each of 10 pedagogical situations was assumed to be 100%.

### 5.2. Methods of the second study

The second study was carried out by a method of poll with participation of 40 secondary school teachers. They were offered to put those modes of behavior in 10 difficult pedagogical situations which were revealed in the first study in compliance with a) levels of communicative culture and b) types of communicative behavior. The concepts connected with types of communicative behavior and levels of communicative culture, were explained to the teachers. The list of behavior modes obtained in the result of the content analysis in the first study was offered for each of 10 situations. It was required to specify to which level of communicative culture (communicative illiteracy, literacy, competence, or creativity), according to respondent's opinion, each mode of behavior belongs (the results were coded as 1, 2, 3 and 4). Then it was required to specify, which type of communicative behavior (destructive, ambivalent, or constructive), according to respondent's opinion, can be applied in each mode of

behavior (the results were coded as 1, 2 and 3). Correlation analysis (according to Spearman) was applied to the data obtained.

## 6. FINDINGS

The research findings demonstrated features of teachers' representations about specific modes of behavior in 10 conflict pedagogical situations, and also about compliance of these modes of behavior to the types of communicative behavior (destructive, ambivalent, and constructive) and to the levels of communicative culture (communicative illiteracy, literacy, competence, and creativity).

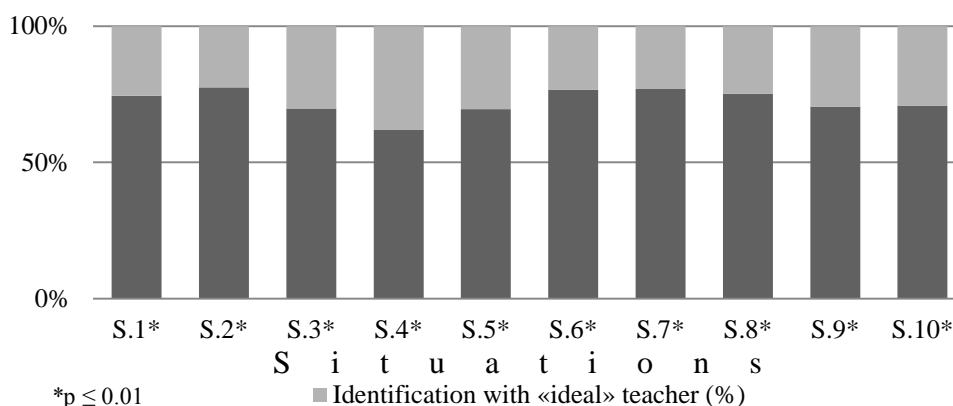
### 6.1. Teachers' notions about modes of behavior in conflict pedagogical situation

Teachers' notions (n=196) about modes of behavior of "ideal" and "real" (ordinary, typical) teachers in 10 difficult pedagogical situations were analyzed. In the answers processed by the method of content analysis, 109 various positive and negative modes of behavior were allocated. Descriptions of 10 pedagogical situations and 109 modes of behavior listed by teachers are presented in Table 1.

The research shows that teachers' notions of the "ideal" teacher are much more positively painted, than about the "real" (ordinary, typical) one. Actions of the "ideal" teacher in difficult pedagogical situations are estimated as more favorable and humanistic in comparison with actions of the "real" (ordinary, typical) teacher.

Results of teachers' identification of their own modes of behavior in each of 10 pedagogical situations with behavior of the "ideal" or "real" teacher are presented in Figure 1.

Figure 1. Teachers' identifications of their own modes of behavior in 10 pedagogical situations with behavior of the "ideal" or "real" teacher.



As we can see from Figure 1, in each of 10 situations the percentage of teachers who identified themselves with the "ideal" teacher was higher than that of teachers who identified themselves with the "real" teacher. All distinctions are statistically significant,  $p \leq 0.01$  (by criterion  $\phi^*$  - Fischer's angular transformation). The research shows that the number of identifications with the "ideal" teacher increases with experience of pedagogical activity. Age dynamics of teachers' identification of their behavior with that of the "ideal" teacher also was observed. Three age groups pairs were allocated: 1) "36-40 years" and "more than 50 years" which have shown statistically significantly highest level of identification of their behavior with that of the "ideal" teacher; 2) "31-35 years" and "41-45 years" which have shown significantly lowest level of identification of their behavior with that of the "ideal" teacher; 3) "30 and less years" and "46-50 years" which have shown the intermediate level of identification of their behavior with that of the "ideal" teacher.



## 6.2. Interrelations between teacher's notions of the types of communicative behavior and the levels of communicative culture.

For correlation analysis (according to Spearman), 40 teachers were offered to carry the above-mentioned 109 modes of behavior allocated on the basis of the content analysis to one of the four levels of communicative culture and to one of the three types of communicative behavior. As for communicative culture, on the whole on 10 situations  $\geq 40\%$  of teachers referred 46 modes of behavior to the level of communicative illiteracy, 30 modes of behavior - to the level of communicative literacy, 8 modes of behavior - to the level of communicative competence and 20 modes of behavior - to the level of communicative creativity. (Other modes of behavior didn't gain  $\geq 40\%$  of answers. Some modes of behavior were referred to different levels of pedagogical communicative culture by  $\geq 40\%$  of teachers). In addition, the same teachers ( $n=40$ ) were also offered to refer 109 modes of behavior in 10 pedagogical situations to the types of communicative behavior – destructive, ambivalent and constructive. As a result,  $\geq 40\%$  of teachers referred 43 modes of behavior to the destructive type of communicative behavior, 17 modes of behavior - to the ambivalent type of communicative behavior, and 53 modes of behavior - to the constructive type of communicative behavior. (Other modes of behavior didn't gain  $\geq 40\%$  of answers. Some modes of behavior were referred to different types of communicative behavior by  $\geq 40\%$  of teachers).

It is visible that there are considerable individual distinctions in teachers' notions about the levels of communicative culture and the types of communicative behavior. So, for 6 of 10 modes of behavior in a situation 1 ("The teacher made a mistake in a formula"), this or that percentages of answers were noted on each of levels of communicative culture – from illiteracy to creativity. For example, a mode of behavior "attention switching (to smooth a mistake)" 28,4% of teachers referred to the level of communicative illiteracy, 34,3% – to the level of literacy, 20,9% – to the level of competence, and 16,4% – to the level of creativity. For 4 of 10 modes, three levels of communicative culture were involved: such modes of behavior as "the praise, thanks for attentiveness" and "the offer to the pupil to correct an error" none of the teachers (0%) referred to the level of communicative illiteracy whereas at three remained levels these modes were presented; such modes as "sneer" and "justification" none of the teachers (0%) referred to the level of communicative creativity, but at three remained levels they were available.

Comparison of teachers' notions about the types of communicative behavior connected with destructive, ambivalent and constructive modes of behavior, with their notions of four levels of pedagogical communicative culture – communicative illiteracy, communicative literacy, communicative competence and communicative creativity, revealed a number of statistically significant correlations. Significant coefficients of correlation of teacher's identifications of 109 modes of behavior in 10 conflict pedagogical situations with types of communicative behavior and levels of communicative culture obtained are given below in table 1 (only significant coefficients are noted:  $r_s$  crit. = 0.49,  $p \leq 0.001$ ;  $r_s$  crit. = 0.40,  $p \leq 0.01$ ;  $r_s$  crit. = 0.31,  $p \leq 0.05$ ).

*Table 1. Significant correlations between results of teacher's identifications of 109 modes of behavior in 10 conflict pedagogical situations with the types of communicative behavior and the levels of communicative culture.*

Pedagogical situations	Modes of behavior
1. When drawing a chemical formula, the teacher made a mistake. A pupil pointed this out to the teacher. The teacher is worried about how pupils' opinion of him/her may change.	Trick (I made it intentionally) (0.672); Recognition of the mistake (0.521); Internal revision of the position (a right to make a mistake) (0.407); Sneer; Praise, thanks for attentiveness; Offer to the pupil to correct the mistake; Justification; Attention switching (to smooth the mistake); Apology; Mistake correction.
2. During the class one of the pupils asks the teacher a difficult question. The answer lies outside teacher's competence; he/she is, therefore, is unable to give the correct answer to it.	Internal revision of the position (recognition of not knowing, a right not to know) (0.489); Suggests the pupil to study the question independently (sends to the library, prompts where to find) (0.484); Explains as he/she can now (0.325); The answer later (understands and explains to the pupil); Cooperation (together we will find the answer); Asks not to distract the teacher at the lesson (including rough reply); Praise; Switches attention (rides off on a side issue).

*Table 1. Significant correlations between results of teacher's identifications of 109 modes of behavior in 10 conflict pedagogical situations with the types of communicative behavior and the levels of communicative culture (cont.).*

<p>3. A visit to the theater by the 9th grade is planned. But there was some hustling at the doorway. Tired after a long day of work, the form master loses his/her nerve and snaps: "Are you all crazy?! What theaters, for God's sake! Return back and put your record-books on my table!!!". What is to be done in this situation?</p>	<p>Joke (0.721); The appeal to culture and maturity of pupils (0.486); Apology for the shout (0.372); Calming the pupils (an appeal to an order, to organize) (0.327); Threat ("there will be no visits"); Calms down; Refusal of the visit; Returning to the class and shouting; Remarks in the record-books; Visit to the theater, but without good mood; Conversation with the pupils (verbalization of his/her own feelings, understanding of pupils' feelings); Visit to the theater.</p>
<p>4. The bell has rung. The corridor is empty. But there is one pupil left behind, slightly out of breath. He looks back and slips into the classroom. Behind him there are two more pupils who want to rush to the classroom. And this is not the first time when it happens...</p>	<p>Clarification of the reasons of delay (0.606); Sanctions and control for delay (0.564); Won't let to the lesson (0.510); Will send to the director (0.508); Remarks in the record-books (0.473); Stops the lesson, waits for all pupils late (0.473); Makes them sit at the entrance (0.454); Appoints "patronage" over those late (0.440); Oral remark (0.402); Calls for parents or threat (0.386); Will start talking on an interesting subject (0.376); Shout, anger; A discussion after the lesson (during the class hour, at PTA meeting); Lets into the classroom; Will leave to stand at an entrance; Look.</p>
<p>5. The teacher summons the pupil to the blackboard. The pupil is unable to answer the teacher's question. At this time his classmate tries to prompt to him. How will the teacher react to this and treat the prompter?</p>	<p>Joke (the correct answer – 2, wrong - 1) (0.635); Will praise the prompter (0.517); Remark and threat (0.472); Decrease in the assessment of the answer (0.448); Task to the prompter during the classmate's answer (0.405); Assessment for both (0.387); Will suggest the prompter to answer the question (help to the classmate); Will ask the prompter to wait and give his classmate a chance to answer; Remark in the record-book ("the record-book on the table"); Calls the prompter to the board.</p>
<p>6. There is a history lesson in the fifth form. The teacher is conducting a lecture. One of the pupils, who is fond of history and reads a lot of extra-curriculum literature, says: "I don't agree with you. In what book did you find it?"</p>	<p>Will ask to wait until the break (0.381); Praise (0.361); Will give a chance to the pupil to speak (0.345); Will answer the question indignantly, discontentedly; Calls the source (book); Reasons his/her point of view ("will show the ambiguity of the problem"); Discussion of the question with the whole class; Won't allow the pupil to speak (won't allow altercations, will accuse of ignorance, "how dare not to trust the teacher").</p>
<p>7. The teacher writes on the blackboard. At this time the silence is broken by the sound of the book falling. The teacher speaks to the one who dropped it: "If this happens again, you will have to leave a classroom". Having estimated the situation, another pupil intentionally throws the book.</p>	<p>Takes away the book (0.525); Look, oral remark (0.479); Points to mediocrity of actions (0.441); Prevention of the situation ("it wasn't necessary to tell these words", not to pay attention from the very beginning) (0.418); Remark in the record-book (0.372); Relieves emotionally the tension (0.362); Removal from the class (0.320); Threat (about sanctions), shout; Search of "guilty"; Punishment for both; Conversation with pupils (about the value of books), clarification of the reasons after or during the lesson; Inclusion of the pupil into work.</p>
<p>8. There is a lesson of mathematics. The teacher tries to write a formula on the blackboard, but the chalk doesn't write. He guesses that someone has soiled the blackboard with wax.</p>	<p>Shout, lecture (0.562); Persons on duty wipe the blackboard (0.460); "Responsible" prepares the blackboard for the following lesson (0.454); Search for the "guilty" (0.397); Uses other forms of work (without the blackboard, oral work) (0.375); Study the material yourself (0.321); Invitation of the director; Will explain unclear, and then will discuss the situation; Refuses to conduct the lesson; Punishes everybody.</p>
<p>9. The teacher begins a lesson but as soon as he/she turns away to the blackboard, a noise is heard in the class. As soon as the teacher turns to the class, everybody becomes silent. This repeats several times.</p>	<p>Switching to another form of work (facing the class) (0.432); Does not pay any attention to the situation, continues the lesson (0.423); Remark (0.420); Independent study of the material (0.403); Shout (0.348); Joke; Conversation with pupils ("current situation discussion"); Threat of independent work; Punishment; Search for the "guilty"; Lesson termination; Switching to another forms of work (to interrogate pupils, to summon to the blackboard).</p>
<p>10. The teacher is having a lesson. Another question that the teacher addresses to the class is again answered by one of pupils with a caustic joke. The class bursts out laughing. The reputation of a "clown" has stuck firmly to this pupil among the teachers.</p>	<p>Look (0.544); Shout and nervousness (0.480); Threat ("there will be an examination") (0.472); Remark to the "clown" (0.471); Conversation after the lesson (0.408); Joke in reply (joke acceptance, from the joke to the topic of the lesson) (0.387); Task which will be checked after the lesson (0.343); Punishment of the "clown" (let him stand during the lesson; "2"; remark in the record-book; call for parents; to the director; to expel from the class); To laugh together with the class; Remark to the class as a whole; To offend the "clown".</p>

As it is possible to see from Table 1, 55 significant correlations between teachers' notions about the types of communicative behavior and the levels of communicative culture concerning an assessment of the same modes of behavior in 10 specific pedagogical situations were obtained (12 – were obtained at  $p \leq 0,001$ ; 25 – at  $p \leq 0,01$ ; 18 – at  $p \leq 0,05$ ). These modes of behavior (both positive and negative ones) can be considered as a kernel of teachers' notions about communicative culture.

Let's note that 75 significant correlations (positive and negative) were also obtained between different modes of behavior (2 – at  $p \leq 0,001$ ; 22 – at  $p \leq 0,01$ ; 51 – at  $p \leq 0,05$ ).

## 7. CONCLUSIONS

The behavior of the “real” (ordinary, typical) teacher in difficult pedagogical situations was estimated as more destructive and illiterate in comparison with that of the “ideal” teacher. In all situations most teachers identified their behavior with that of the “ideal” teacher. In different age groups, however, the degree of such identification was different.

Teachers' notions of the types of communicative behavior and the levels of communicative culture were characterized by considerable individual variability. Teachers differentiate the level of communicative illiteracy well, while experiencing more difficulties at differentiation of the three levels remained, especially, at differentiation of communicative competence and communicative creativity. On the opposite, the teachers are better at distinguishing the options of the constructive type of behavior, than the destructive one. The destructive type of communicative behavior in teachers' representations accurately corresponded to the level of communicative illiteracy, whereas the constructive type of communicative behavior was distributed on the three remained levels of communicative culture. For 55 modes of behavior (of 109) significant correlations between the types of communicative behavior and the levels of communicative culture were obtained. At the same time correlations were insignificant for 54 modes of behavior, teachers' notions about which are more various and less certain.

The applied value of research results is connected with influence of teachers' notions about the types of communicative behavior and the levels of communicative culture on their relationship with pupils, on their behavior in conflict pedagogical situations. The research findings are important for conducting teacher communication training sessions aimed at specifying teachers' representations of communication behavior and of themselves as communicators.

## 8. FUTURE RESEARCH DIRECTIONS

The directions of further researches are caused by limitations existing at the research considered. The main limitation is connected with use of the unique specially made set of 10 conflict pedagogical situations, which wasn't used in researches of other authors. It didn't allow comparison of our results with the results presented in scientific literature. The second limitation is caused by the small samples formed by teachers of different age and experience of pedagogical activity.

Therefore, as one of the directions of further researches, it is necessary to conduct similar research on a wider group of teachers with use of the list of the same 10 conflict pedagogical situations. Besides, it is supposed to expand the list of difficult communicative situations for identification of possible modes of teachers' behavior in these situations. It is also supposed to study the definitions what teachers of different ages and experience of pedagogical activity can give to specific concepts of types of communicative behavior and levels of communicative culture such as “communicative illiteracy”, “communicative creativity”, “constructive type of communicative behavior”, etc., that is to reveal individual distinctions in teachers' interpretations of these concepts. It is important to study the factors influencing formation of communicative culture of the teacher.

## REFERENCES

- Afnan-Rizzuto, K. (2011). *A comparative study of teachers' and secondary level pupils' perceptions of, and responses to conflict in England and Denmark* (Doctoral dissertation, University of Warwick, UK). Retrieved from <http://wrap.warwick.ac.uk/55726/>
- Aukhadeeva, L. A. (2006). *Kommunikativnaya kul'tura budushchego uchitelya kak ob'yekt sistemnogo issledovaniya* [The communicative culture of the future teacher as an object of systematic research]. Kazan, Russia: Kazan State University.
- Aukhadeeva, L. A. (2012). Communicative culture of the teacher as a factor of education quality improvement. *Philology and culture*, 27(1), 226-230.
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, 78(1), 246-263.
- Cefai, C., & Cavioni, V. (2014). Caught social and emotional education: A caring classroom community. In C. Cefai, & V. Cavioni (Eds.), *Social and Emotional Education in Primary School* (pp. 81-95). New York, NY: Springer.
- Dweck, C. S., Chiu, C., & Hong, Y. (1995). Implicit theories and their role in judgments and reactions: A world from two perspectives. *Psychological Inquiry*, 6(4), 267-285.
- Dweck, C. S., & Ehrlinger, J. (2006). Implicit theories and conflict resolution. In M. Deutsch, P. Coleman, & E. Marcus (Eds.), *The handbook of conflict resolution: Theory and practice*. San Francisco, CA: Jossey-Bass.
- Farr, R. M., & Moscovici, S. (Eds.). (1984). *Social Representations*. Cambridge, UK: Cambridge University Press.
- Frisby, B. N., & Martin, M. M. (2010). Instructor-student and student-student rapport in the classroom. *Communication Education*, 59(2), 146-164.
- Glotova, G., & Wilhelm, A. (2013). Teachers' notions about types of communicative behavior and levels of communicative culture. In C. Pracana, & L. Silva (Eds.). *InPACT 2013: International Psychological Application Conference and Trends book of proceedings* (pp. 364-366). Lisbon, Portugal: World Institute for Advanced Research and Science (WIARS).
- Hamilton, L. (2006). Implicit theories of ability: Teacher constructs and classroom consequences. *Scottish Educational Review*, 38(2), 201-212.
- Kelly, G. A. (1970). A brief introduction to Personal Construct Theory. In D. Bannister (Ed.). *Perspectives in Personal Construct Theory* (pp. 1-29). London, UK: Academic Press.
- Kover, J. (1995). Copywriters' implicit theories of communication: An exploration. *Journal of Consumer Research*, 21(4), 596-611.
- Kuzmenkova, O. V. (2005). Struktura i sodержaniye predstavleniy uchiteley o svoey professional'noy roli [Structure and content of teachers' ideas of the professional role]. *Vestnik Orenburg State University, Series: Humanities*, 10(1), 55-58. Retrieved from [http://vestnik.osu.ru/2005\\_10/9.pdf](http://vestnik.osu.ru/2005_10/9.pdf)
- Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2007). Impact of teachers' implicit theories and perceived pressures on the establishment of an autonomy supportive climate. *European Journal of Psychology of Education*, 22(4), 529-545.
- Moscovici, S. (1988). Notes towards a description of social representations. *Journal of European Social Psychology*, 18(3), 211-250.
- Onwuegbuzie, A. J. & Johnson, R. B. (2006). The validity issue in mixed research. *Research in the schools*, 13(1), 48-63.
- Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, 99(1), 83-98.
- Rean, A. A., & Kolominskij, J. L. (1999). *Sotsial'naya pedagogicheskaya psikhologiya: Uchebnoye posobiye dlya psikhologov i pedagogov* [Social pedagogical psychology: A manual for psychologists and educators]. St. Petersburg, Russia: PiterKom.
- Rubie-Davies, C. M. (2005). Teacher expectations and student self-perceptions: Exploring relationships. *Psychology in the Schools*, 43(5), 537-552.
- Short, L. (2013). *Teachers' and pupils' views of teacher-pupil relationships primary and middle school* (Doctoral dissertation, Newcastle University, UK). Retrieved from <http://hdl.handle.net/10443/2250>
- Wang, L.-J., Wang, W.-C., Gu, H.-G., Zhan, P.-D., Yang, X.-X. & Barnard, J. (2014). Relationships among teacher support, peer conflict resolution, and school emotional experiences in adolescents from Shanghai. *Social Behavior and Personality*, 42(1), 99-113.

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L.B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology*, 35(3), 193-202.

## ADDITIONAL READING

- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189-1204.
- Holmes, E. (2005). *Teacher well-being: Looking after yourself and your career in the classroom*. Oxfordshire, UK: Routledge.
- Knee, C. R., Patrick, H., & Lonsbary, C. (2003). Implicit theories of relationships: Orientations toward evaluation and cultivation. *Personality and Social Psychology Review*, 7(1), 41-55.
- Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, Th., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. *Journal of Educational Psychology*, 105(3), 805-820.
- Matteucci, M. C. (2007). Teachers facing school failure: The social valorization of effort in the school context. *Social Psychology of Education*, 10(1), 29-53.
- Patrick, H., Kaplan, A., & Ryan, A. M. (2011). Positive classroom motivational environments: Convergence between mastery goal structure and classroom social climate. *Journal of Educational Psychology*, 103(2), 367-382.
- Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700-712.

## KEY TERMS & DEFINITIONS

**Three types of communicative behavior of the teacher:** destructive, ambivalent, and constructive.

**Destructive type of behavior:** the teacher rigidly insists on the position, ignores interests of the pupil or resorts to condemned methods of fight that finally leads to destruction of the relations between the teacher and pupils.

**Constructive type of behavior:** the teacher isn't beyond ethical standards, respect, acceptances of partners in communication that finally leads to realization of strategy of cooperation between the teacher and pupils.

**Ambivalent (uncertain) type of behavior:** contains both constructive elements of behavior and destructive elements, therefore, it is intermediate.

**Communicative culture:** the multilevel construct including moral values, cultural norms and the modes of behavior used in communication.

**Four levels of communicative culture of the teacher:** communicative illiteracy, literacy, competence, and creativity.

**Communicative illiteracy:** absence or very poor development of communicative culture of the teacher.

**Communicative literacy:** existence at the teacher of the qualities allowing working effectively in standard, stereotypic situations of professional pedagogical communication.

**Communicative competence:** existence of qualities, which assume rather free interaction in rather difficult, non-standard pedagogical situations, existence of skills of management by communication.

**Communicative creativity:** a set of the qualities, helping to cope with non-standard, extraordinary professional pedagogical situations. This level means existence of reflexive mechanisms, developed consciousness and appeal to valuable aspect of pedagogical activity.

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## Chapter 23

# THE IMPACT OF INTERNAL AND EXTERNAL FACTORS ON THE SATISFACTION AND WELL-BEING OF TEACHERS

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### ABSTRACT

This study focused on well-being of primary school teachers in Eastern Slovakia. We studied the differences in the level of teachers' life satisfaction, satisfaction in work, social and emotional well-being with respect to the perceived supportive behaviour of the headmaster and teachers' personality traits. The research sample consisted of 256 primary school teachers (89.6% women, mean age 42.14, SD 9.65). We used the concept of social well-being conceptualized by Keyes (1998) as our main theoretical framework. The IASR-B5 questionnaire (Trapnell & Wiggins, 1990) was used to measure personality traits. Supporting behaviour of headmasters was measured by the SAS-C scale (Trobst, 2000) and life satisfaction and satisfaction in work were measured by The Life Satisfaction Questionnaire (Rodná & Rodný, 2001). The data were analyzed by non-parametric tests to address the differences between the groups with the highest and the lowest levels of measured variables (the perceived type of supportive behaviour of a headmaster and the Big Five personality traits, namely neuroticism, extraversion, agreeableness, openness, conscientiousness). Our findings showed a significant association between neuroticism, extraversion, conscientiousness and subjective as well as social well-being. The significance of social support, in terms of supportive behaviour of headmasters, was confirmed in the context of work and employment satisfaction as well as in subjective well-being.

*Keywords:* work satisfaction, social well-being, teacher, supporting behaviour, personality traits.

## 1. INTRODUCTION

There are two main approaches to subjective well-being that can be found in the current literature. The first approach is represented by the eudaimonic perspective, which stresses the importance of self-realization and realization of individual's potential and talents (Ryff & Singer, 2008). It can be found especially in the work of Ryff and Keyes and their concept of psychological well-being (Keyes, 2006; Ryff & Keyes, 1995). The second approach is based on the hedonistic tradition and focuses mainly on satisfaction with life. From a psychological point of view hedonism is defined by efforts which maximize the experience of pleasure and minimize the experience of suffering. Within this approach subjective well-being consists of two components - cognitive and emotional. The emotional or affective component can be further divided into positive and negative affect and cognitive-evaluative component is represented by the satisfaction with different areas of life and as well as overall life satisfaction (Džuka, 2004). "Subjective well-being is a broad concept that includes experiencing pleasant emotions, low levels of negative moods, and high life satisfaction." (Diener, Lucas, & Oishi, 2002, p. 63).

### 1.1. Literature review

**1.1.1. Determinants of well-being.** Many factors, which have been shown to influence subjective well-being, can be broadly divided into external (related to the environment in which one lives) and internal (related to one's personality structure). The external factors include for example environmental conditions, economic situation and social status, social relationships or working conditions (Ryff & Heidrich, 1997, as cited in Tišanská & Kožený, 2004). A similar view is also presented by Džuka and Dalbert (1997) who suggest that subjective well-being is

determined by environmental variables, variables linked to the person and moderator-type variables (moderators can be qualitative e.g.: sex, race, class, or quantitative e.g.: level of reward and affect the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable) and mediator-type variables (a given variable may function as a mediator between the predictor and the criterion, mediators explain how external physical events take on internal psychological significance)

- **Association between personality and well-being.** Many research findings indicate that there is an association between personality and subjective well-being. Similarly to personality variables subjective well-being also appears to be relatively stable across different situational contexts with a changing frequency and intensity of intervening life events (Diener & Lucas, 2003). A research study conducted on a representative sample of twins showed that both subjective well-being and personality traits extraversion, neuroticism and conscientiousness have a common genetic basis and personality forms so called “affective reserves” (Weiss, Bates, & Luciano, 2008). These reserves have been shown to be especially important in the process of maintaining the equilibrium in subjective well-being and controlling its changes over time (Weiss et al., 2008). Numerous studies have found further evidence for the relationship between subjective well-being and personality dimensions of extraversion and neuroticism (Gomez, Krings, Bangerter, & Grob, 2009; Librán, 2006; Van den Berg & Pitariu, 2005).

The early work of Bradburn (1969, as cited in Diener & Lucas, 2003) on subjective well-being found that sociability, which is a part of extraversion, was related to pleasant emotions but was not found to be related to negative emotions. Costa and McCrae (1980) also found support for these findings and concluded that neuroticism was related to the negative but not the positive affect. Thus extraversion and emotional stability could act as protective factors and play an important part in maintaining higher levels of subjective well-being (Hayes & Joseph, 2003; Kebza, 2005). However, other authors also found that a low level of neuroticism seemed to be a better predictor of subjective well-being than extraversion (Steel, Schmidt, & Shultz, 2008; Tišanská & Kožený, 2004; Vittersø, 2001).

It has also been shown in several research studies that there is a relationship between personality factors conscientiousness (Chung & Harding, 2009; Hayes & Joseph, 2003), agreeableness (Joshani & Nosratabadi, 2009; Ruiz, 2005) and subjective well-being. Another research study found that subjective well-being was correlated with all personality factors except for the factor openness to experience (Hřebíčková, Blatný, & Jelinek, 2010).

While numerous studies have applied the Five Factor Model of personality and focused on the relationship between these five personality factors (extraversion, neuroticism, conscientiousness, agreeableness and openness to experience) and subjective well-being, there are additional variables which should be of interest. In particular, the social dimension and functioning in interpersonal relationships may play important roles in experiencing the feelings of well-being and satisfaction (Blatný, 2005; Myers, 2003) and its respective dimensions (Ryff & Keyes, 1995) or independent components (Keyes, 1998; Šolcová & Kebza, 2005). Furthermore, far less attention has been paid so far to the contingencies of the interpersonal theory of behavioural traits in this context. Based on the theory of the interpersonal circumplex and vertical understanding of provision and denial of status, it can be assumed that self-provision of status and love could also be associated with higher levels of subjective well-being.

- **Association between social support and well-being.** Social support and participation in social relationships promote subjective well-being (Blatný, 2005). Social support is particularly important as it is based on interpersonal communication and exchange in which the one who provides support may also benefit from the positive feedback from the person who receives it (Mareš, 2001). Moreover, social support is one of the first variables that have shown a clear moderating effect on psychological well-being and health (Šolcová & Kebza, 1999).

It is also very important to address the impact of social support on subjective well-being in workplace, which is in the centre of this study. Shirey (2004, as cited in Mintz-Binder & Fitzpatrick, 2009) proposed that within the context of work comfort it is important to distinguish



between provided and perceived emotional support. Furthermore, Smith (2008) has suggested that the effect of support from superiors on subjective well-being of employees is an important topic for investigation and the findings from his research show that leadership based on a respectful and open approach, social support, inspirational motivation and intellectual stimulation have a positive effect on the well-being of the employees.

An original concept of social support has been proposed by Trobst (2000). His concept is based on the interpersonal circumplex theory of personality with individual types of supportive behaviours arranged in a circle. These respective personality types are characterized by either provision or denial of love and granting status to oneself and others. This model allows describing the types of behaviour that are positively but also negatively related to subjective well-being.

### **1.2. Well-being of the teachers**

There are also specific variables that have to be taken into account when studying the subjective well-being of teachers. In particular, it is important to consider teachers' personal and interpersonal skills and characteristics (Van Petegem, Aelterman, Van Keer, & Rosseel, 2008). It has been found that on average a profile of a typical teacher is characterised by a medium to high degree of neuroticism, high degree of extraversion and agreeableness, and medium levels of openness to experience and conscientiousness (Howard & Howard, 2000, as cited in Hřebíčková & Řehulková, 2002). However, research findings regarding the degree of neuroticism among teachers have not been consistent. While increased neuroticism among teachers was reported by Řehulka and Řehulková (1998), and Židková and Martinková (2003); research studies by Hřebíčková and Řehulková (2002) and Žaloudíková (2001) did not find a significant prevalence of neurotic personality among teachers.

Subjective well-being of teachers has been shown to be related to a number of factors. Subjective well-being has been shown to be related to socio-demographic factors, competencies of the teachers but also to the amount support provided to the teachers. The headmaster is an important source of social support for school teachers. Thus the supportive behaviour of the headmaster may have a moderating effect on the impact of psychological stress of the teachers on their well-being (Sakoda, Tanaka, & Fuchigami, 2004). For example, a study on health and well-being of teachers in Scotland has found that teachers considered their superiors' behaviour to be very important; especially, they appreciated friendly attitude, emotional support, collegiality and an engaged proactive approach (Dunlop & Macdonald, 2004). Furthermore, Leithwood (2005, as cited in Konu, Viitanen, & Lintonen, 2010) emphasizes the importance of behavioural attributes of the headmaster such as a tendency to support initiative, creativity and producing new ideas of fellow teachers. Finally, Křivohlavý (2002) in his work focuses on social support of teachers and students and highlights the need for further empirical research in this area.

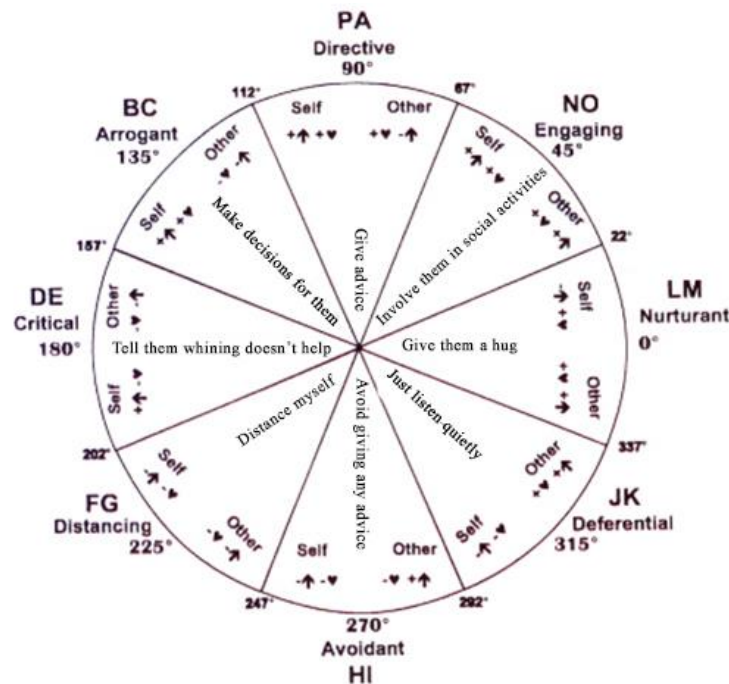
## **2. BACKGROUND**

This research study was based on the hedonic perspective on subjective well-being. It focused on the overall life satisfaction as well as the satisfaction with different areas of life and the frequency positive and negative emotions. As already presented, well-being has been shown to be predominantly associated with the dominance of positive over negative emotions. In this study we used the concept of social well-being by Keyes (1998), which consists of five dimensions:

- a) social integration (the extent to which people feel they have something in common with others who constitute their social reality);
- b) social acceptance (trust to others, belief, that other people are kind and industrious);
- c) social contribution (belief that one is a vital member of society, with something of value to give);
- d) social actualization (belief of the positive evolution of the society);
- e) social coherence (perception of the quality, organization and operation of the social world).

The chosen approach to measuring personality traits was based on the Five Factor Model of personality. This model consists of five basic personality dimensions: extraversion, neuroticism, conscientiousness, agreeableness and openness to experience. Interpersonal behaviour of the school headmasters was studied with specific focus on the provision of social support, which was based on the concept of interpersonal social support (Trobst, 2000). The details regarding the provision of love and status within the concept of the circumplex model of social support is shown in the Figure 1. The particular focus of our study was centred on engaging and distancing behaviours of the headmaster.

Figure 1. Provision love and status in the context of the circumplex model of social support (Trobst 1999, p. 248).



### 3. DESIGN

A cross-sectional comparative design was used to explore the differences in life satisfaction, work satisfaction, social well-being in school environment and emotional well-being according to the level of support from the headmaster as well as teachers' personality characteristics. The differences in measured variables were explored between the groups of teachers who perceived their headmaster as very supportive and those who perceived their headmaster as not supportive. Secondly, the differences were explored between those high in distancing behaviour and low in distancing behaviour.

Finally, the differences in life satisfaction, work satisfaction, social well-being in school and emotional well-being between those with the high versus low score in personality variables (extraversion, neuroticism, conscientiousness, agreeableness, openness to experience) were addressed.

### 4. OBJECTIVES

The aim of the present study was to explore how personality characteristics of teachers and social support provided by headmasters influence life satisfaction, work satisfaction, social and emotional well-being of teachers.

## 5. METHODS

### 5.1. Sample

The research sample consisted of the 1st and 2nd grade teachers from primary schools. The total number of participants was 265 with 89.6% women. According to the Institute of Information and Prognoses of Education in Bratislava, in the academic year 2010/11, 85.74% of teachers who taught in Slovak primary schools were women (<http://www.uips.sk/statistiky/statisticka-rocenka>), which roughly correspond with the gender composition of our research sample. The mean age of participants was 42.14 years, age range 24-68 years. The length of teaching experience of the teachers in our sample varied from 0.5 to 50 years. The average length of teaching experience was 17.92 years. 39.7% of teachers taught at the 1st grade and 60.3% taught at the 2nd grade at primary schools.

Data collection was carried out in January and February 2011. Questionnaires were administered in two ways, both in the form of group learning activities for teachers and also individually through personal contacts with the teachers. Participants were selected based on availability. A total of 551 questionnaires were distributed and 287 completed questionnaires returned (52.09%). 22 questionnaires were excluded from the analysis due to large amount of missing data.

### 5.2. Measures

Work satisfaction was measured by the Questionnaire of life satisfaction created by authors J. Fahrenberg, M. Myrteka, J. Schumacher and E. Brahlera (Rodná & Rodný, 2001). This questionnaire assesses the overall life satisfaction and satisfaction related to important areas of life. Each area is represented by seven items. Participant answered each item on a 7 point scale (1 - very dissatisfied, 2 - dissatisfied, 3 - rather dissatisfied, 4 - neither satisfied nor dissatisfied, 5 - rather satisfied, 6 - satisfied 7 - very satisfied). Summary score of life satisfaction was created by adding the scores for health, work and employment, financial situation, leisure, satisfaction with oneself, friends, acquaintances and relatives, and housing. For the purposes of the analysis overall life satisfaction score and satisfaction in the area of work and employment and satisfaction with oneself were used. Cronbach's  $\alpha$  for the total life satisfaction score was 0.936. Cronbach  $\alpha$  for work satisfaction was 0.862. Table 1 shows examples of representative items from this questionnaire.

*Table 1. Example of the items of the Questionnaire of life satisfaction.*

I am... with my position in the workplace.	1	2	3	4	5	6	7
When I think about how secure my position is in the future I am...	1	2	3	4	5	6	7
The success I have experienced at my work is...	1	2	3	4	5	6	7

To detect affective component of subjective well-being the Scale of habitual emotional subjective well-being was used (Džuka & Dalbert, 2002). It consists of two subscales (positive affect and negative affect) measuring emotional component of subjective well-being. Positive affect was examined by four items (enjoyment, physical vigour, joy, happiness) and negative affect was represented by six items (anger, guilt, shame, fear, pain, sadness). Participants responded to the frequency of experiencing these feelings on a 6-point scale ("almost never", "rarely", "sometimes", "often" and "very often", "almost always"). Emotional well-being was defined as a difference between standardised score of positive and negative emotions.

Social well-being in school was measured by selected items from Keyes's questionnaire (1998). The items were selected to measure concern regarding school environment (table 2). Total score of social well-being was represented by fifteen items. Participants responded on a 7 point scale. Cronbach's  $\alpha$  was 0.828.

Table 2. The scale and example of the items of Social well-being questionnaire.

1 strongly disagree	7 strongly agree						
The school environment is too complicated for me.	1	2	3	4	5	6	7
I feel that I am a part of community in the school where I work.	1	2	3	4	5	6	7
People in the school are helpful without expecting anything in return.	1	2	3	4	5	6	7
I am a valuable member of the community in the school where I work.	1	2	3	4	5	6	7
Schools are becoming a better place for everybody.	1	2	3	4	5	6	7

Personality traits were measured using the IASR-B5 questionnaire (Trapnell & Wiggins, 1990), which included the Big Five factors, as well as interpersonal traits based on the circumplex model. We analysed data only from the following subscales: agreeableness, extraversion, neuroticism, conscientiousness and openness to experience. Participants responded to how the individual adjectives described them on a 8 point scale, with the number 1 meaning completely inaccurate and 8 completely accurate (Table 3). Cronbach’s  $\alpha$  for each subscale ranged from 0.624 to 0.892.

Table 3. The scale and example of the items of questionnaire IASR\_B5.

1	2	3	4	5	6	7	8
extremely inaccurate	very inaccurate	quite inaccurate	slightly inaccurate	slightly accurate	quite accurate	very accurate	extremely accurate
__outgoing	__anxious	__reliable	__imaginative	__friendly			

To identify supportive behaviour of school headmaster, Support Actions Scale Circumplex (SAS-C) methodology was used (Trobst, 2000). Trobst created the scale on the basis of the circumplex model of social support. The questionnaire consists of 64 items and each type of supportive behaviour comprises eight items. We analysed the data from the subscales: engaging (Cronbach's  $\alpha = 0.685$ ) and distancing (Cronbach's  $\alpha = 0.790$ ) behaviours. Participants assessed the behaviour of the headmaster on a seven-point scale (from 1 – “certainly would not do it” to 7 – “certainly would do it”) in situations where they or their co-worker needed help and support when confronted with problems (Table 4).

Table 4. Example of the items of the Questionnaire of life satisfaction.

Reluctant to give advice	1	2	3	4	5	6	7
Helped with enthusiasm	1	2	3	4	5	6	7

### 5.3. Statistical analyses

The data were analysed using non-parametric test (Mann-Whitney U-test) to test for differences between the groups with the highest and lowest levels of measured variables (the perceived type of supportive behaviour of a headmaster and the Big Five personality traits). Work satisfaction and social well-being were the dependent variables.

The analysis was conducted in SPSS 20.

## 6. RESULTS

The engaging behaviour of headmasters was associated with high levels of teachers’ life and work satisfaction as well as social well-being in school. On the contrary, distancing behaviour of headmasters was associated with low levels of these variables. There are no significant differences in teachers’ emotional well-being according to supportive behaviour of their headmaster (Table 5).

Table 5. Significant differences in teachers' Life and Work Satisfaction, Social and Emotional Well-being as related to the level of Engaging/Distancing headmasters' behaviour.

	Engaging behaviour				Distancing behaviour			
	U-test	sig	Median Group 1	Median Group 2	U-test	sig	Median Group 1	Median Group 2
Life Satisfaction	5033	.002	230	245	3052.5	.027	241.5	229
Work Satisfaction	1662.5	.000	31	39	512	.001	38	33
Social Well-being	1639	.000	65	72	383.5	.000	75	66
Emotional Well-being	-	-	-	-	-	-	-	-

Group 1 - low level; Group 2 - high level

The teachers with a low level of neuroticism and high level of extraversion showed a high level of life satisfaction. The emotionally stable and conscientious teachers were more satisfied in work (Table 6).

Table 6. Significant differences in teachers' Life and Work Satisfaction when compared according to their level of Neuroticism, Extraversion, Conscientiousness, Agreeableness and Openness to experience.

	Life Satisfaction				Work Satisfaction			
	U-test	sig	Median Group 1	Median Group 2	U-test	sig	Median Group 1	Median Group 2
Neuroticism	2200	<.001	246	219	311	.000	40	31
Extraversion	4269	.002	229	248	-	-	-	-
Conscientiousness	-	-	-	-	1328	.000	31.5	39
Agreeableness	-	-	-	-	-	-	-	-
Openness to experience	-	-	-	-	-	-	-	-

Group 1 - low level; Group 2 - high level

The emotionally stable, extraverted and conscientious teachers showed higher levels of social and emotional well-being. Social well-being was also higher in the group of teachers scoring high in agreeableness. Emotional well-being was found to be higher in the group of teachers with higher level of openness to experience (Table 7).

Table 7. Significant differences in teachers' Social and Emotional Well-being when compared according to their level of Neuroticism, Extraversion, Conscientiousness, Agreeableness and Openness to experience.

	Life Satisfaction				Work Satisfaction			
	U-test	sig	Median Group 1	Median Group 2	U-test	sig	Median Group 1	Median Group 2
Neuroticism	1392	<.001	.938	-.976	436	.000	73	66.5
Extraversion	5163.5	<.001	-.587	.891	1513	.004	66.5	72
Conscientiousness	5165	.013	-.385	.253	1173.5	.009	66	73
Agreeableness	-	-	-	-	1192	.019	63.5	72
Openness to experience	3808	.013	-.362	.253	-	-	-	-

Group 1 - low level; Group 2 - high level

## 7. CONCLUSION/DISCUSSION

Similarly to other research studies, (Gomez et al., 2009; Hayes & Joseph, 2003; Joshanloo & Nosratabadi, 2009; Van den Berg & Pitariu, 2005) this work also finds support for the association between personality traits (mainly neuroticism, extraversion, conscientiousness) well-being and work satisfaction. However, emotional stability and extraversion were not found to significantly contribute to the explanation of the variance in the overall life satisfaction or social and emotional well-being of teachers. Regarding the emotional component of subjective well-being, personality factors were found to make a unique contribution to the explained variance in this component. Our findings are similar to those of Steel, et al. (2008) who found that neuroticism significantly contributed to the explanation of negative affectivity while extraversion was more effective in explaining positive affectivity.

Our findings further show that there is an association between the overall life satisfaction, work satisfaction and social well-being of teachers and the behaviour of school headmasters characterized by respect, patient listening, affection, and providing of emotional support. This corresponds with the testimonies of teachers regarding behaviour of school headmasters as can be found in the work of Dunlop and Macdonald (2004). It has been even suggested that the evaluation of the overall life satisfaction is affected by work satisfaction (Judge & Locke, 1993). The findings of this study are consistent with the findings of Smith (2008) who concluded that leadership (which includes respectful, open behaviour providing social support, inspirational motivation and intellectual stimulation) had a positive impact on the well-being of employees. Social well-being, life and work satisfaction of teachers are negatively affected by behaviour of the headmasters when they are perceived by the teachers as distancing, even in the absence of emphasized superiority but with missing emotional involvement.

Conscientiousness seems to be another significant factor in explaining work and employment satisfaction as well as emotional and social well-being. Next, agreeableness was also an important variable in explaining social well-being. The positive relationship between job satisfaction and conscientiousness was found in the study by Van den Berg and Pitariu (2005) and the relevance of agreeableness in the context of subjective well-being can be found in the work of Joshanloo and Nosratabadi (2009) and Ruiz (2005).

The findings of this study generally correspond with the assumptions and are logical. There are many studies that deal with subjective well-being and its variables; our work focuses specifically on the subjective well-being of primary school teachers. We were mainly interested in the interconnection of selected factors that contribute to teachers' well-being.

The findings of our study have provided evidence for a significant association between neuroticism, extraversion, conscientiousness and variables representing subjective and social well-being. The significance of social support, in terms of supportive behaviour of school headmasters was especially highlighted in the context of work and employment satisfaction as well as subjective well-being. The behaviour of headmasters appears to be especially supportive when it is characterized by active involvement, interest, emotional support and necessary information. In contrast withdrawn, reserved and avoiding behaviours, showing neither superiority nor emotional involvement were found to work in the opposite direction.

The issues of physical and especially mental health of the teachers, as well as raising the levels of their subjective well-being are the key issues that can improve the overall atmosphere at schools. Our research results indicate the path, which can be followed to achieve this goal.

### 7.1. Limitations of the study

There are some limitations to this study that should be mentioned. The survey sample was based on availability of the teachers and cannot be treated as representative of the primary schools in the East Slovakia region. Another limitation concerns the research tools; Slovak adaptations of the questionnaires used in our study might need further psychometric scrutiny due to lower values of reliability indicators of some scales (extraversion, openness to experiences). Nunnally (1978) suggests 0.70 as an acceptable reliability coefficient.

It is important to mention that the variables included in the analysis were not exhaustive and did not address the whole spectrum of possible influences, which can be found in the current scientific literature, which explores subjective and social well-being. Certain socio-economic as well as demographic variables were not included in our analysis (however, the sample of teachers seemed to be evenly distributed regarding these characteristics). Furthermore, within our study only selected variables were included from a wider spectrum of social relationships, which could be important sources of social support. Moreover, it is also important to mention that a correspondence between personal expectations, values, goals and real life conditions should be addressed in more detail. It is also important that the future research addresses variables representing psychological well-being according to Ryff and Keys (1995) as well as the construct of meaning of life developed by King, Hicks, Krull, & Del Gaiso (2006). The present study is a part of a broader study addressing the variables which could explain the well-being of teachers and their life satisfaction, satisfaction with different life dimensions, and represents a preliminary account of the proposed topics which require a complex approach containing a large variety of possible predictors of subjective and social well-being.

## 8. FUTURE RESEARCH DIRECTIONS

In the future research, we consider using abbreviated versions of questionnaires in order to make the complete battery of questionnaires less demanding to complete in one session. A comprehensive view on the subjective well-being would require integration of methodology used to evaluate psychological well-being based on the theory Ryff and Keyes (1995).

It is important that future explorations include as many relevant variables as possible and address their interactions. In addition to the personality variables and social support provided by supervisors in schools it is important to include additional internal variables such as salutogenic factors of resilience, hardiness, locus of control as well as values, goals and explore them with respect to the needs of the environmental conditions. From the external variables it is important to address the social support from colleagues, close family, wider social environment, teachers' status within the society, atmosphere in schools, problematic students in class, social and economic factors. The findings from such research could help to formulate further recommendations for school managements and policy makers who can thus propose specific action plans for improving the school climate and well-being at schools.

## REFERENCES

- Blatný, M. (2005). Osobnostní předpoklady sebehodnocení a životní spokojenosti: Shody a rozdíly [Personality traits, self-esteem and life satisfaction: Differences and commonalities]. In M. Blatný, J. Dosedlová, V. Kebza, & I. Šolcová (Eds.), *Psychosociální souvislosti osobní pohody* [Psychosocial context of well-being] (pp. 83-107). Brno, Czech Republic: Masarykova Univerzita a Nakladatelství MSD.
- Chung, M. C., & Harding, C. (2009). Investigating burnout and psychological well-being of staff working with people with intellectual disabilities and challenging behaviour: The role of personality. *Journal of Applied Research in Intellectual Disabilities*, 22(6), 549-560.
- Costa, P. T., & McCrae, R. R. (1980). Influence of extroversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, 38(4), 668-678.
- Diener, E., & Lucas, R. E. (2003). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: Foundations of hedonic psychology* (pp. 213-229). New York, NY: Russell Sage Foundation.
- Diener, E., Lucas, R. E., & Oishi, S. (2002). Subjective well-being: The science of happiness and life satisfaction. In C. R. Snyder, & S. J. Lopez (Eds.), *The Oxford handbook of positive psychology* (pp. 63-73). New York, NY: Oxford University Press.
- Dunlop, C. A., & Macdonald, E. B. (2004). *The teachers health and wellbeing study in Scotland*. Edinburgh, Scotland: NHS Health Scotland. Retrieved from <http://www.healthscotland.com/uploads/documents/6925-RE045Final0203.pdf>

- Džuka, J. (2004). Kvalita života a subjektívna pohoda – Teórie a modely, podobnosť a rozdiely [Life quality and subjective well-being – Theories and models, similarities and differences]. In J. Džuka (Ed.), *Psychologické dimenzie kvality života* [Psychological dimensions of life quality] (pp. 42-53). Prešov, Slovakia: Prešovskej univerzity v Prešove. Retrieved from <http://www.pulib.sk/elpub2/FF/Dzuka3/index.htm>.
- Džuka, J., & Dalbert, C. (1997). Model aktuálnej a habituálnej subjektívnej pohody [Pattern of actual and habitual subjective strain]. *Československá Psychologie*, 41(5), 385-398.
- Džuka, J., & Dalbert, C. (2002). Vývoj a overenie validity škál emocionálnej habituálnej subjektívnej pohody (SEHP) [Elaboration and verification of emotional habitual subjective well-being scales (SEHP)]. *Československá Psychologie*, 46(3), 234-250.
- Gomez, V., Krings, F., Bangerter, A., & Grob, A. (2009). The influence of personality and life events on subjective well-being from a life span perspective. *Journal of Research in Personality*, 43(3), 345-354.
- Hayes, N., & Joseph, S. (2003). Big 5 correlates of three measures of subjective well-being. *Personality and Individual Differences*, 34(4), 723-727.
- Hřebíčková, M., Blatný, M., & Jelínek, M. (2010). Osobnost jako preditor osobní pohody v dospělosti [Personality as predictor of subjective well-being in adulthood]. *Československá Psychologie*, 54(1), 31-41.
- Hřebíčková, M., & Řehulková, O. (2002). Struktura osobnosti učitelek: Srovnání se ženami jiných profesí [Teacher personality structure: A comparison with women from other occupations]. In E. Řehulka, & O. Řehulková (Eds.), *Učitelé a zdraví 4* [Teachers and Health 4] (pp. 53-60). Brno, Czech Republic: Nakladatelství Pavel Křepela.
- Joshanloo, M., & Nosratabadi, M. (2009). Levels of mental health continuum and personality traits. *Social Indicators Research*, 90(2), 211-224.
- Judge, T. A., & Locke, E. A. (1993). Effect of dysfunctional thought processes on subjective well-being and job satisfaction. *Journal of Applied Psychology*, 78(3), 475-490.
- Kebza, V. (2005). *Psychosociální determinanty zdraví* [Psychosocial determinants of health]. Prague, Czech Republic: Nakladatelství Academia.
- Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, 61(2), 121-140.
- Keyes, C. L. M. (2006). Subjective well-being in mental health and human development research worldwide: An introduction. *Social Indicators Research*, 77(1), 1-10.
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology*, 90(1), 179-196.
- Konu, A., Viitanen, E., & Lintonen, T. (2010). Teachers' wellbeing and perceptions of leadership practices. *International Journal of Workplace Health Management*, 3(1), 44-57.
- Křivohlavý, J. (2002). Sociální opora učitele a žáka [Teachers and students social support]. In E. Řehulka, & O. Řehulková (Eds.), *Učitelé a zdraví 4* [Teachers and Health 4] (pp. 7-14). Brno, Czech Republic: Nakladatelství Pavel Křepela.
- Librán, E. C. (2006). Personality dimensions and subjective well-being. *Spanish Journal of Psychology*, 9(1), 38-44.
- Mareš, J. (2001). Sociální opora [Social support]. In E. Řehulka, & O. Řehulková (Eds.), *Učitelé a zdraví 3* [Teachers and Health 3] (pp. 87-93). Brno, Czech Republic: Nakladatelství Pavel Křepela.
- Mintz-Binder, R., & Fitzpatrick, J. J. (2009). Exploring social support and job satisfaction among associate degree program directors in California. *Nursing Education Perspectives* 30(5), 299-304.
- Myers, D. G. (2003). Close relationship and quality of life. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: Foundations of hedonic psychology* (pp. 374-391). New York, NY: Russell Sage Foundation.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.
- Řehulka, E., & Řehulková, O. (1998). Problematika tělesné a psychické zátěže při výkonu učitelského povolání [The problem of physical and psychological stress in teachers profession]. In E. Řehulka, & O. Řehulková (Eds.), *Učitelé a zdraví 1* [Teachers and Health 1] (pp. 99-04). Brno, Czech Republic: Nakladatelství Pavel Křepela.
- Rodná, K., & Rodný, T. (2001). *Dotazník životní spokojenosti* [Life Satisfaction Questionnaire]. Prague, Czech Republic: Testcentrum.
- Ruiz, V. M. (2005). The five-factor model of personality, subjective well-being and social adaptation: Generalizability to the Spanish context. *Psychological reports*, 96(3, pt. 1), 863-866.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719-727.
- Ryff, C. D., & Singer, B. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9(1), 13-39.



- Sakoda, Z., Tanak, K., & Fuchigami, K. (2004). Kyōshi ga ninchi suru kōchō kara no sōsharu sapōto ni kansuru kenkyū [Teachers' perception of social support from principals]. *Japanese Journal of Educational Psychology*, 52(4), 448-457.
- Smith, S. (2008). Leadership's effects on employee health well-being. *Occupational Hazards*, 70(9), 18-19.
- Šolcová, I., & Kebza, V. (1999). Social support as a significant protective factor [Sociální opora jako významný protektivní faktor]. *Československá Psychologie*, 43(1), 19-38.
- Šolcová, I., & Kebza, V. (2005). Prediktory osobní pohody (well-being) u reprezentativního souboru české populace [Predictors of well-being in a representative sample of the Czech population]. *Československá Psychologie*, 49(1), 1-8.
- Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin*, 134(1), 138-161.
- Tišanská, L., & Kožený, J. (2004). Osobnost, anticipovaná sociální opora a adaptace seniorek na stárnutí: Test modelu životní spokojenosti [Personality, anticipated social support, and adjustment of elder women to ageing: Test of the life satisfaction model]. *Československá Psychologie*, 48(1), 27-37.
- Trapnell, P. D., & Wiggins, J. S. (1990). Extension of the interpersonal adjective scales to include the Big Five dimensions of personality. *Journal of Personality and Social Psychology*, 59(4), 781-790.
- Trobst, K. K. (1999). Social support as an interpersonal construct. *European Journal of Psychological Assessment*, 15(3), 246-255.
- Trobst, K. K. (2000). An interpersonal conceptualization and quantification of social support transactions. *Personality and Social Psychology Bulletin*, 26(8), 971-986.
- Van Den Berg, P. T., & Pitariu, H. (2005). The relationship between personality and well-being during societal change. *Personality and Individual Differences*, 39(1), 229-234.
- Van Petegem, K., Aelterman, A., Van Keer, H., & Rosseel, Y. (2008). The influence of student characteristics and interpersonal teacher behaviour in the classroom on student's wellbeing. *Social Indicators Research*, 85(2), 279-291.
- Vittersø, J. (2001). Personality traits and subjective well-being: Emotional stability, not extraversion, is probably the important predictor. *Personality and Individual Differences* 31(6), 903-914.
- Weiss, A., Bates, T. C., & Luciano, M. (2008). Happiness is a personal(ity) thing: The genetics of personality and well-being in a representative sample. *Psychological Science*, 19(3), 205-210.
- Žaloudíková, I. (2001). Příspěvek k neuropsychické zátěži učitelů [The contribution to the neuropsychic teachers stress]. In E. Řehulka, & O. Řehulková (Eds.), *Učitele a zdraví 3* [Teachers and Health 3] (pp. 63-73). Brno, Czech Republic: Nakladatelství Pavel Křepela.
- Židková, Z., & Martinková, J. (2003). Psychická zátěž učitelů základních škol [Psychic load in teachers of elementary schools]. *České pracovní lékařství*, 3, 122-126.

## ADDITIONAL READING

- Blatný, M. (2001). Osobnostní determinanty sebeohodnocení a životní spokojenosti: Mezipohlavní rozdíly [Personality determinants of self-esteem and life satisfaction: Gender differences]. *Československá Psychologie*, 45(5), 385-392.
- Janovská, A., Orosová, O., & Gajdošová, B. (2012). The relationship between resilience and well-being among Slovak teachers. *Psychology & Health*, 27 (sup. 1), 232.
- Kebza, V., & Šolcová, I. (2003). Well-being jako psychologický a zároveň mezioborově založený pojem [Personality as a predictor of subjective well-being in adulthood]. *Československá Psychologie*, 47(4), 333-345.

## KEY TERMS & DEFINITIONS

**Social well-being:** appraisal of one's circumstance and functioning in society. There are confirmed five dimensions of social well-being: social integration, social contribution, social coherence, social actualization and social acceptance.

**Big Five personality traits:** five broad dimensions of personality that are used to describe human personality. The five factors are openness, conscientiousness, extraversion, agreeableness, and neuroticism.

**Social support:** it is understood as an act willingly provided in good faith to a person with whom the provider is in a personal relationship and has a positive effect on the recipient.

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## Chapter 24

# ASSOCIATIONS BETWEEN PSYCHO-EDUCATIONAL DETERMINANTS AND DYNAMIC CAREER ATTITUDES AMONG UNDERGRADUATE STUDENTS

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### ABSTRACT

Monitoring and assessment of career attitudes are critical for the student's preparation for an adapted university-to-work transition. This problem remains partially addressed though optimal services proposed by universities which may enhance students' generic career capabilities. Our study explored the relationships between the psycho-educational and socio-demographic factors, and the perception of their career attitudes. Bachelor students in social sciences, engineering, applied management from University of Luxembourg were invited to complete a paper pencil questionnaire. Data were analyzed using correlation and multiple linear regression models. Of 278 students, 124 participated. The majority studied applied management, were women, unemployed and with six months or less of job experiences. The search for work self-efficacy score is linked to the employability soft-skills and job search techniques scores which are, in parallel, with the quality of life autonomy associated to the dynamic career attitudes. Greater are employability, search for work and quality of life autonomy, the higher are dynamic career attitudes. Students who were in their final academic year also had greater career capabilities. These findings may help to elaborate interventions aiming at improving psycho-educational determinants. It must be stimulated at the entry to university with appropriately collaborative supports, pedagogical workshops and interpersonal trainings.

*Keywords:* university to work transition, career attitudes, job search, employability soft-skills.

## 1. INTRODUCTION

With an increasing number of university students entering the labour market (OECD, 2011), more and more graduates fail to adopt a proactive approach to their careers (Jameson & Holden, 2000) with the consequences that they fail to distinguish themselves by being more active in furthering their career development and creating opportunities to ensure their sustainable employability (Engelberg & Limbach-Reich, 2012). In the frame of new career models (Hall, 2004) employment does not typically requires a fixed set of competences, particularly over the longer term (McMahon, Patton, & Tatham, 2003). Nowadays, employers seek greater skills, ambition and energetic drive in their future employees in terms of work-readiness.

During the study period, students are preoccupied with examinations and coursework deadlines at the expense of their career and job outcomes. Added to this, some students may present the socioeconomic difficulties to cope with their substantial needs (Roberts, Golding, Towell, & Weinreib, 1999). Everyday stress causes the development of strategies aimed to cope with these problems (Spitz, Costantini, & Baumann, 2007), which may have an impact on their academic performance and being more prone to depressive situations (Verger, Guagliardo, Gilbert, Rouillon, & Kovess-Masfety, 2010). The result of this is students may display passiveness in their career planning and expectation, neglecting the development of their attitudes to make a series of transitions where the labour market is in constant change (Savickas, 2005). In this context, the present research was aimed to identify to what extent the psycho-educational determinants of undergraduate students are associated to their career attitudes that were identified as important for their evolving careers.

The career attitudes have a strong effect on future career outcomes (career adaptability, career optimism, career-related knowledge and career planning) (Ng, Eby, Sorensen, & Feldman, 2005; Brown, Cober, Kane, Levy, & Shalhoop 2010) and also increase perceptions of employability because they enhance an employee's options for employment development and capacity to negotiate during the job search. (Claes & Ruiz-Quintanilla, 1998). Also, individuals who are confident of their employability are likely to perceive job seeking as less threatening, and consequently show higher degrees of life satisfaction (Berntson & Marklund, 2007), better psychological quality of life (Baumann, Karavdic, & Chau, 2013) and autonomy perception (Ryan & Deci, 2006). The “autonomy” dimension refers to the independence and therefore describes the level of ability to live independently and take the necessary decisions on your own (Leplège et al., 2012). Mayhew, Ashkanasy, and dan Gardner (2007) provided evidence that if employees are allowed the flexibility and freedom to plan and perform their work activity and control their work and environment, this will increase their work-related attitudes and behavior.

Some researches support the importance of career attitudes that positively affect the job seeking process (Brown et al., 2006). Moreover, search for work self-efficacy, the belief that one can successfully perform specific job search behaviours and obtain employment (Saks & Ashforth. 1999) has been found to be related to work search outcomes such as search status, duration, and the number of offers received (Kanfer, Wanberg, & Kantrowitz, 2001). Becoming competitive in the labour market, developing generic skills through academic institutions is not the only issue facing students and graduates trying to obtain and sustain employment (Bridgstock, 2009); they also need a repertoire of active self-regulated and directed career-oriented attitudes (Murphy & Ensher, 2001).

## **2. BACKGROUND**

Monitoring and assessment of career attitudes are critical for the preparation of students and the best university-to-work transition. This problem remains partially addressed though optimal information and services proposed by universities which may enhance students' career behaviors. In order to develop a “Pass Career Programme”, a research project entitled “Capital Employability of Students” CapJob – was initiated to evaluate the efficacy of the content of the training interventions elaborated by the University of Luxembourg – the youngest academic institution, in one of the smallest country in Europe (531,400 habitants, 2600 km<sup>2</sup>) – with the aim to better prepare students for their first employment and improve their transition to the job market. The CapJob project team accompanies the implementation of the Pass Careers activities program and will be in charge of the first step to assess the students' generic capabilities for employment. The objective of the study is to analyze the relationships between the work-search self-efficacy, job techniques, employability soft skills, quality of life autonomy and the dynamic career attitudes among university students pursuing Bachelor degrees.

## **3. METHODS**

### **3.1. Participants**

Bachelor students in applied management, social sciences and engineering degree programs from the University of Luxembourg were invited to participate in the survey.

### **3.2. Data collection**

During a class period, the research team (with the cooperation of representatives of the student career center) presented the aims of the survey and its relations to the “Pass Career activities program”. Students were then asked to complete, a self-administered paper pencil questionnaire via an anonymous process assessing:

- *Dynamic Career Attitudes*: Dynamic Career Attitudes (DCA-13 items) was adapted from the work of (Rottinghaus, Day, & Borgen, 2005); (De Vos, De Clippeleer, & Dewilde 2009) and regrouped into items exploring career-related adaptability (4-items), optimisms (4-items), knowledge (3-items) and career planning (3-items). All item responses were on a 5-point Likert

scale (1=strongly disagree to 5=strongly agree) and showed satisfactory internal consistency (Cronbach  $\alpha = .822$ )

- *Psycho-educational factors*: They were measured using the: Search for Work Self-Efficacy Scale (SWSES - 12 items;  $\alpha=0.882$ ; 1=not well at all; 5=very well) which assesses students' perceptions of their capability in building employment strategies (Pepe, Farnese, Avalone, & Vecchione, 2010); and Job Search Techniques (JST-14 items) (1=not well at all; 5=very well) and Employability Soft-Skills (ESS-20 items) (1=not capable at all; 5=perfectly capable). The items were constructed using a qualitative research analysis realized with focus groups among students (Amara & Baumann, 2012) and professionals (Engelberg & Limbach-Reich, 2012). The two scales have demonstrated a single factorial structure, their internal consistencies were  $\alpha = .937$  for JST and  $\alpha = .934$  for ESS, respectively.

- *Quality of life Autonomy and socio-demographic characteristics*: Quality of life-Autonomy (Whoqol- domain -QoLA-4 items; Cronbach  $\alpha = .679$ ) (1=strongly disagree; 5=strongly agree) assesses the ability to live independently and to make necessary decisions on your own (Leplège et al., 2012)

- *Socio-demographic characteristics* susceptible to describe the social disparities between the students: age, gender, parents' education level, (higher/lower than bachelor), work experience (less vs. more than 6 months), year of bachelor (1<sup>st</sup> year, 2<sup>nd</sup> year, 3<sup>rd</sup> year) and actual employment (yes/no).

### 3.3. Procedure and data analysis

*Statistical analyses*: For each instrument a score was calculated so that a higher score represented a better level. Bivariate and adjusted partial correlations were used for association analyses. Separated simple regressions were performed to evaluate the relationships for each of the socio-demographic variables related to the dynamic career attitudes score. Only the significant ones were integrated and adjusted in the multiple regression model.

## 4. RESULTS

### 4.1. Socioeconomic characteristics of students

The participation rate was 44.6%. As describe in the Table 1, the mean age was about 23 years (nb. in Luxembourg students enter university at 19). Women slightly predominated among respondents. One-third came from third year and two-fifths from the second year of study. The majority were from the Bachelor in Applied Management program.

Table 1. Socioeconomic characteristics of students mean (standard deviation) or %.

		N=124
		M (SD) or %
Age		22.6 (4.53)
Gender	Women	51.9
	Men	48.1
Bachelors in	Social Sciences	16.9
	Engineering	25.0
	Applied Management	58.1
Year of Study	1 <sup>st</sup> Year	23.4
	2 <sup>nd</sup> Year	41.9
	3 <sup>rd</sup> Year	34.7
Educational level of parents (higher than undergraduate)	Mother	32.1
	Father	37.0
Work experience	Less than 6 months	64.2
	More than 6 months	35.8
Actual employment	Yes	24.7

### 4.2. Relation between socio-educational factors and dynamic career attitudes

As shown in Table 2, all variables were significantly positively related. For the partial correlation adjusted on other variables, SWSES score was positively correlated with the ESS and JST scores. But the QoLA, ESS and JST were positively linked to the DCA score.

Table 2. Associations between socio-educational factors scores and dynamic career attitudes of undergraduate students.

	Means	SD <sup>b</sup>	Correlations (with adjusted partial correlations, in parentheses)				
			DCA	ESS	JST	SWSES	QoLA
Dynamic Career Attitudes (DCA) <sup>a</sup>	3.66	.46	<b>1</b>	.623*** (.204*)	.565*** (.248*)	.607*** (.163)	.572*** (.325***)
Employability Soft Skills (ESS) <sup>a</sup>	3.75	.60		<b>1</b>	.551*** (.094)	.712*** (.478***)	.502*** (.217*)
Job Search Techniques (JST) <sup>a</sup>	3.68	.68			<b>1</b>	.619*** (.323***)	.377*** (.026)
Search for Work Self-Efficacy (SWSES) <sup>a</sup>	3.78	.60				<b>1</b>	.407*** (-.024)
Quality of Life Autonomy (QoLA) <sup>a</sup>	3.73	.69					<b>1</b>

<sup>a</sup> Scale from 1(low level) to 5 (high level); <sup>b</sup> Standard deviations (SD)  
Significant p-value: \* p<.05; \*\* p<.01; \*\*\* p<.001.

### 4.3. Associations between Socio-demographic characteristics and dynamic career attitudes score

Year of study and professional experience were significantly linked with DCA score, indicating for higher academic year of study and/or for more than six months of professional experience a greater DCA score. As seen in Table 3, no effects reached the .05 significance level for age, sex and education level of parents.

Table 3. Associations between socioeconomic variables and dynamic career attitudes score - regression coefficient - Standard error - (SE).

	Dynamic Career Attitudes Score				
	b	L95	U95	SE	p <sup>1</sup>
Age	.017	-.008	.041	.012	.181
Gender : male (vs female)	-.150	-.368	.068	.110	.175
Bachelor year 1 <sup>st</sup> & 2 <sup>nd</sup> (vs 3 <sup>rd</sup> ) <sup>2</sup>	-.288	-.485	-.091	.100	.017*
	-.123	-.324	.079	.112	-
Work experience < 6 (vs > 6 months)	-.313	-.555	-.071	.122	.012*
Educational level of mother (higher than bachelor) (vs father)	-.092	-.327	.143	.118	.439
	-.171	-.396	.054	.113	.134

<sup>1</sup> Significant p-value: \* p<.05; \*\* p<.01; \*\*\* p<.001.

<sup>2</sup> Fisher's F-test

**Note:** separated linear regression was realized independently for each socioeconomic variable.

### 4.4. Associations of psycho-educational factors on dynamic career attitudes

The multiple regression results indicated that year of study, employability soft skills, SWSES, JST and QoLA all together explained 55.6 % of variance (adjusted R- Square) for the dependant variable. The residuals of the regression have been verified showing a normal distribution. All of β coefficients were significantly different from zero, except for SWSES. As seen in Table 4, the first and second years of undergraduate bachelors were negatively associated with the DCA score.

Table 4. Associations of psycho-educational factors on dynamic career attitudes by undergraduate students - regression coefficient - Standard error - (SE).

	Dynamic Career Attitudes Score				
	b	L95	U95	SE	p <sup>1</sup>
Intercept	1.296	.872	1.721	0.215	.000***
Bachelor year 1 <sup>st</sup> & 2 <sup>nd</sup> (vs 3 <sup>rd</sup> ) <sup>2</sup>	-.181	-.322	-.041	.071	.038*
	-.139	-.297	.019	.080	
Work experience < 6 months (vs > 6 months)	-.080	-.261	.102	.092	.386
Employability Soft Skills	.224	.076	.373	.075	.003**
Search for Work Self Efficacy	.086	-.065	.237	.076	.261
Job Search Techniques	.137	.027	.247	.055	.015*
Quality of Life Autonomy	.217	.122	.313	.048	.000***

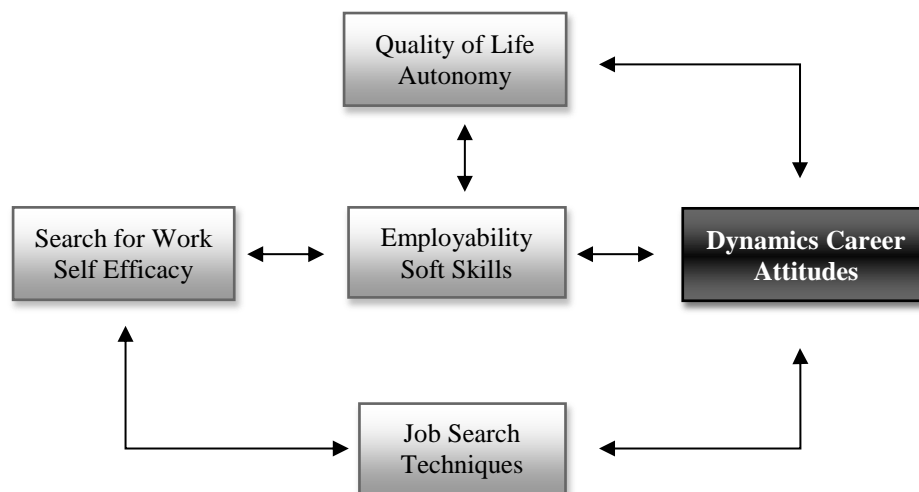
Adjusted R Squared =55.6%; F (7, 116) =22.995

<sup>1</sup> Significant p-value: \*: p<.05; \*\*: p<.01; \*\*\*: p<.001.

<sup>2</sup> Fisher's F-test

The ESS, the JST and the QoLA were positively related to the DCA score. No link exists with SWSES. However, as presented in Figure 1, its association seems to be partially related with the ESS and JST scores.

Figure 1. Socio-educational determinants of the Determinants of Dynamic Career Attitudes.



## 5. FURTHER RESEARCH DIRECTIONS

Targeting intervention strategies early in the course of career progression may positively affect outcome. In line with this statement, students with high dynamic career attitudes would be more likely to be able to make their own decisions, influence what happens in their life, manage their career development and resist social and academic pressures. To develop a Pass Career program at the University of Luxembourg, these findings may help to elaborate interventions aiming at improving psycho-educational determinants. However, it must be stimulated at the beginning of the entrance to the university with appropriately collaborative supports based on pedagogical workshops and interpersonal trainings in order that all participants in the learning environment have something specific to contribute to the overall learning of the group.

The constructs studied seem to provide a useful theoretical framework for increasing student's career outcome; however, since it was limited to a small sample of undergraduate students the findings cannot be generalized to other contexts. Future research is needed to evaluate the effectiveness of identified determinants related to the "Pass Career" activities program. In addition a longitudinal study based on a semi-experimental design is needed to demonstrate the impact of career intervention training on psycho-educational determinants and career outcomes.

## 6. DISCUSSION AND CONCLUSION

Our research analyses the association between psycho-educational determinants scores and dynamic career attitudes scores among university students pursuing bachelor degrees. The main finding showed that the greater were the employability, job search and quality of life autonomy, the higher was the dynamic career attitudes. These findings are in relation to the theoretical outcome indicating that self-efficacy beliefs held by students could act as a motivating mechanism through which they perceive their own level of competence (Bandura, 2001) and in our case to the employability soft skills. Indeed the construct of employability has been conceptually related to self-efficacy in different ways (Darce-Pool & Qualter, 2013). As to the career area, interventions aimed at increasing self-efficacy related to the tasks of given career fields have been shown to enhance students' interests and expectations for their career (Turner & Lapan, 2004).

In addition, the better were the students' quality of life autonomy and their employability soft-skills, the higher was the dynamic career attitudes. In others words, students with higher quality of life autonomy scores may want to regulate themselves and may more easily develop the capacity to take some control of their career. Higher autonomy perception may allow them to take initiatives and give them an adequate attitude to plan their career path and further develop their career outcome. In addition, learning appropriate strategies may help students to cope with the different types of potentially stressful situations that they might need to face in their academic period or further in their professional activity by taking initiative in performing a job (Ryan & Deci, 2006). Indeed the promotion of individual autonomy could free individuals to experience attachment and intimacy and enhance the capability to make a series of appropriate transitions where the labour market is in constant change. Perceived autonomy and an autonomy supportive environment are concerned with setting up a dynamic and stimulating setting, which motivates and fosters self-directed approaches and perceptions of competences (Guay, Ratelle, Senecal, Larose, & Deschenes, 2006).

The second main finding showed that students in their final academic year had greater career capabilities. We suggest that if freshmen are not concerned with their employment in the first year of study, their passiveness could result in stressful periods when they graduate (Jameson & Holden, 2000). During this time individuals could be vulnerable and they may feel disoriented and unduly affected by any career plans proposed by potential employers, while they display passiveness in their career attitudes, resulting in a job below their qualification. In line with this, some recent researchers suggest that interventions should be developed and implemented during an individual's tertiary education and at early stage in the individual's career development in order to either (a) match the individuals to better fitting jobs (Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011) or (b) to provide individuals with necessary skills, knowledge, abilities and attitudes to flourish in their later position (Van Zyl & Rothmann 2012).

Enhancing a successful transition may be done by career preparation (Jepsen & Dickson, 2003). Providing newcomers with the necessary resources may help them cope with the transition from school to work and prevent any negative consequences to their further careers and social outcome. Particularly the acquisition of a repertoire of active self-regulated career-oriented attitudes can be facilitated with workshops and interpersonal trainings (Koen, Klehe, & van Vianen, 2012). This could be seen as the fundamental first step in the promotion of career development and sustainable employability. In this context, career training will need to focus more on the implementing of activities through a screening process during the early



academic years. Providing an individual training based on needs with an interactive process would permit students to become more a) active in furthering their career path by creating opportunities to improve their employability and b) able to make their own decisions and influence the choices which happen in their life.

## REFERENCES

- Amara, M. E., & Baumann, M. (2012). *L'Europe Universitaire. L'identité d'étudiante face à l'employabilité* [The University Europe. The identity of a student facing employability] (collection INSIDE). Louvain la Neuve, Belgium: Academia L'Harmattan.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Baumann, M., Karavdic, S., & Chau, N. (2013). Psychological quality of life and employability skills among newly registered first-year students: Opportunities for further university development. *Health*, 5(3A), 617-626.
- Berntson, E., & Marklund, S. (2007). The relationship between perceived employability and subsequent health. *Work & Stress*, 21(3), 279-292.
- Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, 28(1), 31-44.
- Brown, D. J., Cober, R. T., Kane, K., Levy, P. E., & Shalhoop, J. (2006). Proactive personality and successful job search: A field investigation with college graduates. *Journal of Applied Psychology*, 91(3), 717-726.
- Claes, R., & Ruiz-Quintanilla, S. A. (1998). Influences of early career experiences, occupational group, and national culture on proactive career behavior. *Journal of Vocational Behavior*, 52(3), 357-378.
- Darce-Pool, L. & Qualter, P. (2013). Emotional self-efficacy, graduate employability, and career satisfaction: Testing the associations. *Australian Journal of Psychology*, 65(4), 214-223.
- De Vos, A., De Clippeleer, I., & Dewilde, T. (2009). Proactive career behaviours and career success during the early career. *Journal of Occupational & Organizational Psychology*, 82(4), 761-777.
- Engelberg, E., & Limbach-Reich, A. (2012). After the Bologna Reform: Employability of bachelors in social and educational work in Luxembourg. *Social Work Education*, 31(7), 807-818.
- Guay, F., Ratelle, C. F., Senecal, C., Larose, S., & Deschenes, A. (2006). Distinguishing developmental from chronic career indecision: Self-efficacy, autonomy, and social support. *Journal of Career Assessment*, 14(2), 235-255.
- Hall, D. T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior*, 65(1), 1-13.
- Jameson, S., & Holden, R. (2000). "Graduateness" – Who Cares? Graduate identity in small hospitality firms. *Education and Training*, 42(4), 264-271.
- Jepsen, D. A., & Dickson, G. L. (2003). Continuity in life-span career development: Career exploration as a precursor to career establishment. *The Career Development Quarterly*, 51(3), 217-233.
- Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology*, 86(5), 837-855.
- Koen, J., Klehe, U.-C., & van Vianen, A. E. M. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior*, 81(3), 395-408.
- Lepège, A., Perret-Guillaume, C., Ecosse, E., Hervy, M. P., Ankri, J., & von Steinbüchel, N. (2013). Un nouvel instrument destiné à mesurer la qualité de vie des personnes âgées: Le WHOQOL-OLD version française [A new instrument to measure quality of life in older people: The French version of the WHOQOL-OLD]. *Revue de Médecine Interne*, 34(2), 78-84.
- Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *Emotion*, 11(2), 391-402.
- Mayhew, M. G., Ashkanasy, N. M., & dan Gardner, J. (2007). A study of the antecedents and consequences of Psychological Ownership in organizational settings. *Journal of Social Psychology*, 147(5), 477-500.
- McMahon, M., Patton, W., & Tatham, P. (2003). *Managing life, learning and work in the 21st Century: Issues informing the design of an Australian blueprint for career development*. Canberra, Australian Capital Territory: Miles Morgan Australia. Retrieved from [http://www.blueprint.edu.au/Portals/0/resources/DL\\_life\\_learning\\_and\\_work.pdf](http://www.blueprint.edu.au/Portals/0/resources/DL_life_learning_and_work.pdf)
- Murphy, S. E., & Ensher, E. A. (2001). The role of mentoring support and self-management strategies on reported career outcomes. *Journal of Career Development*, 27(4), 229-246.

- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology, 58*(2), 367-408.
- OECD. (2011). *How many young people graduate from tertiary education?* (Education at a Glance 2011: Highlights, OECD Publishing). Retrieved from OECDiLibrary website: [http://dx.doi.org/10.1787/eag\\_highlights-2011-7-en](http://dx.doi.org/10.1787/eag_highlights-2011-7-en)
- Pepe, S., Farnese, M. L., Avalone, F., & Vecchione, M. (2010). Work self-efficacy scale and search for work self-efficacy scale: A validation study in Spanish and Italian cultural contexts. *Revista de Psicología del Trabajo y de las Organizaciones, 26*(3), 201-210.
- Roberts, R., Golding, J., Towell, T., & Weinreib, I. (1999). The effects of economic circumstances on British students' mental and physical health. *Journal of American College Health, 48*(3), 103-109.
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment, 13*(1), 3-24.
- Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality, 74*(6), 1557-1586.
- Saks, A. M., & Ashforth, B. E. (1999). Effects of individual differences and job search behaviors on the employment status of recent university graduates. *Journal of Vocational Behavior, 54*(2), 335-349.
- Savickas, M. L. (2005). The theory and practice of career construction. In R. W. Lent, & S. D. Brown (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42-70). Hoboken, NJ: John Wiley.
- Spitz, E., Costantini, M. L., & Baumann, M. (2007). Détresse psychologique et stratégies de coping des étudiants en première année universitaire [Adaptation and strategies of coping of the students in first academic year]. *Revue Francophone du Stress et Trauma, 7*(3), 217-225.
- Turner, S. L., & Laplan, R. T. (2004). Evaluation of an intervention to increase non-traditional career interests and career-related self-efficacy among middle-school adolescence. *Journal of Vocational Behavior, 66*(3), 516-531.
- Van Zyl, L. E., & Rothmann, S. (2012). Beyond smiling: The development and evaluation of a positive psychological intervention aimed at student happiness. *Journal of Psychology in Africa, 22*(3), 78-99.
- Verger, P., Guagliardo, V., Gilbert, F., Rouillon, F., & Kovess-Masfety, V. (2010). Psychiatric disorders in students in six French universities: 12-month prevalence, comorbidity, impairment and help-seeking. *Social Psychiatry Psychiatric Epidemiology, 45*(2), 189-199.

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## Chapter 25

### **PATTERNS OF ENGAGEMENT AND ANXIETY IN UNIVERSITY STUDENTS: FIRST YEAR TO SENIOR YEAR** **Students' work engagement & anxiety: Are they related?**

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#### **ABSTRACT**

Several researches have shown student engagement as an important predictor of academic outcomes and educational success. Yet, despite evidence that student engagement is an important determinant of performance at university, it has been under analyzed in research and practice, particularly in relation to academic years of study, engagement and psychological distress. Therefore, the goal of the undertaken research is to: (a) assess the level of student engagement and anxiety across academic years of study (i.e., freshman, sophomore, junior and senior), and (b) examine the correlation between student engagement and anxiety. Two instruments, Utrecht Work Engagement Scale-Student Version (UWES-S) and Anxiety scale from Depression, Anxiety and Stress Scale (DASS) were used for the purpose of this research. The sample comprised of 492 female students who were enrolled at a private university in Jeddah, KSA. Results of One-Way ANOVA indicated a statistically significant difference in engagement based on academic year of study,  $F(3, 172) = 3.63, p = .01$ . Additionally, student engagement was inversely related to anxiety,  $r(430) = -.13, p < .01$ . Findings of this study indicate that engaged students tend to have low anxiety levels. Further research is recommended to explicate the role of engagement and anxiety across academic years.

*Keywords:* university students, engagement, anxiety.

#### **1. INTRODUCTION**

The Cooperative Institutional Research Program's (CIRP) Freshman Survey involving 1.5 million students, released in 2013, revealed instability in student's overall mental health. The findings not only pointed towards "anxiety is on the rise" but revealed that students feel increasingly overwhelmed at university (Eagan, Lozano, Hurtado, & Case, 2013). These finding parallels the National Survey of Student Engagement (2012) survey (NSSEs) results, which demonstrated that students continue to feel, challenged in their classes.

These data reveal continuing high levels of emotional distress and an increase in achievement abilities among students. While recent research has found that university students generally are up to four times as likely to be psychologically distressed as other people of their age, female students are known to experience psychological distress at rates higher than male counterparts. (e.g., Abdulghani, AlKanhah, Mahmood, Ponnampuruma, & Alfaris, 2011; Leahy et al. 2010)

According to student involvement theory (Astin, 1999), involvement is defined as "the amount of physical and psychological energy that students devote to the educational experience in college". Another premise of this theory is the idea that students' involvement enhances the development of both cognitive and affective outcomes in collegiate or university endeavors by facilitating learning.

Building on Astin's theory of student involvement, Shneiderman (1998) coined the term "student engagement" to define students' meaningful learning in classroom contexts.

Roberts and McNeese (2010) conducted a study to investigate student engagement based on educational origin and found significant differences between student's academic year of study and overall engagement. Their results also indicated that transfer students engaged less as compared to the indigenous counterparts.

Recognizing the importance of engagement in university students, several universities (e.g., Columbia University, New York University, Missouri State University, King’s College London, and University of Maryland) have specified engagement programs for student’s academic year of study. Evaluations of NSSEs Student Achievement Guarantee in Education (SAGE) project aimed at boosting engagement in university indicated that those students who got them enrolled in SAGE reported significantly higher scores on engagement but no significant differences in terms of academic effort and distress. Further, freshman and sophomore reported more engagement and career gains as compared to juniors and seniors. These findings suggest that anxiety and withdrawal occurs when greater academic challenges are perceived, e.g., as in case of juniors and seniors (Kashdan & Fincham, 2004).

Eisenberg and colleagues (2007) found that the estimated prevalence of anxiety in undergraduate university students was 15.6% which lends additional support to the above findings. Clearly, students’ engagement with academic or extracurricular activities is important to address and seemingly linked to psychological wellbeing.

Attempts to assess engagement in relation to achievement and learning are widespread in educational research. However, the majority of this work has been conducted in the United States, with relatively few international studies done in Western Europe and Australia. As evident from the above studies, little research as yet has examined how engagement contributes to anxiety and therefore, the objective of the current research is to: (a) assess the level of student engagement across academic years of study, and (b) examine the relationship between student engagement and anxiety.

### **1.1. Research questions**

- i. Is there any significant difference between student engagement and collegiate levels e.g., freshman, sophomores, juniors and seniors?
- ii. Is there any significant difference between anxiety and collegiate levels e.g., freshman, sophomores, juniors and seniors?
- iii. Is there any significant relationship between student engagement and level of anxiety among university students?

## **2. BACKGROUND**

Student engagement provides an important backdrop for the social, emotional and cognitive development of students, accounting for a large proportion of performance at university. It is characterized by a continuum of energy; involvement and efficacy for meaningful learning.

The importance of engagement has been increasingly recognized in relation to achievement and learning (e.g., Abdulghani et al., 2011, Carini, Kuh, & Klein, 2006; Cross, 2005). Considerable progress has been made in conceptualization, assessment, and investigation of the important but subtle concept of engagement in students (Grier-Reed, Appleton, Rodriguez, Ganuza, & Rechly, 2012). In the past, the most common means of measuring engagement has been through the use of indicators (e.g., attendance, portion of tasks completed, amount of participation and time spent, intensity of student concentration, the enthusiasm and interest expressed, and the degree of care shown in completing academic work) via observation or case studies, rather than through empirical testing (Newmann, Wehlage, & Lamborn, 1993).

Despite the expansion of engagement in university students, the body of empirical research investigating the level of engagement across academic levels is still relatively small (e.g., Kuh, 2002; Roberts & McNeese, 2010) Therefore, this research is inclined to examine student engagement and anxiety across academic year of study.

### **2.1. Engagement in Academia: The antecedents**

Newmann et al. (1993) defined engagement as “the student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote”. Since “psychological investment” and

“effort” to “master” are not readily observable characteristics; engagement is a construct used to describe an intrinsic quality of concentration and efforts to learn (see Newmann et al. 1993, pp. 11-12).

Engagement stands for persistent, positive, fulfilling and pervasive state of mind (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002; Schaufeli & Bakker, 2004), in contrast to superficial participation, apathy, or lack of interest. It implies more than motivation (Newmann et al., 1993) and is characterized by affective-cognitive factors such as social support and intrinsic motivation (Appleton, Christenson, Kim, & Reschly, 2006; Newmann et al. 1993; Skinner, Furrer, Marchand, & Kindermann, 2008). Thus engagement is dynamic, malleable, and affects students’ psychological, physiological and social support systems within and outside academic context.

At the collegiate level, student engagement is linked to participation in educationally purposeful activities (Casuso-Holgado et al., 2013; Kuh, 2002; Kuh, Linnenbrink, & Pintrich, 2003; Zhao & Kuh, 2004) and has been measured by the NSSE on an annual basis since 2000. As a result, colleges and universities are gaining an understanding of the levels of engagement within their first-year and senior students and are provided with practical ways of enhancing engagement. NSSE has brought campus reforms because its research has been a valuable contribution to American higher education. Findings of NSSE indicate an upward trend in achievement abilities and challenges related to competition at university, classroom demands and academic expectations (Eagan et al., 2013). Moreover, seniors are less likely to participate in a learning community as part of coursework (NSSE). To sum up, evaluations of NSSE indicate that students who are actively involved gain more from college experience. They were satisfied, received more teachers’ support and had an increased participation in classes. Therefore, it is important to focus on the ways to encourage student engagement in students beginning from first years to senior year (Pascarella & Terenzini, 2005).

Moreover, the importance of students’ engagement with educational institutions is recognized by educators, as is the observation that far too many students are bored, unmotivated, and uninvolved, i.e., disengaged from the academic and social aspects of educational life (Appleton, Christenson, & Furlong, 2008). This suggests that students confront many challenges while pursuing their educational paths and when such challenges are perceived as negative, engagement and/or motivation gets affected adversely. On the contrary, engagement seems to serve as an important social signal, eliciting supportive reciprocal reactions, for example, when students are engaged, they are provided with more motivational support by their teachers (Louis & Smith, 1993; Skinner & Belmont, 1993).

## **2.2. Understanding the adverse effect of Engagement: Anxiety spike**

While NSSEs findings purport an increase in level of engagement, CIRP (Cooperative Institutional Research Program) 2012 highlights the need to address low emotional stability among university students (Wyer, 2013). The CIRP survey gauged that students felt frequently overwhelmed during their senior year (30.4 percent in 2012 vs. 28.5 percent in 2011). More than twice as many incoming female students (40.5 percent) reported feeling frequently overwhelmed as compared to first-year male students (18.3 percent). This finding parallels Abdulghani et al. (2011) and Leahy et al.’s (2010) studies, both of which indicated that the prevalence of anxiety is higher in females. Furthermore, the age at which mental disorders (e.g., mood disorders, eating disorders) manifest themselves is between 18 and 24, which coincides with the average age of student enrolled in higher education (Kessler et al., 2005).

The Healthy Minds Study (2012) involving 25,000 students from 29 US based universities screened 20% of the respondents sample as positive for anxiety. Dori Hutchinson, one of the lead researchers of the study reported that 30% of the students screened positive for anxiety or depressive disorders in the year 2012 were referred for mental health services. However, in 2013, the number jumped to 65% and both students and administration laid emphasis on the marginalization of mental health resources (Selingson, 2013). Further, the number of students struggling with anxiety is rising (Noguchi, 2014; Gallagher, 2008). University students who report high levels of anxiety often cite academic expectations heightened by high achievement (e.g., GPA) and the gap between academic expectations and

reality as one of the sources of anxiety (Flatt, 2013). A research conducted by Van der Merwe (2003) revealed that students who experience high educational demands such as meeting deadlines, running from class to class, complex decision making and an external locus of control (poor coping skills, lack of recognition and social support) experience higher emotional exhaustion.

Larcombe, Tumbaga, Malkin, Nicholson, and Tokatlidis (2013) conducted a study to examine psychological distress among law students and reported that less than half of the respondents were in the normal ranges for all three of the DASS scales (Depression, Anxiety, Stress Scales) and 40% of the total respondents reported severe levels of anxiety. Similarly, Abdulghani et al. (2011) conducted a study at King Saud University to examine the levels of stress and its effects in medical students and found that physical problems were associated with student's academic year, and prevalence of stress was higher during the first three years with females reporting higher levels of psychological distress.

These findings suggest that students manifest a triad of behavioral, psychological and physical symptoms as part of their academics. As evident from the literature, the extent to which students' level of engagement may affect anxiety has not attracted much research particularly across academic years of study. Thus, this research contributes to understanding the impact of student engagement on negative emotional state i.e., anxiety, by examining engagement in conjunction with anxiety across academic years of study.

### 3. METHODOLOGY

#### 3.1. Participants

The sample comprised of 492 female undergraduates enrolled in a private university in Saudi Arabia ( $M = 20.22$  yrs,  $SD = 1.97$ ,  $R = 16$ ). Of those reporting their year in college, freshmen ( $n = 198$ ) comprised 40%, sophomores ( $n = 144$ ) 29%, juniors ( $n = 57$ ) 12%, and seniors ( $n = 93$ ) 19%.

#### 3.2. Procedures

All participants were sent a cover letter through university's internal email system along with a link to the questionnaire that had (shortened) student version of work engagement UWES-S (Schaufeli et al., 2002) and Anxiety Scale of DASS (Lovibond & Lovibond, 1995) along with some demographic information such as age, level, major, college, marital and employment status. The participants were provided the necessary information about the purpose of the survey, and were instructed that if they volunteer to respond to the survey, they will receive 2 points as part of their optional value points requirement. Alternatively, they may choose not to participate and were also assured that their identity as well as responses will be kept strictly confidential and will be used only for the research purposes.

#### 3.3. Measures

**3.3.1. Utrecht Work Engagement Scale (Schaufeli et al., 2002).** A widely used Utrecht Work Engagement Scale (UWES) includes a total of 9 items and is designed to measure the cognitive and affective states of engagement at work. It is characterized by three positive, fulfilling, work related states of mind namely: vigor, dedication and absorption. For the present study, the student version of work engagement (UWES-S) was used. The UWES-S is scored on a 7-point scale (i.e., almost never, rarely, sometimes, never, often, very often, and always), where high scores indicate a high level of engagement. The data yielded a high reliability. (Cronbach  $\alpha = .85$ )

**3.3.2. Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995).** It is a 4-point scale with 42 items that has values ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). It differentiates between states of depression, anxiety, and stress, rather than looking at undifferentiated distress. For the present study, only Anxiety scale

(14 items) that assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect was administered. The reliability of the scale in the data set was very high,  $\alpha = .90$

### 3.4. Data analysis

Originally designed for employees at work, the UWES-S was developed and normed on a diverse sample of students. The UWES-S has correlated as expected with measures of academic performance, (e.g., GPA, and achievement) and behavior (e.g., burnout).

Validations of the UWES support the use and reliability of one-factor model instead of three-dimensional model, particularly for the shortened version of UWES. Correlations between latent and manifest UWES factors (vigor, dedication and absorption) were high (ranged from .77 to .98) and therefore, it is recommended that the three dimensions of the scale be collapsed and treated as one factor i.e., engagement for practical uses (Schaufeli & Bakker, 2004).

Consequently, for the present analysis, participants' responses on UWES-S items were given a mean score which determines classification within five levels of engagement namely: "very low", "low", "average", "high" or "very high" (See Schaufeli & Bakker, 2004). Additionally, anxiety items were given a raw score which determined classification within five levels of anxiety symptoms, namely: "normal", "mild", "moderate", "severe", or "extremely severe" (see Lovibond & Lovibond, 1995).

All data was analyzed via Statistical Package for the Social Sciences version 17 (SPSS v.17.0). The primary analysis involved one-way ANOVA for the dependent variables; self-reported scores on engagement and anxiety. The independent factor was academic year of study with four levels: freshman, sophomore, junior and senior. To avoid violating the basic assumption underlying ANOVA, outliers were removed and normality of both engagement and anxiety was assessed through the Shapiro-Wilk Test. With the exception of freshman and seniors' score on anxiety, all data was approximately normal against the dependent variables ( $p > .05$ ). Since the sample size differed among groups,  $F$  values were computed on the basis of Welch statistics. Moreover, a Pearson correlation between engagement and anxiety was also computed.

## 4. RESULTS

Descriptive statistics ( $n = 492$ ) indicated that 57% of the participants had "average" level of engagement. Approximately 37% of the respondents scores returned in the "normal" range for anxiety scale, and the remaining respondents were relatively evenly distributed across mild (7%), moderate (18%), severe (14%), and extremely severe (24%). Figure 1 and 2 shows the percentage of ranges associated with engagement and anxiety across academic year of study.



Figure 1. Engagement level of students.

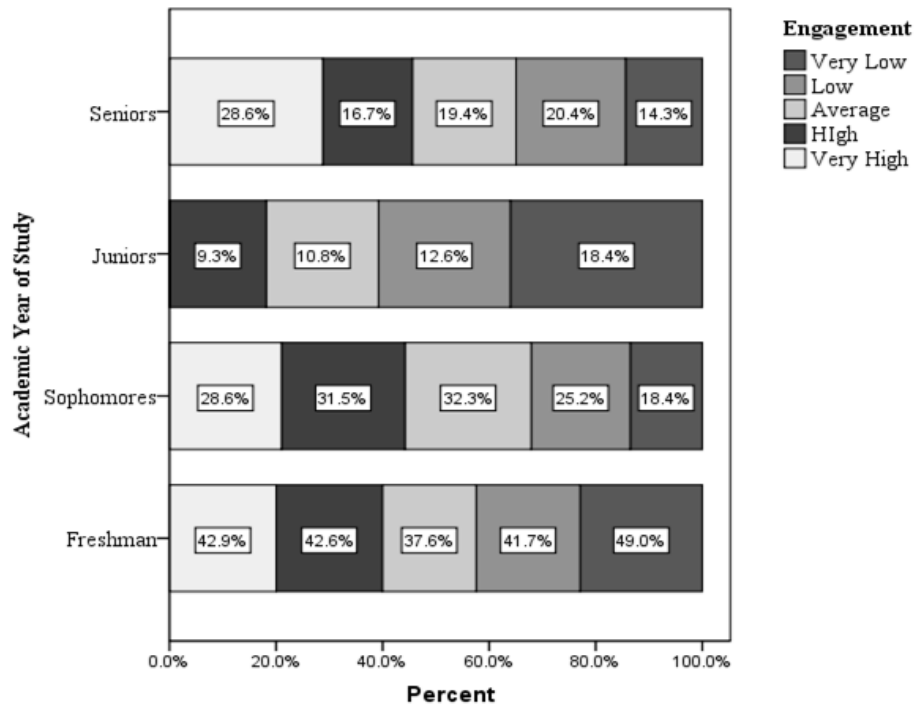
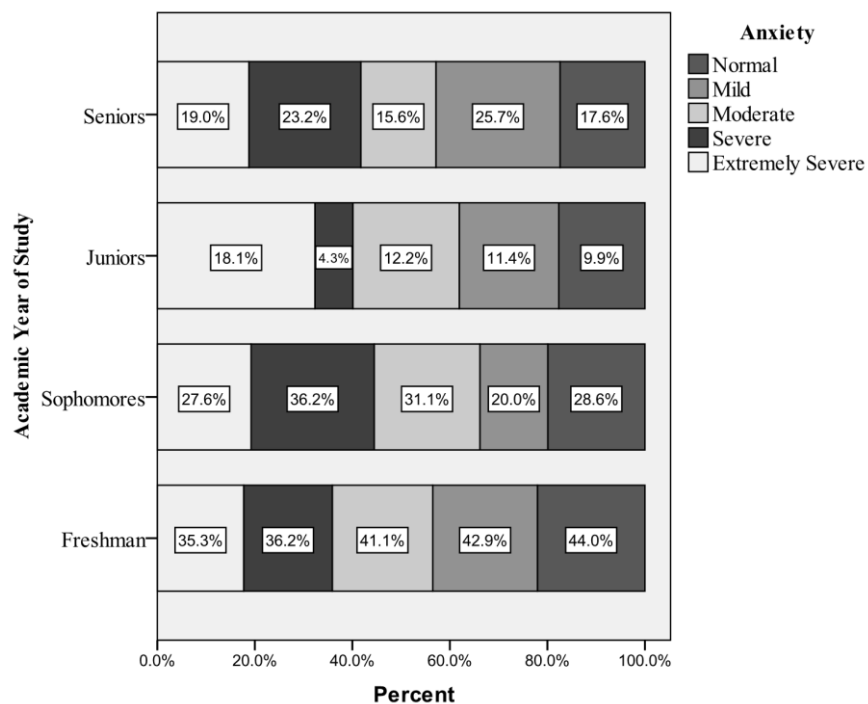


Figure 2. Anxiety level of students.



#### 4.1. Academic year of study and engagement

There was a statistically significant difference between academic year of study and engagement as determined by one-way ANOVA,  $F(3, 172) = 3.63, p = .01$ . Freshman and sophomores reported more engagement than did juniors and seniors. Post hoc comparisons with the use of Dunnett’s C test indicated a significant difference in the level of engagement between sophomores and juniors. No significant differences between other groups were found. The 95%

confidence intervals (CI) for the pairwise differences, as well as the means and standard deviations for the four levels are reported in Table 1.

Table 1. 95% Confidence Intervals of pairwise differences in level of Engagement (n = 432).

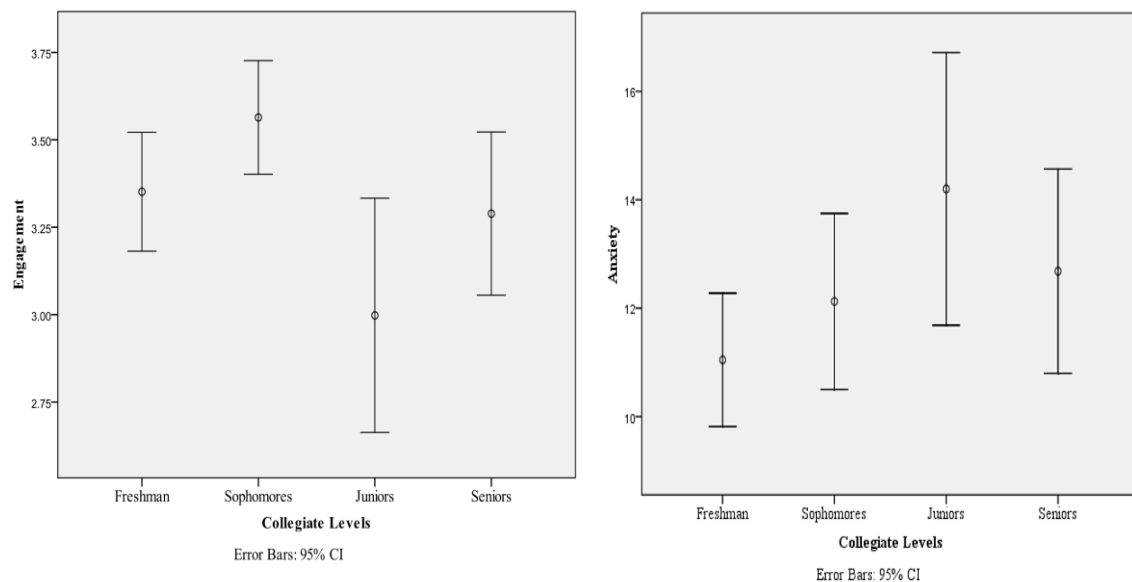
College Year	M	SD	1.	2.	3.
1. Freshman	3.35	1.13	--		
2. Sophomore	3.56	.90	-.10 to .52	--	
3. Junior	2.99	1.24	-.85 to .14	-1.1 to -.07*	--
4. Senior	3.29	1.08	-.44 to .32	-.65 to .10	-.25 to .83

Note: An asterisk indicates that the difference in mean is significant at the .05 significance using Dunnett's C procedure.

#### 4.2. Academic year of study and anxiety

The ANOVA for year in college and anxiety was not significant,  $F(3, 172) = 2.05$ ,  $p = n.s.$  Freshman ( $M = 11.05$ ,  $SD = 8.17$ ), sophomores ( $M = 12.13$ ,  $SD = 8.98$ ), juniors ( $M = 14.20$ ,  $SD = 9.30$ ) and seniors ( $M = 12.68$ ,  $SD = 8.74$ ) did not significantly differ on the reported levels of anxiety. Figure 3 represents error bars for levels of engagement and anxiety.

Figure 3. 95% CI Error Bars for Engagement and Anxiety across academic levels.



#### 4.3. Engagement and anxiety

Using a Pearson correlation (two-tailed), it was found that engagement was negatively correlated with anxiety,  $r(430) = -.13$ ,  $p < .01$ .

Descriptive statistics indicated that engaged students tend to have low anxiety levels. Further, results of ANOVA indicated that freshman and sophomores were more engaged as compared to juniors and seniors. To further explore this relationship, a correlation between engagement and anxiety for each data set was computed. The results are presented in Table 2.

Table 2. Correlations between Engagement and Anxiety across academic year of study (n = 432).

	df	r	p
Freshman	170	-.22	.00*
Sophomore	118	-.17	.07
Junior	53	.02	.87
Senior	83	.02	.84

\* $p < .01$

## 5. DISCUSSION

The current study examined engagement and anxiety in university student samples across academic years of study. Descriptive statistics indicated that overall, students have “average” engagement with “moderate” anxiety. This finding parallels NSSEs results that indicate an upward trend in student engagement and achievement as well as CIRPs findings that revealed “anxiety is on the rise”.

Most notably, with respect to engagement, no junior student fell into the category of “very high” and a vast majority (18%) scored “very severe” on anxiety. Further, less than half (37%) of the respondents were in the “normal” range for anxiety scale and indicated that majority of the sample had scored “severe” on anxiety. One possible explanation lies in the conjecture that anxiety exacerbates as students transit from sophomore and junior years. For example, in comparison to other levels, juniors were the least engaged ( $M = 2.99$ ,  $SD = 1.24$ ) and majority of them were in “extremely severe” range on anxiety scale ( $M = 14.20$ ,  $SD = 9.30$ ). Similarly, seniors' anxiety scores ( $M = 12.68$ ,  $SD = 8.74$ ) were high as compared to freshman and sophomores. While the mean scores on anxiety showed that freshman and sophomores had lower levels of anxiety, this difference was not statistically significant ( $p < .05$ ). This result is in compliance with the findings of Larcombe et al. (2013), who did not find any statistically significant difference between anxiety levels and academic years of study. Similarly, findings of NSSEs engagement program (SAGE) indicated agitation in juniors and seniors. Moreover, no significant differences on engagement benchmarks or career gains were found between juniors and seniors who enrolled in SAGE as compared to those who did not. These suggest that third and fourth year student's perceptions about academic challenge and campus environment should be explored.

Attempts to assess engagement in relation to achievement and learning have been widespread but very few studies have followed a comparative approach with a focus on collegiate levels. Findings of this study divulge that the differences in the mean responses of engagement were statistically significant. The present patterns of findings indicate that juniors and seniors are less engaged than freshman and sophomore counterparts. Therefore, it would be useful to examine the factors associated with low and high engagement across collegiate levels. Further, the weak but significant correlation between anxiety and student engagement suggests that engaged students tend to have low anxiety levels.

This study makes two notable contributions to understanding engagement and anxiety across academic levels. First, it confirms that UWES-S is a reliable measure for assessing engagement in students ( $\alpha = .85$ ). Secondly, it demonstrates that level of engagement substantially contribute to variations across academic years of study, and to their anxiety levels. For example, of all the four levels, freshman were the most engaged as compared to the other three levels. The correlation ( $r = -.22$ ,  $p = .00$ ) indicates that anxiety decreases as engagement increases.

## 6. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The present study is not without its limitations that need to be considered while evaluating the major findings. Firstly, the study was done in a private setting and included females exclusively as its sample. Secondly, all data was gathered in present/real time. Thus, one avenue for future research is to utilize longitudinal design and examine students' engagement and anxiety over the course of their graduation journey.

This work also lays the foundation for future work examining the influence of motivating or de-motivating factors such as credit hours, teacher support and access to resources, technical support and realistic deadlines towards student engagement. Casuso-Holgado et al. (2013) has shown that grade point average is strongly associated with student's engagement and tends to be different for males and females. Future research may examine the interaction between student's gender, academic performance, perceived peer/family

support and credit hours on engagement. The researcher is also interested in exploring whether reported engagement and/or anxiety levels would vary as a function of time. For example, in the present study, all data was collected during the beginning of semester (Fall 2013) which leads us to question whether the scores being average/moderate will hold towards the end of the semester as well. One way to examine the extent to which these findings are particular only to Saudi is to extend this work by replicating or examining students' engagement and anxiety since the beginning of enrollment i.e., assess them throughout the course of their four/five year program. Similar studies in other countries with added variables such as depression, stress, anxiety, GPA, social and organizational support could provide valuable insight into the source of expected or unexpected set of relationship between engagement and anxiety across academic years of study. Further, the undertaken research up to this point has not utilized the pre-post design which may provide an opportunity for future research as well. Future research examining (a) what are the factors that motivate students to engage, (b) what strategies do academicians use to engage students, and (c) how can students stay engaged without getting emotionally drained is also recommended.

## 7. CONCLUSION

The researcher hypothesized that more engaged students would be more likely to score high on anxiety. The weak negative correlation between the two variables does not allow the researcher to assert this fact, but the present pattern of findings indicates that student engagement has a positive association with negative emotions such as anxiety. However, it is necessary to explore this relationship extensively, by including variables such as depression, stress, learning style, coping strategies and campus involvement, and seek answers for maximizing students' engagement.

## REFERENCES

- Abdulghani, H. M., AlKhanhal, A. A., Mahmood, E. S., Ponnampuruma, G. G., & Alfari, E. A. (2011). Stress and its effects on medical students: A cross-sectional study at the college of medicine in Saudi Arabia. *Journal of Health, Population and Nutrition*, 29(5), 516-522. Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3225114/>
- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology*, 44(5), 427-445.
- Appleton, J. J., Christenson, S. S., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 4(5), 369-386.
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40(5), 518-529.
- Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkage. *Research in Higher Education*, 47(1), 1-32.
- Casuso-Holgado, M. J., Cuesta-Vargas, A. I., Moreno-Morales, N., Labajos-Manzanares, M. T., Barón-Lopez, F. J., & Vega-Cuesta, M. (2013). The association between academic engagement and achievement in health sciences students. *BMC Medical Education*, 13(1), 33. Retrieved from <http://www.biomedcentral.com/1472-6920/13/33>
- Cross, K. P. (2005). *What do we know about students' learning and how do we know it?* Research and Occasional Paper Series: CSHE.7.05. University of California, Berkeley: Center for Study in Higher Education. Retrieved from <https://escholarship.org/uc/item/2bh4k013>
- Eagan, K., Lozano, J. B., Hurtado, S., & Case, M. H. (2013). *The American freshman: National norms Fall 2013*. Los Angeles, CA: Higher Education Research Institute, UCLA. Retrieved from <http://www.heri.ucla.edu/monographs/TheAmericanFreshman2013.pdf>
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry*, 77(4), 491-499.
- Flatt, A. K. (2013). A suffering generation: Six factors contributing factors to the mental health crises in North American higher education. *College Quarterly*, 16(1). Retrieved from <http://www.collegequarterly.ca/2013-vol16-num01-winter/flatt.html>

- Gallagher, R. (2008). National Survey of Counseling Center Directors 2008. Monograph Series 8R. The International Association of Counseling Services, Inc. Retrieved from [http://www.collegecounseling.org/pdf/2008\\_survey.pdf](http://www.collegecounseling.org/pdf/2008_survey.pdf)
- Grier-Reed, T., Appleton, J., Rodriguez, M., Ganuza, Z., & Reschly, A. L. (2012). Exploring the student engagement instrument and career perceptions with college students. *Journal of Educational and Developmental Psychology, 2*(2), 85-96.
- Kashdan, T. B., & Fincham, F. D. (2004). Facilitating curiosity: A social and self-regulatory perspective for scientifically based interventions. In P. A. Linley, & S. Joseph (Eds.), *Positive psychology in practice* (pp. 482-503). Hoboken, NJ: John Wiley and Sons.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity survey replication. *Archives of General Psychiatry, 62*(6), 593-602.
- Kuh, G. D. (2002). *The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties*. Bloomington, IN: Indiana University Center for Postsecondary Research and Planning. Retrieved from [http://nsse.iub.edu/pdf/psychometric\\_framework\\_2002.pdf](http://nsse.iub.edu/pdf/psychometric_framework_2002.pdf)
- Kuh, G. D., Linnenbrink, E. A., & Pintrich, P. R. (2003). The role of self-efficacy beliefs in student engagement and learning in the classroom. *Reading & Writing Quarterly, 19*(2), 119-137. doi:10.1080/10573560308223
- Larcombe, W., Tumbaga, L., Malkin, I., Nicholson, P., & Tokatlidis, O. (2013). Does an improved experience of law school protect students against depression, anxiety and stress? An empirical study of wellbeing and the law school experience of LLB and JD students. *Sydney Law Review, 35*(2), 407-432
- Leahy, C. M., Peterson, R. F., Wilson, I. G., Newbury, J. W., Tonkin, A. L., & Turnbull, D. (2010). Distress levels and self-reported treatment rates for medicine, law, psychology and mechanical engineering tertiary students: Cross-sectional study. *Australian and New Zealand Journal of Psychiatry, 44*(7), 608-615.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety stress scales* (2nd ed.) Sydney, Australia: Psychology Foundation.
- Louis, K. S., & Smith, B. (1993). Cultivating teacher engagement: Breaking the iron law of social class. In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools* (pp. 120-122). New York, NY: Teachers College Press.
- National Survey of Student Engagement. (2012). *Promoting student learning and institutional improvement: Lessons from NSSE at 13*. Bloomington, IN: Indiana University Center for Postsecondary Research.
- Newmann, F. M., Wehlage, G. G., & Lamborn, S. D. (1993). The significance and sources of student engagement. In F. M., Newmann (Ed.), *Student engagement and achievement in American secondary schools* (pp. 11-28). New York: Teachers College Press.
- Noguchi, S. (2014, May 2). Teen health: Depression, anxiety and social phobias rising in kids, educators say. *Mercury News*. Retrieved July 21, 2014 from [http://www.mercurynews.com/health/ci\\_25074044/teen-health-depression-anxiety-and-social-phobias-rising](http://www.mercurynews.com/health/ci_25074044/teen-health-depression-anxiety-and-social-phobias-rising)
- Pascarella, E., & Terenzini, P. (2005). *How college affects students: Vol. 2. A third decade of research*. San Francisco, CA: Jossey-Bass Publishers.
- Roberts, J., and McNeese, N. M. (2010). Student engagement/involvement in higher education based on student origin. *Research in Higher Education Journal, 7*, 11-20.
- Schaufeli, W. B., & Bakker, A. (2004). *Utrecht Work Engagement Scale: Preliminary manual* [Version 1.1, December 2004]. Utrecht University, Occupational Health Psychology Unit. Retrieved January 17, 2013 from [http://www.wilmarschaufeli.nl/publications/Schaufeli/Test%20Manuals/Test\\_manual\\_UWES\\_English.pdf](http://www.wilmarschaufeli.nl/publications/Schaufeli/Test%20Manuals/Test_manual_UWES_English.pdf)
- Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross Cultural Psychology, 33*(5), 464-481.
- Shneiderman, B. (1998). Relate-Create-Donate: A teaching/learning philosophy for the cyber-generation. *Computers & Education, 31*(1), 25-39.
- Selingson, S. V. (2013). Depression, anxiety persistent problems at universities. *Recovery and Rehabilitation Newsletter, 8*(2). Retrieved May 9, 2014, from <http://cpr.bu.edu/resources/newsletter/depression-anxiety-persistent-problems-at-universities>
- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85*(4), 571-581.

- Skinner, E. A., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology, 100*(4), 765-781. doi:10.1037/a0012840
- Van der Merwe, M. (2003). *Burnout, engagement, coping and locus of control of postgraduate students*. (Master's thesis). Retrieved from [http://dspace.nwu.ac.za/bitstream/handle/10394/249/vandermerwe\\_me.pdf?sequence=1](http://dspace.nwu.ac.za/bitstream/handle/10394/249/vandermerwe_me.pdf?sequence=1)
- Wyer, K. (2013, January 24). *Survey: More freshman than ever say they go to college for better jobs, make more money* (Press release). Los Angeles, CA: Higher Education Research Institute. Retrieved from <http://heri.ucla.edu/pr-display.php?prQry=111>
- Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-138.

## ADDITIONAL READING

- Chapman, E. (2003). Alternative approaches to assessing student engagement rates. *Practical Assessment, Research & Evaluation, 8*(13). Retrieved from <http://pareonline.net/getvn.asp?v=8&n=13>
- Miller, R. L., Amsel, E., Kowalewski, B. M., Beins, B. C., Keith, K. D., & Peden, B. F. (Eds.) (2011). *Promoting student engagement: Vol. 1. Programs, techniques and opportunities*. Society for the Teaching of Psychology, American Psychological Association. Retrieved from <http://teachpsych.org/ebooks/pse2011/vol1/index.php>
- Natriello, G. (1984). Problems in the evaluation of students and student disengagement from secondary schools. *Journal of Research and Development in Education, 17*(4), 14-24.

## KEY TERMS & DEFINITIONS

**Student Engagement:** Natriello (1984) defined student engagement as the willingness to participate in routine school activities, such as attending class, submitting required work, and following directions. This definition focuses on learners' attitudes or affect and their willingness to meet implicit expectations within the context of an institution (Chapman, 2003).

**Anxiety:** general term for several disorders that cause nervousness, fear, apprehension, and worrying. These disorders affect how we feel and behave, and they can manifest real physical symptoms.

**Academic Years of Study:** refers to the four undergraduate years defined by total number of earned credit hours at Effat University.

**Freshman:** 0 – 32 credit hours

**Sophomore:** 33 – 65 credit hours

**Junior:** 66 – 96 credit hours

**Senior:** Above 97 credit hours

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**Section 4**  
**Social Psychology**



## Chapter 26

# THE REASONS FOR MIGRATING TO A FRENCH-SPEAKING BLACK AFRICAN POPULATION

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### ABSTRACT

This study is part of a research program aimed at understanding the reason why French-Speaking Sub-Saharan African citizens decide to settle in Europe and particularly in France. We created an anonymous questionnaire to collect data on the construction of the migration process. All participants (N: 316) are French-speaking Africans, citizens of Sub-Saharan African French-Speaking countries. For the analysis, we created two groups: participants who reside in their home country, and the migrant population. Participants were contacted through social networks and professional and personal relationships in Europe and Africa. The group analysis shows a predilection for economic reasons to migrate and to settle; the return is explained in terms of economic stability, and the ability to provide knowledge and the means of development in the home country. In term of the key factors that determine the migration process, these results confirm the ones showed in our first study. Despite the progress, this study remains one based on a mixed approach, which does not seek to establish generalities applicable to all Africans wishing to migrate or in a migration process. Rather, it is to understand the reason a specific population has to migrate, allowing access to underlying psychological phenomena.

*Keywords:* social representation, migration, motivation, Africa, Europe.

## 1. INTRODUCTION: FOREIGNERS AND IMMIGRANTS IN FRANCE

The National Institute of Statistics, *Institut National de la Statistique et des Etudes Economiques* [INSEE] (2014), estimated the French population at 65,821,000 inhabitants on 1<sup>st</sup> January 2014, which is divided into three groups: French citizens, foreigners and immigrants.

According to the latest population census, there should be 56,271,000 French Citizens by birth (equivalent to 89.73% of the total population) and 2,789,000 French Citizens by acquisition of nationality (4.4%). According to data from INSEE (2014), 11% of French citizens (6,500,000) are direct descendants of one or two immigrant(s), and among the children of immigrants aged between 18 and 30 years old, every second one has African origins (Borrel & Lhommeau, 2010; INSEE 2014).

Foreigners represent 5.80% of the French population (3,817,562), with 13% of them (441,477) from sub-Saharan Africa.

Finally, there are 5,514,000 immigrants, corresponding to 8.38% of the total French population. Information by country of birth shows that 2,362,099 people (42% of immigrants) come from Africa. More specifically, 13% of immigrants (719,156) are from African countries excluding Algeria, Morocco and Tunisia (which represent the main countries of African immigrants in France).

Although since 1974, a diversification of migration has been observed, it is difficult to quantify the black population in the French territory. This is due to the desire by the French Republic to integrate all citizens regardless of their origins, in accordance with the constitutional principle of equality, and the decision of the Constitutional Council of 15<sup>th</sup> November 2007 declaring “unconstitutional” the ethnic statistics (Conseil Constitutionnel, 2007)

However, in the study of relations between Blacks and Whites, it is important to consider two elements: the past of colonization of a large part of Africa, and the differentiation between metropolitan France and the overseas (DOM-COM). Indeed, in the view of “being black” in metropolitan France, “black” is a salient category and theories of social categorization may suggest that the risks of discrimination are real.

## 2. THEORETICAL AND CONTEXTUAL BACKGROUND

In the study of cultural psychology of immigration, relationships between members of the host society and immigrants have been particularly studied. From identity strategies in France (Camilleri, 1996; Camilleri et al., 1990) to acculturation (Berry, 2005) in Canada, mutual adaptation of populations led to extensive researches. However, immigration refers to processes that are not limited to this phase. It is subtended by a set of decisions involving their motivations.

### 2.1. Acculturation: The relationships in the host country

Camilleri's Studies (Camilleri, 1996; Camilleri et al., 1990), on the identity strategies of migrants, is considered in French context as a key element to understand the relationship between two people or groups of different cultures.

His theoretical model, in the case of unequal social relations offers two fundamental issues: a) questioning the unity of meaning and b) the social devaluation.

Strategies proposed by Camilleri (1996) are established in a continuum between an ontological pole, marked by the idea of preserving the culture of origin without change, and a pragmatic pole, in which the original culture disappears in favor of the appropriation of the culture of the host country. Between these two poles, intermediate strategies allow compromise and balance to the individual. The most beneficial equilibrium situation is found in the identification of representations and values that are part of the identity of the individual, while allowing it to match with its environment (Jumageldinov, 2009).

On the Canadian side, acculturation can be understood as “dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members” (Berry, 2005, p. 698). This process involves changes in the behavior of the individual but also changes in social practices and structures.

Berry model includes two axes<sup>1</sup> enabling the identification of four acculturation strategies for the minority group (integration, assimilation, separation and marginalization) and for the majority group (multiculturalism, melting pot, segregation and exclusion) (Berry, 1997, 2005).

More recently, researchers from the University of Almeria (Spain) (Navas Luque, García Fernández, & Rojas Tejada, 2006; Navas Luque, Rojas Tejada, García Fernández, & Pumares Fernández, 2007) have extended the model of acculturation Berry, offering the Relative Acculturation Extended Model: RAEM .

According to RAEM, it is necessary to differentiate the acculturation strategies in seven specific areas (political, work, Economic, Social, family relationships, religious beliefs and customs, ways of thinking) (Navas Luque, et al., 2007). Short of what happens during the intergroup contact, at some point the immigrant decides to migrate and must decide (once arrived in the host country) to stay there or not: s/he appeals to his/her motivation.

### 2.2. Reasons as motivation content

Motivation is not an object or a material act. Motivation is the inference of a psychological process, an abstract in connection with the “strengths” which mobilize the person towards a specific behavior.

For this study, we take the Vallerand and Thill motivation concept: motivation is a “hypothetical concept used to describe the internal and/or external strengths producing the release, the direction, the intensity and the persistence of the behavior” (1993, p. 18).

This definition of motivation suits the purposes of this research because it establishes a privileged way, a necessary time axis for understanding behavior in the medium and long term, and to the extent that the categories of this research can be treated analogously to the items listed in the definition.

However, “motivation” as hypothetical construct cannot be observed or quantified directly, because what is observable, measurable is the behavior, the consequences of the motivation, and not the motivation itself.

Thus, we will apply to identify the underlying reasons for the migration process and more specifically on the reasons for the release of the migration process and the reasons for its persistence or not.

### **2.3. Migration process**

For us, migration is understood as a process consisting of three phases: -migrating- (before the preparation and execution of the trip), -staying- (living conditions and experience of adaptation in the host country; and -returning- the issue of return or a new migration project) the design of the migration process in the long term leads us to understand the motives behind the migration process of nationals from sub-Saharan Africa in the three times previously defined.

TeO survey from 2010 establishes the panorama of differences and similarities in migration trajectories and experience, with the processes of integration and discrimination for different population groups in France<sup>ii</sup>. This survey is based on a questionnaire suggested to nearly 22,000 French residents. The questionnaire explored 17 topics, regrouped in three central axes: strategies for upward social mobility; access to various resources; identity references and obstacles to equality. Data collected may help to better understand the onset of the migration process, but also its persistence.

Indeed, this survey highlights that 50% of migrants came while they were already adult, that is to say at a time when they are free of their own decisions, and even soon after reached this milestone since 30 years old is the maximum age of these migrants. In other words, half of all migrants, triggering the migration process, do it around the majority. When migrants arrive in a country, they do not necessarily stay there. 12% of foreigners were living at least one year in another country before arriving in France; others (not included in the statistics) have shorter stays in their first host country, even if they have not decided to stay in the country encountered. There is no persistence of the installation. Finally, the possibilities of return are still present.

Although sub-Saharan migrants are the ethnic group who lives in France with the smaller score of round trips between France and foreign countries (4%); their descendants are in first position in round trips between France and others countries (21%). Also, for this group, “50% of descendants of immigrants from sub-Saharan Africa who have lived for at least one year or more outside metropolitan France, were at least 6 years old at the moment of his/her first departure”<sup>iii</sup> (Beauchemin, Hamel, Simon, & L'équipe-TeO, 2010, p. 24). Everything happens as if the persistence of migration was, for some, still to renegotiation.

## **3. METHOD**

### **3.1. Objective**

This study is part of a research program aimed at understanding the reasons of French-speaking Sub-Saharan African nationals settle in Europe and particularly in France. To do this and following our conception of migration process in three times, we decided to focus on the reasons for migrating, for remaining in the host country or returning to the home country.

### **3.2. Participants**

All participants (N: 316) are French-speaking Africans, citizens of French-Speaking Sub-Saharan African countries, aged between 14 and 56 years old (M: 27.85, SD: 7.84). For the analysis, we created two groups: participants who reside in their home country (n: 166), aged between 15 and 54 years old (M: 26.54, SD: 7.42) and the migrant population (n: 150), aged between 14 and 56 years (M: 29.23, SD: 8.07). For participants who do not reside in their home country, time spent abroad is between 1 and 35 years (M: 10.08 years, SD: 9.17).

### **3.3. Pre-Study**

26 persons were consulted thanks to an opened question survey, created according to the logic of a journey and, allowing finding each of the elements of the definition of the motivation.

The sample consisted of 17 men and 9 women, aged between 17 and 52, in order to take into account several generational groups.

The participants, established in Europe or in Africa, belonged to various socio-economic groups (students, artists invited in Europe, European residents or French citizens descendants of the African immigration). Nationalities in the sample tried to reproduce the statistics on migrants' origins in France.

Two blind decoders categorized the answers, what allowed highlighting eleven categories: living conditions, Work, Money, Education, Family Relationships, personal Identity, Identity Status, Africa, Europe, Development of the country and others.

The analysis of frequencies but also the contents of the answers allowed the construction of the final questionnaire, which follows the same logic.

### 3.4. Questionnaire, Validation of Analysis categories and Data processing

Final questionnaire consists of 12 questions: 9 closed questions with a scale of answer between 0 and 20, 1 Yes/No question, 2 opened questions<sup>iv</sup>.

However, only four questions will be taken into account for the purpose of this chapter: the reasons for departure (Q5), the reasons for staying in Europe (Q7), the reasons for going back to Africa (Q8) and the choice of destination country (Q11). For questions 5, 7 and 8, we used a 0 to 20 scale; for question 11 participants had the possibility to give all the destinations, without limit about their number or continent.

Participants were contacted between April 2011 and September 2012 through social networks and professional and personal relationships in Europe and Africa. They responded to a computerized version of the questionnaire.

The internal validity of the questionnaire was tested, by factorial analysis by Varimax rotation for question 5, 7 and 8. This procedure was necessary in these questions, due to the amount of items and the variable evoked. Table 1 shows the result of factor analysis, with indications of the factors that explain the different variables, the number of items retained by category and factor, explanatory value and the Cronbach's alpha value for each variable.

Table 1. Results of factorial analysis by Varimax rotation (question 5, 6, 7 and 8).

Questions	KMO	Bartlett	Factors	Items by factor	Explanatory % by factor	Cronbach alpha by factor
5. Departure	.879	1207.840 <i>p</i> < .0001	Economic factors	4	24	.88
			Security and Rights	4	20	.85
			War and instability	4	15	.75
			“Touristic” reasons	3	10	.43
7. Staying in the host country	.848	874.207 <i>p</i> < .0001	Economic conditions	4	20	.83
			Advantages in Europe	4	23	.83
			Disadvantages in Africa	4	22	.80
8. Going back to the home country	.847	1015.090 <i>p</i> < .0001	Stability/contribution to the home country	4	18	.80
			Insecurity/failure of the migration process	4	16	.78
			Obligations and family problems	4	17	.80
			Separation from the country and family	3	16	.81

For the questions in relation with the construction of the migratory project  $\alpha = .70$ .

We calculated Cronbach's alpha and averages. Subsequently, we performed repeated measures ANOVA in an exploration by groups.

In cases where it was relevant, we subdivided the group of migrants into three sub-groups: African residents living in a country different from their own (*n*: 48) Africans living in France (*n*: 75) African European residents living in countries other than France (*n*: 27). For data analysis, the threshold of .05 was chosen for the probabilities referring to a particular group and the threshold of .01 for the probability in relation to all participants.

Since the question 11 indicates several countries allowed unrestricted number, frequency analysis presented here takes into account only the first answer.

## 4. RESULTS

### 4.1. The reasons for departure

In this study, three factors explain the departure: a) economic reasons and the search for better conditions for the immigrant and his/her family, b) war and instability in the special relationship with fear and perceived danger, and c) security and access to rights as the element that makes possible plans for the future. The group analysis (Migrants vs. Non-Migrants) shows a predilection for economic reasons<sup>v</sup>. The repeated measure ANOVA showed that there was no interaction effect, so we can assume that the results confirm (for each group, as well as in general) that participants associate departure with economic conditions and that it is a significant reason which is actually more important than the other two factors (economic factors:  $M: 10.58$ ;  $SD: 5.79$ ,  $F(2.632) = 162.89$ ,  $p < .00000$ ,  $\eta_p^2: .340$ ; war and instability:  $M: 5.761$ ;  $SD: 4.994$ ; and security and human rights:  $M: 9.864$ ;  $SD: 6.042$ ).

Sub-dividing migrants by differentiating them according to their respective countries of residence (African country, France, other European countries) also reveals an important role for the economic factor. It is still the main factor even if the subgroup of migrants, who resides in Africa, emphasizes the important role played by safety and rights reasons. It is pertinent to mention that the reasons related to a search for better living conditions (economic factors, security and rights) are higher in the non-migrant group. This seems to indicate a change of opinion related to the migration process itself. The reversal of the trend for war and instability reasons would therefore be affected by this change.

### 4.2. Reasons for staying in Europe

The reasons for staying in Europe were categorized into three factors: a) the advantages of living in Europe, b) the disadvantages of living in Africa, and c) economic conditions, referring mainly to the ability to plan for the future and help the family.

The analysis of group averages presents the economic conditions<sup>vi</sup> ( $M: 11.90$ ;  $SD: 5.87$ ) as the most frequently mentioned factor to justify the establishment of the migrant in the host country for the two groups. It is the same for the three subgroups that constitute the migrant group with values above average (for African residents:  $M: 11.270$ ,  $SD: 6.684$ ; for residents in France:  $M: 10.468$ ;  $SD: 5.825$ ; and European residents living in a country other than France:  $M: 10.572$ ,  $SD: 6.505$ ).

The analysis for all participants shows that the difference between factors is significant ( $F(2.632) = 257.32$ ,  $p < .00000$ ,  $\eta_p^2: .448$ ), in comparison to the other two factors: the advantages in Europe ( $M: 7.127$ ;  $SD: 5.838$ ) or disadvantages in Africa ( $M: 6.109$ ;  $SD: 4.876$ ). However, the ANOVA showed interaction effects. These interactions seem not to address the reasons for the factor “economic conditions”, but the other two factors.

Indeed, considering our results in a temporal perspective, the two factors “advantages Europe” and “disadvantages Africa” seem to be two sides of the same situation at different times of the migration process. Thus, we consider that it may be a change of reference point which would serve to focus on the benefits of being a foreigner (non-migrant) or the disadvantages of staying in the home country (migrant).

In addition, we consider the hypothesis that for the migrant participants, these results represent the expression of a certain disillusionment produced by the gap between the expectations, the stereotypes about Europe (widely shared in developing countries), and the reality of the migration process, which is subject to more restrictions and control by the European authorities.

### 4.3. Reasons for returning to the home country

The reasons for going back to the home country were explained by four factors: a) stability and the possibility of contributing something to the home country, b) insecurity and the failure of the migration process, c) obligations and family problems, and d) separation from

the country and family. Within the two groups, the results explain the return in terms of economic stability, the ability to provide knowledge and the means of development in the home country. For migrants, this is considered as the only valid option for going back home. In detail, the averages for each subgroup are also higher for this factor than the others. Overall, return is considered by the participants as a possible contribution to the stability and the development of the home country ( $M: 13.20; SD: 5.19; F(3,948) = 110.65, p < .00000, \eta_p^2 = .259$ ) in a significant way. It is more important than the other reasons: distance ( $M: 8.636; SD: 5.468$ ), insecurity and failure ( $M: 8.635; SD: 5.624$ ) or family ( $M: 8.793; SD: 5.517$ ).

However, the ANOVA data on this issue shows an interaction effect, which limits the progress of our study. This interaction can be explained mainly by the overlapping factors “obligations and family problems” and “separation from the country and family”.

Indeed, these two factors can express a change related to the temporality of the process that makes possible a differentiated way of considering the contact with the family. For non-migrants, it would be appropriate to discuss the responsibilities and the need to count on the support of the migrant as a reason for requesting the presence of the people living abroad. For migrants, being abroad, it seems more useful to interpret the same situation as a desire to go back (not an obligation), while affirming their commitment to their family and the feelings of lack produced by the migration process.

#### 4.4. Choice on destination country

The results show that 74.1% of residents in their home country choose a European country as the first destination, against 54.67% of migrants who choose the same continent.

The mixed results of the participants of the migrant group is mainly due to participants residing in Africa, who choose a European destination (89.58%); while residents in Europe, divided between the choice of a European country (38.23%) and an African country (36.27%), mainly associated with the return to the home country. Table 2 presents the results for the most cited European countries.

Table 2. Results for the most cited European countries chosen by the participants ( $\geq 4$  answers).

Country	Not Migrants	Migrants	Africa	Europe
France	57	45	78	24
Belgium	14	10	18	6
Spain	13	1	13	1
Switzerland	13	3	15	1
UK and Ireland	13	11	21	3
Germany	4	6	8	2
All the European Answers	123	82	167	39
Total Answers	166	150	214	102

Finally, concerning the spoken language of the countries chosen by the participants (who have chosen a European destination countries as first answer); 67.07% of the residents in Africa prefer a French-speaking European country<sup>vii</sup>. Residents in Europe are more categorical, choosing to 79.49% French-speaking destinations.

## 5. DISCUSSION

This study was designed to determine the reasons that explain the migratory movement of sub-Saharan Africa citizens at three different stages: planning to travel and departure, settling into the host country, and finally the possibility of going back. These three stages, which we call the migration process, constitute a whole. It allows us to advance in the understanding of the evolution of the reasons for the migration behavior.

Regarding the reasons for leaving, this study updates what motivate the participants to leave their countries of origin: that is to say mainly the economic conditions. Three elements seem relevant to review:



a) The relationship between economic and security reasons and the access to rights, as the scores awarded by participants are similar. It is conceivable that these two elements are complementary as a reason to migrate, but our approach does not allow us to examine more closely the relationship between these two elements. Thus, these elements must be verified subsequently.

b) We note the weak results of the war and instability factor. This can be explained by a classic social desirability standpoint, as the evocation of the negative elements of one's country undermines the social identity of the migrant and

c) Finally, the highest scores for non-immigrants. This seems to indicate that the stereotypes associated with the migration process and life in Europe, have greater impact in the African continent. They are less important once the trip has already taken place.

In terms of reasons for staying in Europe, the results of this study, as well as those presented in a previous publication (Velandia Torres & Lacassagne, 2012) confirm the significant choice of economic conditions as the most important reason to settle down on the European continent. In light of the complex relationship established between the factors "the advantages in Europe" and "disadvantages in Africa", we advanced the interpretation that this dichotomy represents the two sides of a single situation, which refers to identification of the role of reference point in our study.

Finally, concerning the reasons for going back to the home country, the results strongly consider a return with the economic means and the opportunity to contribute to the country's development. This preference expressed by migrant participants seems consistent with the reasons for leaving or staying in Europe and is, as we have already noted, the only socially rewarding way to return to the home country. Responses mentioning separation from the country and family, as well as obligations appear to play a much smaller role, and could be explained as avoidance of any manifestation of weakness or return without success.

## 6. FUTURE RESEARCH DIRECTIONS

Despite the progress of this study, the aim is not to establish generalities applicable to all Africans wishing to migrate or Africans in a migration process. Rather, it is to understand the reasons a specific population has to migrate, allowing access to underlying psychological phenomena. The results of our work provide three main objectives for future study: a) further the understanding of the contents of stereotypes (Bourhis & Gagnon, 2006; Bourhis & Leyens, 1999; Castel, 2007) about Africa, present in French society, b) determine more precisely the importance of reference point in explaining the grounds of the migration process and c) advance the understanding of relations between nationals of sub-Saharan Africa and the French population, thanks to the use of the RepMut<sup>viii</sup> questionnaire to measure racism and discrimination (Dovidio, Gaertner, & Kawakami, 2010; Légal & Delouvé, 2008), among other phenomena.

## 7. CONCLUSION

Three factors seem important for conclusion:

a) The importance of the study on the construction of the migration project, and the evocation of the return. Often, studies on migration privilege the time of intergroup contact. even if relevant, considering only this aspect "forgets" the notion of process and an overall understanding of the migration process, which limits the understanding of this complex reality.

b) The importance of identifying representative elements in relation to the construction of the migration process. The role played by these representations in intergroup relations is undeniable in this interethnic context.

c) Finally, although our study did not determine the weight of social desirability in the responses of participants, we find the low impact of the elements on the instability and war in the responses of African participants in our study; which contrasts with its presence in the European and western stereotypes and political discourses about Africa (Giblin, 2012; Hanson-Easey & Moloney, 2009; Orfali, 2012)

## REFERENCES

- Beauchemin, C., Hamel, C., Simon, P., & L'équipe-TeO. (2010). *Trajectoires et Origines. Enquête sur la diversité des populations en France* (Documents de travail 168) [Trajectories and Origins. Survey about the population diversity in France]. Paris, France.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5-34. doi:10.1080/026999497378467
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29(6), 697-712.
- Borrel, C., & Lhommeau, B. (2010). Etre né en France d'un parent immigré [Being born in France from an immigrant parent]. *Insee Première*, 1287(4). Retrieved from [http://www.insee.fr/fr/themes/document.asp?ref\\_id=ip1287](http://www.insee.fr/fr/themes/document.asp?ref_id=ip1287)
- Bourhis, R. Y., & Gagnon, A. (2006). Les préjugés, la discrimination et les relations intergroupes [Prejudice, discrimination and intergroup relations]. In R. J. Vallerand (Ed.), *Les fondements de la Psychologie Sociale* [Foundations of Social Psychology] (2nd ed., pp. 531-598). Montreal, Canada: Chenelière Education & McGraw-Hill.
- Bourhis, R. Y., & Leyens, J. P. (1999). *Stéréotypes, discrimination et relations intergroupes* [Stereotypes, discrimination and intergroup relations] (2nd ed.). Paris, France: Editions Mardaga.
- Camilleri, C. (1996). Les stratégies identitaires des immigrés [Identity strategies of immigrants]. *Sciences Humaines, Hors Série*, 15, 32-34.
- Camilleri, C., Kastersztein, J., Lipansky, E. M., Malewska-Peyre, H., Taboada-Leonetti, I., & Vasquez, A. (1990). *Stratégies identitaires* [Identity strategies]. Paris, France: Presses Universitaires de France.
- Castel, P. (2007). Catégorisation sociale, stéréotypes ethniques et discours racistes [Social categorization, ethnic stereotypes and racist discourse]. In J. P. Pétard (Ed.), *Psychologie Sociale* [Social Psychology] (pp. 335-392). Paris, France: Bréal.
- Castel, P., & Lacassagne, M.-F. (2011). Contrat de communication et partitions sociales [Contract of communication and social partitions]. In P. Castel, E. Salès-Wuillemin, & M.-F. Lacassagne (Eds.), *Psychologie sociale, communication et langage* [Social psychology, communication and language] (pp. 19-34). Paris, France: De Boeck.
- Conseil Constitutionnel. (2007). *Décision n° 2007-557 DC du 15 novembre 2007 - Loi relative à la maîtrise de l'immigration, à l'intégration et à l'asile* [Law on the immigration control, integration and refuge]. Paris, France.
- Dovidio, J. F., Gaertner, S. L., & Kawakami, K. (2010). Racism. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *The SAGE handbook of prejudice, stereotyping and discrimination* (pp. 312-327). London, UK: Sage Publications.
- Giblin, B. (2012). Extrême droite en Europe: Une analyse géopolitique [Extreme right in Europe: A geopolitical analysis]. *Hérodote*, 144(1), 3-17. doi:10.3917/her.144.0003
- Hanson-Easey, S., & Moloney, G. (2009). Social representations of refugees: Place of Origin as a delineating resource. *Journal of Community & Applied Social Psychology*, 19(6), 506-514. doi:10.1002/casp
- Institut National de la Statistique et des Etudes Economiques. (2014). *Composantes de la croissance démographique* [Components of demographic growth]. Retrieved March 13, 2014, from [http://www.insee.fr/fr/themes/tableau.asp?reg\\_id=0&ref\\_id=NATnon02151](http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATnon02151)
- Jumageldinov, A. (2009). *Diversités culturelles et construction identitaire chez les jeunes appartenant aux différents groupes ethniques au Kazakhstan. Approche comparative* [Cultural diversity and identity construction among young people from different ethnic groups in Kazakhstan. Comparative approach] (Doctoral dissertation, Lyon, France). Retrieved from [http://theses.univ-lyon2.fr/documents/lyon2/2009/jumageldinov\\_a#p=0&a=top](http://theses.univ-lyon2.fr/documents/lyon2/2009/jumageldinov_a#p=0&a=top)
- Légal, J. B., & Delouvé, S. (2008). *Stéréotypes, préjugés et discriminations* [Stereotypes, prejudice and discrimination.]. Paris, France: Dunod.
- Navas Luque, M., García Fernández, M. del C., & Rojas Tejada, A. J. (2006). Acculturation strategies and attitudes of african immigrants in the south of Spain: Between reality and hope. *CrossCultural Research*, 40(4), 331-351. doi:10.1177/1069397105283405
- Navas Luque, M., Rojas Tejada, A. J., García Fernández, M., & Pumares Fernández, P. (2007). Acculturation strategies and attitudes according to the Relative Acculturation Extended Model (RAEM): The perspectives of natives versus immigrants. *International Journal of Intercultural Relations*, 31(1), 67-86. doi:10.1016/j.ijintrel.2006.08.002

- Orfali, B. (2012). *L'adhésion à l'extrême droite: Étude comparative en France, Hongrie, Italie et Roumanie* [Joining the extreme right: A comparative study in France, Hungary, Italy and Romania]. Paris, France: L'Harmattan.
- Vallerand, R. J. & Thill, E. E. (1993). Introduction au concept de motivation [Introduction to the concept of motivation]. In R. J. Vallerand & E. E. Thill (Eds.), *Introduction à la psychologie de la motivation* [Introduction to psychology of motivation] (pp. 533-581). Laval (Québec, Canada: Editions Études Vivantes.
- Velandia Torres, C. R., & Lacassagne, M.-F. (2012). La construcción del proyecto migratorio y las razones para emigrar en la población de África subsahariana francófona. Un estudio intercontinental Europa-África [The construction of the migration project and the reasons for population migration in Sub-Saharan francophone Africa. An intercontinental study Europe-Africa]. *Universitas Psychologica*, 11(3), 743-753.

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<sup>i</sup> The maintenance of heritage culture and identity, and the relationship sought among groups

<sup>ii</sup> Immigrants, immigrants' descendants born in France, people born in the overseas territories, their descendants born in metropolitan France, and the French-born descendants of French-born nationals.

<sup>iii</sup> «50% des descendants d'immigrés originaires d'Afrique Subsaharienne ayant fait au moins un séjour d'un an ou plus en dehors de la France métropolitaine avaient moins de 6 ans lors du premier départ».

<sup>iv</sup> The full explanation of variables and explanatory factors, as well as view factor analysis of the questionnaire, was published in *Universitas Psychologica* (Velandia Torres & Lacassagne, 2012)

<sup>v</sup> Economic factors include reasons touching on the seeking of the satisfaction of personal and family needs, giving the opportunity to help the family or the avoidance of problems (unemployment/unpaid work).

<sup>vi</sup> Economic conditions include reasons that correspond to opportunities for finding a job and satisfactory and stable situation, possibly with a higher standard of training, and the opportunity to help the family.

<sup>vii</sup> France, Belgium, Switzerland and Luxembourg.

<sup>viii</sup> RepMut ([www.RepMut.com](http://www.RepMut.com)) is a tool that has been developed from the design of social partitions (Castel & Lacassagne, 2011) by a working group (Castel, Lacassagne, Mangin, Peteuil, Velandia-Coustol) from Socio-Psychology and Sport Management laboratory (SMPS). He has been a software development supported by Synerjinov. Version 2, funded by Welience is under development (<http://spms.u-bourgogne.fr/>).

## Chapter 27

# THE IMAGE OF THE BELARUSIAN STATE IN STUDENTS' CONSCIOUSNESS DURING THE RECENT FINANCIAL CRISIS

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### ABSTRACT

The image of the state depends on what the economic and political situation in the country is, and on how accurate and timely actions of the authorities are. The objective of this study was to investigate the image of Belarusian State in common consciousness of students before, during and after the financial crisis. Transversal design was carried out in three stages: before the global crisis (September-November 2008), against the backdrop of the acute phase of its occurrence in Belarus (October-November 2011), and then November 2013. A total of 480 students (180&180&120) from Belarusian universities took part in the research. Semi-projective techniques (symbol-association ranking method and modified semantic differential with the stimuli concept of the “State of Belarus”) combined with the “Citizen Questionnaire”. The values orientations were also measured. The results of research showed that during the acute phase of the crisis there have been significant shifts in the reflection of the state in the minds of students. The financial crisis in Belarus led to a sharp decline in authority of the government. The image of the Belarusian State in 2011 was distorted in comparison with the data in 2008 and 2013. It clearly demonstrated the political resentment of citizens due to the effects of the financial crisis. Thus, errors and failures in economic policy had a negative impact on the image of the state and its characteristics as a socio-political institution.

*Keywords:* Belarusian State, financial crisis reflection, modified semantic differential, test of associations, political resentment of citizens, “citizen-state” system.

## 1. INTRODUCTION

The purpose of the State (as a form of organization of modern society and the leading subject of economic policy) is to ensure the unity and independence of the society, the maintenance of public order and security, as well as perform other functions through the power of social work and law. In assessing the current situation as stable or unstable responsibility rests with the State.

Local instabilities might lead to global consequences in the world space (economic, political, informational, cultural etc.), which is still being developed. As an illustrative example of this, the global financial and economic crisis has resulted in political destabilization phenomena such as the Occupy Wall Street protest movement (Ross, 2012).

Political subjects can get feedback from society and its groups about current situation by exploring the image of the state in the consciousness of people. It is important to research the youths' image of the state and their attitudes towards it. Youth is a specific social group, which to a significant degree determines further development of the country and society, and which is the main strategic resource of any state. Due to age specifics, youth is the group which is the most adjusted to any social changes. However, Olesich (2009) states that when young people, especially students, are dissatisfied with such changes, they might be eagerly involved in protest reactions and even in extremism.

## 2. BACKGROUND

Political psychology examines the image of the state as an important phenomenon in mass and individual political consciousness. Boulding (1959) had used the concept of the “image” to explain the causes of hostility. There are different concepts of the image of the state.

Fisher (1990) defines "image" as an organized representation of the social object in the cognitive system of the individual (p. 151). As noted by the leading Russian expert in the field of psychological semantics, the academician Petrenko, for the political and economic institutes to be able to function, certain figures of consciousness, which implement the economic and political behavior, are required (Petrenko & Mitina, 1997). According to Shestopal (2013), a political image as any other image, is on one hand - a reflection of some real characteristics of the object of perception, i.e. political power, leader's personality, state, etc. On the other hand, the image is a projection of expectations of the subject's perception. Political image reflects peoples' needs, motives, emotions, cognitions, concepts, stereotypes, values and demands of the public to authorities (Shestopal, 2013).

The image of the state as a socio-political institution is exposed to situational factors. It depends on the economic and political situation in the country and on how accurate and timely the actions of the authorities are. The economic crisis has acted as a natural political-psychological experiment. From psychological point of view, reforms or crises could be viewed as a "natural experiment" (Lewis, Webley, & Furnham, 1995). Typically, people in times of crisis feel more lost, dissatisfied, anxious and distrustful than usual (Maital, 1982). In terms of Easton and Dennis, whose theory of political support is based on psychoanalytic and behaviorist ideas, human factor intensifies the stress of political system (Easton & Dennis, 1969). This stress of political system, caused by economic crisis, is manifested in political behavior of citizens as distortion of their citizenship identity, decreased loyalty to their state (up to emigration) and protest activity (up to putsches and "color revolutions"). Therefore, in a context of the economic crisis it is expedient to explore the image of the state as a complex and integrative phenomenon, which determines and changes citizens' political behavior (Shestopal, 2013) and could be an informative empirical indicator of political consciousness of different social groups (Deyneka, 2013).

### 3. DESIGN

#### 3.1. Research objectives and design

The objective of this study was to investigate the image of the Belarusian State in the students' conscious before, during and after the financial crisis. Transversal design was carried out in three stages: 1) before the global crisis (September-November 2008); 2) against the background of the acute phase of its occurrence in Belarus (October-November 2011); and 3) two years later (November 2013).

#### 3.2. Method

**3.2.1. Participants.** A total of 480 students from Belarusian universities took part in the research. Groups at the first and the second stage (360 Ss) were the most balanced: 180 participants in each stage were 90 female and 90 male aged 19 to 24 (mean 21). 120 students took part at the third stage of the study (68 female and 52 male aged 18 to 22, mean 20.3). These were students of humanitarian and technical specialties.

**3.2.2. Instruments.** According to Hermann (1996), political psychology needs a combination of different approaches and methods. The research was based on a combination of questionnaires and semi-projective methods. Semi-projective methods make analysis deeper (Binford, 1984) by re-creating image of phenomenon in common consciousness, which is characterized by conscious and unconscious elements and intertwining of rational and emotional contexts.

A self-developed symbol-association ranking method with the stimuli concept of the "State" was used. The test materials contain two identical lists of association symbols. One of them demands associations with the state as a real (today's) institute, and the other as an ideal one (the way it should be). The list of associative concepts includes: *state functions* (governance, rule, direction and control) the state of society, embodying the *political activity*

*products* (rule of law, stability, freedom, order, social security), the specific *people and groups* that are associated with the State (President, ruling class, parties, the bureaucracy), some *form of interaction* between elements of the system "citizen-state" (a partner, a tyrant, a competitor, or nobody). The second method was the modified semantic differential (MSD) method (Deyneka, 2000) with stimulus "State of Belarus", which includes 20 descriptors.

The citizen's attitude survey on the second and third stages of the study was also used. This third method consisting of 24 affirmations with a seven-point scale of responses was titled "Citizen Questionnaire". It reflects the aspects of economic and political patriotism, economic optimism, solidarity, time perspective, and assessing the most pressing problems of society. It was investigated as follows:

- direct (positive or negative) and indirect (political optimism, patriotism, solidarity, time perspective) estimating the country's image and the authority of the government;
- sphere of the image of the country (economic, political, mental);
- control components of vital functions of the society (law, morality, tradition);
- pressing problems of the society at the moment (corruption, social and economic stratification, unemployment, migration).

All three tools were tested for constructive validity (by factor analysis) and reliability (Spearman-Brown criterion was used to check the reliability of homogeneity) and have proved to be effective for monitoring the image of the Russian state, and for cross-national comparative studies in Germany, France, USA, Mozambique (Deyneka, 2000, 2001, 2012; Deyneka & Minina, 2011; Matemulane & Deyneka, 2012; Deyneka, 2013). In addition, the structure of value orientations (Johnston, 1995) among students of Belarusian universities was studied.

*Statistical analysis of Data.* We used nonparametric statistical methods. The significance of differences was revealed using the van der Waerden X-criteria (van der Waerden, 1952; Storm, 1967). The correlation analysis was produced using Spearman method. The factor analysis was performed using principal components with Varimax rotation method.

## 4. RESULTS

### 4.1. Results of the first and second stages of the study

Results of the symbol-association ranking method are represented in Table 1. In the countries where the state is trustworthy test results show that the products of political activity and function of the state in the associative series occupy the first position, and not the subjects of power or form of interaction between elements of the system "citizen-state".

*Table 1. Intergroup comparisons of the symbol-association ranking method with stimulus "State of Belarus": 2008x2011.*

"The State of Belarus" (ranking associations)	The comparative periods						The van der Waerden X-criteria
	Before the global crisis (September-November 2008)			During the financial crisis in Belarus (October-November 2011)			
	Rank	M	SD	Rank	M	SD	
Political Parties	13	10.87	4.45	12	11.42	4.58	< 1.96
Social Protection	12	10.86	4.22	13	11.44	4.46	< 1.96
Domination	6	7.62	4,85	<b>4</b>	6.86	4.59	< 1.96
Partner	15	12.54	3.33	16	12.37	3.30	< 1.96
Nobody	18	13.83	5.01	10	10.87	5.67	3.70***
The ruling class	8	10.87	4.75	8	8.27	4.71	2.16**
Order	9	9.95	4.57	11	11.37	7.54	2.04**
President	<b>1</b>	2.97	3.64	<b>1</b>	3.87	4.08	2.53**
Leadership	<b>4</b>	7.03	3.95	7	7.81	4.13	< 1.96
Tyrant	11	10.29	6.30	<b>2</b>	6.44	5.79	6.25***

Table 1. Intergroup comparisons of the symbol-association ranking method with stimulus "State of Belarus": 2008x2011 (cont.).

Stability	14	11.11	4.91	17	12.73	7.06	2.86***
Control	<b>2</b>	5.99	3.62	<b>3</b>	6.52	4.03	< 1.96
Bureaucracy	10	9.66	4,99	6	7,69	4.83	2.05**
Management	<b>3</b>	6,14	3.59	<b>5</b>	7.12	3.28	3.41***
Freedom	17	13.08	4.52	18	13.91	4.49	< 1.96
Competitor	16	12.60	3.41	15	12.17	7.06	< 1.96
Legitimacy	7	9.18	4.18	14	11.55	4.62	3.65***
Regulation	<b>5</b>	7.54	3.86	9	8.86	3.76	3.17***

Note: a) the smaller the rank place of the associative concepts, the more it is important;  
 b) significantly different<sup>^</sup> \* – p<0,05 (criteria > **1.96**); \*\* – p<0,01 (criteria > **2.47**); \*\*\* – p<0,001 (criteria > **3.29**).

In Table 1, the data of ranking associations with the term "The State of Belarus" in 2011 was also deformed with the data in 2008. "Tyrant" got the second place in the ranking of associations (after "president"), then go "control", "domination" and "management". Products of political activity - order, stability and legitimacy - significantly shifted to the periphery. (A perfect image of the state went even further from the real one in 2011 than in 2008). Thus, errors and failures in economic policy had a negative impact on the image of the state (and its characteristics) as a socio-political institution.

Table 2. Intergroup comparisons of MSD: 2008x2011x2013.

The MSD descriptors (and the level of significance of differences)	The State of Belarus in 2008		The State of Belarus in 2011		The State of Belarus in 2013		van der Waerden X-criteria 2008x2011/ 2011x2013
	M	SD	M	SD	M	SD	
Moral/immoral***	0.91	1.33	-0.20	1.88	<b>1.15</b>	1.40	4,25/5.16
Decisive/indecisive	0.21	0.06	-0.06	0.71	0.71	1.50	< 1.96/3,23
Legal/illegal***	0.67	1.63	-0.25	1,91	1.61	1.49	4,06/6.08
Responsible/ irresponsible***	0.86	1.46	-0.10	1.81	0.94	1.61	4,62/4.85
Stimulatory/coercive**	-0.64	1.73	-1.18	1.64	-0.20	1.84	2.75/4.40
Safe/dangerous***	1.32	1.49	<b>0.17</b>	1.79	<b>1.37</b>	1.42	6,00/5.57
Credible/not credible***	0.40	1.54	-1.14	1.71	0.60	1.66	7,26/7.52
Constructive/ destructive***	0.85	1.33	-0.22	1.62	0.61	1.44	5,83/3,91
Democratic/ totalitarian***	-0.28	1.80	-1.19	1.67	0.34	1.71	4,67/6.83
Native/alien***	1.99	1.40	<b>0.94</b>	2.00	1.69	1.66	4,54/3.14
Progressive/backward***	0.22	1.68	-0.67	1.63	0.31	1.51	4,77/4.88
Controlling/not controlling***	1.70	1.54	<b>1.54</b>	1.69	1.42	1.24	< 1.96/< 1.96
Calm/disturbing***	1.74	1.46	<b>0.14</b>	1.87	1.44	1.52	7,34/5.83
Friendly/hostile***	1.76	1.28	<b>0.47</b>	1.85	1.73	1.22	6,34/5.74
Independent/dependent***	0.20	1.78	-0.66	1.89	0.19	1.93	3,88/3.57
Enabling/not enabling***	-0.57	1,53	-1,22	1,57	0.23	1.51	3,86/7.10
Fair/unfair***	-0,06	1,41	-0,81	1,62	0.27	1.45	4,17/5.43
Prospective/hopeless***	0,47	1,76	-0,55	1,73	0.04	1.53	5,13/2.75
Profitable/unprofitable***	-0,20	1,51	-1,27	1,52	-0.42	1.56	5,74/4.36
Humane/inhumane***	1,01	1,68	-0,14	1,77	1.14	1.39	5,55/6.10

Table 2 contains the results obtained by the modified semantic differential. Table 2 using MSD showed that during the acute phase of the crisis there were significant shifts in the reflection of the state in the minds of students. Only 2 of the 20 descriptors ("decisive" and "controlling") didn't show difference between the State's representations in 2008 and in 2011. Only the descriptors "native" and "friendly" remained in the positive zone of the semantic space according to data of 2011. The financial crisis in Belarus led to a sharp decline of the authority

of the government. Analysis of descriptors showed that the Belarusian government was recognized as totalitarian, not credible, coercive and forbidding. Estimates for the descriptors “moral”, “humane”, and especially “fair” decreased.

Situational factor reflected in the system of values of young people. Some negative manifestations of value’s orientations can be seen in Table 3. So, the role of money and entertainment has increased (block of the terminal values). The role of values of tolerance and sense of humor has declined and intolerance of shortcomings of people increased (block of the instrumental values).

*Table 3. Intergroup comparisons of Value Orientations: 2008x2011  
(only statistically significant differences are shown).*

Value orientations (ranking test)	The comparative periods						van der Waerden criteria
	Before the global crisis (September-November 2008)			During the financial crisis in Belarus (October-November 2011)			
	Rank	M	SD	Rank	M	SD	
<b>Terminal Values</b>							
Comfortable Life (Money)	6	7.98	4.59	4	6.60	4,27	2.939**
Pleasure (Entertainment)	16	14.03	3,87	15	12.78	4.14	2.641**
Mature love	2	4.62	4.85	2	6.86	4.59	2.890**
<b>Instrumental Values</b>							
Non-Forgiveness (Intolerance of shortcomings)	18	16.00	3.26	18	15.00	3.96	2.158*
Broad-Mindedness (Tolerance)	7	8.57	4.55	13	10.22	4.86	3.233***
Cheerfulness (Sense of humor)	3	6.30	4.87	4	7.49	4.84	1.966*

If we turn to personal value orientations as a factor of the representation of Belarusian State in common consciousness, the orientation on the “happiness of others” has most clearly manifested itself. It showed the greatest number of significant correlations with the estimates of the MSD descriptors. Students with more pronounced collectivist orientations showed a more pronounced grudge against the state during the acute phase of the crisis.

#### **4.2. Results of the third stage of the study**

We proceed to the analysis of data obtained two years after the financial crisis (in late 2013) on the background of the stable phase of development of the country.

According to the ranking of associations, the image of Belarusian State in the minds of the students showed almost the same characteristics as that in 2008. It still does not match with the image of the ideal state in which the products of political activity occupy the first position in the associative series. But the functions of the state (leadership, management, control, regulation) took the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> places immediately after the “president” (1<sup>st</sup> place) and “tyrant” has moved to the end of the list (16<sup>th</sup> place).

The MSD data showed a shift from negative to positive territory semantic space and also return to the data obtained before the crisis (Table 2). Only two descriptors (small values) were in the negative area of semantic space – “stimulatory” and “profitable”. At the same time Belarusian power ceased to be “totalitarian” and again recognized as “democratic”. The State in modern Belarus estimated as a moral and humane, calm and safe, legal, responsible and controlling. High scores are also assigned descriptors such as “native” and “friendly”. Thus, in the image of the state, which quickly overcame the financial crisis and cope with the difficulties, all the indicators, confirming the features of the welfare state, not just moved into positive territory, but also significantly increased.



Complementing the data obtained by symbol-association method and MSD with the multifactorial survey "Citizen Questionnaire" (Table 4), we can say on the positive trends in the civic consciousness of Belarusian students. Comparative analysis of the questionnaire in 2011 and 2013 shows that in 2013, relations in the "citizen - state" system (citizen is a conditional group as students) are not perfect, but they differ greatly crisis relations. Many students believe in the prospect of the achievements of Belarus in a global world. The subjects expressed a high degree of pride for their country again and lower willingness to migrate from Belarus. With regard to economic optimism, it remained at a low level.

Table 4. Intergroup comparisons of Citizen Questionnaire: 2011x2013.

The citizen Questionnaire		Groups				van der Waerden criteria
		2011		2013		
N°	The Statements	M	SD	M	SD	X
3	For the sake of progress, one can refuse many cultural values.	3,64	1.89	3.32	1.82	2.167
4	I believe that economic situation in Belarus will improve in 3 years.	2,53	1.71	2.97	1.68	3.424
5	Implementation of new laws in my country almost always makes me anxious.	<b>4,87</b>	1.88	4.02	1.92	3.900
7	The overall conditions in Belarus allow people making long-term plans.	2.12	1.57	<b>3.39</b>	1.61	7.217
8	I always try to obey the laws of my country.	4.81	1.70	5.40	1.55	3.714
9	If I had an opportunity to leave Belarus, I would do it without hesitation.	5.51	1.83	<b>4.71</b>	2.00	5.312
12	Belarusian citizens understand and accept the main political goals of their government.	2,92	1.62	<b>3.66</b>	1.54	5.010
14	The main problem of Belarus is a high level of corruption.	4.51	1.65	4.14	1.51	2.552
15	I believe that our country is able to achieve a lot in a global world.	3.52	1.80	4.00	1.69	2.824
16	I am saddened by the possibility of rising retirement age in the country.	4.37	2.07	4.81	2.07	2.242
17	In general, we can acknowledge the decency of the Belarusian governmental officials.	2.68	1.66	<b>3.39</b>	1.66	6.007
18	For me, my own material well-being is more important than protection of the cultural environment.	4.56	1.63	<b>5.40</b>	1.56	3.250
19	Principles of morality in our society work better than the law.	3.78	1.69	<b>4.71</b>	2.00	3.097
21	In today's Belarusian policies, there is a coherent development strategy and a clear set of priorities.	2.79	1.64	<b>3.76</b>	1.51	5.580
22	Governmental authorities are responsible for all the problems of the modern society.	<b>5.10</b>	1.76	4.47	1.39	4.408
23	I consider the problem of immigration to be the most acute problem in our country.	3,15	1.85	3.70	1.81	2.548
24	I am proud to be a citizen of Belarus.	4,43	1.97	<b>5.50</b>	1.66	5.482

Students are much less accusative toward authorities because of current problems in the country. Honesty of the Belarusian statesmen in 2013 was rated higher than in 2011. Effectiveness of social regulators, namely respect for the law and the role of morality increased in the student consciousness. As for the traditions and cultural values, there is a paradox observed. On the one hand, students expressed reluctance to abandon the cultural values for progress. On the other hand, they expressed a high degree of agreement that the material well-being is more important than preserving the cultural environment.

Table 5. The factors of global optimism.

Weight of the factor (10.3)			
Belief that Belarus is able to achieve a lot in a global world (0.670)	The overall conditions in the Belarus allow people making long-term plans (0.654)	The presence of the image of the future (0,638)	Coherent strategy for national development (0.507)
I am proud to be a citizen of the Belarus (0.539)	Belarusian citizens could have sacrificed personal interests for the wellbeing of the society (0.505)	Principles of morality in our society work better than the law (0.449)	Faith in the improvement of economic situation in the next three years (0.430)

(For each characteristic is indicated by the factor loadings in parentheses)

The matrix of the six factors was obtained from factor analysis of the questionnaire data after rotation technique. The first most significant factor was named “*factor of global optimism*” (Table 5). Faith in their country and its rightful place in the global world, the presence of the image of the future of Belarus, the possibility for citizens to set long-term goals (stability) formed the core factor. The adoption of national development strategy and the economic optimism are also signs of a factor. It is important to note that national pride, solidarity (sacrifice) and reliance on morality also included as features in the factor. Strong correlations between factors signs suggest that students associate global optimism with mental peculiarities Slavic nature and manifestations of patriotism, identification with their country.

Table 6. Orientation factors for material well-being.

Weight of the factor (7.83)		
For me, my own material well-being is more important than protection of the cultural (0.664)	If I had an opportunity to leave the Belarus, I would do it without hesitation (0.629)	For the progress's sake one can refuse many cultural values (0.619)
Any citizen must always rely only on himself/herself (0.496)	Governmental authorities are responsible for all the problems of the modern society (0.484)	Implementation of new laws in my country almost always makes me anxious (0.417)

The second factor was named “*factor orientation to material well-being*” (Table 6). Willingness to emigrate and abandon cultural values, as well as charges and claims to power were signs of this factor. Correlation analysis showed that who are more focused on material wealth are more willing to leave the country ( $r = 0.31, p < 0,001$ ).

The third factor was named “*factor relations between citizens and the state*”. Citizens’ understanding (and acceptance) of the purposes of the Government, the recognition of decency statesmen, obedience to the law and disagreement with the statement “Governmental authorities are responsible for all the problems of the modern society” were signs factor. The remaining three factors describe the current problems of society.

## 5. DISCUSSION

According to the Leiser, Bourgeois-Gironde, & Benita (2010), people tend to be more inclined to attribute intentional causes of the crisis than systematic. Reflection of the Belarusian State in the minds of youth clearly demonstrated the political resentment of citizens due to the effects of the financial crisis. According to specialists and analysts, recession and currency crisis, which started in 2011, were provoked by increased spending on social programs in context of forthcoming election in 2010 (Stern, 2011) and by unjustified raise of people’s salaries and income, which led to increased inflationary pressure (Kruk, 2011). Financial crisis resulted in a decreased standard of living. Mean salary (in USD) has decreased 1.6 times, from \$500 to \$312, in a situation of growing prices and shortage of goods. Since April 2011, there has been a drastic fall in employment levels, especially in construction and finance areas. For

the first time during rather long period of time, workers of different sectors in Belarus went on strikes.

The Belarusian government and the long-term President had kept the economic situation within the framework of relative stability and prosperity of citizens despite the global financial and economic crisis in all European countries. However, in 2011 they had failed to protect the citizens from financial loss and psychological stress, which is reflected in the results of our study of youth consciousness. Belarus has seen huge queues to exchange currency (financial panic). Citizens were buying food and household goods (consumer hype). The authorities' professionalism and political flexibility were sufficient to overcome the crisis and not be in a situation of a "color" revolution.

If the territorial image of the country is to be considered, Belarus is a socially oriented state with strong presidential rule, "vertical power" and prevalence of state ownership. Belarus is generally perceived by Russians as the "sanctuary of socialism" and European center of social, ethnic and confessional stability. It is said to be characterized by high level of safety, smooth highways and clean streets, lack of beggars, inexpensive medical services, orderliness and friendly people (Sharuho, 2009). According to specialists from the Gallup Institute in Mail.Ru (2013), median income of a family in Belarus is 15 085\$ per year, which is higher than in Russia, or Poland, or Baltic countries.

Nevertheless, thanks to the strength of the stock of political conservatism and statehood and the effectiveness of social control (law, morality, traditions), the political resentment of youth hasn't transformed into destructive forms of political behavior. The result, which we received, corresponds to the data provided by Leiser et al. (2010), according to which of the factors affecting the dynamics of the crisis in the country, a factor of State's non-interference in the development of the crisis is essential and not positive. At the same time, an important role in overcoming the consequences of the crisis was played by such qualities of the Belarusian mentality as patience, hard work, discipline and responsibility, moral and normative behavior, as well as sacrifice.

The concept of "tense system" (Ross & Nisbett, 1991), as well as "unbalanced system" ("citizen-state"), "paternalism" and others may be useful for the analysis of the psychological causes of a favorable outcome of the crisis in 2011.

## 6. CONCLUSIONS

The research that was carried out has proved that semi-projective methods are effective in studying the everyday political and economic consciousness. It is advisable to monitor the state of consciousness of certain social groups, especially the youth.

The financial crisis in Belarus led to a sharp decline of the authority of the government, but the experience of statehood and the effectiveness of the social controls (law, morality, traditions) prevented an escalation of the situation. Behavior of citizens in crisis situations is determined not only by situational factors, but also by mental peculiarities.

With regard to the values of students, the collectivist orientation was largely associated with the grudge against the state.

The image of the state, which quickly overcame the financial crisis, became better. All the indicators, confirming the features of the welfare state significantly increased in the student consciousness.

Belarusian students demonstrate emotional connection with their country now but the system of goal-setting is a problem area in civilian politics and requires special attention.

## REFERENCES

- Binford, M. B. (1984) Semi-projective methods, political attitudes and political reasoning. *Political Methodology*, 10(4), 413-446.
- Boulding, K. (1959). National images and international systems. *The Journal of Conflict Resolution*, 3(2), 120-131.

- Deyneka, O. S. (2000). Ekonomiko-psikhologicheskiye posledstviya politiki perekhodnogo perioda [Economic and psychological consequences of transition period politics]. In V. U. Bolshakov (Ed.), *Obshchestvo i politika: Sovremennyye issledovaniya, poisk kontseptsiy* [Society and politics: Modern studies, search of concepts] (pp. 442-475). Saint-Petersburg, Russia: Izdatel'skiy dom SPbGU.
- Deyneka, O. S. (2001). *Attitude to state of Russia citizenry*. Paper presented at the VII European Congress of Psychology, London, UK.
- Deyneka, O. S. (2012). *Comparative analysis of the image of the State among Russian and French students*. Paper presented at the 35th annual International Society of Politic Psychology (ISPP) meeting, Chicago, IL.
- Deyneka, O. S. (2013). *Psikhologiya preventivnoy politiki pravonarusheniy v ekonomike i biznese* [Political psychology and crime prevention in economics and business]. Saarbrücken, Germany: Palmarium Academic Publishing.
- Deyneka, O. S., & Minina, Z. P. (2011). The image of modern economic policy of managers in Russia and Germany. In V. A. Dines, A. N. Neverov, & V. A. Rusanovskiy (Eds.), *Proceedings of the International Research-to-Practice Conference "Economic psychology: Past, present, future"* (pp. 291 -296). Saratov, Russia: Saratov State Socio-Economic University.
- Easton, D., & Dennis, J. (1969). *Children in the political system: Origins of political legitimacy*. New York, NY: McGraw-Hill.
- Fisher, R. J. (1990). *The social psychology of intergroup and international conflict resolution*. New York, NY: Springer-Verlag.
- Hermann, M. G. (Ed.). (1986). *Political psychology: Contemporary problems and issues*. San Francisco, CA: Jossey-Bass.
- Johnston, C. S. (1995). The Rokeach Value Survey: Underlying structure and multidimensional scaling. *Journal of Psychology: Interdisciplinary and Applied*, 129(5), 583-597.
- Kruk, D. (2011, May 5). *Is Belarus in danger of economic crisis?* Retrieved July 23, 2014, from <http://www.easternpartnership.org/publication/economy/2011-05-05/belarus-danger-economic-crisis>
- Leiser, D., Bourgeois-Gironde, S., & Benita, R. (2010) Human foibles or systemic failure - Lay perceptions of the 2008-2009 financial crisis. *Journal of Socio-Economics*, 39(2), 132-141.
- Lewis, A., Webley, P., & Furnham, A. (Eds.). (1995). *The new economic mind: The social psychology of economic behavior* (2nd ed.). London, UK: Harvester Wheatsheaf.
- Mail.Ru. (2013, December 20). Gallup: Dokhod belorusov vyshe, chem v RF, Pol'she, Litve i Latvii [Group Gallup: Belarusians income is higher than in Russia, Poland, Lithuania and Latvia]. Retrieved July 23, 2014, from <http://news.mail.ru/inworld/belorussia/economics/16177131/?frommail=1>
- Maital, S. (1982). *Minds, markets and money: Psychological foundations of economic behavior*. New York, NY: Basic Books.
- Matemulane, J. S. Z., & Deyneka, O. S. (2012). *State management of Mozambique*. Saarbrücken, Germany: LAP Lambert Academic Publishing.
- Olesich, N. Y. (2009). Politiko-psihologicheskie osnovaniya molodezhnogo politicheskogo ekstremizma: Istoricheskiy aspekt [Political and psychological origins of political extremism of the youth: An historical aspect]. *Vestnik Sankt-Peterburgskogo Universiteta*, 12(4), 183-187.
- Petrenko, V., & Mitina, O. (1997). *Psikhosemanticheskij analiz dinamiki obschestvennogo soznaniya* [Psychosemantic analysis of dynamic of public consciousness]. Moscow, Russia: Moscow University Press.
- Ross, J. T. (2012). *Occupy Wall Street: A global roadmap for radical economic and political reform*. White River junction, VT: Chelsea Green Publishing.
- Ross, L., & Nisbett, R. E. (1991). *The person and the situation: Perspectives of social psychology*. New York, NY: McGraw-Hill.
- Sharuhu, J. H. (2009). Cozdaniye obraza territorii kak odin iz podkhodov sovremennogo stranovedeniya (na primere obraza belarusi) [Creating a territory as one approach of contemporary regional geography (image of Belarus case)]. *Pskov regionologicheskyy Journal*, 8, 105-114. Retrieved from <http://cyberleninka.ru/article/n/sozдание-obraza-territorii-kak-odin-iz-podhodov-sovremennogo-stranovedeniya-na-primere-obraza-belarusi>
- Shestopal, E. (2013). Theoretical and methodological problems of the study of political perception. In E. Shestopal (Ed.), *Citizens and Leaders in a Comparative Perspective* (pp. 70-89). Moscow, Russia: Moscow University Press.

- Stern, D. L. (2011, May 31). *Belarus faces an economic precipice*. Retrieved July 23, 2014, from Globalpost news website: <http://www.globalpost.com/dispatch/news/regions/europe/110530/belarus-ruble-currency-belarusian-economy>
- Storm, R. (1967). *Wahrscheinlichkeitsrechnung, mathematische statistik und statistische qualitätskontrolle* [Probability theory, mathematical statistics and statistical quality control]. Leipzig, Germany: VEB Fachbuchverlag.
- van der Waerden, B. L. (1952). Order tests for the two-sample problem and their power. *Indagationes Mathematicae*, 14, 453-458.

## ADDITIONAL READING

- Osgood, C. E. (1979). *Focus on meaning: Vol. 1. Explorations in semantic space*. Janua Linguarum. Series Minor. Berlin, Germany: Mouton de Gruyter.

## KEY TERMS & DEFINITIONS

**Political image:** political image as any other image, is on one hand - a reflection of some real characteristics of the object of perception, i.e. political power, leader's personality, state, etc. On the other hand, the image is a projection of expectations of the subject's perception. Political image reflects peoples' needs, motives, emotions, cognitions, concepts, stereotypes, values and demands of the public to authorities (Shestopal, 2013).

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## Chapter 28

# PROJECT FOR WORK MANAGEMENT AND SOCIAL INCLUSION OF MENTAL HEALTH USERS IN BRAZIL

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### ABSTRACT

As a pioneer proposal for social inclusion through work, the Work Management Project (WMP) is presented as a model of a new caregiving practice in the field of mental health designed to establish the conditions for access and permanence of individuals with mental disorders in the formal job market. Underway in the city of Rio de Janeiro/RJ, Brazil since 2008, this project today has 50 users of different mental health services and devices in a number of locations in the Greater Rio area, working at Prezunic-Cencosud S.A., with all their labor rights guaranteed. Based on specific guidelines, the WMP supports the real caregiving demands of this population to enable the users to exercise their citizenship rights through formal work.

*Keywords:* work management, citizenship, mental disorder, mental health.

## 1. INTRODUCTION

The Work Management Program (WMP) (Salis, 2011) was established to recover the rights of citizenship for people historically marginalized from human development plans, as well as to offer companies opportunities to invest in new knowledge in personnel administration, leading to new social responsibility actions. At the same time, the WMP also opens up a new field of activity for psychology professionals, along with investments in the academic formation of psychologists.

Considering that in the State of Rio de Janeiro, the 1st Region Public Labor Prosecutor's Office (MPT/RJ) on May 12, 2012 incorporated "psychosocial deficiencies" (based on United Nations Convention 2006/08) — that is to say, persons with "mental disorders" — in Law No. 8.213, July 24, 1991, this population now is conclusively included in the legal obligations of companies regarding the requirement to fill mandatory work positions.

Toward this end, by assuming a specific project aimed at people with mental disorders and within a self-sustainable perspective, a company in the State of Rio de Janeiro not only will be in compliance with the law but also will contribute to building a society that is more tolerant in terms of the diversity and differences.

Inspired in the U.S. Support Employment model, the WMP was first implemented in Brazil in the city Nova Friburgo, RJ (2005). In 2007, it obtained public institutional support through participation in a larger project of the Nise da Silveira Municipal Institute (IMNS/RJ). In 2008/9, the WMP took on the format of a consulting company and began to offer services to the Prezunic Comercial Ltda. supermarket chain.

This chapter presents the qualitative and quantitative results achieved since implementation of the pilot project of the company on behalf of the Prezunic-Cencosud S.A. in 2012.

## 2. DEVELOPMENT

### 2.1. Paradigms of the Work Management Project

**2.1.1. As "invention".** It is through understanding of the reformist Italian proposal of "invention" (Vasconcelos, 2002) and the influence of "American pragmatism" that the WMP

proposes its actions. Franco Basaglia, an Italian physician, father of the Italian Psychiatric Reform (Law no. 180/1978 – Basaglia Law – which abolished mental asylums in Italy), proposed a radical rupture with some of the paradigms that had oriented the understanding and treatment of madness. Thereafter, a series of possibilities emerged that even extended through to the most current of proposals for social inclusion for this population. For its part, the government of the United States, more than thirty years ago, has been investing in effective programs for inclusion and preparation of these persons for the job market (Weingarten, 2001). Based on this Support Employment proposal (Leal, 2008), the WMP intends to bring its version, the Brazilian “invention”, to support a job strategy for mental health users in Brazil.

Among its strategies, the WMP will implement training of a new field agent, the work manager, whose job is to monitor and train a worker in his or her own place of work. Moreover, and listening to the discourse of the mental health users themselves, regarding their legitimate desire to work with a signed employment contract, the WMP will seek out the conditions that can make this occur. The “invention”, together with pragmatism, in this case, comes about through the affirmative action in the building of a practice that until now has not been possible from a number of different points of view.

Even today in Brazil, there are no laws, with the exception being the State of Rio de Janeiro, protecting the work of this specific population. Furthermore, we continue to have a very rigid labor organization imposed by the capitalist mode of production, which has led to the establishing the conditions of exclusion for vulnerable populations, which are not adapted to the standard model of formal workers. Therefore, the issues that involve the conditions of access and permanence of people with mental disorders in the formal job market were the first challenges the WMP faced.

**2.1.2. Access.** This chapter could begin by affirming that, in Brazil, if there is any possibility of the acceptance of the WMP by a company, it resides in what can be offered as a counterpoint to the employer. That is, the acceptance of “crazy people” in the workforce includes “risks” that the company only will accept through the force of law, or the result of a generous commitment to social responsibility. Certainly, the most effective predisposition to achieve this result is through compliance with the law.

In the case of our companies, the counterpart to the employer is in the possibility of being in compliance with Law 8.213/91 that determines that a company with more than 100 employees must make available 2% to 5% of its job positions to people with deficiencies; but this does not include “mental disorders”. So it was through association of people diagnosed with deficiencies together with mental disturbances that the WMP proposed the hiring of the first six individuals (IMNS/RJ), that is, people with both diagnoses, within the quota plan of a company. First, this was the first “protected” possibility of access to formal work for mental health users: those who had a situation of associated deficiency. Second was the possibility for access, which would include mental health users without a deficiency diagnosis, through a formal commitment of a company through the Public Labor Prosecutor’s Office (MPT), by signing a Conduct Adjustment Agreement (TAC). Going this route, a company could commit itself to alternatives other than compliance with the Law of Quotas — for instance, investing in social projects. This agreement is acceptable to the MPT as proof of commitment and compliance of the companies when they are not in conformance with the requirements of the Law of Quotas. Third, and most effective, was the possibility would be the inclusion of people with mental disorders in Law 8.213/91. Currently, it is only in the State of Rio de Janeiro where mental health users are included in this law.

**2.1.3. Permanence** Regarding the permanence and structure of the proposal, the WMP believes it is absolutely necessary to coordinate action between the *three instances*:

- 1) *The hiring company*: to make it possible to have job contracts in the “hours worked” format, besides recruiting psychology trainees as “work managers”;
- 2) *Mental health services*: to work in strict partnership with the WMP’s coordinators, forwarding them issues regarding the “treatment”;

3) *WMP*: the coordination of all of these actions, as well as orienting and supervising the “work managers” in training and monitoring each user.

## **2.2. Company support**

Different than other proposals for entry into the formal job market, the *WMP* is notable for not only being dedicated to obtaining employment for people with mental disorders, but also to those who under no hypothesis could enter in the workforce without appropriate support. This refers to those who have “serious” disorders (Crowther, Marshall, Bond, & Huxley, 2001). This distinction is made taking into account that there are many mental health users who, although they can be inserted into the professional job market, lose their jobs because there is a lack of support to help them overcome their difficulties. For the more serious cases — those with a long history of disease — there is nothing in their profiles that demonstrates any of the characteristics that would identify them with the economically active population. Therefore, in this chapter we emphasize the possibility of these persons to be contracted, frankly in opposition to ideological tutelage that identifies them as incapable or irrecoverable (Basaglia *apud* Amarante, 1994). Thus, with regard to the proposal to hire these people, the issue is centered on the determination of the adjustment of the interests between the employee and the employer. Likewise, it is important to emphasize that the salary received by these users/employees are proportional to the hours of labor performed by them. This strategy aims to guarantee the “non *assistencialista*” character of the *WMP*, as well as to establish the equality between all employees once their working hour has the same value.

## **2.3. Supporting mental health devices**

The proposal of a close dialogue with the mental health services technicians and services to which the Work Management Project users belong is an essential condition. The understanding of this practice, although necessarily tangential to the clinical issues, includes the logic of “caregiving”, although disengaged from the therapeutic discourse, properly speaking. Here, the *WMP* wants to respect the work activity through the frank exercise of free will and rights, rather than as an extension of therapeutic projects (Guerra, 2008). The benefits the users achieve through work are considered to be the same gains common to any worker. The clinical issues, or therapeutic planning for each user, will be duly discussed and sent to the mental health services they use.

## **2.4. Support of the work managers**

The work manager is conceived as a new field agent, whose function is to provide the necessary support to the users, both for carrying out the tasks (or for training purposes) in the workplace location itself, as well as to monitor the evolution of each with regard to retaining their jobs. The practical *WMP* stages, as of acceptance of the job position request for mental health users, are the following:

1) Interviews conducted singly with users interested in the job, to obtain their history. At this moment, whether as part of the evaluation of interests or because of clinical conditions, the first strategies are established regarding monitoring the user in his or her place of employment.

2) The search for jobs compatible with the interests and/or skills of each user.

3) Pursuant to the orientation of item “b”, it will be up to the *WMP* to investigate, together with the employer, which job function (or breaking down of functions) the user could fulfill in a manner that is most advantageous for both.

4) It is during this stage that work management properly speaking begins. Based upon the prior assessment of each one of the employees in the project, a work manager can do two of the following things: intensive work management (*WMI*), which implies monitoring and training the employee in his/her own place of work for, a maximum, of two hours a day, two times a week (for individuals with serious disorders); and non-intensive management (*WM*) which implies weekly monitoring of the employees to evaluate their evolution, performance and degree of satisfaction. Training in their own places of work is not required for these users. Furthermore, the work manager shall monitor and be the mediator of issues related to the work



environment (with colleagues, bosses, etc.) and eventual absences from work due to medical treatment and accompaniment issues. This is designed to make the employer comfortable regarding how crisis situations are handled. Therefore, when, and if necessary, the user can be temporarily taken off duty for the appropriate treatment. Similarly, when, and if, for any reason an employee is not living up to the expectations of the employer, he or she can be dismissed.

### 3. DISCUSSION: SOME RESULTS

In order to demonstrate how this work has evolved, we are now presenting some of the results that have been obtained since August 2008, when the WMP first was implemented in Prezunic Comercial Ltda. (now Prezunic-Cencosud S.A.), through to today.

During the three years comprising 2008-2011, the WMP grew significantly, going from six (6) to 45 (forty-five) mental health user-employees working for the company. This evolution mainly came about through the signing of a Conduct Adjustment Agreement (TAC/2010) between Prezunic and the Public Labor Prosecutor's Office (MPT/RJ). Once the accord was signed, it became possible to include users without a diagnosis of associated disability.

It also should be noted that this growth cycle (pursuant to a prior agreement with the MPT/RJ), will always be limited to about 10% of the total number of persons to be contracted through the company's quota plan. The objective of this strategy is to achieve diversity regarding job protection for all persons considered under United Nations Convention 2006 to be in socially disadvantaged circumstances. In other words, and in conformance with the Prezunic headcount, the project included 45 employees participating in the WMP through October 2011, and through May 2014 the number had reached 53 employees.

Also important is the low job rotation ratio (*turnover* = 2.5/2013), indicating the positive performance of the monitoring operation set up by the WMP designed to help retain this type of manpower contracted by Prezunic. In other words, the systematic monitoring of people with mental disorders through the WMP contributes to improve the global turnover ratio of the hiring company. It should also be emphasized that, even the dismissals that occurred did not mean the definitive removal of the employees from the company. In some cases, the user continues to be monitored because the removals, or strategic dismissals, are carried out to assure that an employee remains in treatment (a condition for participation in the project).

Another WMP caretaking guideline is with regard to the establishing of differentiated workloads. It is well known that not all of these persons are in a position to work the regulatory 44 hours per week. Therefore, the project's coordinators must establish the appropriate number of work hours following the real work capacity of each one of the participants. That is, it will always be possible to increase or reduce the hourly workload according to the conditions and requirements of the employees. Taking into consideration a minimum of four hours on the job per week, the total monthly workload can vary from four to forty four hours.

The actions of the Work Management Project surpassed expectations, because it was able to achieve what had been supposedly unachievable — from promoting public policies through to new possibilities for mental health fieldwork for psychologists and new experiences in managing people in companies. Furthermore, in Rio de Janeiro the project also was the reason a social responsibility clause was included in a Conduct Adjustment Agreement contemplating inclusion projects and programs for people with mental disorders — among others — in the formal job market (2010). This made and makes it possible for people with mental disorders to have protected entry into companies, without a diagnosis of associated disability. Also, in unequivocal recognition of this work, in the month of November 2010, Prezunic received the “Human Being Prize” (2010 edition) in the medium/large-company category of the Brazilian Human Resources Association (ABRH/RJ), awarded for its case study *Work Management Project: A strategy for social inclusion through work*.

Regarding the promotion of public policies, in yet another new initiative on the part of the MPT/RJ, the following was registered in the *Minutes of a Meeting*:

“On the 12th day of the month of April 2012, at 2:05 p.m. at the site of the 1st Region Labor Prosecutor's Office in the presence of Labor prosecutors Lisayne Chaves Motta and Luciana Tostes de Guadalupe e Silva, within the sphere of interest of Promotional Procedure no. 002290.2011.01.000/3, another meeting was inaugurated to emphasize the instrumental role of the Promotional Procedure and to record as of now the assumption for institutional actions the inclusion in company quotas (Law 8.213/91) of people with mental disorders pursuant to the UN Convention on the rights of people with disabilities, 2006.” (Author's Note: Free translation from original minutes in Portuguese.)

Taking into consideration the experience of the inclusion of mental health users in the Prezunic-Cencosud S.A. company (Work Management Project), the supermarket sector was selected to receive a notification recommending this new situation, that is, inclusion of people with mental disorders within the of mandatory quotas of the companies.

Definitively, this is the most important Brazilian public initiative regarding the adjustment of protective measures on behalf of a population that has historically been excluded from the legal possibility of exercising its rights of citizenship through formal jobs. By including mental health users in the coverage of Law 8.213/91 (pursuant to the criteria is of the UN Convention of 2006), it propelled the State of Rio de Janeiro into the forefront of the defense of the rights of mental health users regarding the question of entry into the formal job market.

And we are exceptionally proud the WMP was one of the points of reference motivating the Public Labor Prosecutor's Office (MPT/RJ) in this regard. And to illustrate the effects of the WMP on the assisted population, we will use the histories of four participants in the project (their names do not be appear in order to protect their identities):

*Employee J.M.: (male, 57 years old, single, Grade School I (incomplete), CID 10: F20.5; Hired in 2008, initial workload: 4 hours/week).* The whereabouts of his family of origin are unknown, and the actual date of his birth and civil registration (situation resolved by management the Nise da Silveira Municipal Institute (IMNS/RJ), 2001/2009 establishing “fictitious” records for these dates), this employee was in psychiatric institutions most of his life. With an “incapacitated” diagnosis, his distinguishing characteristic was the practice of almost absolute silence in the way he conducted his life. However, upon hearing about the possibility of obtaining a job through the Project WMP, at the time being run by the IMNS/RJ (where he resided), was able to visit the coordinators of the Project, and made the following statement: “I want to work.” Since then, he not only began to work, but also went on to give valuable information about his early life, something he had never done before. Today, he is already in his sixth year on the job, communicating and socializing with much more ease with everyone he is in contact with on a daily basis. While it was initially assessed that this employee could not increase his four-hour/week workload, we were surprised with his “request” to increase it by two hours a week. Thus, his workload increased to six hours per week and remains so to this day.

*Employee S.: (male; 45 years old; married; Grade School I (incomplete); CID 10. F20; Hired in 2009, initial workload: fulltime).* This employee began his first formal work experience through the project. His psychiatric history began at age 16 when he lost his parents. Being the second child of four siblings, he reported he could not support this loss and his family was unable to sustain him. As of then, he began his pilgrimage through the streets and psychiatric hospitals. There was a serious suicide attempt when, according to him, he purposely fell down in the street, waiting for a truck to run over him. In his version, he stated that “it was God who prevented me from dying” since in this episode the truck only ran over his arm, and he didn’t even lose the member. After that incident, when he was about 30 years old, he decided to go back into treatment, resuming his studies in school and turning to the church. He now was being treated in a Psycho-social Care Center (Caps), which welcomed him and helped him understand it was necessary to take medication even when not in a “crisis”. This also helped him regain contact with his family of origin (his siblings). Through his school time he had the opportunity to meet his current wife. This era was marked by the stabilization of his psychosis and, with the

experience of having a family again, receiving treatment and being married, he only lacked obtaining a job to enable him to give continuity to his projects.

Quite cheerful and fully capable of learning tasks, S. began his work as an “operations assistant” in March 2009, full-time. However, in light of some limitations (physical and emotional) that were being imposed over time, we were forced to reduce his workload (2011) to 30 hours/week, a condition so he could remain employed. Still, his work experience is developing in a very satisfactory manner and led to him being named “Employee of the Month” in 2009, and receiving a diploma for this achievement. On the occasion of his first vacation period (April 2010), when asked in an interview what he believed had been his experience at work, he told us: “Now I am a citizen. What applies to others, goes for me, too...”

*Employee, G. (female, 49, single, Grade School I (incomplete), CID: F20, hired in 2010, initial workload: 4 hours per week).* Abandoned by her parents in childhood, G. was taken in by a public institution for the protection of minors (FEBEM) and in her teens was homeless again until accepted by a public shelter (*Fundação Leão XVIII*) where she resides to this day. During her time at the *Fundação*, she gave birth to two daughters (given up for adoption) and it was there her psychosis was identified (delusional and hallucinatory manifestations), initiating psychiatric treatment. She has never had news of her daughters or family of origin. Although she went to school and even was employed several times, she did not remain in any of the jobs for longer than five months. She began her work experience (2010) with just four hours per week; today G. works 30 hours a week and has acquired an autonomy she never before had achieved, and remains stable with regard to her the psychotic crises.

*Employee, R. (female, 39 years old, single, Grade School I (incomplete); ICD: F29, hired in 2010, initial workload: 4 hours per week).* Totally deaf in her right ear and with only 10% hearing in the left, R. has always struggled to relate to people. Although she attended school through the 5th grade, she did not develop her communication skills and remained isolated during most of her youth. At 19 she had her first psychotic “crisis” and, since then, has been undergoing treatment at the Pinel Hospital/RJ. In her job interview, R. said she had never worked, but really wanted the experience of having her own money. Starting her work activities with only four hours a week, currently, while facing all her difficulties, R. works fulltime and remains stable in terms of psychotic episodes.

#### 4. CONCLUSION

Upon reviewing the history of madness in the West and the Psychiatric Reform (Law No. 10.216, April 6, 2001) guidelines in Brazil, one perceives that the clinical and political militancy in the reconstruction of paradigms for understanding and assisting mental health users is still an arduous barrier for the professionals involved in this process. Even taking into account important advances in the search for alternatives to penning up mad people in “protected” spaces (Tenório, 2002), nevertheless some steps are still absent to assure the creative positivity of madness and guarantee these citizens the free exercise of autonomy. Taking into account the forced distancing that is imposed on these individuals in the sharing of the social contract, it remains up to us to continue to fight to represent their potential interests. It is thus that efforts to make it feasible for this population to responsibly enter the formal job market can bring about the possibility of reversing a crucial point for the acceptance and inclusion of madness as a “difference” and not as “incapacity” within the social body. This is the intention that the WMP brings, and seeks to share, to the dialogue, based on its inclusion experience: the expectation that we can further expand some new caretaking paradigms to the mental health users in Brazil, capable of ensuring for them the full exercising of their rights of citizenship.

#### REFERENCES

- Amarante, P. (1994). Uma aventura no manicômio: A trajetória de Franco Basaglia [An adventure in the asylum: The trajectory of Franco Basaglia]. *História, Ciências, Saúde, I*(1), 61-67.
- Crowther, R. E., Marshall, M., Bond, G. R., & Huxley, P. (Org.). (2001). Helping people with severe mental illness to obtain work: Systematic review. *BMJ*, 322(7280), 204-208.

- Guerra, C. M. A. (2008). Oficinas em saúde mental: Percurso de uma história, fundamentos de uma prática [Workshop on mental health: The trajectory of a history, fundamentals of a practice]. In M. C. Costa, & A. C. Figueiredo, A. (Orgs.). *Oficinas terapêuticas em saúde mental: Sujeito, produção e cidadania* [Therapeutic workshops on mental health: Subject, production and citizenship]. Rio de Janeiro, Brazil: Contra Capa.
- Law No. 8.213, July 24, 1991. *Providência Social* [Social Providence]. Retrieved from [http://www.ipism.mg.gov.br/arquivos/legislacoes/legislacao/leis/lei\\_8213.pdf](http://www.ipism.mg.gov.br/arquivos/legislacoes/legislacao/leis/lei_8213.pdf)
- Law No. 10.216, April 6, 2001. *Lei para a Reforma Psiquiátrica Brasileira* [Law of the Brazilian Psychiatric Reform]. Retrieved from [http://www.planalto.gov.br/ccivil\\_03/leis/leis\\_2001/110216.htm](http://www.planalto.gov.br/ccivil_03/leis/leis_2001/110216.htm)
- Leal, M. E. (2008). Trabalho e reabilitação psiquiátrica fora do contexto hospitalar [Work and psychiatric rehabilitation outside the hospital setting]. In M. C. Costa, & A. C. Figueiredo (Orgs.), *Oficinas terapêuticas em saúde mental: sujeito, produção e cidadania* [Therapeutic workshops on mental health: Subject, production and citizenship]. Rio de Janeiro, Brazil: Contra Capa.
- Salis, A. C. A. (2011). Gerência de trabalho: Uma estratégia de inclusão social pela via do trabalho [Management of work: A strategy for social inclusion through work]. *Saúde em Debate*, 35(89), 207-216.
- Tenório, F. (2002). A reforma psiquiátrica brasileira, da década de 1980 aos dias atuais: História e conceito [Brazilian psychiatric reform of the 1980s to the present day: History and concept]. *História, Ciências, Saúde – Manguinhos*, 9(1), 25-59.
- Vasconcelos, M. E. (2002). Reinvenção da cidadania, empowerment no campo da saúde mental e estratégia política no movimento de usuários [Reinvention of citizenship, empowerment in mental health and policy strategy in the movement of users]. In P. Amarante (Org.) *Ensaio: Subjetividade, saúde mental, sociedade* [Essays: Subjectivity, mental health, society] (Coleção Loucura & Civilização). Rio de Janeiro, Brazil: Fiocruz.
- Weingarten, R. (2001). *O movimento de usuários em saúde mental nos Estados Unidos: História, processo de ajuda e suporte mútuos e militância* [The movement of users in mental health in the United States: History, process of mutual and support help and militancy]. Rio de Janeiro, Brazil: Instituto Franco Basaglia/Projeto Transversões.

## ADDITIONAL READING

- Carvalho, J. M. (2002). *Cidadania no Brasil. O longo Caminho* [Citizenship in Brazil. The Long Way] (3rd ed.). Rio de Janeiro, Brazil: Civilização Brasileira.
- Desviat, M. (1999). *A Reforma Psiquiátrica* [The Psychiatric Reform]. Rio de Janeiro, Brazil: Fiocruz.
- Rinaldi, D. (2006). Entre o sujeito e o cidadão: Psicanálise ou psicoterapia no campo da saúde mental? [Between the subject and the citizen: Psychoanalysis or psychotherapy in the mental health field?] In S. Alberti, & A. C. Figueiredo (Orgs.), *Psicanálise e saúde mental: Uma aposta* [Psychoanalysis and mental health: A bet]. Rio de Janeiro, Brazil: Companhia de Freud.
- Saraceno, B. (1990). *Libertando identidades: Da reabilitação psicossocial à cidadania possível* [Releasing identities: From psychosocial rehabilitation to possible citizenship]. Rio de Janeiro, Brazil: Ed. Te Corá/Instituto Franco Basaglia.

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## Chapter 29

# WATER USE STRATEGIES UNDER COMPETITION AND COOPERATION CONDITIONS

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### ABSTRACT

Scarce natural common-pool resources – such as water – are often overexploited, resulting in drastic consequences for both society and the planet. An experiment was carried out in order to analyze the role of cooperation and competition in the use of water as a limited natural common-pool resource. To this end, 107 participants played the Irrigania simulation, in which they acted as farmers by deciding how to irrigate their fields over years. Before the simulation exercise, participants were randomly assigned to the experimental conditions of competition or cooperation. In the competition condition, farmers and their villages used a more selfish strategy to cultivate their fields (they used less rainfed crops and more groundwater irrigation), which produced lower benefits. Moreover, multiple regression analyses have shown that, under competition, benefits to farmers and their villages were reduced over time. Then, we discuss the relevance of providing individuals and groups with some sort of cooperative framework for environment-related decision making, perhaps by creating formative and educational programmes that allow individuals and groups to experience (a) cooperation and (b) the benefits that cooperation has at a practical level, both for themselves, and for society and the environment, which ultimately has a further impact on them.

*Keywords:* competition, cooperation, simulation, analytical strategies, water.

## 1. INTRODUCTION

On October 10, 2005, the Royal Academy of Sciences awarded the Nobel Prize in Economic Sciences to Robert Aumann (mathematician) and Thomas Schelling (economist), for their contribution to the analysis of conflict and cooperation from the Game Theory. These researchers sought to explain human behaviour in situations of war and conflict. The authors claim that, for a society to prosper, cooperative behaviour is necessary; indeed, they assert that psychology should provide more knowledge and research about how people manage to build a balance in conflict situations (Aumann & Schelling, 2005).

Currently many organizations generate situations of interdependence in which individuals try to maximize personal interests to the detriment of the group to which they belong. Environments that encourage competition make people have to face similar social dilemmas to those addressed in other sciences, such as economics, evolution, population studies, environment, ecology and urban design. For this reason, behavioural researchers have termed this phenomenon the Psychology of Sharing. Weber, Kopelman, and Messick (2004) defined social dilemmas as situations requiring decision-making focused on the question of ownership (what does a person like me do in a situation like this?). Social dilemmas are characterized by two features: (a) at any moment of decision, individuals receive a reward for making selfish choices rather than making cooperative decisions regardless of the choices made by those with whom they interact, and (b) those involved receive less reward if everyone makes selfish decisions than if they make cooperative decisions (Dawes, 1980; Messick & Brewer, 1983). In such situations, individual rationality leads to collective irrationality (Kollock, 1998). When a group has to share a limited number of resources, there is a tendency to act in a self-sufficient manner, even if they know that mutual cooperation could lead to a greater benefit for more people (Joireman, Posey, Truelove, & Parks, 2009; Steg & Vlek, 2009).

In the last few decades, social psychology has focused much of its efforts on investigating the processes that are generated in working groups. This interest reflects one of the

most important changes that have been experienced in the organizational field, the implementation of autonomous work groups. Therefore, Nadler and Tushman (1999) believe that the effective management of equipment is one of the key skills that organizations must take into the twenty-first century. Perhaps responding to these social needs, social psychology is interested in exploring the psychosocial processes that favour an individual who behaves cooperatively, valuing the group's interest more than their own self-interest.

By working in groups or teams, individual behaviour can be affected both positively and negatively. For example, classical references cited in *Journeys in social psychology. Looking back to inspire the future* (Levine, Rodrigues, & Zelezny, 2008) demonstrated that (1) the group could positively influence individual behaviour through social facilitation or mere presence (Zajonc, 1965); and on the other hand, (2) revealed that when collectivity facilitates anonymity, the individual may behave more violently or aggressively toward others than he or she would do in a situation of isolation (Zimbardo, 1969). Osofsky, Bandura, and Zimbardo (2005) argue that certain social situations could lead to an individual morally disengaging from an action just executed. Moreover, people use moral strategies to not feel morally responsible for the effect that their decisions or actions have had on those who have been affected. Thus, individuals need to categorize the situation before making a decision on how they will behave. Individuals ask: "Is this a cooperative or competitive situation?", "Is this a group or individual task?", "Is this a game or a problem to be solved?", "Is this a single election dilemma or a sequential dilemma?", "Is this a dilemma that demands an anonymous or public choice?" The definition of the situation informs the person concerned about rules, expectations, learned behaviours, skills and potential strategies that are relevant. In this chapter we show some variables that modulate the selfish behaviour of individuals in collective situations.

### **1.1. Social dilemmas in researches**

In many cases, an individual's reasonable and justified behaviour leads to a detrimental outcome for the group. Such situations are called social dilemmas and are behind many of the social problems we cope with (Weber et al., 2004). Social dilemmas entail a conflict between maximizing one's individual benefit and the benefit of the collectivity (Parks, Joireman, & Van Lange, 2013; Zhong, Xu, Shi, & Qui, 2013). Perhaps the best-known social dilemma, and the most widely used in research, is the famous "Prisoner's Dilemma". When putting "Prisoner's Dilemma" into Google and Google Scholar, approximately 1,030,000 and 105,000 results are found, respectively. This type of social dilemma begs raises the need to choose between acting self-sufficiently and cooperating for the good of the collective. In 1968, Hardin analysed another social dilemma called "the tragedy of the commons", in which individuals have to choose between (1) acting according to their own self-interest and contrary to the long-term interest of their community by depleting some common resource, and (2) acting according to the interest of the community and agreeing with a more sustainable development. According to Hardin (1968), these kinds of situations are very similar to those raised today with the use and abuse of natural common-pool resources. Probably an entrepreneur will consider what to do about the possibility of gaining more benefices or lowering the production level in order to generate lower CO2 emissions; similarly, a citizen will wonder whether he or she would prefer to decrease the speed of his or her car to produce less pollution or to arrive early at his or her destination. As we see, these are social dilemmas in which individuals have to choose whether the self-interest or the collective interest will prevail. But when someone cannot be excluded from the benefits that others provide, each person will be motivated not to contribute to the effort of the whole, but to take advantage of the efforts of others. But if everyone chooses not to cooperate, it will be impossible to achieve the collective benefit. The question is to what extent can the group regulate themselves?

### **1.2. Cooperation, competition and water as a limited natural common-pool resource**

Scarce natural common-pool resources are often overexploited, resulting in drastic consequences for both society and the planet. Water is a scarce and precious common-pool natural resource essential to human life. Shortages of water – mainly due to the climate – result

in problems for society and for the environment (Madurga, 2005). Thus, there is a relevant scientific and human interest in the study of the psychosocial variables related to pro-environmental behaviour (Markowitz, Goldberg, Ashton, & Lee, 2012). In this regard, it has been shown that competitive situations (Reeson & Tisdell, 2010) and situations of scarcity of resources (Gifford, 2011; Van Lange, Joireman, Parks, & Van Dijk, 2013) lead individuals to use more selfish and competitive strategies, whilst they tend to be more prosocial in cooperative situations. And similarly, prosocial individuals tend to show more self-interested behaviour in competitive contexts than in cooperative ones (Reeson & Tisdell, 2010).

From a social dilemma perspective, the decline in natural common-pool resources happens because individuals try to maximize their own interests without taking into account the negative community and planetary impacts (Joireman et al., 2009; Steg & Vlek, 2009). In conditions of scarcity, behaviour becomes more selfish (Gifford, 2011; Van Lange et al., 2013). However, cooperating implies laying aside our self-interest to protect the interests of others (Tomasello & Vaish, 2013). Moreover, Barker, Barclay, and Reeve (2012) have recently shown that, when submerged in competitive situations, the cooperation and profits of in-groups are reduced. Analysing the role of situational factors (competition or cooperation) in the selection of water use strategies when water is a limited resource is therefore of potential interest.

## 2. OBJECTIVES AND HYPOTHESES

The main objectives of this study were to examine: (1) the behaviour associated with water consumption from both an individual and a collective perspective; and (2) how certain situational variables (cooperation and competition) influence pro-environmental behaviour, indexed as water use strategies (selfish or prosocial).

### 2.1. Hypotheses

H1. Incomes will be higher for farmers and their villages in situations of cooperation than in situations of competition.

H2. Profits of farmers and villages in competition situations will be reduced over time, whilst profits of farmers and villages in cooperation situations will increase over time.

H3. In the simulated competition condition, farmers and their villages will use a more selfish irrigation strategy in the competition condition, whilst in the cooperation condition farmers and their villages will use a more prosocial irrigation strategy.

## 3. METHOD

### 3.1. Participants

A total of 107 students from the University of Córdoba (Spain) took part in the study: 70.5% were women and 29.5% men ( $M$  age = 21.28 [18 to 27];  $SD$  = 2.18).

### 3.2. Procedure

*First phase:* Randomization of participants in the experimental conditions of cooperation ( $N$  = 52) or competition ( $N$  = 55). Cooperation condition: participants could talk to each other about strategies and income at the end of years 3, 6 and 9. Competition condition: no interaction was allowed; at the end of years 3, 6 and 9 they could see the recent annual incomes of their group members.

*Second phase:* Irrigania simulation (Seibert & Vis, 2012): a web-based game about the shared use of water. There are different villages, each comprising a number of farmers (participants) who have to maximize their net income by deciding how to use their 10 fields each year (the simulation ran for 10 years). Three irrigation options are available, each with different associated costs and revenues reflecting some aspects of reality: rainfed agriculture, river water irrigation and groundwater-based irrigation.

### 3.3. Measures, analytical strategies and decision making

*Decision making* was measured through the Irrigania simulation: 1) rainfed agriculture: lowest costs, but lower revenue; 2) river water irrigation: fixed cost, but revenues may be reduced if the river water has to be distributed among too many fields in a village; and 3) groundwater-based irrigation: fixed income, but the costs increase if the depth of the groundwater increases. *Selfish irrigation* was indexed as the difference between the number of fields under groundwater irrigation and the number of fields under rainfed agriculture (groundwater irrigation – rainfed agriculture), as the most extreme strategies, selfish and prosocial respectively. *Income* depended on weather conditions during the previous year, the mode of irrigation chosen and the use of water resources of the other farmers. *Village data*: to analyse village outcomes the individual matrix was transformed by using aggregated measures for 107 farmers from to 37 villages. We obtained good support for aggregation.

## 4. RESULTS

The ANOVAs performed showed that the benefits for both farmers and their villages were higher in the cooperative condition than in the competitive condition (See Figure 1 and 2); (2) both farmers and their villages used a more selfish strategy by irrigating a higher number of fields with groundwater in the competition condition than in the cooperation condition (See Figure 2); (3) both farmers and their villages used a more prosocial strategy by irrigating a higher number of fields with rainfed agriculture in the cooperation condition than in the competition condition (See Figure 3).

Figure 1. Accumulated income across the 10 years of the simulation at individual and village level for cooperation condition, competition condition and for the general sample (cooperation and competition conditions together).

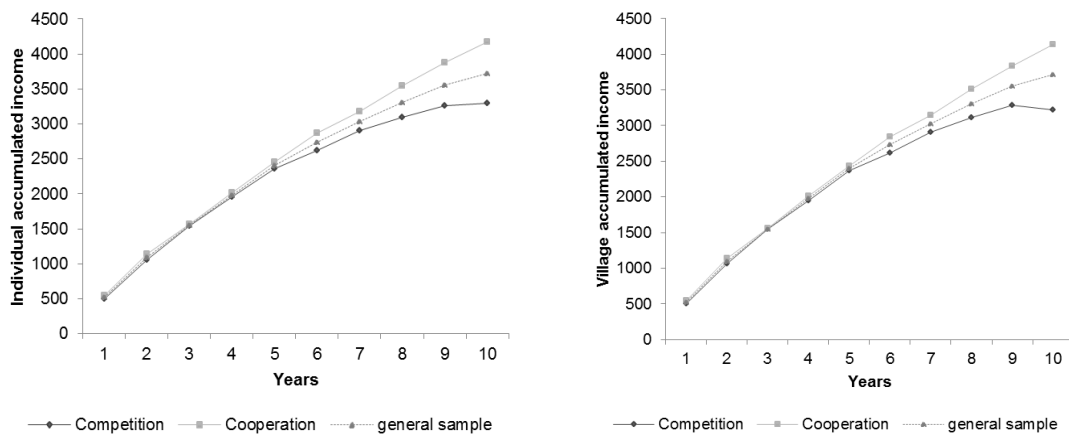
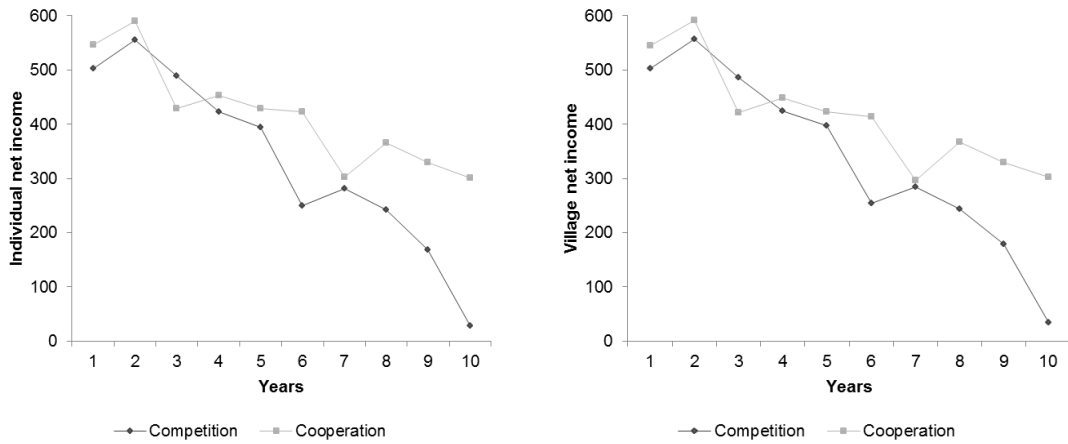


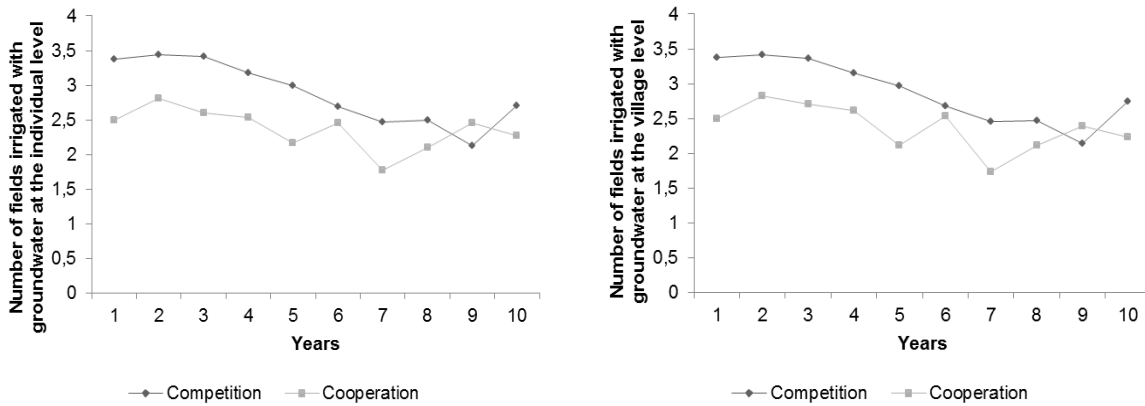


Figure 2. Net income across 10 years of the simulation at individual and village level for both cooperation and competition conditions.



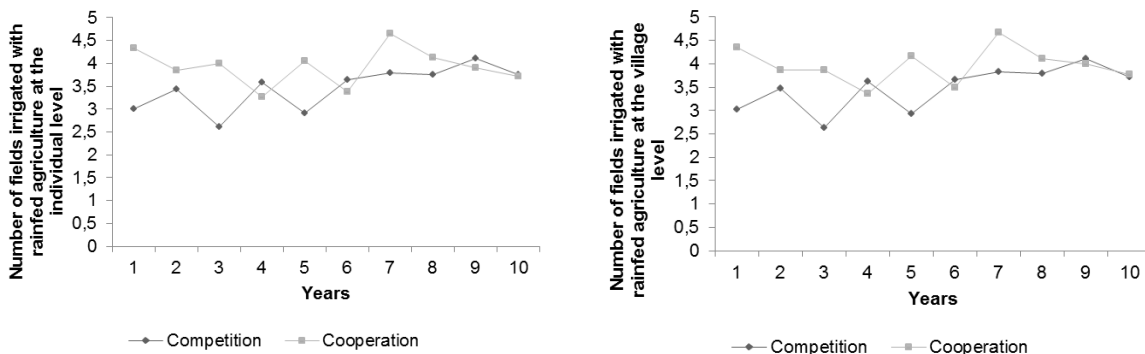
Moreover, the results of the ANOVAs showed that both farmers and their villages used a more selfish strategy by irrigating a higher number of fields with groundwater in the competition condition than in the cooperation condition (See Figure 3).

Figure 3. Number of fields irrigated with groundwater across the simulation.



Finally, the ANOVAS performed showed that both farmers and their villages used a more prosocial strategy by irrigating a higher number of fields with rainfed agriculture in the cooperation condition than in the competition condition (See Figure 4).

Figure 4. Number of fields under rainfed agriculture across the simulation.



## 5. DISCUSSION AND CONCLUSIONS

The present study showed that in a simulation, farmers and their respective villages working under competitive conditions earned consistently lower incomes; This is consistent with the statement that natural resources become depleted because individuals – especially in a competitive situation—try to maximize their own interests regardless of the repercussions this has for society or the planet (Steg & Vlek, 2009). In a cooperative situation both individuals and groups obtain higher benefits, both net and accumulated, than in a competitive situation, a result in accordance with previous studies (Barker et al., 2012).

Our results seem to corroborate the theories which hold that selfish and self-sufficient behaviors are increased in competitive situations (Weber et al., 2004), and that such self-sufficient behavior has a negative impact in the long-term, not just for the planet and for society in general when considering natural common-pool resources, but also for the individuals and groups which act self-sufficiently.

The results suggest that when individuals and groups are submerged in competitive contexts, they cannot escape the vicious circle in which they are caught, the conflict becoming increasingly destructive (Deutsch, 1990). In contrast, cooperation situations seem to protect individuals and groups against the conflict escalation resulting from the scarcity of natural common-pool resources, in line with previous researches (Gifford, 2011; Van Lange et al., 2013). Moreover, when exposed to competitive contexts, both individuals and groups tend to earn lower incomes, seeing their benefits reduced compared with individuals and groups submerged in cooperative contexts (Barker et al., 2012). Thus, some sort of cooperative framework for environment-related decision-making should be provided to individuals and groups. In this regard, it would be interesting to create formative and educational programmes that allow individuals to experience (1) cooperation and (2) the benefits of cooperation – both for themselves, and for society and the environment.

Thus, our results imply that pro-environmental educational programmes would benefit from taking into account the influence of cooperative and competitive contexts in students and adults. It should be emphasized that our results suggested that participating in cooperative actions could foster the development of a cooperative framework, constituting relevant previous experience that would promote more pro-environmental behaviours at both the individual and collective level, which in turn would benefit the planet.

Accordingly, in future researches, it would be interesting to measure performance on pro-environmental educational programmes and to evaluate whether the educational outcomes of such programmes are superior when education of cooperative contexts are applied in comparison with education of competitive contexts.

## REFERENCES

- Aumann, R., & Schelling, T. (2005). *Robert Aumann's and Thomas Schelling's contributions to game theory: Analyses of conflict and cooperation* (Advanced information on the Bank of Sweden Prize in Economic Science in Memory of Alfred Nobel, 10 October, 2005). Stockholm, Sweden: The Royal Swedish Academy of Sciences. Retrieved from [http://www.nobelprize.org/nobel\\_prizes/economic-sciences/laureates/2005/advanced-economicsciences2005.pdf](http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2005/advanced-economicsciences2005.pdf)
- Barker, J. L., Barclay, P., & Reeve, H. K. (2012). Within-group competition reduces cooperation and payoffs in human groups. *Behavioral Ecology*, 23(4), 735-741, doi:10.1093/beheco/ars020
- Dawes, R. M. (1980). Social dilemmas. *Annual Review of Psychology*, 31, 169-193. doi: 1146/annurev.ps.31.020180.001125
- Deutsch, M. (1990). Sixty years of conflict. *International Journal of Conflict Management*, 1(3), 237-263, doi:10.1108/eb022682
- Gifford, R. (2011). Social dilemmas. In *The Encyclopedia of Peace Psychology*. Wiley-Blackwell. doi:10.1002/9780470672532.wbepp252
- Hardin, G. (1968). The tragedy of the commons. *Science Magazine*, 162(3959), 1243-1248.

- Joireman, J., Posey, D. C., Truelove, H. B., & Parks, C. D. (2009). The environmentalist who cried drought: Reactions to repeated warnings about depleting resources under conditions of uncertainty. *Journal of Environmental Psychology, 29*(2), 181-192. doi:10.1016/j.jenvp.2008.10.003
- Kollock, P. (1998). Social dilemmas: The anatomy of cooperation. *Annual Review of Sociology, 24*, 183-214. doi:10.1146/annurev.soc.24.1.183
- Levine, R., Rodrigues, A., & Zelezny, L. (2008). *Journeys in social psychology. Looking back to inspire the future*. New York, NY: Psychology Press.
- Nadler, D. A. & Tushman, M. L. (1999). The organization of the future: strategic imperatives and core competencies for the 21st century. *Organizational Dynamics, 28*(1), 45-60. doi:10.1016/S0090-2616(00)80006-6
- Madurga, M. R. L. (2005). Los colores del agua, el agua virtual y los conflictos hídricos. [The colors of the water, virtual water and water conflicts]. *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales de Madrid, 99*, 369-389.
- Markowitz, E. M., Goldberg, L. R., Ashton, M. C., & Lee, K. (2012). Profiling the “pro-environmental individual”: A personality perspective. *Journal of personality, 80*(1), 81-111. doi:10.1111/j.1467-6494.2011.00721.x
- Messick, D. M., & Brewer, M. B. (1983). Solving social dilemmas: A review. In L. Wheeler, & P. Shaver (Eds.), *Review of Personality and Social Psychology: Vol. 4* (pp. 11- 44). Beverly Hills, CA: Sage.
- Osofsky, M. J., Bandura, A., & Zimbardo, P.G. (2005). The role of moral disengagement in the execution process. *Law and Human Behavior, 29*(4), 371-393.
- Parks, C. D., Joireman, J., & Van Lange, P. A. M. (2013) Cooperation, trust, and antagonism. How public Goods are promoted. *Psychological Science in the Public Interest, 14*(3), 119-165. doi:10.1177/1529100612474436
- Reeson, A. F., & Tisdell, J. G. (2010). The market instinct: The demise of social preferences for self-interest. *Environmental and Resource Economics, 47*(2), 439-453. doi:10.1007/s10640-010-9387-0
- Seibert, J., & Vis, M. J. P. (2012). Irrigania – A web-based game about sharing water resources. *Hydrology and Earth System Sciences, 16*(8), 2523-2530. doi:10.5194/hess-16-2523-2012
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology, 29*(3), 309-317. doi:10.1016/j.jenvp.2008.10.004
- Tomasello, M., & Vaish, A. (2013). Origins of human cooperation and morality. *Annual Review of Psychology, 64*, 231-255. doi:10.1146/annurev-psych-113011-143812
- Van Lange, P. A., Joireman, J., Parks, C. D., & Van Dijk, E. (2013). The psychology of social dilemmas: A review. *Organizational Behavior and Human Decision Processes, 120*(2), 125-141. doi:10.1016/j.obhdp.2012.11.003
- Weber, J. M., Kopelman, S., & Messick, D. M. (2004). Conceptual review of decision making in social dilemmas: Applying a logic of appropriateness. *Personality and Social Psychology Review, 8*(3), 281-307. doi:10.1207/s15327957pspr0803\_4
- Zajonc, R. B. (1965). Social facilitation. *Science Magazine, 149*(3681), 269-274.
- Zhong, L., Xu, W., Shi, Y., & Qui, T. (2013). Coupled dynamics of mobility and pattern formation in optional public goods games. *Chaos, Solitons & Fractals, 47*, 18-26. doi:10.1016/j.chaos.2012.11.012
- Zimbardo, P. G. (1969). The human choice: Individuation, reason and order versus deindividuation, impulse and chaos. *Nebraska Symposium on Motivation, 17*, 237-307.

## ADDITIONAL READING

- Caprara, G. V., Steca, P., Zelli, A., & Capanna, C. (2005). A new scale for measuring adults' prosocialness. *European Journal of Psychological Assessment, 21*(2), 77-89. doi:10.1027/1015-5759.21.2.77
- Dawes, R. M., & Messick, D. M. (2000). Social dilemmas. *International Journal of Psychology, 35*(2), 111-116, doi: 10.1080/002075900399402
- Greenhalgh, L., & Chapman, D. I. (1998). Negotiator relationships: Construct measurement, and demonstration of their impact on the process and outcomes of negotiation. *Group Decision and Negotiation, 7*(6), 465-489, doi:10.1023/A:1008694307035

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## Chapter 30

# PSYCHOSOCIAL FACTORS OF PROBLEMATIC INTERNET USE AND BINGE DRINKING AMONG SLOVAK UNIVERSITY STUDENTS

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### ABSTRACT

*Objectives:* To explore the associations between gender, academic performance, relationship status, personality factors and risk behaviours (problematic internet use and binge drinking) among the first year university students. *Methods:* 817 first year university students from Slovakia (74.5% females, 19.6 mean age) provided data on their academic performance at high school prior to their university study (overall performance, amount of schoolwork, quality of schoolwork), relationship status, length of the relationship, filled in the ten item Personality Inventory and provided data on various risk behaviours (GPIU2 – generalized problematic internet use, AUDIT-C – binge frequency). Respondents were dichotomized according to their level of risk behaviours for the purposes of binary logistic regression. The complete model containing the predictors: gender, academic performance, relationship status and personality factors distinguished between students who reported and did not report risk behaviours. Gender, relationship status and academic performance contributed significantly to the model. *Conclusions:* Gender, duration of a romantic relationship and previous academic performance at high school may be important to acknowledge when targeting prevention programs for the first year students.

*Keywords:* psychosocial factors, problematic Internet use, binge drinking.

## 1. INTRODUCTION

The crucial period for studying risk behaviour among university students are the first years. This period requires successful adaptation, coping with qualitative and quantitative changes arising from coming into a completely new environment. The years spent studying at the university are also important for forming one's personal and social identity (Janovská, Petkeviciene, Lukacs, Orosová, & Gajdošová, 2013).

The research on risk behaviour of university students is also very important, because university students might have a significant influence on other young adults within society and significantly contribute to the perception of social norms. Moreover, after finishing their studies it is the university students that take on leading public roles in the society (Bačíková et al., 2011). Interestingly, risky behaviours are quite frequent in this group and follow a different pattern in comparison to other groups. For example risky patterns of alcohol consumption such as consuming large quantities of alcohol, or binge drinking are very common (Ansari, Stock & Mills, 2013).

A new phenomenon in risk behaviour, the problematic Internet use, has been recently introduced into current research. Up to now, problematic Internet use has not been extensively studied (Šebeňa, Orosová, & Benka, 2013). Nonetheless, it has been found to be highly relevant in the context of university study, however, its relation to other risk behaviours has been scarcely investigated.

Recently, it has been suggested that risk behaviours tend to co-occur and form clusters (Lippke, Nigg & Maddock, 2012). Thus monitoring the incidence of risk behaviour clusters could improve the understanding of the underlying processes of risk behaviour as such (Dusseldorp et al., 2014).

## 2. BACKGROUND

### 2.1. Binge drinking

Despite the findings that people with more years of education consume alcohol less frequently and less risky than those with fewer years of education, it has been shown in numerous countries that university students constitute a special group tending to consume alcohol more frequently and in larger amount in comparison to the rest of the population (Ansari et al., 2013). The prevalence of alcohol use and problems related to drinking have been shown to be higher among university students in comparison to the same age group of people who are not attending a university (Adámková, Vondráčková, & Vacek, 2009).

The problems connected to alcohol use can be divided into short term and long term (Benka & Orosová, 2013). The long-term problems are represented for example by deterioration of one's health, relationship problems, and presence of other risk behaviours. In the context of university students it can also be connected to specific study difficulties, inability to meet deadlines and not being able to manage the study load (Ansari et al., 2013; Gajdošová, Orosová, & Janovská, 2012).

Janovská et al. (2013) investigated the role of relationship status and found that having a partner served as a protective factor. Furthermore, Fleming, White, & Catalano (2010), based on the findings from a longitudinal study, concluded that a well-functioning relationship contributed to the reduction of alcohol use especially at the beginning of university studies. It has also been found that a supportive social network can moderate the extent to which university students consume alcohol in order to cope with difficult situations related to their university studies (Orosová, Šebeňa, Benka, & Gajdošová, 2013).

### 2.2. Problematic Internet use

The research suggests that in addition to the many benefits connected with the everyday use of Internet, a completely new form of risk behaviour has come to existence (De Leo & Wulfert, 2013). It has been shown that online activities might interfere with other life activities by spending too much time online playing interactive games, visiting chat rooms, emailing, visiting websites with sexual content and more importantly replacing real relationships with those online. This creates the basis for further risks of electronic communication such as cyberstalking, cybergrooming or sexting (Caplan, 2010). Problematic Internet use can cause a decrease of interests in real social contact and become subsequently a trigger of interpersonal problems, problems in relationship with a partner or even affect performance at work or school (Demetrovics, Szered, & Rósz, 2008). Caplan (2010) proposed a cognitive-behavioural model of Generalized Problematic Internet Use (GPIU). This model addresses why and how online social activities can be related to adopting an unhealthy pattern of Internet use. He identified what he called the individual components of problematic Internet use. According to his theory it is the preference for online communication versus face-to-face communication that triggers the GPIU. This is followed by compulsive Internet use, deficient self-regulation, cognitive preoccupation and negative consequences. The relationship between the preference for online communication is theorized to be mediated by deficient self-regulation and using the Internet for mood regulation. Further research has shown that problems with self-regulation and depression can indeed contribute to problematic Internet use (Šebeňa, Orosová, & Benka, 2013). It was also found that loneliness and social anxiety can increase the impact of GPIU on an individual and make people more vulnerable to GPIU (De Leo & Wulfert, 2013).

### 2.3. Psychosocial factors of problematic Internet use and binge drinking

Jessor and Jessor (1997) have formulated a problem-behaviour theory which claims that people who demonstrate a particular risk behaviour in one area have the tendency to engage in risk behaviours in other areas as well. The existence of health behaviour clusters has triggered the search for factors associated with these clusters (Brooks, Magnusson, Spencer, & Morgan, 2012). The combination of problematic internet use and binge drinking chosen in this study is rather an unusual cluster of substance and non-substance risk behaviours although few studies

have already tried to explore this issue. For example Orosová, Šebeňa, Gajdošová, and Kalina (2012) explored the differences in problematic Internet use between heavy drinking and non-heavy drinking university students. Her study showed that significantly higher levels of compulsive use as well as cognitive preoccupation were found among heavy drinking students (Orosová et al., 2012). Both of these behaviours are typical for university students and have been found to be strongly interfering with the ability to complete tasks (Bačiková et al., 2011). For example, poor academic performance has been shown to be significantly associated with both problematic Internet use and binge drinking (Frangos, Frangos, & Sotiropoulos, 2011, Ansari, et al. 2013). On the other hand, being in a relationship and a general presence of social support was found to be negatively related to both problematic Internet use and alcohol use (Janovská et al., 2013). It could be theorized that students may be using the Internet as well as bingeing to overcome the feelings of loneliness, depression and anxiety (Robinson, Sareen, Cox, & Bolton, 2011). Problematic Internet use seems to be much more complicated and the causal factors are often found to be contradicting. Online communication and its preference over face-to-face communication were found to be related to lower extraversion, emotional stability and openness to experience (Kopuničová, Orosová, & Gajdošová, 2012), whereas alcohol use has been more closely and consistently associated with gender and personality factors (Gajdošová et al., 2012).

### **3. DESIGN**

A cross-sectional design was used.

### **4. OBJECTIVES**

This study aimed to explore the associations between gender, academic performance, relationship status, personality factors and the risk behaviour cluster (general problematic internet use and binge drinking) of the first year university students.

### **5. METHODS**

#### **5.1. Sample**

This study is part of a larger study – SLiCE (Student behaviour and Life perspectives Cohort study in Europe: <http://www.slice-study.eu/>), which is a five years follow-up up cohort study conducted among the first year university students from 13 European countries. However, this study will present findings only from the Slovak sample. It is a longitudinal investigation of life perspective and health-related behaviour, and psychosocial risk/protective factors of health-related behaviour among university students. The first year university students from four universities in the Eastern part of Slovakia were contacted via their university e-mail, as well as personally during their courses with the offer to participate in the study. In total 1272 students were approached and 817 completed the survey resulting in a response rate of 64.22%. The final sample consisted of 817 students, 75.2% were females and the mean age was 19.6 (0.81). Those first year university students, who signed the consent form, were asked to fill in on-line questionnaires covering various domains such as their academic performance, relationship status, personality factors and risk behaviours. The questionnaire was approved by the Institutional Review Boards of individual participating universities.

#### **5.2. Measures**

*Academic performance.* Academic performance (Markel & Frone, 1998) was assessed by three single-item indicators of school performance, which were represented by students' ratings of their overall performance, the amount of academic work completed in high school and the quality of their work in high school. Each item (overall performance during high school, the amount of work completed in high school, the quality of work) was evaluated on a 5-point Likert-type scale that ranged from 1 (poor) to 5 (excellent).

*Relationship status.* Relationship status was assessed by the question: “Do you have a romantic/steady relationship? If yes, how long ago did it start?” with possible answers: 1/ No romantic/steady relationship at present, 2/1-2 months, 3/6 months, 4/12 months, 5/more than 12 months.

*Personality factors.* TIPI - Ten Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003) was used to measure five personality factors: extraversion, agreeableness, emotional stability, conscientiousness and openness to experience. Each item consists of two descriptors, separated by a comma, using the common stem, “I see myself as:” Each of the ten items was rated on a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). A higher score indicated a higher level in each factor.

*Problematic Internet use.* The Generalized Problematic Internet Use Scale 2 (Caplan, 2010) has 15 items in total and all items are evaluated on a scale ranging from 1 (definitely disagree) to 8 (definitely agree). A higher score indicates more problematic Internet use. Cronbach’s alpha in this study reached 0.91 for the whole scale. The Generalized problematic Internet Use Scale 2 consists of five subscales (preference for online social interaction ( $\alpha = 0.75$ ), mood regulation ( $\alpha = 0.87$ ), cognitive preoccupation ( $\alpha = 0.88$ ), compulsive Internet use ( $\alpha = 0.88$ ), negative outcomes ( $\alpha = 0.88$ )).

*Binge drinking.* Heavy episodic (binge) drinking was assessed by the third item of the AUDIT-C: “How often did you drink 6 or more standard drinks on one occasion in the past 30 days?” Respondents could answer on a scale from 0 – never to 4 –daily or almost daily.

### 5.3. Statistical analyses

Binary logistic regression models were conducted in order to explore the simultaneous contribution of the measured variables. The final sample was dichotomized according to students’ level of cumulative index of risk behaviours for the purposes of binary logistic regression.

Visual Binning was used to identify suitable cut-off points to divide the variables problematic Internet use (GPIU) into two approximately equal groups ( $0^{(PIU/0)} = \leq 36,00$ ,  $1^{(PIU/1)} = 37,00+$ ). Visual Binning was used to create groups (bins, categories) from a continuous variable and visually control the process.

Participants with AUDIT-C scores of zero (the “never” response) were categorized “AUDIT- 3 negative ( $0^{auditC/0}$ ),” while participants with AUDIT-C scores from 1 (less than monthly) to 4 (daily or almost daily) were considered “AUDIT-C positive” ( $1^{auditC/1}$ ).

Risk behaviours as dependent variables of logistic regression were dichotomised into categories RBS0 ( $^{PIU/0+auditC/0}$ ,  $n=126$ ) and RBS1 ( $^{PIU/1+auditC/1}$ ,  $n=560$ ).

All data were analysed using the statistical package for social sciences (SPSS 20).

## 6. RESULTS

In our sample, 80.5% of the first year university students fulfilled the criteria for binge drinking (6 or more drinks on one occasion) and reported some symptoms of problematic internet use. Only 19.5 % of these students scored very low on problematic Internet use and did not use binge drinking.

From the three single-item indicators of school performance: students' ratings of their overall performance, the amount of academic work completed in high school and the quality of their work in high school, the highest score was reached in overall performance.

Regarding the personality factors, the lowest score was found in emotional stability and the highest score in the factor openness to experience (Table 1).



Table 1. Psychosocial characteristics (percentages, means and standard deviations).

	N	%	Valid %	Mean	SD
RBS0 (PIU/0+audit 3/0)	126	15.5	19.5		
RBS1 (PIU/1+audit 3/1)	560	63.8	80.5		
Romantic relationship				3.4	1.8
Overall performance				4.1	0.8
Amount of schoolwork				3.0	0.9
Quality of schoolwork				3.7	0.8
Extraversion				9.9	3.2
Agreeableness				9.9	2.4
Conscientiousness				10.5	2.5
Emotional stability				8.9	2.9
Openness to experience				11.3	2.3

The complete model containing all predictors (gender, duration of a romantic relationship, academic performance: overall performance, the amount of academic work completed in high school and the quality of their work in high school and personality factors extraversion, agreeableness, conscientiousness, emotional stability, openness to experience) was statistically significant ( $\chi^2 = 41.79$ ,  $p < 0.001$ ) and distinguished between students reporting versus not reporting cluster of risk behaviours (problematic internet use and binge drinking) explaining 12% to 20% of the total variance. Gender, having a romantic relationship (1- 2 months, more than 12 months) and academic performance (total outcome while studying at college) made statistically significant contributions to the model (Table 2). The duration of romantic relationship of 1-2 month and more than 12 months decreased risk behaviours of problematic Internet use/binge drinking. Overall performance decreased this health behaviour cluster of problematic Internet use/binge drinking.

Table 2. The associations between gender, duration of romantic relationship, academic performance, personality factors and risk behaviours among Slovak university students.

	Odds Ratio (95% CI)	
Gender	<b>0.22*</b>	<b>(0.06-0.78)</b>
Romantic relationship 1-2months	<b>0.19*</b>	<b>(0.04-0.85)</b>
Romantic relationship 3-6 months	0.39	(0.08-1.88)
Romantic relationship 7-12 months	0.33	(0.08-1.39)
Romantic relationship more than 12 months	<b>0.16***</b>	<b>(0.06-0.44)</b>
Overall performance	<b>0.63*</b>	<b>(0.39-0.99)</b>
Amount of schoolwork	0.93	(0.60-1.44)
Quality of schoolwork	1.07	(0.69-1.66)
Extraversion	0.93	(0.81-1.06)
Agreeableness	0.95	(0.81-1.11)
Conscientiousness	1.00	(0.89-1.14)
Emotional stability	0.95	(0.84-1.07)
Openness to experience	1.03	(0.86-1.25)

\*  $p < 0.05$ ; \*\*\* $p < 0.001$

$\chi^2 = 41.79$ \*\*\*,  $p < 0.001$

## 7. CONCLUSION/DISCUSSION

Based on the tenets of Problem-behaviour theory of Jessor and Jessor (1997) and recent concept of health behaviour clusters (Conry et al., 2011), this study addressed the combination of problematic Internet use and binge drinking among university students. Both of these behaviours are typical in university environment (De Leo & Wulfert, 2013; Howland et al., 2010; Shields & Kane, 2011). In our sample, 80.5% of the first year university students fulfilled the criteria for binge drinking (6 or more drinks on one occasion) and at the same time reported

some symptoms of problematic Internet use. Only 19.5 % of these students scored very low on problematic internet use and they did not engage in binge drinking.

Our research focused on three indicators of academic performance: students' ratings of their overall performance, the amount of academic work completed and the quality of their academic work during the past year. The overall performance indicator was associated with the explored risk behaviour cluster of problematic Internet use/binge drinking. Unhealthy Internet use may strongly interfere with their academic performance and may cause disruptions of daily routines and negatively influence academic performance (De Leo & Wulfert; 2013, Ansari et al., 2013; Anderson, 2001). Regarding alcohol use, similarly, it has been found that repeated periods of heavy alcohol consumption are related to achieving lower grades (Pascarella et al., 2007).

This study further showed that being in a relationship 1-2 month or more than 12 months was associated with the cluster problematic Internet use/binge drinking. According to Fleming et al. (2010) being in relationship is protective towards feelings of loneliness and can serve as an important source of social support. Also negative significant relationship was observed between social support and preference for online communication (Kopuničová et al., 2012). It has been shown that binge drinking is negatively associated with social support and loneliness (Ang, Chong, Chye, & Huan, 2012; Hetzel-Riggin & Pritchard, 2011; Tokunaga & Rains, 2010).

The effect of personality variables did not appear to be significant in our study. Significant differences regarding gender were observed. Some research has shown that gender differences in problematic Internet use exist but with a considerable inconsistency (Guertler et al., 2014; Odaci & Cikrikci, 2014). On the other hand, Internet use shows a similar pattern for both genders that also report similar risk behaviours (Kuss, Griffiths, & Binder, 2013). Current research of undergraduates found that more men than women have a problem with alcohol use (Ansari et al., 2013; Maggs, Williams, & Lee, 2011; Heather et al., 2011). Further research is needed regarding gender differences in GPIU. 74.5% of participants in our research were female students, which is one of the limitations of this study. On-line data collection, as well as self-report based research could be identified as further limitations of this study.

The results of this study generally supported existing research and confirmed a simultaneous contribution of gender, relationship status and school performance with a cumulative indicator of risk behaviours (problematic internet use/ and binge drinking).

The findings of this study further highlight the necessity of research-based preventions of risk behaviour of first year university students.

## 8. FUTURE RESEARCH DIRECTIONS

This research study is a part of a larger international longitudinal project focused on psychosocial factors of health related behaviour. Future research regarding the relationship between the studied risk behaviours of problematic Internet use and binge drinking should be investigated from a longitudinal perspective. Similarly, psychosocial characteristics could be addressed on a process level, studying changes in these variables over time, which might prove to be relevant and significantly associated with health related behaviour as well as clusters of specific risk behaviours.

## REFERENCES

- Adámková, T., Vondráčková, P., & Vacek, J. (2009). Užívání alkoholu u vysokoškolských student [Alcohol abuse among university students]. *Adiktologie*, 9(2), 96-103.
- Anderson, K. J. (2001). Internet use among college students: An exploratory study. *Journal of American College Health*, 50(1), 21-26.
- Ang, R. P., Chong, W. H., Chye, S., & Huan, V. S. (2012). Loneliness and generalized problematic Internet use: Parents' perceived knowledge of adolescents' online activities as a moderator. *Computers in Human Behavior*, 28(4), 1342-1347.

- Ansari, W., Stock, C., & Mills, C. (2013). Is alcohol consumption associated with poor academic achievement in university students? *International Journal of Preventive Medicine*, 4(10), 1175-1188.
- Bačíková, M., Benka, J., Gajdošová, B., Kalina, O., Orosová, O., Salonna, F., & Sedlák-Vendelová, N. (2011). *Alma Alcohol Mater: Názory študentov na konzumáciu alkoholu a alkoholové politiky v univerzitnom prostredí* [Alma Alcohol Mater: Students opinions about alcohol consumption and alcohol policy making at universities]. Košice, Slovakia: Univerzita Pavla Jozefa Šafárika v Košiciach.
- Benka, J., & Orosová, O. (2013, November). *Satisfaction of basic psychological needs in relation to motivation of alcohol use among university students in Slovakia*. Poster presented at the 4th International Conference and Member's Meeting of European Society for Prevention Research "Understanding differences in prevention outcomes", Paris, France.
- Brooks, F. M., Magnusson, J., Spencer, N., & Morgan, A. (2012). Adolescent multiple risk behaviour: An asset approach to the role of family, school and community. *Journal of Public Health*, 34(1), i48-i56.
- Caplan, S. E. (2010). Theory and measurement of generalized problematic Internet use: A two-step approach. *Computers in Human Behaviour*, 26(5), 1089-1097.
- Conry, M., Morgan, K., Curry, P., McGee, H., Harrington, J., Ward, M., & Shelley, E. (2011). The clustering of health behaviours in Ireland and their relationship with mental health, self-rated health and quality of life. *BMC Public Health*, 11, 692.
- De Leo, J. A., & Wulfert, E. (2013). Problematic Internet use and other risky behaviors in college students: An application of problem-behavior theory. *Psychology of Addictive Behaviors*, 27(1), 133-141.
- Demetrovics, Z., Szeredi, B., & Rósz, S. (2008). The three-factor model of Internet addiction: The development of the Problematic Internet Use Questionnaire. *Behavior Research Methods*, 40(2), 563-574.
- Dusseldorp, E., Klein Velderman, M., Paulussen, T. W. G. M., Junger, M., van Nieuwenhuijzen, M., & Reijnevelde, S. A. (2014). Targets for primary prevention: Cultural, social and intrapersonal factors associated with co-occurring health-related behaviours. *Psychology and Health*, 29(5), 598-611.
- Fleming, C. B., White, H. R., & Catalano, R. F. (2010). Romantic relationships and substance use in early adulthood: An examination of the influences of relationship type, partner substance use, and relationship quality. *Journal of Health and Social Behavior*, 51(2), 153-167.
- Frangos, C. C., Frangos, C. C., & Sotiropoulos, I. (2011). Problematic Internet use among Greek university students: An ordinal logistic regression with risk factors of negative psychological beliefs, pornographic sites, and online games. *Cyberpsychology, Behavior and Social Networking*, 14(1-2), 51-58.
- Gajdošová, B., Orosová, O., & Janovská, A. (2012). Brief psycho-social training, personality factors and alcohol consumption among Slovak university students. *Psychology & Health*, 27(1), 209-210.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Guertler, D., Rumpf, H. J., Bischof, A., Kastirke, N., Petersen, K. U., John, U., Meyer, C. (2014). Assessment of problematic Internet use by the Compulsive Internet Use Scale and the Internet Addiction Test: A sample of problematic and pathological gamblers. *European Addiction Research*, 20(2), 75-81.
- Heather, N., Partington, S., Partington, E., Longstaff, F., Allsop, S., Jankowski, M., Wareham, H., Gibson, A. St. C. (2011). Alcohol use disorders and hazardous drinking among undergraduates at English universities. *Alcohol and Alcoholism*, 46(3), 270-277.
- Hetzel-Riggin, M. D., & Pritchard, J. R. (2011). Predicting problematic Internet use in men and women: The contributions of psychological distress, coping style, and body esteem. *Cyberpsychology, Behavior, and Social Networking*, 14(9), 519-525.
- Howland, J., Rohsenow, D. J., Greece, J. A., Littlefield, C. A., Almeida, A., Heeren, T., Winter, M., Bliss, C. A., Hunt, S., & Hermos, J. (2010). The effects of binge drinking on college students' next-day academic test-taking performance and mood state. *Addiction*, 105(4), 655-665.
- Janovská, A., Petkeviciene, J., Lukacs, A., Orosová, O., & Gajdošová, B. (2013). Intimate relationships, gender and risky drinking: An international SLiCE study. *Psychology & Health*, 28(1), 232.
- Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth*. New York, NY: Academic Press.

- Kopuničová, V., Orosová, O., & Gajdošová, B. (2012). Osobnosť, sociálna opora a preferencia online komunikácie u študentov vysokých škôl [Personality, social support and preferences for online communication among university students]. In P. Halama, R. Hanák, & R. Masaryk (Eds.), *Proceedings of the International Annual Conference Sociálne procesy a osobnosť 2012* (pp. 337-341). Bratislava, Slovakia: Spoločenskovedný ústav SAV.
- Kuss, D. J., Griffiths, M. D., & Binder, J. (2013). Internet addiction in students: Prevalence and risk factors. *Computers in Human Behavior, 29*(3), 959-966.
- Lippke, S., Nigg, C. R., & Maddock, J. E. (2012). Health-promoting and health-risk behaviours: Theory-driven analyses of multiple health behaviour change in three international samples. *International Journal of Behavioural Medicine, 19*(1), 1-13.
- Maggs, J. L., Williams, L. R., & Lee, C. M. (2011). Ups and downs of alcohol use among first-year college students: Number of drinks, heavy drinking, and stumble and pass out drinking days. *Addictive Behaviors, 36*(3), 197-202.
- Markel, K. S. & Frone, M. R. (1998). Job characteristics, work-school conflict and school outcomes among adolescents: Testing a structural model. *Journal of Applied Psychology, 83*(2), 277-287.
- Odaci, H., & Cikrikci, O. (2014). Problematic Internet use in terms of gender, attachment styles and subjective well-being in university students. *Computers in Human Behavior, 32*, 61-66.
- Orosová, O., Šebeňa, R., Benka, J., & Gajdošová, B. (2013, November). *Gender, social support, and alcohol drinking among Slovak university students. A longitudinal study*. Poster presented at the 4th International Conference and Member's Meeting of European Society for Prevention Research "Understanding differences in prevention outcomes", Paris, France.
- Orosová, O., Šebeňa, R., Gajdošová, B., & Kalina, O. (2012). Alcohol drinking and problematic Internet use among university students. *European Journal of Public Health, 22*(2), 203-204.
- Pascarella, E. T., Goodman, K. M., Seifert, T. A., Tagliapietra-Nicoli, G., Park, S., & Whitt, E. J. (2007). College student binge drinking and academic achievement: A longitudinal replication and extension. *Journal of College Student Development, 48*(6), 715-727.
- Robinson, J., Sareen, J., Cox, B. J., & Bolton, J. M. (2011). Role of self-medication in the development of comorbid anxiety and substance use disorders. *Archives of General Psychiatry, 68*(8), 800-807. doi:10.1001/archgenpsychiatry.2011.75.
- Shields, N., & Kane, J. (2011). Social and psychological correlates of Internet use among college students. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 5*(1), article 1. Retrieved from <http://cyberpsychology.eu/view.php?cisloclanku=2011060901&article=1>.
- Šebeňa, R., Orosová, O., & Benka, J. (2013). Are self-regulation and depressive symptoms predictors of problematic internet use among first year university students? *PsychNology Journal, 11*(3), 235-249.
- Tokunaga, R. S., & Rains, S. A. (2010). An evaluation of two characterizations of the relationships between problematic Internet use, time spent using the Internet, and psychosocial problems. *Human Communication Research, 36*(4), 512-545.

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## Chapter 31

# GENDER, OPTIMISM, PERCEIVED STRESS ON PROBLEMATIC INTERNET USE AMONG SLOVAK UNIVERSITY STUDENTS

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### ABSTRACT

A review of current literature shows that so far only few sociodemographic, psychological, and social correlates of problematic Internet use have been identified. However, even these limited findings seem to be inconclusive and inconsistent. The aim of this study was to investigate the effect of gender, optimism, and perceived stress on Generalized Problematic Internet Use among university students. In total, 817 first year university students from Slovakia (25.5% male, 74.5% female, 19.6 mean age) completed the Perceived Stress Scale, Revised Life Orientation Test and The Generalized Problematic Internet Use Scale 2. Two-way between groups ANOVA was used for the data analysis. This study showed that students with a lower level of optimism and a higher level of perceived stress seemed to have higher levels of generalized problematic Internet use. The main effect of gender on generalized problematic Internet use was not statistically significant. The findings of this study provide support for the conclusion that the development of life orientation, optimism, coping with stress, and reflection/deconstruction of perception of stress among first year university students could contribute to the prevention of generalized problematic Internet use.

*Keywords:* life orientation, perception of stress, problematic Internet use, university students.

## 1. INTRODUCTION

Problematic Internet use (PIU) is a heterogeneous construct which has been defined and operationalized by researchers in many different ways. Nonetheless, the main features which can be considered as fundamental for the existing definitions are: a) inability to control one's use of the Internet and b) various negative consequences related to spending too much time on the Internet (neglecting social activities, social contacts and relationships, mental and physical health, school or work duties, etc.) (Spada, 2014). PIU has recently been addressed by numerous research studies investigating the prevalence and its associations with various psychosocial factors as well as in case reports focusing on individual qualitative aspects of PIU development (Odaci & Cikrikci, 2014).

Various social and psychological variables have been identified that predispose certain individuals and groups to be more prone to developing PIU. The research has pointed out that university students could represent a high risk group for developing PIU. In particular, the first year spent at university has been recognized as a critical period for developing risk behaviors due to the intensive psycho-social development of young adults (e.g. the development of one's sense of social and personal identity, gaining independence, fitting in with peers, the development of intimate relationships) (Li, Wang, & Wang, 2009). Accessibility in general is an essential aspect for developing any kind of risk behaviour (Hawkins, Catalano, & Miller, 1992). Regarding PIU, easy and widespread access to high speed Internet is very common in the university environment. Moreover, using the Internet for academic progress, as an important source of information and learning is absolutely essential and thus creates a higher probability that the Internet can interfere with other life activities. This is one of the main reasons why the PIU phenomenon among university students has recently attracted the attention of Prevention Science (Celik & Odaci, 2013; Odaci, 2011; Li et al., 2009; Niemz, Griffiths, & Banyard, 2005). Prevention Science is a relatively new discipline which tries to integrate the empirical

and theoretical knowledge in order to attempt to reduce the impact of risk factors and promote the influence of protective factors on individuals' behaviour and their health (Shek, Sun, & Yu, 2013).

## **2. BACKGROUND**

### **2.1. Problematic Internet use**

The different conceptualizations of PIU in the literature have been addressed by the application of different terminologies, such as Internet addiction, Internet abuse and problematic Internet use. However, there is a general agreement that PIU can be defined in terms of the generally negative effect of the Internet with possible negative consequences on an individual's everyday life (Chittaro & Vianello, 2013).

PIU is defined as a multidimensional syndrome (Caplan, 2005, 2010). Problematic Internet use has been defined in the literature by cognitive, emotional, and behavioral symptoms (obsessive thoughts about the Internet, reduced impulse control, preoccupation with the use of the Internet, guilt about the use of the Internet, failure to control the use of the Internet, using the Internet to escape one's problems, intensive use of the Internet, difficulty in engaging in social and familial relationships and academic responsibilities) (Chittaro & Vianello, 2013; Senol-Durak & Durak, 2011). This study has employed Caplan's cognitive-behavioral model of general problematic Internet use (Caplan, 2010).

### **2.2. Gender**

The current research has shown that there are gender differences in PIU although the findings are inconsistent (Odaci & Cikrikci, 2014; Ceyhan, 2010).

A higher level of PIU was found among males in comparison to female university students (Odaci & Cikrikci, 2014; Celik & Odaci, 2013; Odaci, 2013; Öztürk & Özmen, 2011; Frangos, Frangos, & Sotiropoulos, 2011; Odaci & Kalkan, 2010; Ceyhan, 2008). Öztürk and Özmen (2011) reviewed the research findings exploring the association between gender and PIU and found that women were more prone to engage in PIU while men were more inclined to show a pattern of addictive behaviour regarding their Internet use. Kim and Davis (2009) similarly found that the chance of becoming addicted to Internet use was much higher for male than for female students. On the other hand, it was found that gender was not a significant predictor of PIU (Kuss, Griffiths, & Binder, 2013; Yeh, Lin, Tseng, & Hwang, 2012; Ceyhan, 2010).

The mentioned studies show that further research is needed to justify the assumption that there are gender differences in PIU and that different psychological reasons for excessive Internet use can be attributed to males and females (Hetzl-Riggin & Pritchard, 2011). Thus, one of the aims of this study is to investigate gender differences in PIU in a sample of Slovak university students.

### **2.3. Stress**

It has been well established that the level of perceived stress is often associated with a variety of maladaptive behaviours and current research suggests that PIU could be one of them. For example, stressful life events have been found to contribute to PIU and higher scores of perceived stress have been shown to be associated with a more frequent Internet use. Yet, it is important to note that this topic is relatively new and further research is necessary (Derbyshire et al., 2013; Hetzel-Riggin & Pritchard, 2011; Wang et al., 2011; Li et al., 2009).

### **2.4. Optimism**

In addition to the role of stress, it has been found that stable personality characteristics such as optimism could be associated with PIU (Kim & Davis, 2009). In particular, individuals with a pessimistic perception of life events had higher levels of PIU in comparison to those with an optimistic perception of the world (Celik & Odaci, 2013). Moreover, it was also shown that greater optimism was related to a smaller increase in stress over time among university students throughout their first semester (Brissette, Scheier, & Carver, 2002). Optimism served as

a valuable mechanism for coping with stress and was also found to be generally associated with good adjustment to the university environment (Dawson & Pooley, 2013). According to the findings of Besser and Zeigler-Hill (2012) the protective role of positive personality traits such as optimism (in their study also hope and happiness) on psychological distress (e.g. depressive symptoms, anxiety or perceived stress) appears to be especially important during the initial transition period of beginning at a university.

The research findings regarding the risk factors connected to PIU are very much needed (Aboujaoude, 2010) in order to provide data-based interventions for preventing PIU. The exploration of perceived stress and optimism and their relation to PIU among first year university students aims to contribute to the knowledge of the relatively newly established phenomenon of PIU.

### **3. OBJECTIVES**

The main aim of this study was to investigate the effect of gender, optimism, and perception of stress on general problematic Internet use as well as on the respective factors of general problematic Internet use among the first year university students.

### **4. METHODS**

#### **4.1. Design**

A cross-sectional design was used.

#### **4.2. Sample**

The sample consisted of 817 first year university students from Slovakia (74.5% females, 19.61 mean age,  $SD = 1.42$ ) who participated in the SLiCE study (Student Life Cohort in Europe). SLiCE is a 5 year follow-up cohort study conducted among first year university students. The first year university students from universities in Košice in the Eastern part of Slovakia were contacted by university e-mail as well as personally during their courses with an offer to participate in this study. Those students who signed the consent form were then asked to complete on-line questionnaires concerning perceived stress, optimism and PIU anonymously.

#### **4.3. Measures**

The Generalized Problematic Internet Use Scale 2 (Caplan, 2010) consists of 15 items. Each item is rated on a scale ranging from 1 (definitely disagree) to 8 (definitely agree). A higher score indicates more problematic use of the Internet. Cronbach's  $\alpha$  in this study reached 0.91 for the whole scale. The Generalized Problematic Internet Use Scale 2 consists of the following individual subscales: preference for online social interaction ( $\alpha = 0.75$ ), mood alteration ( $\alpha = 0.87$ ), cognitive preoccupation ( $\alpha = 0.88$ ), compulsive use ( $\alpha = 0.88$ ) and negative outcomes ( $\alpha = 0.88$ ).

The Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) is a four-item self-report instrument with each item measured on a five-point scale (1 = never, 2 = almost never, 3 = sometimes, 4 = fairly often, 5 = very often). Cronbach's  $\alpha$  in this study reached 0.73.

The Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994) is a ten-item measure of generalized dispositional optimism (versus pessimism). In this instrument, respondents answer each item using a scale that ranges from 0 (I disagree a lot) to 4 (I agree a lot) with a higher score indicating a higher level of optimism. LOT-R was found to have satisfactory reliability in the present sample (Cronbach's alpha in this study was 0.79).

#### **4.4. Statistical analyses**

Visual binning was used to identify suitable cut-off points to categorize the continuous variables of perceived stress and optimism into three approximately equal groups. Two-way between groups ANOVA was used for the data analysis. Post hoc comparisons were carried out using the Turkey HSD test. The data were analysed using SPSS 20.



## 5. RESULTS

### 5.1. The effect of gender, optimism and perception of stress on generalized problematic Internet use (GPIU)

Statistically significant main effects of optimism, as well as the perception of stress on GPIU were found although the effect sizes were small (Table 2). Post hoc comparisons indicated that the mean score of GPIU for the group with a lower level of optimism was significantly higher when compared to the groups with a medium and a higher level of optimism (Table 1, 2). Furthermore, the mean score of GPIU in the group with a higher level of self-perceived stress was significantly higher when compared to the group with a medium and a lower level of perceived stress (Table 1, 2). The main effect of gender was not statistically significant. In the next step, two-way between-groups analyses of variance were conducted to explore the effects of gender, optimism and perception of stress on the GPIUS subscales: preference for online social interaction, mood alteration, cognitive preoccupation, compulsive use, and negative outcomes.

### 5.2. The effect of gender, optimism and perception of stress on preference for online social interaction (POSI)

There was a statistically significant main effect of gender and optimism on POSI although the effect size was small (Table 3). The statistically significant main effect of perception of stress on POSI was not found (Table 3). Post hoc comparisons indicated that the mean score of POSI for the group with a lower level of optimism was significantly different from the groups with a medium and a higher level of optimism (Table 1, 3). Simple main effects analysis further showed a significantly higher level of POSI among males and university students with a lower level of optimism.

Table 1. Mean scores and standard deviation of general problematic Internet use (GPIU), and GPIU subscales according to optimism, and perception of stress.

		GPIU <sup>1</sup>	GPIU2 subscales <sup>2</sup>				
			POSI <sup>5</sup>	MA <sup>6</sup>	CP <sup>7</sup>	CU <sup>8</sup>	NO <sup>9</sup>
Gender	Males	40.77 (19.70)	7.50 (4.54)	10.94 (6.13)	8.03 (5.48)	8.29 (5.64)	6.45 (4.73)
	Females	40.16 (19.26)	6.85 (4.26)	12.87 (6.02)	7.43 (5.30)	7.45 (5.38)	5.94 (4.67)
Optimism <sup>3</sup> n(%)	Lower 255(38.2)	45.49 (19.98)	7.95 (4.70)	13.77 (5.76)	8.53 (5.73)	8.68 (5.76)	7.01 (5.08)
	Medium 237(35.5)	37.57 (18.62)	6.68 (4.04)	11.38 (5.94)	7.03 (5.05)	7.09 (5.35)	5.63 (4.48)
	Higher 176(26.3)	37.70 (19.24)	6.04 (3.96)	12.16 (6.68)	7.27 (5.37)	7.30 (5.20)	5.13 (4.03)
Perception of stress <sup>4</sup> n(%)	Lower 299(37.6)	36.56 (17.93)	6.42 (4.17)	11.84 (6.33)	6.80 (5.06)	6.72 (4.80)	4.98 (3.74)
	Medium 300(37.7)	39.14 (18.51)	6.94 (4.18)	11.85 (5.80)	7.41 (5.16)	7.72 (5.52)	5.96 (4.35)
	Higher 196(24.7)	47.58 (20.71)	7.98 (4.69)	14.05 (5.93)	8.87 (5.76)	8.93 (6.02)	7.89 (5.88)

**Note:**

<sup>1</sup>minimum score of GPIUS2 = 15, maximum score of GPIUS2 = 120

<sup>2</sup>minimum score of GPIUS2 subscale = 3, maximum score of GPIUS2 subscale = 24

<sup>3</sup>optimism: lower level = <= 19.00, medium level = 20.00 – 23.00, higher level = 24.00+

<sup>4</sup>perception of stress: lower level = <= 9.00, medium level = 10.00 – 12.00, higher level = 13.00+

<sup>5</sup>preference for online social interaction; <sup>6</sup>mood alteration; <sup>7</sup>cognitive preoccupation; <sup>8</sup>compulsive use;

<sup>9</sup>negative outcomes

Table 2. Summary of two-way ANOVA for preference for GPIU.

GPIU subscales	Source	SOS	df	MS	F	P	Partial Eta Squared	Post hoc test
GPIU	Gender	236.92	1	236.92	0.644	0.423	0.001	
	LO	3610.41	2	1805.21	4.905	0.008	0.016	<sup>a</sup> 1-2***, 1-3***
	PoS	5017.18	2	2508.59	6.816	0.001	0.022	<sup>b</sup> 3-1***, 3-2***
	Error	228189.36	620	368.05				
	Total	1271171.00	631					

**Note:** GPIU = General Problematic Internet Use; LO = Optimism; PoS = Perception of Stress; SOS = Sum of Square; df = degree of freedom, MS = Mean Square, F= computed F value; P = level of significance.

<sup>a</sup> optimism: (1) lower level = <= 19.00, (2) middle level = 20.00 – 23.00, (3) higher level = 24.00+

<sup>b</sup> perception of stress: (1) lower level = <= 9.00, (2) middle level = 10.00 – 12.00, (3) higher level = 13.00+

\*\*\*p<0,001

### 5.3. The effect of gender, optimism and perception of stress on mood alteration (MA)

There was a statistically significant main effect of gender, optimism and perceived stress on MA although the effect sizes were small (Table 3). The mean score of MA for females was significantly higher when compared to males. Post hoc comparisons indicated that the mean score of MA for the group with a lower level of optimism was significantly higher when compared with the groups with a medium and a higher level of optimism (Table 1, 3). The mean score of MA for the group with a higher level of perception of stress was significantly higher when compared with the groups with a medium and a lower level of perception of stress (Table 1, 3).

### 5.4. The effect of gender, optimism and perception of stress on cognitive preoccupation (CP)

There was a statistically significant main effect of perceived stress on CP (Table 3). The main effect of gender and optimism on CP was not significant (Table 3). Post hoc comparisons indicated that the mean score of CP for the group with a lower level of perception of stress was significantly lower when compared to the groups with a higher level of perception of stress (Table 1, 3).

### 5.5. The effect of gender, optimism and perception of stress on compulsive use (CU)

There was a statistically significant main effect of gender and perception of stress on CU although the effect sizes were small (Table 3). The statistically significant main effect of optimism on CU was not found (Table 3). The mean score of CU for males was significantly higher in comparison to females. Post hoc comparisons indicated that the mean score of CU for the group with a lower level of perception of stress was significantly lower when compared to the group with a higher level of perception of stress (Table 1, 3).

### 5.6. The effect of gender, optimism and perception of stress on negative outcomes (NO)

There was a statistically significant main effect of perception of stress on NO although the effect size was small (Table 3). The statistically significant main effect of gender and optimism on NO was not found (Table 3). Post hoc comparisons indicated that the mean score of NO for the group with a lower and a medium level in perception of stress was significantly lower compared to the group with a higher level of perception of stress (Table 1, 3).

Table 3. Summary of two-way ANOVA for preference for GPIU subscales (preference for online social interaction, mood alteration, cognitive preoccupation, compulsive use, and negative outcomes).

GPIU subscales	Source	SOS	df	MS	F	P	Partial Eta Squared	Post hoc test
POSI	Gender	78.00	1	78.00	4.24	0.040	0.006	
	LO	244.24	2	122.12	6.63	0.001	0.020	<sup>a</sup> 1-2**, 1-3***
	PoS	33.04	2	16.52	0.90	0.408	0.003	
	Error	11966.47	650	18.41				
	Total	44628.00	656					
MA	Gender	384.20	1	384.20	10.59	0.001	0.016	
	LO	394.85	2	197.43	5.44	0.005	0.017	<sup>a</sup> 1-2***, 1-3*
	PoS	318.27	2	159.13	4.39	0.013	0.013	<sup>b</sup> 3-1***, 3-2**
	Error	23396.61	645	36.27				
	Total	126063.00	651					
CP	Gender	88.90	1	88.90	3.086	0.079	0.005	
	LO	113.47	2	56.74	1.97	0.140	0.006	
	PoS	181.08	2	90.54	3.144	0.044	0.010	<sup>b</sup> 1-3**
	Error	18519.69	643	28.80				
	Total	56993.00	649					
CU	Gender	147.11	1	147.11	5.001	0.026	0.008	
	LO	124.79	2	62.40	2.121	0.121	0.007	
	PoS	231.36	2	115.68	3.933	0.020	0.012	<sup>b</sup> 1-3***
	Error	19001.48	646	29.41				
	Total	58556.00	652					
NO	Gender	54.18	1	54.18	2.663	0.103	0.004	
	LO	110.33	2	55.17	2.712	0.067	0.008	
	PoS	400.85	2	200.43	9.851	0.001	0.030	<sup>a</sup> 3-1***, 3-2***
	Error	13020.62	640	20.35				
	Total	37251.00	646					

Note: POSI = Preference for Online Social Interaction; MO = Mood alteration; CP = Cognitive Preoccupation; CU = Compulsive Use; NO = Negative Outcomes; LO = Optimism; PoS = Perception of Stress; SOS = Sum Of Square; df = degree of freedom; MS = Mean Square; F= computed F value; P = level of significance.

<sup>a</sup> optimism: (1) lower level = <= 19.00, (2) medium level = 20.00 – 23.00, (3) higher level = 24.00+

<sup>b</sup> perception of stress: (1) lower level = <= 9.00, (2) medium level = 10.00 – 12.00, (3) higher level = 13.00+

\*p<0,05 \*\*p<0,01 \*\*\*p<0,001

## 6. CONCLUSION/DISCUSSION

The main aim of this study was to investigate the effect of gender, optimism and perception of stress on GPIU as well as its individual subscales. Firstly, this study showed that the main effect of gender on GPIU was not statistically significant. This finding is similar to previous research findings and provides further empirical support showing that there are no gender differences in problematic Internet use (Yeh et al., 2012; Ceyhan, 2010; Li et al., 2009). However, this finding is not consistent with the findings of other studies which report higher levels of problematic Internet use among males (Odaci & Cikrikci, 2014; Celik & Odaci, 2013; Odaci, 2013; Öztürk & Özmen, 2011; Frangos, Frangos, & Sotiropoulos, 2011; Odaci & Kalkan, 2010; Ceyhan, 2008). This apparent inconsistency has been addressed by Odaci (2013)

who suggests that while there has been an increase in computer use and Internet use among male and female university students, there may be differences in the actual reasons for using it. Internet access and Internet use are necessary means for academic success for both genders although the type of use might be different according to the results of this study. Gender differences were indeed found in some of the GPIU subscales. A statistically significant effect of gender was found in the following GPIU subscales: higher level of preference for online social interaction and compulsive use among males and higher level of mood alteration among females. These findings are consistent with the results of previous studies that have supported the existence of gender differences in emotional responding (McRae, Ochsner, Mauss, Gabrieli, & Gross, 2008). They are also consistent with the idea that females are more likely than males to engage in emotion regulation strategies (Nolen-Hoeksema & Aldao, 2011). The possible interpretation of the fact that males reported a higher level of preference for online social interaction and compulsive use than females could be attributed to a higher mastery in communication skills by females, and a better ability at expressing their own feelings and thoughts in the context of a virtual environment without face-to-face contact. For males, greater difficulties in establishing intimate relationships as well as more interest in computer and video games has generally been reported (Celik & Odaci, 2013; Bulut Serin, 2011; Ceyhan, 2008).

The current research findings have shown that a significantly higher level of GPIU was found among university students with a lower level of optimism, as well as those with a higher level of stress. These findings are consistent with other published studies which have found support for the association between problematic Internet use and stress and between problematic Internet use and stressful life events (De Leo & Wulfert, 2012; Echeburúa & De Corral, 2010). The results of this study have generally confirmed the effect of life orientation (generalized dispositional optimism) on problematic Internet use and are in line with the research showing that optimism has been found to be related to problematic Internet use (Kim & Davis, 2009).

The present research findings further suggest that a lower level of optimism is especially important for the following subscales of GPIU; preference for online social interaction, and mood alteration. A significantly higher level of GPIU in the subscales of preference for online social interaction, and mood alteration was found among the students with a lower level of optimism. These findings also show that a higher level of perceived stress is associated with GPIU and all the subscales of GPIU with the exception of the subscale preference for online social interaction. These findings generally support the relevance of the model of compensatory Internet use (Kardefelt-Winther, 2014), which states that negative life situations or stress can be facilitated by Internet.

The results of this study have revealed that problematic Internet use of Slovak university students is below average of The Generalized Problematic Internet Use Scale 2 but that students with a lower level of life orientation (optimism), as well as a higher level of perceived stress seem to have higher levels of problematic Internet use. The development of life orientation, coping with stress, and reflection / deconstruction of perception of stress among first year university students could contribute to the prevention of GPIU.

Several limitations of this study should also be noted in order to provide a direction for future research. Firstly, the research sample was not representative and consisted only of university students that accepted the invitation to participate in the on-line research. Secondly, the online data collection consisted of abbreviated versions of the questionnaires. Therefore, the research conclusions are limited to the weakness of the online data collection, which may be especially relevant for the GPIU context.

## 7. FUTURE RESEARCH DIRECTIONS

Further exploration and implementation of the model of Compensatory Internet use (Kardefelt-Winther, 2014) could be useful for further investigations of the interactions between life perspective, stress and GPIU. The elaboration of this model could bring more insight into the nature of GPIU and its development in time within the context of psychosocial risk factors of GPIU among university students.

## REFERENCES

- Aboujaoude, E. (2010). Problematic Internet use: An overview. *World Psychiatry, 9*(2), 85-90.
- Besser, A., & Zeigler-Hill, V. (2012). Positive personality features and stress among first-year university students: Implications for psychological distress, functional impairment, and self-esteem. *Self and Identity, 13*(1), 24-44.
- Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology, 82*(1), 102-111.
- Bulut Serin, N. (2011). An examination of predictor variables for problematic Internet use. *Turkish Online Journal of Educational Technology, 10*(3), 54-62.
- Caplan, S. E. (2010). Theory and measurement of generalized problematic Internet use: A two-step approach. *Computers in Human Behavior, 25*(5), 1089-1097.
- Caplan, S. E. (2005). A social skill account of Problematic Internet Use. *Journal of Communication, 55*(4), 721-736.
- Ceyhan, E. (2010). Predictiveness of identity status, main Internet use purposes and gender on university students' the Problematic Internet Use. *Educational Sciences: Theory & Practice, 10*(3), 1323-1355.
- Ceyhan, A. A. (2008). Predictors of problematic Internet use on Turkish university students. *CyberPsychology & Behavior, 11*(3), 363-366.
- Celik, C. B., & Odaci, H. (2013). The relationship between problematic Internet use and interpersonal cognitive distortions and life satisfaction in university students. *Children and Youth Services Review, 35*(3), 505-508.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 385-396.
- Chittaro, L., & Vianello, A. (2013). Time perspective as a predictor of problematic Internet use: A study of Facebook users. *Personality and Individual Differences, 55*(8), 989-993.
- Dawson, M., & Pooley, L. A. (2013). Resilience: The role of optimism, perceived parental autonomy support and perceived social support in first year university students. *Journal of Education and Training Studies, 1*(2), 38-49.
- De Leo, J. A., & Wulfert, E. (2012). Problematic Internet Use and other risky behaviors in college students: An application of Problem-Behavior Theory. *Psychology of Addictive Behaviors, 27*(1), 133-141.
- Derbyshire, K. L., Lust, K. A., Schreiber, L., Odlaug, B. L., Christenson, G. A., Golden, D. J., & Grant, J. E. (2013). Problematic Internet Use and associated risks in a college sample. *Comprehensive Psychiatry, 54*(5), 415-422.
- Echeburúa, E., & De Corral, P. (2010). Adicción a las nuevas tecnologías y a las redes sociales en jóvenes: Un nuevo reto [Addiction to new technologies and to online social networking in young people: A new challenge]. *Adicciones, 22*(2), 91-95.
- Frangos, C. C., Frangos, C. C., & Sotiropoulos, I. (2011). Problematic Internet use among Greek university students: An ordinal logistic regression with risk factors of negative psychological beliefs, pornographic sites, and online games. *Cyberpsychology, Behavior, and Social Networking, 14*(1-2), 51-58.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*(1), 64-105.
- Hetzel-Riggin, M. D., & Pritchard, J. R. (2011). Predicting Problematic Internet Use in men and women: The contributions of psychological distress, coping style, and body esteem. *Cyberpsychology, Behavior, and Social Networking, 14*(9), 519-525.
- Kardefelt-Winther, D. (2014). A conceptual and methodological critique of Internet addiction research: Towards a model of compensatory Internet use. *Computers in Human Behavior, 31*, 351-354.
- Kim, H., & Davis, K. E. (2009). Toward a comprehensive theory of problematic Internet use: Evaluating the role of self-esteem, anxiety, flow, and the self-rated importance of Internet activities. *Computers in Human Behavior, 25*(2), 490-500.
- Kuss, D. J., Griffiths, M. D., & Binder, J. (2013). Internet addiction in students: Prevalence and risk factors. *Computers in Human Behavior, 29*(3), 959-966.
- Li, H., Wang, J., & Wang, L. (2009). A survey on the generalized problematic Internet use in Chinese college students and its relations to stressful life events and coping style. *International Journal of Mental Health and Addiction, 7*(2), 333-346.

- McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J. D., & Gross, J. J. (2008). Gender differences in emotion regulation: An fMRI study of cognitive reappraisal. *Group Processes & Intergroup Relations*, 11(2), 143-162.
- Niemz, K., Griffiths, M., & Banyard, P. (2005). Prevalence of pathological Internet use among university students and correlations with self-esteem, the General Health Questionnaire (GHQ), and disinhibition. *CyberPsychology & Behavior*, 8(6), 562-570.
- Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationships to depression. *Personality and Individual Differences*, 51(6), 704-708.
- Odaci, H., & Cikrikci, O. (2014). Problematic Internet use in terms of gender, attachment styles and subjective well-being in university students. *Computers in Human Behavior*, 32, 61-66.
- Odaci, H. (2013). Risk-taking behavior and academic self-efficacy as variables accounting for problematic Internet use in adolescent university students. *Children and Youth Services Review*, 35(1), 183-187.
- Odaci, H. (2011). Academic self-efficacy and academic procrastination as predictors of problematic Internet use in university students. *Computers & Education*, 57(1), 1109-1113.
- Odaci, H., & Kalkan, M. (2010). Problematic Internet use, loneliness and dating anxiety among young adult university students. *Computers & Education*, 55(3), 1091-1097.
- Öztürk, E. & Özmen, S. K. (2011). An Investigation of the problematic Internet use of teacher candidates based on personality types, shyness and demographic factors. *Educational Sciences: Theory & Practice*, 11(4), 1799-1808.
- Senol-Durak, E., & Durak, M. (2011). The mediator roles of life satisfaction and self-esteem between the affective components of psychological well-being and the cognitive symptoms of problematic Internet use. *Social Indicators Research*, 103(1), 23-32.
- Shek, D., Sun, R., & Yu, L. (2013). Internet addiction. In D. W. Pfaff (Ed.), *Neuroscience in the 21st century: From basic to clinical* (pp. 2775-2811). New York, NY: Springer.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A re-evaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063-1078.
- Spada, M. M. (2014). An overview of problematic Internet use. *Addictive Behaviors*, 39(1), 3-6.
- Wang, H., Zhou, X., Lu, C., Wu, J., Deng, X., & Hong, L. (2011). Problematic Internet use in high school students in Guangdong province, China. *PloS one*, 6(5), e19660. doi:10.1371/journal.pone.0019660
- Yeh, Y. C., Lin, S. S., Tseng, Y. H., & Hwang, F. M. (2012). The Questionnaire of Lifestyle Change in regard to problematic Internet use: Factor structure and concurrent and cross-year predictive utilities. *Turkish Online Journal of Educational Technology*, 11(4), 315-324.

## ADDITIONAL READING

- Young, K., & Abreu, C. (2011). *Internet addiction. A handbook and guide to evaluation and treatment*. Hoboken, NJ: John Wiley & Sons.

## KEY TERMS & DEFINITIONS

**Problematic Internet Use:** the generally negative effect of the Internet with possible negative consequences on an individual's everyday life.

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**Section 5**  
**Legal Psychology**



## Chapter 32

# MARITAL VIOLENCE: FROM CHILD WITNESS TO ADULT OFFENDER

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### ABSTRACT

Violence is inherent to all human beings and even forms an intrinsic part of individuals when establishing the first parental bonds. In this article, we seek to demonstrate the consequences of marital violence on the future of children who witness this act. Indeed, such children encounter a troubling relationship between their parents, founded on violence. In addition, they are caught up in the shock and the silence that are sources of trauma. Thrust in cross-generational issues where violence acts as a bond, putting this violence into action is one of the possible outcomes. Our research focuses on recollections of experiences by adults of their childhood, once children who witness domestic violence. The purpose of such a research is to elucidate psychic mechanisms and mental consequences for these persons. It is based on a qualitative approach with case study method. The case of Mr. Ritti enables us to highlight the conscious and unconscious stakes at play within the mechanism of cross-generational repetition.

*Keywords:* domestic violence, child, psychic transmission, trans-generational, repetition.

### 1. INTRODUCTION

International research consistently demonstrates that a woman is more likely to be assaulted, injured, raped, or killed by a current or former partner than by any other person<sup>1</sup>. In France one woman dies every two and a half days from conjugal violence (Jaspard, 2000). Spousal abuse remains a serious problem in France (Jaspard, 2007) and in the world. How can we explain this?

A psychodynamic model will be used in the case of Mr. Ritti, integrating the theories of Jean Bergeret (1984) and Piera Aulagnier (1975/ 1995) and their conceptualizations of primary and fundamental violence, the theories of Anna Freud (1936/1990) and Sandor Ferenczi (1982) and their contributions to theory about trauma. Children's internal and external worlds develop from birth and, to a certain extent, these worlds are associated with violent impulses. According to these authors, violence is as present in children as it is in their parents; it is fundamental in the construction of parent-child bonds, as well as in the development of family then social ties, we will explain that later. The symbolic register guides the transformation of violence in respect to law and the forbidden; then violence is represented in imagination not in reality; for example by the wishes for death. On the contrary, real violence refers to a destructive act and to its pathogenic effects.

Within families, existent and repetitive acts of marital violence undoubtedly affect the psychological development of the child witness (Lehmann, 2000); they can also affect the representations of marital bonds for the child, and more globally, can have an impact on what constitutes the link to the other - impacts but also risks of repetition (Wood & Sommers, 2011). Witnessing and living in a marital violence environment is puzzling for a child with regard to both the perpetrator of such an act and its victim. The child is trapped when the violence is finally put into action. He is left voiceless. Stuck in a dead-end, he is unable to symbolize the violence. As a result, it acquires a traumatic dimension while symptoms and sufferings emerge. That is what we can notice when it is repeated by the following generation. In this article, we address marital violence from a psychopathological angle. In order to understand violence within the family nucleus, our work centers on the conscious and unconscious transmission of violence. "Actioned violence" as we will refer to it, is indeed characterized by the fact that it is

too often repeated by the following generation. The French Henrion report (2001) and other studies in the United States (Wood & Sommers, 2011) and Canada<sup>ii</sup> (Fortin, 2011) have focused on child “witnesses” or those “exposed” to violence. These studies have established the extent of the behavioral difficulties these children exhibit, and the risk of marital violence reproduction in their own generation. A child who witnesses marital violence often becomes an “adult-aggressor”. Using a specific case, Mr. Ritti, we will highlight the issues at stake during childhood, then in adulthood.

Firstly, we will base our research on the notion of the so-called “normal violence” from a psychoanalytical perspective, meaning, the violence that provides subjects with a framework defining how they relate to others. Secondly, based on our research, we will elucidate psychic mechanisms and mental consequences for an adult, once child who witness marital violence. Some of them become violent as adults (Evans, Davies, & DiLillo, 2008; Fortin, 2011; Razon & Metz, 2011), and we will be looking to identify certain psychic causes: how their psychological dynamics in adult development lead them to marital violence with intimate partner. This research is based on a qualitative approach with case study method, and the case of Mr. Ritti enables us to investigate the conscious and unconscious stakes at play within the mechanism of transgenerational repetition.

## 2. BACKGROUND

### 2.1. Violence from a psychoanalytic point of view

All violence makes reference to childhood: it is inherent to human beings; it forms the first encounter with the mother and is fundamental in the development of the first bonds. We will develop three fundamental aspects of violence: “primal violence” (Freud, 1915/1988), “primary violence” (Aulagnier, 1975/ 1995) and “fundamental violence” (Bergeret, 1984).

**2.1.1. Primal violence.** “We are (...) as the primal men, a horde of murderers.” (Freud, 1915/1988, p. 154). According to Freud’s myth of the primitive horde, every child has to deal with primal violence; it is primal insofar as humanization arises from this violence. The child inherits the manner in which his forefathers and his parents in particular, have dealt with violence. Have they repressed it, fantasized about it, or acted it out? From a psychical point of view, the child’s humanization goes through the internalization of the laws that allow him to handle his destructive instincts. When the Oedipus Complex is resolved, the psychical law plays a structuring role.

By taking an interest in children who grow up witnessing their parents’ violence, we seek to study how these children internalize violence in reference to forbidden acts. We will thus focus on the constitutive or normal violence in the bond between parents and children.

**2.1.2. Primary violence or maternal bond.** In Piera Aulagnier’s studies (1975/ 1995), primary violence is rooted in the speech a mother addresses to her baby, who is, at that age, unable to understand it. “Primary violence is the psychical act of imposing on someone else’s psyche, a choice, a thought or an action only motivated by one’s own desire.” (p. 40) It lies between a desire (the mother’s) and a need (the child’s), and is necessary as the manner in which mothers interpret their children’s needs enables these children to make sense of their experiences.

Moreover, the mother often appears as absent and dissatisfied; in this way, she makes it possible for the child to discover his/her own existence. The child’s hatred of the mother emanates from this frustration. Freud summarized this issue as: “The maternal bond leads to hatred” (Freud, 1932/ 1989, p.129); fundamental hatred which is also present in the relationship with the father.

According to Melanie Klein (2013) too, hatred is present early in the development of the child, during the paranoid-schizoid position: “the first object being the mother breast which to the child becomes split into a good (gratifying) and bad (frustrating) breast; this splitting results in a severance of love and hate (p. 20). Margaret Mahler’s theory also demonstrates that

the child struggles with his ambivalence during the subphase of rapprochement (Traub & Lane, 2002).

**2.1.3. Fundamental violence or paternal bond.** The notion of fundamental violence was introduced by Jean Bergeret (1984). This positive violence takes place in the child's imaginary during the oedipal complex. The father appears as an "annoying rival" because he bears and transmits the law forbidding incest and murder. He hands down a law to which both he and the mother are subject to. This law is based on a fundamental principle: it forbids a destructive or possessive bond over the other. Consequently, the father reinforces the issues of boundaries and castration, already present in the mother-child bond. He compels and thus helps the child to handle his love and hate instincts. In other words, he prevents the child from yielding to his destructive impulses. He sets the containing boundaries, halting primal and primary violence.

**2.1.4. When primal hatred becomes violence.** "Man is rarely entirely good or bad" (Freud, 1915/ 2010, p.136). "Actioned violence" by a family member results from insufficiently structured interdictions that prevent the counteracting of destructive impulses. The familial bond neither depends on dialogue nor on triangulation. In a dual relationship, the law of the strongest is sovereign. This pathological mechanism is associated with failure in the initial development of the bond.

The whole development of the child passes through this discovery of the other, alternating love and hatred. Generally, children overcome this hatred as they have everything to gain by shaping themselves differently. As we have developed above, unavoidable fear, hatred or rage can be surmounted by many but unfortunately, for some individuals these become points of attachment. It is in this impasse that we can find the roots of hatred for the other and of the violence in a relationship. When hatred is not overcome in the psychic organization of the subject, it could take the form of a pathology. Consequently, the relationship with the other, such as for a couple, essentially falls within a perspective of fusional duality, linked to the assumed violence of the other. The new relationship revives memories of this childhood violence resulting from familial ties. The violence of the unresolved childhood conflict could be transposed onto the other partner in the couple. Consequently, the violence observed in a family's protagonist results from failure to integrate impulses within the scope of taboo, taboo that is insufficiently structured to act as a barrier to destructive impulses. This imaginary fear of the other requires the installation of a relationship model to which everyone must submit. The law of the strongest is thus established and results from a dual relationship and from the absence of oedipal triangulation (Vasse, 1978; Bergeret, 1984). Children who witness marital violence are witnesses of this dual relationship dominated by the law of the strongest, generally the father, but not always. They observe two people during violent scenes between their parents: one is dominated and withdrawn, the other dominant and overwhelming. They are anxious and traumatized as the actual violent scene confronts them with their own archaic fantasies of violence. The trauma arises from acting on what was to remain imaginary. Psychic intrusion through reality prevents the child from speaking and reflecting on the event, leaving him struck by the traumatic event (Ferenczi, 1982; Fortin, 2011). There is a significant risk of the repetition of this violence across generations (Wood & Sommers, 2011). This research aims to explain the psychical mechanism at the origin of violence.

### 3. RESEARCH

#### 3.1. Objectives

In this psychical context, what effect does actioned marital parental violence have on a child witness? (Freud, 1936/1990; Wood & Sommers, 2011) This is the subject we will address in the course of our research.

### 3.2. Design

Our research is based on a qualitative approach with case study method. We have chosen to present Mr. Ritti's testimony, obtained during a research, (works by Nancy Sawan, student at the Louis-Pasteur University of Strasbourg, under the direction of Claire Metz; Razon & Metz, 2011), carried out among five adults who witnessed marital violence during childhood. Adults are an original and particularly interesting group as they are able to detach themselves when reflecting on their past. Their discourse falls within a context which, despite the inevitable presence of unconscious issues, is no longer directly influenced by living within the family. This past is undoubtedly captured in its reconstruction but the choice of this population of adults is significant as it makes it possible to analyze the modalities and risk factors of transgenerational transmission.

Although this research cannot be generalized, it highlights the fundamental psychic mechanisms at work in trauma and repetition. It therefore enables us to hypothesize on the assistance that can be provided to deal with violence and how this violence can be prevented.

*Case introduction:* We selected Mr. Ritti as he is representative of this child-witness population. Aged approximately forty years old, he spoke on his past as a child, then of his current marital life. He is recently separated from his wife, who has filed a complaint against him on the grounds of marital violence. Mr. Ritti's father was repeatedly violent against his wife who then escaped with her partner, leaving her children behind. Lying about the situation, their father then forced them to follow him to his native country. He was subsequently imprisoned for the murder of his wife's partner. As a result, Mr. Ritti spent eleven years without his parents as his mother had no legal right to take her children to France. In the course of the interview, evoking these difficult moments was distressing as time had not erased Mr. Ritti's pain.

*Method:* We collected testimonies using unstructured interviews and carried out a content and discourse analysis. Their testimonies were recorded with the consent of the persons involved, and subsequently transcribed. The first main question was formulated as follows: "How did you experience father's violence against your mother during your childhood?" The following questions concern his married life and finally his fatherhood.

### 3.3. Testimonial answers

Mr. Ritti describes his child-witness situation: "*We would go see my mother lying on the ground, devastated, sometimes passed out. We would lift her up, once an ambulance came for her... we were powerless, defenseless in the face of such situations, we didn't know what to do. I often found myself alone, wondering: 'but what can I do?' My brothers and I would huddle together under the sheets and reflect on how to stop the violence. But in reality, we never intervened. The powerlessness is what annoys me. In my opinion, not assisting a person in danger is a form of failure.*" Mr. Ritti was less than six years old at the time, and when asked what he could possibly have done at this young age, he responds: "*I don't know, we could have done something, call the police or the neighbors.*"

Then his abused mother "*never said anything, always played down the situation to avoid frightening us and to comfort us. The next day was silent, she prepared breakfast for us, nobody spoke about it.... My mother always told us that she didn't want to leave because of us.*" However, his father justified his violence: "*He said it was because of the house, that he did not feel at ease in that house and as the neighbors often intervened, we had to move. These things have constantly been on my mind since that time, the fear, the instability, incessantly having to start over again, leaving, coming back.*"

Mr. Ritti's father aroused ambivalent affects: "*When I was young, together with my four sisters and my brother, I often saw scenes where my father was violent against my mother. He scared us, he would come home nasty, angry, and go after my mother, just like that, for no reason. The problem is that when he was upset, there had to be some form of release. He would punch her. We would hear voices rise, sometimes plates would break. It was quite often, twice to thrice a week, it was frightening; I was scared that he would turn against me, that he would hit me. He was strong, powerful, a real monster. We were a family with a large black stain, the stain of violence; horror and fear. What surprises me even today is that he never hit us, we the*

*six children. I don't know, maybe he loved us, I say this without being sure. At the time, I would say to myself 'I will never be like my father when I grow up', it was a horrible, unbelievable image, he was a real monster"*

Now that the children have become adults, the violence has passed onto the next generation: *"My sisters are with violent men."* Mr. Ritti himself is being prosecuted because of the complaint filed by his wife: *"It is a different story; my father beat my mother for no reason. My mother was a kind woman. My wife is dangerous, she has even filed a complaint against me, and she has hidden medical certificates. A loving wife does not hide, that is real treason."* *"I do not want to be like my parents"*. According to him, he is violent because of his wife, she is the responsible party: *"I can't forbid her from complaining because I beat her. She provoked me, she pushed me to my limits, asking to be beaten and then she went to see the doctor and cry. There is no respect; it is war, a full-blown war. Maybe this is what mankind is about: it's her or me."*

Two parts of the ego coexist separately and inconsistently, which is how Mr. Ritti explains his own violence: *"Sometimes I am a stranger to myself; there are parts in me that I do not know. I am at a loss for words"*

Mr. Ritti presents his current situation as his father used to do: *"As far as violence is concerned, I think that my children realize that I am right."*

#### 4. CASE CONCEPTUALIZATION

Mr. Ritti describes his child-witness situation with a lot of guilt. It thus appears that Mr. Ritti is reversing the generations since as a child, he felt responsible for and guilty of witnessing his mother's aggression. He is thus parentalized, like many children, witnesses to mother assault (Fortin & Lachance, 2011).

We believe that the absence of speech has contributed to this repetition through the generations. Mr. Ritti was unable to develop a representation of the violence, to identify it or to reflect on it. He describes a helpless mother, unable to speak to her children. Although the difficulty faced by this woman is understandable, she aroused guilt in her children by telling them that she stayed for them. They had neither the words to reflect on what was happening to their mother, nor what was happening to them. They were exposed to the hard facts, as cruel as they were. This silence fuelled the confusion, making the children feel guilty. His father justified his violence, he had his reasons. The children faced the maternal silence and a father justifying his acts of violence depending on what suited him best. As a consequence, the children felt guilty. Furthermore, the case of Mr. Ritti illustrates maternal distress (Fortin, Côté, Rousseau, & Dubé, 2007).

It appears that the violence experienced in the past is repeated by the following generation. However, in his mind the violence exerted by his father and his own violence are not similar since his violence can be justified, unlike his father's. According to him, he is violent because of his wife, she is the responsible party. With her, Mr. Ritti is stuck in a logic of duel, in a power struggle similar to the one he witnessed between his parents (De Neuter, 2012). As a matter of fact, he is trapped in this confounding logic which considers that the abused wife is responsible for the blows she receives and that violence is justifiable and excusable (Grihom & Grollier, 2012).

This violent father aroused fright, but also some form of admiration in his son. Mr. Ritti evokes a totalitarian and all powerful individual, unable to curb his fundamental violence. Nevertheless, this reveals a certain fascination for this father, whom he describes as strong and powerful; the fascination going along with the fright. These two dimensions - love and hate for the father - favor identification with the aggressor (Freud, 1936/1990). While love leads to identification, hate makes it possible for children to handle their anxiety when witnessing marital violence. However this identification mechanism transforms the child, making his violent father a model, and ultimately leading to the reproduction of marital violence during adulthood. On the psychic level, in addition to the identification mechanism, we observed that the dis-idealization of the father figure was not completely achieved as the fascination still

remained intact. Gérard Pommier (1999, p. 124) reminds us that during adolescence: “the death of the father is necessary (...) For the symbolic father to come onto the scene, the murder [dis-idealization] of a first father must have been expended in order for him to then appear as symbolic.” This psychic activity that is necessary in adolescence could thus avert transgenerational repetition.

According to Anna Freud (1936/ 1990), Mr. Ritti has identified with the aggressor using defense mechanisms that are easily identifiable. On the one hand is denial, he doesn't want to be like his father. This affirmation suggests that he perceives himself to be like his father, a thought that is immediately rejected. On the other hand, identifying with the aggressor is a response to trauma, through the splitting of the ego during the situation; this induces fear and extreme distress. “When that fear reaches its climax, it forces them to submit unquestionably to the will of the aggressor, to guess his slightest desires, to blindly obey while identifying completely with the aggressor.” (Ferenczi, 1982, p. 130). The aggressor and the aggressive situation thus become intrapsychical; they no longer exist as an external reality but become part of the ego. This splitting allows him to defend the paradoxical idea that although he beats his wife, he is not reproducing his father's violence against his mother.

In this man's mind, some acts of violence are justifiable, others are not. His points of reference are mixed up, the suffering and guilt once felt are of no use in preventing repetition in the next generation - the opposite is true; indeed, his guilt is only felt in relation to his mother. The real issues of violence and manipulation are therefore not recognized.

The father's relationship with the law has to be taken into account: a tyrannical father impedes the paternal function as by embodying violence, he no longer represents the law. The tyrannical father can either be on the positive side of perfection, as is the case with President Schreber's father (Tabouret-Keller, 1973). Freud (1911/2013) developed the case of President Schreber, a psychoanalytic profile of a paranoid personality. President Schreber's father was a severe and daunting personage who invented a system of corrective and educative gymnastics for children. He appears all the more ideal in having all the traits of the perfect father. The Schreber case partly is being seen as the typical result of the drill of a father education. The tyrannical father can be on the negative side of unimaginable brutality as is the case with the father of corporal Lortie (Benkheira, 2002). Denis Lortie is a former Canadian army corporal. In 1984, he stormed into the National Assembly of Quebec building and opened fire with several firearms, killing three Quebec government employees and wounding thirteen others. According to Pierre Legendre, he was under the domination of his frightening father. In the same way, as a child, Mr. Ritti was confronted with a tyrannical father laying down the law rather than representing it. It was thus impossible for Mr. Ritti to transmit it and difficult to take ownership of the law.

Before the divorce, the children were made to feel guilty and were parentalized. After the separation, they were manipulated by their father who destroyed their daily lives and their future by taking them away.

## 5. FUTURE RESEARCH DIRECTIONS

Mr. Ritti's specific case highlights the psychological risks that his children face. Silent observers of the horror and victims of mental manipulation from one or the other parent, their reflection is hindered by shock, especially when the situation is worsened by silence. This underscores the significant risk for repeated violence by the subsequent generation.

In this research direction, we continue to collect testimonies of victims of spousal violence, and perpetrators of domestic violence in the goal to explain the factors of spousal violence against women in our society, with a focus particularly on mental factors; Therefore, we try to confirm or to infirm our assumption, namely the consequences of marital violence on the future of children who witness this act. We are asking people about their past and present history, with their parents, their spouses, and their children. On the other hand, we collect contributions from professionals sharing their experiences, in the goal to investigate current practices, and thus contribute to a better prevention. With children who witness spousal violence, we offer to pass a projective test “Adventures of the Black Paw” by Corman (1961).



The test highlights the possibility of understanding pathological cases, each time putting into game the analysis unconscious conflicts of the subject, particularly the relationship to violence.

## 6. CONCLUSION

In conclusion, we can say that even before being an action, violence is how one positions him or herself in relation to the other. It is essential to question the role of violence within a family and to understand why it creates a bond. This was the purpose of our article.

The child who witnesses marital violence becomes helpless and is unable to work it out or overcome it. This case shows psychic mechanisms: feeling of guilt and process of parentalisation, identification to the aggressor, then denial and splitting. These mechanisms are implied in transmission of spousal violence. Finally, the father relationship with the law prevents the transformation of the child's aggressiveness when the father is tyrannical. Consequently, prevention of spousal violence requires a journey of psychic construction, with children who witness spousal violence, and naturally with perpetrators of marital violence. Preventive measures should thus aim at verbalizing this violence as early as in childhood, in order to turn identification and bonding away from violence and destruction, and prevent its repetition among the next generation. Moreover, this case illustrates maternal distress. Then it's very important to support the mother-child relationship (Bennett, Shiner, & Ryan, 2006; Shaw et al., 2006; Racicot, Fortin, & Dagenais, 2010). Of course, a prevention program relate to marital program case concern society, because "violence against women has its roots in cultural assumptions that must undergo change if the incidence of that violence is to be reduced" (Arias, Dankwort, Douglas, & Dutton 2002, p. 157). But according to this study, we can see that the three partners – child, woman, man – have to do a journey of psychic construction in order to change the relationship to violence and fear. In fact, supporting professionals, quality of relationships between professionals and women and their children, seem to play a key role.

## REFERENCES

- Arias, I., Dankwort, J., Douglas, U., & Dutton, M. A. (2002). Violence against women: The state of batterer prevention programs. *Journal of Law, Medicine & Ethics*, 30(sup. 3), 157-165.
- Aulagnier, P. (1995). *La violence de l'interprétation* [The violence of interpretation]. Paris, France: PUF. (Original work published 1975)
- Benkheira, M. H. (2002). Pierre Legendre, Leçons VIII. Le crime du Caporal Lortie. *Traité sur le Père* [Pierre Legendre, Lessons VIII. The crime of Caporal Lortie. A Treatise on the Father.]. *Archives de Sciences Sociales des Religions*, 120, 63-126.
- Bennett, L. R., Shiner, S. K., & Ryan, S. (2006). Using therapy in shelter settings with mothers and children who have experienced violence in the home. *Journal of Psychosocial Nursing & Mental Health Services*, 44(10), 38-47.
- Bergeret, J. (1984). *La violence fondamentale* [The fundamental violence]. Paris, France: Dunod.
- Corman, L. (1961). Le Test PN [The Patte Noire test].
- De Neuter, P. (2012). Pourquoi un homme est-il si souvent un ravage pour sa femme? [Why is a man so often a destruction for his wife?] In M. J. Grihom & M. Grollier (Eds.), *Femmes victimes de violences conjugales. Une approche clinique* [Women victims of domestic violence. A clinical approach] (pp. 31-42). Rennes, France: PUR.
- Evans, S. E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior*, 13(2), 131-140.
- Ferenczi, S. (1982). *Psychanalyse IV. Œuvres complètes* [Psychoanalysis IV. Complete works]. Paris, France: Payot.
- Fortin, A. (2011). L'enfant et les violences conjugales [Children and domestic violence]. *La Revue Internationale de L'éducation Familiale*, 1(29), 9-11.
- Fortin, A., Côté, I., Rousseau, S., & Dubé, M. (2007). *Soutenir les mères pour prévenir les effets néfastes de la violence conjugale chez les enfants: Guide pour les intervenantes des maisons d'aide et d'hébergement* [Mothers support to prevent the adverse effects of domestic violence among children: Guide for the interveners in the houses of assistance and accommodation]. Montréal, Canada: CRI-VIFF.

- Fortin, A., & Lachance, L. (2011). La parentification chez l'enfant exposé à la violence conjugale [Parentification in children exposed to domestic violence]. *La Revue Internationale de L'éducation Familiale*, 1(29), 63-86.
- Freud, A. (1990). *Le Moi et les mécanismes de défense* (A. Berman, Trans.) [The Ego and the mechanisms of defense]. Paris, France: PUF. (Original work published 1936)
- Freud, S. (1988). Actuelles sur la guerre et la mort [Current on war and death]. In *Œuvres complètes - Psychoanalyse. Tome XIII: 1914-1915* (J. Lapanche, Trans., pp. 127-158) [Complete works - Psychoanalysis. Vol. XIII: 1914-1915]. Paris, France: PUF. (Original work published 1915)
- Freud, S. (1989). *Nouvelles conférences d'introduction à la Psychoanalyse* (R.-M. Zeitlin, Trans.) [New conferences to Psychoanalysis introduction]. Paris, France: Gallimard. (Original work published 1932)
- Freud, S. (2010). *Pulsions et destin des pulsions* [Impulses and fate of the impulses]. In *Œuvres complètes - Psychoanalyse. Tome XIII: 1914-1915* (J. Lapanche, Trans., pp. 163-188) [Complete works - Psychoanalysis. Vol. XIII: 1914-1915]. Paris, France: PUF. (Original work published 1915)
- Freud, S. (2013). *Le Président Schreber: Un cas de paranoïa* (O. Mannoni, Trans.) [President Schreber: A case of paranoia]. Paris, France: Payot. (Original work published 1911)
- Grihom, M. J., & Grollier, M. (Eds.). (2012). *Femmes victimes de violences conjugales: Une approche clinique* [Women victims of domestic violence : A clinical approach]. Rennes, France: PUR.
- Henrion, R. (2001). *Les femmes victimes de violences conjugales, le rôle des professionnels de santé: Rapport au Ministre chargé de la Santé* [Women victims of violence, the role of health professionals: Report to the Minister responsible for Health]. France: Ministère de la Santé. Retrieved from <http://www.ladocumentationfrancaise.fr/rapports-publics/014000292/index.shtml>
- Jaspard, M. (2000). *L'enquête nationale sur les violences envers les femmes en France*. [The national survey on violence against women in France]. Paris, France: Ined.
- Jaspard, M. (2007). Au nom de l'amour: Les violences dans le couple [In the name of love: Violence in the couple]. *Informations sociales*, 144, 34-44.
- Klein, M. (2013). Notes on some schizoid mechanisms. In E. Spillius & E. O'Shaughnessy (Eds.), *Projective identification: The fate of a concept* (pp. 19-46). New York, NY: Routledge.
- Lehmann, P. (2000). Posttraumatic Stress Disorder (PTSD) and child witnesses to mother assault: A summary and review. *Children and Youth Services Review*, 22(3-4), 275-306.
- Pommier, G. (1999). C'était donc vrai [It was therefore true]. In D. Lauru, Ch. Hoffmann, & Cl.-N. Pickmann (Eds.), *Problématiques adolescentes et direction de cure* [Teenage problematics and direction of treatment] (pp. 121-136). Paris, France: Érès.
- Racicot, K., Fortin, A., & Dagenais, C. (2010). Réduire les conséquences de l'exposition de l'enfant à la violence conjugale : Pourquoi miser sur la relation mère-enfant? [Reducing the consequences of childhood exposure to domestic violence: Why rely on the mother-child relationship?] *Les Cahiers Internationaux de Psychologie Sociale*, 86, 321-342.
- Razon, L., & Metz, C. (2011). Les violences intrafamiliales et leur devenir chez l'enfant témoin [Violence within the family and their fate at the child witness]. *Neuropsychiatrie de l'enfance et de l'adolescence*. 59(7), 411-414.
- Tabouret-Keller, A. (1973). Une étude: La remarquable famille Schreber [A study: The remarkable Schreber family]. *Scilicet*, 4, 287-320.
- Traub, H. L., & Lane, R. C. (2002). The case of Ms. A. *Clinical case studies*, 1(1), 49-66.
- Shaw, D. S., Sherrill, J., Huffman, D., Schonberg, M., Lukon, J., Obrosky, D., & Kovacs, M. (2006). Responsivity to offspring's expression of emotion among childhood-onset depressed mothers. *Journal of Clinical Child and Adolescent Psychology*, 35(4), 490-503.
- Vasse, D. (1978). *Un parmi d'autres* [One among others]. Paris, France: Seuil.
- Wood, S. L., & Sommers, M. S. (2011). Consequences of intimate partner violence on child witnesses: A systematic review of the literature. *Journal of Child and Adolescent Psychiatric Nursing*, 24(4), 223-236.

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Razon, L. (2007). *Enigma do incesto*. Rio de Janeiro: Compantia de Freud.

Razon, L. (2002). *Secrets et transmissions*. Rencontres universités-société, Transmission: Mémoire collective et transmission, Strasbourg, France.

Razon, L., & Metz, C. (2011). Les violences intrafamiliales et leur devenir chez l'enfant témoin. *Neuropsychiatrie de l'enfance et de l'adolescence*, 59(7), 411-414.

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<sup>i</sup> Rapport de l'ONU A/61/122/Add.1. 6 Juillet, 2006. Paragraphe 112, Étude approfondie de toutes les formes de violence à l'égard des femmes.

<sup>ii</sup> The 2006 law for the Protection of the youth, in Quebec (Gouvernement de Québec, 2009), established that marital violence is to be considered as a form of ill-treatment toward the child (Racicot et al., 2010)

## Chapter 33

# A CULTURE OF VIOLENCE AGAINST WOMEN IN SOUTH AFRICA: EXPLORING YOUNG WOMEN'S STORIES

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### ABSTRACT

Violence against women is extremely prevalent in South Africa and it has been labeled the rape capital of the world. It has been two decades since the end of apartheid and South Africa is still grappling with the relentless issue of violence. However this is not surprising as South Africa's past is embedded in political violence and oppression, creating a culture of violence, which is both normalized and tolerated. This study focuses on how women's lives and identities are transformed by living in this culture of violence. A biographical-interpretive methodological approach was adopted and free association, narrative interviews were conducted with 27 female, University of Cape Town (UCT) students. Interpretive analysis, drawing on social discourses, narrative accounts and psychoanalysis was used to analyse the data. Findings have revealed the complex interaction between identity and trauma, more specifically the prevailing discourse of silencing women's stories.

*Keywords:* gender, identity, trauma, violence against women.

## 1. INTRODUCTION

Violence against women is extremely prevalent in South Africa and it can be seen as the social epidemic facing the nation. The legacy of apartheid's militant and violent ideology can be seen in post-apartheid South Africa's culture of violence against women. This chapter expands on doctoral research, which explores the psychological impact of living in a culture of violence against women, such as South Africa. This chapter also explores the paradox between the high levels of violence against women and the extensive legal discourse set in place to protect women.

## 2. BACKGROUND

Apartheid was a system of racial segregation and oppression enforced by the white ruling party in South Africa between 1948 and 1994, in which the majority of the population were denied various political and human rights. The legacy of apartheid can be seen in daily South African life as apartheid's oppressive racial categorization has had long-lasting effects on the economic, social and political opportunities of its citizens (Henri & Gruenbaum, 2005). South Africa's transition from an oppressive apartheid government to a democratic one in 1994 ushered in an era of policy reform and change. The South African Constitution of 1996 is one of the most progressive constitutions in the world and there is currently extensive legislation that readdresses the subordination of women in South Africa (Human Rights Watch, 2010; Walker, 2005). This includes the Domestic Violence Act 116 of 1998, which broadened the definition of domestic abuse to include emotional, economic, verbal, physical and sexual abuse, widening the definition of what constitutes "domestic" (Domestic Violence Act 116 of 1998). The New Sexual Offences Act of 2007, which broadened the definition of rape to include forced anal, oral and vaginal sex, irrespective of the gender of either the victim or perpetrator and the method of penetration (Criminal Law (Sexual Offences and Related Matters) Amendment Act 32 of 2007). Furthermore, South Africa has some of the highest number of women in parliament in the world (Graybill, 2001). Despite the significant advances for women in the political arena and the extensive legislation, which readdresses the subordination of women,

violence against women and the fear associated with such violence is still prevalent (Britton, 2006; Gqola, 2007). The Human Rights Watch (2010) reported that South Africa has the highest rate of reported rapes in the world, labelling it as the rape capital of the world. In 2012, 55201 rapes were reported to the police and recent statistics reveal that one in three women will be raped in her lifetime (Institute for Security Studies, 2012; Statistics South Africa, 2012). However, these statistics also need to be viewed within the trend of underreporting in South Africa (Vetten, 2000). Intimate partner violence is also rife in South Africa and it is estimated that one in four women are in an abusive relationship (Abrahams, Jewkes, Laubscher, & Hoffman, 2006; Mathews et al., 2004; van Rensburg, 2007; Wood & Jewkes, 1997; Wood, Lambert, & Jewkes, 2008). Abrahams et al. (2009) reported that the overall rate of female homicide (24.7 for 100,000) in South Africa is six times higher than the global rate. In this respect, the gap between policy and practice is evident and measures need to be taken to address this.

South Africa's history of violence can be seen in the brutality of the apartheid regime and the armed resistance of the liberation party (Britton, 2006; Hamber, 2000; Wardrop, 2009). In the 1990's South Africa became known for its culture of political violence, however since the end of apartheid in 1994, there has been a shift to a narrative of violent and sexual crime (Britton, 2006; Hamber, 2000). Vetten (2000, p. 49) argues that the "militarisation and conflict of the Apartheid era" are embedded in the country's psyche and set the context for how men relate to women. Violence against women is enmeshed in these patterns of patriarchy, oppression and hegemonic masculinity, which were synonymous with colonialism and apartheid (Britton, 2006; Gqola, 2007; Morrell, Jewkes, & Lindegger, 2012). Violence against women in South Africa also appears to be entrenched in justificatory narratives in apartheid discourse (Britton, 2006; Moffett, 2006, 2009; Vetten, 2000). During the apartheid era legislation, racist discourse and violence was used to shame and remind the "non-white" population of their subordinate position in society. Similarly men use gender-based violence and the fear of such violence to shame women and keep them within specific boundaries and categories (Moffett, 2006, 2009). Despite extensive legislation aimed at readdressing the issue of violence against women, the country's history of racial violence and human rights violations creates the context for a culture of violence and fear, where human life is expendable. Wardrop (2009) argues that living within a context of violent crime and fear, such as South Africa, transforms an individual and changes the topography of their identity. Women who live in communities characterised by high levels of violence are affected regardless of whether or not they are directly victimised because the continuous fear and anticipation of violence serve as traumatic stressors, exposing all women to "insidious trauma" (Brown, 1995; Root, 1992). In South Africa preparing for the dangers of violence has become interwoven into our daily activities and social practices, as women are expected to employ precautionary strategies to avoid violence (Gordon & Collins, 2013). The fear of violence, specifically sexual violence, is constructed as central to the identity of women and women are expected to constantly police their behaviour (Day, 1994; Campbell, 2002; Gavey, 2005; Gordon & Riger, 1991; Stanko, 1996, 2001). The intersection between trauma and identity is evident in this context, as the fear of violence becomes a taken-for-granted aspect of women's identity. This research explores this intersection between trauma and identity and how women navigate their lives in this volatile context.

### **3. RESEARCH DESIGN**

This doctoral research is a qualitative, biographical-interpretive study, which explores 27 young women's stories in the post-apartheid context. It focuses on how women's lives and identities are transformed by living in this culture of violence. The theory of the psychosocial subject was used to frame the study (Hollway & Jefferson, 2000). The psychosocial subject consists of the unique inner world and shared social world of an individual (Frosh, 2003; Gadd & Jefferson, 2007; Hollway, 2004). Free-association, narrative interviews were conducted with these women and interpretive analysis, drawing on discourse analysis, narrative theory and unconscious motivations, was used to analyse the data (Hollway & Jefferson, 2000).

### **3.1. Participants**

Twenty-seven young female students, between the ages of 18 and 32 were interviewed. The racial composition of these young women was a mixture of black African, White, Indian and Coloured<sup>1</sup>. Participants were accessed through the Student Research Participant Programme (SRPP) in the psychology department at UCT. Students in the undergraduate psychology programme must accumulate academic credit by participating in their choice of research studies. This form of purposive sampling helped identify young female participants, whilst keeping the sample relatively random and unbiased. Women did not necessarily need to have direct experiences of violence to participate in this study.

### **3.2. Free association and narrative interviews**

A biographical-interpretive method, focusing on a free-association narrative interview style, following Hollway and Jefferson (2000) was adopted. Informed consent was obtained before the interviews were conducted and participation was emphasised as voluntary. Two interviews were conducted with each participant. The first interview consisted of an opening statement, discussing the prevalence of violence against women and the researcher's interest in the participant's life story. Participants were asked "Can you start off by talking about yourself and your life in Cape Town?". Probes reflecting key theoretical themes, such as gender-based violence/victimization; precautionary strategies/rules; fear/anxiety; identity/womanhood, were explored. The second interview consisted of a series of tailor-made follow-up questions based on the first interview. Interviews were approximately an hour and a half to two hours in length and were audiotaped and transcribed by the researcher. Each participant was debriefed at the close of the interviews.

### **3.3. Interpretive analysis: Discourses, narrative accounts and unconscious motivations**

Interpretive qualitative data analysis derived from the biographical-interpretive approach, designed by Hollway and Jefferson (2000) was used to analyse the interview transcripts. This interpretive analysis is embedded in the theoretical underpinnings of "the psycho-social subject" and explores both the inner psychic world and the shared social world of the individual, providing us with a holistic understanding of each participant (Frosh, 2003; Gadd & Jefferson, 2007; Hollway, 2004). It utilises discourse analysis, narrative theory and psychoanalysis to explore the stories of these 27 women. Hollway (1984) argues that individuals are not just "accidentally" positioned in particular discourses but receive "some satisfaction or pay-off" from investing in specific discourses (p. 238). The researcher explored the discourses participants' position themselves in and the unconscious attractions of these discourses in relation to their biographical narrative accounts. Emphasis is placed on the overall plot of the narrative, specifically the interconnectedness between the past, present and future and how the practices of retrospection and reflection inform identity.

## **4. FINDINGS AND DISCUSSION**

Findings have highlighted the following: the discourse of fear; the discourse of women's responsibility and the narrative of intergenerational trauma. This chapter focuses on a short overview of these findings.

### **4.1. Discourses of fear and women's responsibility**

The women in the study positioned their fear of violence against women as "natural" because women are socialised from a young age to fear men. This fear of male perpetrators becomes assimilated into the identity of women and their life stories. Women are also constructed as responsible for negotiating this fear and avoiding gender-based violence. Monica's story will be explored to highlight the discourses of fear and women's responsibility. Monica is a black African female student who is previously from a township in Johannesburg and currently lives in university residence. She (aged 19) tells the story of her first conscious memory of fear at seven years old. She speaks about seeing a neighbour raped.

“This lady she was one of the house helpers on my street and she was running and there was this guy chasing her. He grabbed her on the lawn in front of my street and basically he wanted to rape her. He was taking off his pants and stuff. That was like...looking back on it I didn't really understand what was happening at the time.”

(Monica, Interview 1)

“(...) that was the first time that I think I was scared of a man because I just didn't understand why you would do that to somebody so that was like I think like my first conscious memory of fear.” (Monica, Interview 1)

“(...) but I always heard my granny saying that you need to be careful you'll get yourself raped and stuff like that.” (Monica, Interview 1)

In the first excerpt Monica uses active verbs to begin describing the story of her neighbour's rape, such as “she was *running*” and “there was this guy *chasing* her”. Beginning the story with the present tense places us, the listener inside the story and infuses the story with life. Monica's use of the present tense emphasises the continuing significance of this story in her life (Hollway & Jefferson, 2000). She speaks about how she never understood why her mother tried to make her scared of men until she was seven years old and witnessed her neighbour's rape. Her first memory of fear is directly connected to male perpetrators and rape and it can be postulated that the fear of men and rape is constructed as integral to Monica's identity and narrative. This poignant story highlights how the fear of rape has become a taken-for-granted aspect of womanhood, an unconscious force that motivates how we live our lives, that we often forget that there was once a time that we didn't know what the “fear of rape” was or why we had to be scared of men. Monica also speaks about how her grandmother told her that she needs to be careful or “*you'll get yourself raped*”. The use of the words, “*you'll*” and “*yourself*” emphasise how women are seen as responsible for the violence perpetrated against them and are expected to construct precautionary strategies to avoid such violence. Investing in a discourse of women's responsibility, in which women cast themselves as responsible for avoiding violence may represent an attempt to limit the anxiety and fear surrounding violence against women (Stanko, 1996, 2001). Investing in this discourse may allow Monica to feel safe in an otherwise volatile environment. However, this discourse shifts responsibility away from perpetrators towards victims, which reinforces victim blaming, contributing to the silence surrounding violence against women (Day, 1994; Campbell, 2002; Gavey, 2005; Gordon & Collins, 2013; Stanko, 1996, 2001). Constructing women as responsible for avoiding violence is a false representation because as Campbell (2002) argues “victims don't cause rape; rapists cause rape” (p. 49). Furthermore, the dissemination of this discourse of women's responsibility serves to reproduce patriarchal power relations and uphold the status quo. As a result society is not adequately challenged to address the issue of violence against women.

Monica begins to describe what happened to the man that raped her neighbour.

Monica: “Like they all came out with walking sticks and mops and stuff. Literally mob justice at its worst to beat this guy and the next day we found out that he died.”

Interviewer: “They beat him to death?”

Monica: “Ja basically. They beat him up so bad that we took him the next day he died and by that time I didn't understand what that meant or the implications of it...”

(Monica, Interview 1)

The man who raped her neighbour was beaten to death by other community members in an action Monica describes as “mob justice at its worst”. Monica reflects again on her innocence and confusion as a seven-year-old child, who did not understand the significance of these events. This is specifically highlighted when she states “(...) by that time I didn't understand what that meant or the implications of it...” Monica's story illustrates the culture of violence in her community and also highlights the prevalence of vigilantism and mob justice in townships in post-apartheid South Africa (Buur & Jensen, 2004; Minnaar, 2001; Nina, 2000). This fear and culture of violence in South Africa was a theme that was present across all of the women's stories. Gqola (2007) argues that an “ideology of militarism” has been carried over from

apartheid and violence has been constructed as the “constant companion” in our lives as South Africans (p. 114).

This study also revealed that womanhood in South Africa appears intimately connected with fear, vulnerability and constant caution. Nandipha, (aged 20) a black African female student, speaks about this connection in the excerpt below.

“Living as a woman in South Africa is a difficult thing because we don’t see the hardships every day like there’s just this caution constantly. You have to be alert all the time.” (Nandipha, Interview 1)

Alicia (aged 18), a white, female student, also speaks about her experience of being a woman in South Africa in the excerpt below, highlighting the connection between fear, vulnerability and womanhood.

“It can be very scary. It affects you every day of your life. You’ve always got to be aware of your surroundings and who you’re around.” (Alicia, Interview 1)

These associations between fear, vulnerability and womanhood are very dangerous because they serve to restrict and shame women, relegating them to a subordinate position to men (Moffet, 2006, 2009). Furthermore, the fear generated by the prevalence of violence against women and its capacity to restrict and limit the choices and movements women make in society, constitute violence in itself (Campbell, 2002; Kelly & Radford, 1996).

#### **4.2. Narratives of intergenerational trauma**

This construction of womanhood and its intimate connection with fear translated into narratives of intergenerational trauma. When asked to speak about their lives five of the women in this study chose to structure their personal narratives around stories of intergenerational trauma. Throughout the interviews these five participants spoke about how their mothers, grandmothers, aunts and sisters told them stories about the violence perpetrated against themselves and other female family members. This oral tradition serves to construct cautionary tales for other women in the family. Camilla’s story illustrates this narrative of intergenerational trauma. Camilla (aged 26), a white female student who currently resides in a middle class area in Cape Town, speaks about how she found out that her mother was abused as a child, in the excerpt below.

“I mean I heard the stories from my aunt about what my grandfather did to her and I can understand her not wanting to tell us. It was quite horrific hearing someone bashed your mother’s head against the wall because they were angry at her.” (Interview 1, p. 12)

These stories were considered “private family issues” and were not consciously labelled as violence. In Camilla’s excerpt above she describes how her mother didn’t disclose the abuse herself, but her aunt did. Danieli (1998, p. 4) argues that it is this “conspiracy of silence” that defines intergenerational trauma in families. Camilla’s second-hand knowledge of the abuse and her mother’s silence surrounding this issue opens itself up to multiple interpretations. Her mother’s silence could be demonstrative of the shame and stigma surrounding violence against women. The silence could also represent the traumatic nature of her mother’s abuse and her resistance to engage with this experience (Frosh, 2001). However silence can also be constructed as an agentic choice, rather than an unconscious denial (Frankish & Bradbury, 2012). This oral tradition of intergenerational trauma and the “conspiracy of silence” that surrounds it, helped structure these women’s narratives and ultimately their identities. The emergence of these narratives of intergenerational trauma also indicate how embedded the social issue of violence against women is in the lives of these women.

#### **4.3. Summary**

In South Africa an interesting paradox exists in which women are legislatively empowered but feel unsafe in their daily lives (Gqola, 2007). This was reflected in the way the women in this study told their life stories. Questions of identity became stories of fear, responsibility and intergenerational trauma. The fear of violence against women appears to be socialised into women at a young age. Monica constructs the story of witnessing her neighbour’s rape at the age of seven as her “first conscious memory of fear”, encapsulating the seamless connection between fear and womanhood. The brutal murder of her neighbour’s rapist



by community members represents the culture of violence in South Africa and our ties to an “ideology of militarism” (Buur & Jensen, 2004; Britton, 2006; Hamber, 2000; Minnaar, 2001; Nina, 2000; Wardrop, 2009). Women are also constructed as being responsible for avoiding violence and are expected to change their behaviour. This discourse of women’s responsibility absolves the perpetrators of any guilt or shame, further silencing women in South Africa (Campbell, 2002; Gavey, 2005; Gordon & Collins, 2013; Stanko, 1996, 2001). The discourses of fear and women’s responsibility reflect how women in South Africa are told to “surrender many choices, make yourselves as small, quiet and invisible as possible” (Gqola, 2007, p. 121). Stories of intergenerational trauma represent how ingrained violence against women is in our family histories and the residual impact it has. These findings reflect how women in South Africa, regardless of whether or not they are direct victims of violence, are affected by the presence of violence and fear in their communities. This culture of fear and violence against women is intertwined into how these women construct their personal narratives and how they understand and experience the world.

## 5. FUTURE RESEARCH DIRECTION

There are needs to be more research on the psychological impact of living in communities characterised by high levels of violence, as there is sparse research in this area. The link between the militancy of apartheid and the prevalence of violence against women in post-apartheid South Africa also needs to be addressed in future research.

## 6. CONCLUSION

This study is highly significant as there is sparse literature in South Africa that explores the psychological impact of a culture of violence against women. The paradox between the prevalence of violence against women and the extensive legislation aimed to protect women in South Africa is a multi-faceted issue. Apartheid’s legacy of militancy, which constructs violence as an acceptable social resource is one of the factors that play a role. The dominant discourse of hegemonic masculinity and patriarchy in South Africa also serve to create a culture in which violence against women is normalised and tolerated. As a result women’s stories are silenced and seen as unimportant in the public arena. This research goes beyond previous literature as it highlights how all women are affected by the presence of violence in their community, emphasising the bondage that violence against women has over the lives of all women.

## REFERENCES

- Abrahams, N., Jewkes, R., Laubscher, R., & Hoffman, M. (2006). Intimate partner violence: Prevalence and risk factors for men in Cape Town, South Africa. *Violence and Victims, 21*(2), 247-264.
- Abrahams, N., Jewkes, R., Martin, L. J., Mathews, S., Vetten, L., & Lombard, C. (2009). Mortality of women from intimate partner violence in South Africa: A national epidemiological study. *Violence and victims, 24*(4), 546-556.
- Britton, H. (2006). Organising against gender-based violence in South Africa. *Journal of Southern African Studies, 32*(1), 145-163.
- Brown, L. S. (1995). Not outside the range: One feminist perspective on psychic trauma. In C. Caroth (Ed.), *Trauma: Explorations in memory* (pp. 100-112). London, UK: Johns Hopkins University Press.
- Buur, L., & Jensen, S. (2004). Introduction: Vigilantism and the policing of everyday life in South Africa. *African Studies, 63*(2), 139-152.
- Campbell, R. (2002). *Emotionally involved: The impact of researching rape*. New York, NY: Routledge.
- Criminal Law (Sexual Offences and Related Matters) Amendment Act 32 of 2007 (South Africa). Pretoria, South Africa: Government Printers. Retrieved from <http://www.justice.gov.za/legislation/acts/2007-032.pdf>
- Danieli, Y. (1998). *International handbook of multigenerational legacies of trauma*. New York, NY: Plenum Press.

- Day, K. (1994). Conceptualizing women's fear of sexual assault on campus: A review of causes and recommendations for change. *Environment and Behavior*, 26(6), 742-765.
- Domestic Violence Act 116 of 1998 (South Africa). Pretoria, South Africa: Government Printers. Retrieved from <http://www.justice.gov.za/legislation/acts/1998-116.pdf>
- Erasmus, Z., & Pieterse, E. (1999). Conceptualising Coloured identities in the Western Cape province of South Africa. In M. Palmberg (Ed.), *National identity and democracy in Africa* (pp. 167-187). Cape Town, South Africa: Capture Press.
- Frankish, T., & Bradbury, J. (2012). Telling stories for the next generation: Trauma and nostalgia. *Peace and Conflict: Journal of Peace Psychology*, 18(3), 294-306.
- Frosh, S. (2001). Things that can't be said: Psychoanalysis and the limits of language. *International Journal of Critical Psychology*, 1(1), 29-46.
- Frosh, S. (2003). Psychosocial studies and psychology: Is a critical approach emerging? *Human Relations*, 56(12), 1545-67.
- Gadd, D., & Jefferson, T. (2007). *Psychosocial criminology*. London, UK: Sage Publications.
- Gavey, N. (2005). *Just sex? The cultural scaffolding of rape*. New York, NY: Routledge.
- Graybill, L. (2001). The contribution of the truth and reconciliation commission toward the promotion of women's rights in South Africa. *Women's Studies International Forum*, 24(1), 1-10.
- Gordon, S. F., & Collins, A. (2013). "We face rape. We face all things": Understandings of gender-based violence amongst female students at a South African university. *African Safety Promotion*, 11(2), 93-106.
- Gordon, M. T., & Riger, S. (1991). *The female fear: The social cost of rape*. Urbana and Chicago, IL: University of Illinois Press.
- Gqola, P. D. (2007). How the "cult of femininity" and violent masculinities support endemic gender based violence in contemporary South Africa. *African Identities*, 5(1), 111-124.
- Hamber, B. (2000). "Have no doubt it is fear in the land": An exploration of the continuing cycles of violence in South Africa. *Southern African Journal of Child and Adolescent Mental Health*, 12(1), 5-18.
- Henri, Y., & Grunebaum, H. (2005). *Re-historicising trauma: Reflections on violence and memory in current-day Cape Town*. Direct Action Centre for Peace and Memory.
- Hollway, W. (1984). Gender difference and the production of subjectivity. In J. Henriques, W. Hollway, C. Urwin, C. Venn, & V. Walkerdine (Eds.), *Changing the subject: Psychology, social regulation and subjectivity* (pp. 227-263). London, UK: Methuen.
- Hollway, W. (2004). Editorial. In W. Hollway (Ed.), *The international journal of critical psychology: Psycho-social research* (pp. 5-12). London, UK: Lawrence & Wishart.
- Hollway, W. & Jefferson, T. (2000). *Doing qualitative research differently: Free association, narrative and the interview method*. London, UK: Sage Publications.
- Human Rights Watch. (2010). *Human Rights Watch world report: South Africa*. New York, NY: Seven Stories Press.
- Institute for Security Studies. (2012). *Fact Sheet: Explaining the Official Crime Statistics for 2012/3*. Pretoria, South Africa: Institute for Security Studies.
- Kelly, L., & Radford, J. (1996). "Nothing really happened": The invalidation of women's experiences of sexual violence. In J. Radford, L. Kelly & M. Hester (Eds.), *Women, violence and male power* (pp. 19-33). Bristol, UK: Open University Press.
- Mathews, S., Abrahams, N., Martin, L. J., Vetten, L., van der Merwe, L., & Jewkes, R. (2004). "Every six hours a woman is killed by her intimate partner": A national study of female homicide in South Africa (MRC Policy brief no. 5). Retrieved from South African Medical Research Council (MRC) website: <http://www.mrc.ac.za/policybriefs/woman.pdf>
- Minnaar, A. (2001). *The new vigilantism in post-April 1994 South Africa: Crime prevention or an expression of lawlessness*. Johannesburg, South Africa: Institute for Human Rights & Criminal Justice Studies. Retrieved from <http://www.unisa.ac.za/contents/docs/vigilantism.pdf>
- Moffett, H. (2006). "These women they force us to rape them": Rape as narrative of social control in post-apartheid South Africa. *Journal of Southern African Studies*, 32(1), 129-144.
- Moffett, H. (2009). Sexual violence, civil society and the new constitution. In H. Britton, J. Fish, & S. Meintjes (Eds.), *Women's Activism in South Africa: Working across Divides* (pp. 155-184). Scottsville, South Africa: University Of KwaZulu-Natal Press.
- Morrell, R., Jewkes, R., & Lindegger, G. (2012). Hegemonic masculinity/masculinities in South Africa: Culture, power, and gender politics. *Men and Masculinities*, 15(1), 11-30.
- Nina, D. (2000). "Dirty Harry" is back: Vigilantism in South Africa – The (re)emergence of the "good" and "bad" community. *African Security Review*, 9(1), 18-28.

- Root, M. P. (1992). Reconstructing the impact of trauma on personality. L. S. Brown, & M. Ballou (Eds.), *Personality and psychopathology: Feminist reappraisals* (pp. 229-265). New York, NY: Guilford Press.
- Stanko, E. A. (1996). Reading danger: Sexual harassment, anticipation and self-protection. In M. Hester, L. Kelly, & J. Radford (Eds.), *Women, violence and male power: Feminist activism, research, and practice* (pp. 50-63). Bristol, PA: Open University Press.
- Stanko, E. A. (2001). Women danger and criminology. In C. Renzetti, & L. Goodstein (Eds.), *Women, crime and criminal justice* (pp. 13-26). California, CA: Roxbury Publishing Company.
- Statistics South Africa. (2012). *Victims of Crime Survey 2012*. Pretoria, South Africa: Statistics South Africa. Retrieved from: <http://www.statssa.gov.za/publications/P0341/P03412012.pdf>
- United Nations General Assembly. (1993). *Declaration on the Elimination of Violence against Women*. UN doc. A/RES/48/104. Geneva, Switzerland: United Nations Publication.
- van Rensburg, M. J. (2007). A comprehensive program addressing HIV/AIDS and gender-based violence. *Journal of Social Aspects of HIV/AIDS Research Alliance*, 4(3), 695-706.
- Vetten, L. (2000). Gender, race and power dynamics in the face of social change: Deconstructing violence against women in South Africa. In J. Y. Park, J. Fedler, & Z. Dangor (Eds.), *Reclaiming women's spaces: New perspectives on violence against women and sheltering in South Africa* (pp. 47-80). Johannesburg, South Africa: Nisaa - Institute for Women's Development.
- Walker, L. (2005). Men behaving differently: South African men since 1994. *Culture, Health & Sexuality*, 7(3), 225-238.
- Wardrop, J. (2009). Notes from a tense field: Threatened masculinities in South Africa. *Social Identities*, 15(1), 113-130.
- Wood, K., & Jewkes, R. (1997). Violence, rape and sexual coercion: Everyday love in a South African Township. *Gender and Development*, 5(2), 41-46.
- Wood, K., Lambert, H., & Jewkes, R. (2008). "Injuries are beyond love": Physical violence in young South Africans' sexual relationships. *Medical Anthropology*, 27(1), 43-69.

## ADDITIONAL READING

- Dosekun, S. (2007). "We live in fear, we feel very unsafe": Imagining and fearing rape in South Africa. *Agenda: Empowering Women for Gender Equity*, 21(74), 89-99.
- Dosekun, S. (2013). "Rape is a huge issue in this country": Discursive constructions of the rape crisis in South Africa. *Feminism & Psychology*, 23(4), 517-535.
- Herman, J. L. (1992). *Trauma and recovery: Domestic abuse to political terror*. London, UK: Pandora.
- Jewkes, R., & Abrahams, N. (2002). The epidemiology of rape and sexual coercion in South Africa: An overview. *Social Science & Medicine*, 55(7), 1231-1244.
- Shefer, T., Boonzaier, F., & Kiguwa, P. (Eds.). (2006). *The gender of psychology*. Cape Town, South Africa: UCT Press.

## KEY TERMS & DEFINITIONS

**Gender-based violence:** an umbrella term for any harm that is perpetrated against a person's will and that results from power inequities that are based on gender roles (UNGA, 1993).

**Violence against women:** any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life (United Nations General Assembly, 1993).

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<sup>i</sup> The term "Coloured" is used instead of "mixed-race" as it describes "those South Africans loosely bound together for historical reasons such as slavery and a combination of oppressive and preferential treatment during apartheid, rather than by common ethnic identity." (Erasmus & Pieterse, 1999, p. 169).

## Chapter 34

# THE INFLUENCE OF STEREOTYPES ON EYEWITNESS RECALL OF PERCEIVED STEREOTYPICALITY

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### ABSTRACT

The present research investigates whether victim characteristics can exacerbate the effect of crime-type on eyewitness recall of perceived stereotypicality. To isolate the influence of victim characteristics, 43 participants watched a video of a Black male drive-by shooter (i.e., stereotypically Black crime) differing only in the alleged victims of the crime. Participants then identified the perpetrator using a software program that morphs the perpetrator's face through 100 frames of stereotypicality (low to high). As predicted, participants who watched a drive-by shooter whose victims were Black, accurately remembered the perpetrator's level of perceived stereotypicality ( $M = 48.50$ ); whereas, those participants who watched a drive-by shooter whose victims were White, falsely remembered the perpetrator as looking more stereotypically Black ( $M = 67.30$ ) than he is in reality,  $F(1,41) = 8.44$ ,  $p < .01$ , partial eta-squared = .17. In short, there is a discernable pattern to eyewitness misidentifications. It is only after we understand both (a) when errors in eyewitness identification will occur and, (b) who will be mistakenly identified that we can begin to take proactive measures to ensure these biases do not translate into wrongful convictions.

*Keywords:* eyewitness memory, false convictions, stereotypes.

## 1. INTRODUCTION

The Innocence Project, an organization that provides statistics on DNA exonerations and often initiates the exoneration process, reports that there have been 317 post-conviction DNA exonerations in the United States since 1989 (2014). On average, exonerees spent 13.5 years in prison, and 18 people were sentenced to death before DNA testing proved their innocence. In total, exonerees spent 4,249 years in prison, and only 65% of these individuals were financially compensated for their wrongful conviction. Related to the current study, approximately 70% of the 317 exonerees were from minority groups, and an overwhelming proportion (63%) of those individuals self-identified as Black. Further, eyewitness identification errors are cited as the cause in 73% of the wrongful convictions overturned by DNA evidence, and at least 40% of these cases involved cross-race identifications (Innocence Project, 2014). These statistics tell a troubling story of how errors in the criminal justice system can occur, and speak to need for research in this area. The goal of the present research is to identify when errors are likely to occur, and who is likely to fall victim to these errors.

The concept of perceived stereotypicality is central to the present line of research. Perceived stereotypicality is the degree to which an individual is perceived to possess physical features that are believed to be representative of a given racial group. In terms of race, perceived Black stereotypicality is the degree to which a person is viewed to be physically representative of the Black racial group. For example, an individual high on perceived Black stereotypicality may have a darker skin tone, broader nose, and thicker lips than someone low on perceived Black stereotypicality (Blair, Judd, & Chapleau, 2004; Blair, Judd, & Fallman, 2004; Blair, Judd, Sadler, & Jenkins, 2002; Livingston & Brewer, 2002; Maddox & Gray, 2002).

Research suggests that there is a relationship between what a person looks like, and what crime they are perceived to commit (Bull & Green, 1980; Goldstein, Chance, & Gilbert, 1984; Gordon, Michels, & Nelson, 1996; Jones & Kaplan, 2003; MacLin & Herrera, 2006; Shoemaker, South, & Lowe, 1973; Sunnafrank & Fontes, 1983). In the case of perceived Black

stereotypicality, features that are characteristic of high perceived Black stereotypicality (e.g., dark skin tone, broad nose, thick lips) are thought to impact the observer's memory of the individual more so than those characteristics of low perceived Black stereotypicality. Indeed, Corneille, Huart, Becquart, and Bredart (2004) found that the presence of strong ethnic features contributed to the distortion in participant memory for facial characteristics. It is hypothesized that this is because expectations about what type of person commits what type of crime can influence the image individuals retrieve when having to make their identification (Araya, Ekehammer, & Akrami, 2003; Lenton, Blair, & Hastie, 2001; Sherman, Groom, Ehrenberg, & Klauer, 2003). In this way, memories are encoded in a stereotype-consistent way (Martin & Halverson, 1981; Pendry & Macrae, 1999), and they become reconstructions rather than reproductions of real-world events (Osborne & Davies, 2013).

Osborne and Davies (2013) conducted a series of studies comparing different crimes in terms of their seriousness, violence, and associated race. The results of these studies concluded that crimes such as "drive-by shooting", "carjacking", and "street gambling" were found to be highly stereotypical Black crimes, while "hate crime", "embezzlement", and "serial killing" were found to be highly stereotypical White crimes. From these analyses, the researchers were then able to reanalyze the two groups of crimes to identify a pair of crimes that were similar in terms of seriousness and violence, but differed significantly in terms of race. The results of these analyses concluded that while matched on seriousness and violence, drive-by shooting was rated a highly stereotypical Black crime, while serial killing was rated a highly stereotypical White crime. The researchers used these two crimes for a series of studies, which found that participants who were exposed to a stereotypically Black crime (i.e., drive-by shooting) recalled the perpetrator to be higher on perceived Black stereotypicality than the same perpetrator of a stereotypically White crime (i.e., serial-killing). This work has laid the foundation for explaining both when eyewitness identification errors are likely to occur and who is likely to be a victim of those errors.

## 2. BACKGROUND

The current research expands on the work of Osborne and Davies (2013) to examine if victim characteristics exacerbate the effects of crime-types on eyewitness recall of a suspect's perceived Black stereotypicality. Research suggests that victim characteristics play a large role in the criminal justice system especially with regards to sentencing (Glaeser & Sacerdote, 2003). In terms of race, research by Glaeser and Sacerdote (2003) has shown that Black individuals convicted of murder receive shorter sentences if the victim is Black than if the victim is White. Not all Black individuals convicted of murdering White individuals are treated the same, however. Eberhardt, Davies, Purdie-Vaughns, and Johnson (2006) found that the more stereotypically Black the defendant was perceived to be, the more likely that person was to be sentenced to death (i.e., 57.5% of high stereotypical Black males were sentenced to death vs. 24.4% of low stereotypical Black males). This research found that the perceived Black stereotypicality of the defendant influenced the likelihood of a death sentence but only when the victims were White. In other words, the perceived Black stereotypicality of the defendant did not significantly predict the likelihood of perpetrators receiving the death sentence when targeting Black victims. The researchers note that the race-salience hypothesis may help to explain this discrepancy (Eberhardt et al., 2006). According to this hypothesis, the interracial nature of crimes involving Black defendants and White victims brings the issue of race to the forefront. In crimes involving Black defendants and Black victims, however, the issue of race is not as salient. Individuals are more inclined to attribute the crime to conflict within individuals rather than conflict between groups (Prentice & Miller, 1999). The way in which individuals attribute race conflict (i.e., interpersonal vs. intergroup) is examined in this current research.

Osborne and Davies (2013) have established that participants who are exposed to a surveillance video of a suspect of a highly stereotypical Black crime (i.e., drive-by shooting) recall the target as higher in perceived Black stereotypicality than participants who are exposed to the same suspect of a highly stereotypical White crime (i.e., serial killing). Prior research

(Eberhardt et al., 2006) has also established that perceived Black stereotypicality becomes a critical factor in sentencing when race becomes salient; that is, when a Black male kills a White male. As mentioned earlier, eyewitness errors account for a large percentage of wrongful convictions (Innocence Project, 2014). Investigating the effects of victim characteristics in conjunction with crime-types on eyewitness accuracy will help to identify how these errors occur, while also paving the way for procedures that help prevent them from occurring in the future.

### 3. OBJECTIVES

The goal of this research was to examine the possibility that victim characteristics exacerbate the effects of crime-types on eyewitness recall of perceived Black stereotypicality. It is hypothesized that participants who are exposed to a surveillance video of a drive-by shooter (i.e., a stereotypically Black crime) whose purported victims are White would remember the perpetrator as being higher on perceived Black stereotypicality than participants who watched the same surveillance video but of a perpetrator whose purported victims were Black.

### 4. DESIGN

This study was a between-participants design in which all participants were exposed to the video of the stereotypically Black crime (i.e., drive-by shooting) prior to being randomly assigned to the Race of Victims condition (i.e., Black victims or White victims). The dependent variable in this study was the participants' memory of the perpetrator's perceived stereotypicality on a scale of 0-100 with a score of "0" representing the lowest level of perceived stereotypicality, and a score of "100" representing the highest level of perceived stereotypicality.

### 5. METHODS

Undergraduate students were recruited for this online study via the SONA Online Recruitment System at the University of British Columbia (Okanagan Campus). A total of 43 students were recruited in exchange for 0.5 course credit. The sample of undergraduate students consisted of 29 women and 14 men. Thirty-two participants self-identified as White, five as Asian, two as Black, one as Latino/Latina, and three as "Other". Participants ranged in age from 17 to 36 ( $M = 19.44$ ,  $SD = 2.897$ ). In order for their data to be included in the analyses, the participants had to pass a series of manipulation checks. These manipulation checks were designed to confirm if participants were paying attention to the study, by asking questions related to information that was provided to participants multiple times at the beginning of the study (i.e., if the perpetrator committed a crime, what crime the perpetrator was suspected of committing, if there were victims of the crime, the demographics of the victims, if the perpetrator in the identification video was present at the beginning of the study, and what colour sweatshirt the perpetrator was wearing). Unfortunately, the limited number of participants did not allow us to accurately test participant effects of age, gender, or race. As such, those participant factors will not be discussed further. For this study, the participant pool was collapsed across age, gender, and race, and participants were randomly assigned to one of two conditions: Black victims or White victims. That being said, we hope to further test these participant variables with subsequent research.

After consenting to participate in this online study, all participants were told that they were about to watch a surveillance video of a perpetrator leaving a building. The surveillance video showed a moderately stereotypical Black male exiting an ambiguous building carrying nothing in his hands (see Osborne & Davies, 2013). All participants in this study were led to believe that the perpetrator leaving the building was suspected of committing a highly stereotypic Black crime (i.e., drive-by shooting). To illustrate, participants were told: "You are about to see a short (about 15 seconds) surveillance video of a suspected drive-by shooter

leaving a building". After watching the surveillance video, participants were shown the purported victims of the drive-by shooting. Depending on their randomly assigned condition, those purported victims were either all Black or all White.

After viewing the victim photographs, participants were asked to read an unrelated article on visual processing for 10 minutes. This article, *How Photons Start Vision* by Denis Baylor (1996), served as a cognitive distractor task to conservatively replicate real-world eyewitness identification circumstances (i.e., memory impairment caused by the duration of time between witnessing the event and subsequent recall for the event). Participants were told that this article on the visual system would help them understand how visual information is processed in the brain, and that it would increase their performance on the latter parts of the study. To avoid instilling feelings of stress or anxiety, at the end of the 10 minutes, participants were informed that it was not necessary to have finished reading the entire article, as most people are not able to finish reading the article in the allotted time.

After reading the article, participants were asked to identify the perpetrator that they saw in the surveillance video at the beginning of the study. Participants were shown a video, created using FantaMorph version 4.0 (Abrosoft, 2007) that transitions between faces. The morphing video goes through 100 frames of stereotypicality in 10 seconds, and participants were asked to stop the morph at the exact moment when the face matched their memory of the perpetrator they were exposed to in the surveillance video at the beginning of the study. The first frame of the morph represents the lowest level of perceived Black stereotypicality, whereas the 100<sup>th</sup> frame of the morph represents the highest level of perceived Black stereotypicality. In reality, the perpetrator's level of perceived Black stereotypicality is exactly the midpoint of the morph; that is, the 50<sup>th</sup> frame. Previous studies determined that the direction of the stereotypicality in the video (i.e., low-high vs. high-low) was not significant. Therefore, the direction of low to high stereotypicality was arbitrarily selected. For further discussion of these issues please see Osborne and Davies (2013). The morphing software records the exact frame at which the participant chooses to stop the morph, which allows for a rating of 0 (low perceived Black stereotypicality) to 100 (high perceived Black stereotypicality) to be determined. The frame at which the video is stopped serves as our dependent measure (i.e., 0-100). To ensure that participants were familiar with the morphing software before having to make their judgments, a practice trial was given prior to the actual perpetrator identification task.

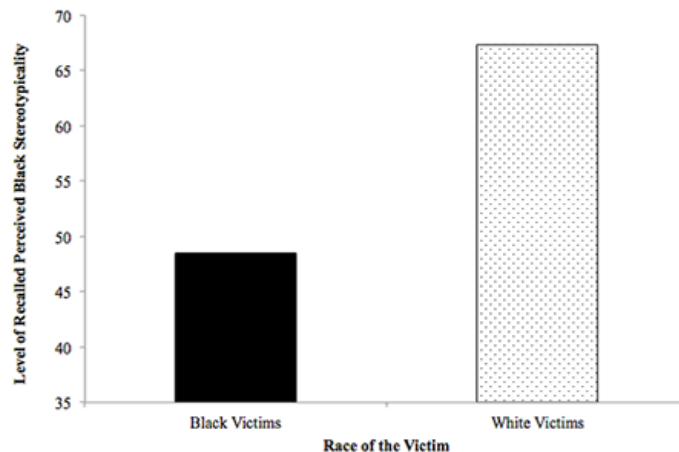
Following the identification task, participants were asked a series of questions to ascertain the level of confidence in their identification of the perpetrator's level of perceived stereotypicality. Participants were also asked a series of questions to confirm that they were paying attention during the study and did not experience any difficulties with the program or the study itself. These manipulation checks were used to identify potential sources of error in the data and to confirm that the study was accessible across multiple computer types and various web browsers. Participant demographics were then collected, including age, gender, and ethnicity. Participants were then thanked for their participation and fully debriefed.

## 6. RESULTS

The results of our study supported our hypothesis that those participants who were exposed to the surveillance video of a suspected drive-by shooter whose victims were White recalled the perpetrator as higher on perceived Black stereotypicality than those participants who were led to believe that the drive-by shooter's victims were Black. Specifically, participants who believed the victims were White rated the perpetrator's level of perceived stereotypicality to be 67.30, whereas those who believed the victims were Black rated the perpetrator's level of perceived stereotypicality to be 48.50,  $F(1, 41) = 8.44$ ,  $p < .01$ , partial eta-squared = .17 (see Figure 1).



Figure 1. Mean results of the effect of crime-types and race of the victim on eyewitness recall.



## 7. FUTURE RESEARCH DIRECTIONS

As discussed, the results of our study supported our hypothesis with regards to eyewitness recall of perceived stereotypicality. Specifically, those participants who were exposed to the surveillance video of a suspected drive-by shooter whose victims were White recalled the perpetrator as higher on perceived Black stereotypicality as compared to those participants whose victims were Black. As acknowledged in the Methods, the limited sample size in this study prevented the examination of participant characteristics such as age, race, and gender. Future research in this paradigm will involve the exploration of these victim characteristics, and specifically, those of gender and age.

With respect to gender, male perpetrators' sentences tend to be longer for female victims than for male victims (Curry, Lee, & Rodriguez, 2004; Franklin & Fearn, 2008). Specifically, Curry et al., (2004) studied samples of offenders convicted of various violent crimes (e.g., homicide, assault, sexual assault, robbery), and found that those male offenders who targeted females received longer sentences than female offenders who targeted males. Further, research by Curry (2010) found that violent offenders who targeted Hispanic and/or White females, but not Black females, received 30% longer sentences.

With respect to age, surprisingly little research has been done to establish the differences in sentencing for crimes involving child victims versus adult victims. Kleinfield (2012) discussed how criminal law has perpetuated the belief that it is worse to commit a crime against a child or an elderly individual, rather than commit the same crime against an adult. Furthermore, the work of Garvey (1998) examined aggravating and mitigating factors present in 41 capital murder cases in South Carolina. He interviewed the jurors involved in all of these cases, and found that the majority endorsed the death penalty in cases where the victim was a child. Admittedly, research in this specific area is limited, and the goal of future research should be to determine if differences exist in terms of eyewitness recall of perceived stereotypicality across gender of target, and for child victims versus adult victims.

Another avenue of exploration for the current research could involve the incorporation of Terror Management Theory (TMT). Put simply, TMT is a theory that addresses the paradox of an individual's "biological inclination toward self-preservation" and the reality that life is finite, and we can cease to exist at any given time (Solomon, Greenberg, & Pyszczynski, 2004, p. 17). The "terror" that is created within us from this realization is managed through the development and maintenance of cultural worldviews. As Solomon et al., (2004) discuss, culture worldviews are beliefs about the world that help individuals find internal meaning and value. In terms of criminality, work by Greenberg, Solomon, and Arndt (2008) suggest that TMT may provide a way of understanding how legal decision-making is influenced by external psychological factors. Specifically, cultural violations such as crime may threaten an

individual's worldview, and that may cause an increase in punitive attitudes. Support for this notion can be seen in the work of Bradley and Kennison (2012) who found that reminding individuals of their own death (i.e., mortality salience) caused participants to perform worse on a weapon bias task (see Payne, 2001), and these errors were worse for conditions involving Black versus White faces. Incorporating TMT will help to increase the mundane realism of our work as reminding individuals of their own death (i.e., mortality salience) is a very real process for individuals, and is relatable outside of a laboratory setting. Our eyewitness identification research is applicable in law and criminal justice settings. Combining the mundane realism of TMT with the real-world applicability of eyewitness identifications will help to further address the issues of intergroup bias and prejudice.

The findings of this study are the first of its kind to highlight the effect of victim characteristics, in conjunction with crime-types, on the accuracy of eyewitness recall of perceived stereotypicality. This work lays the foundation for future work examining the influence of other victim characteristics such as age on the accuracy of eyewitness identifications. As discussed, work by Kleinfield (2012) has shown that our criminal justice system perpetuates the belief that it is more heinous to commit a crime against a child than against an adult. As a consequence, our future research will examine the interaction between victim's age and crime-type on the accuracy of eyewitness recall of perceived stereotypicality. We are also interested in exploring whether witness characteristics can also interact with crime-types to influence the accuracy of eyewitness recall of perceived stereotypicality. For example, it has been well established that people are particularly inept at cross-race identifications, which is an effect known as the cross-race identification bias (Malpass & Kravitz, 1969). This leads us to question whether these errors in memory for perceived stereotypicality will only hold for non-Blacks witnessing Black suspects. Our research up to this point has not involved enough Black subjects to determine whether this phenomenon would also be shown among Black participants recalling the perceived stereotypicality of Black perpetrators. Future research will examine this issue in greater detail through increased diversity in our recruited samples.

## 8. CONCLUSION/DISCUSSION

Our research has demonstrated that crime-types and the race of the victim can influence the level of eyewitness recall of perceived stereotypicality. By conducting further research on these issues, judges, lawyers, and jurors will become aware of how certain crimes become associated with certain races, and how these associations impact their perceptions of those accused. The goal of future research will be to identify not only when errors in judgment, especially in terms of race and crime, are likely to occur, but also who is likely to fall victim to those errors, and what safeguards need to be put in place to protect those individuals from being wrongfully accused. Fully understanding the factors that influence eyewitness memory and identification accuracy is a critical step in enabling us to create and implement procedures designed to reduce the tragic errors that can occur during the identification process.

## REFERENCES

- Abrosoft. (2007). *FantaMorph (Version 4.0)* [Computer software]. Beijing, China: Abrosoft.
- Araya, T., Ekehammar, B., & Akrami, N. (2003). Remembering things that never occurred: The effects of to-be-forgotten stereotypical information. *Experimental Psychology*, *50*(1), 27-32. doi:10.1027//1618-3169.50.1.27
- Baylor, D. (1996). How photons start vision. *Proceedings of the National Academy of Sciences of the United States of America*, *93*, 560-565. doi:10.1073/pnas.93.2.560
- Blair, I. V., Judd, C. M., & Chapleau, K. M. (2004). The influence of Afrocentric facial features in criminal sentencing. *Psychological Science*, *15*(10), 674-679. doi:10.1111/j.09567976.2004.00739.x
- Blair, I. V., Judd, C. M., & Fallman, J. L. (2004). The automaticity of race and Afrocentric facial features in social judgments. *Journal of Personality and Social Psychology*, *87*(6), 763-778. doi:10.1037/0022-3514.87.6.763

- Blair, I. V., Judd, C. M., Sadler, M. S., & Jenkins, C. (2002). The role of Afrocentric features in person perception: Judging by features and categories. *Journal of Personality and Social Psychology*, 83(1), 5-25. doi: 10.1037/0022-3514.83.1.5
- Bradley, K. I., & Kennison, S. M. (2012). The effect of mortality salience on weapon bias. *International Journal of Intercultural Relations*, 36(3), 403-408. Retrieved from <http://dx.doi.org/10.1016/j.ijintrel.2011.09.006>
- Bull, R., & Green, J. (1980). Relationship between physical appearance and criminality. *Medicine, Science, and the Law*, 20(2), 79-83. Retrieved from <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=70171>
- Corneille, O., Huart, J., Becquart, E., & Bredart, S. (2004). When memory shifts toward more typical category exemplars: Accentuation effects in the recollection of ethnically ambiguous faces. *Journal of Personality and Social Psychology*, 86(2), 236-250. doi:10.1037/0022-3514.86.2.236
- Curry, T. (2010). The conditional effects of victim and offender ethnicity and victim gender on sentences for non-capital cases. *Punishment and Society*, 12(4), 438-462. doi:10.1177/1462474510376585
- Curry, T., Lee, G., & Rodriguez, S. F. (2004). Does victim gender increase sentence severity? Further explorations of gender dynamics and sentencing outcomes. *Crime and Delinquency*, 50(3), 319-343. doi:10.1177/0011128703256265
- Eberhardt, J. L., Davies, P. G., Purdie-Vaughns, V. J., & Johnson, S. L. (2006). Looking deathworthy: Perceived stereotypicality of black defendants predicts capital-sentencing outcomes. *Psychological Science*, 17(5), 383-386. doi:10.1111/j.1467-9280.2006.01716.x
- Franklin, C. & Fearne, N. (2008). Gender, race, and formal court decision-making outcomes: chivalry, paternalism, conflict theory or gender conflict? *Journal of Criminal Justice*, 36(3), 279-290. Retrieved from <http://dx.doi.org/10.1016/j.jcrimjus.2008.04.009>
- Garvey, S. P. (1998). Aggravation and mitigation in capital cases: What do jurors think? *Columbia Law Review*, 98, 1538-1578. Retrieved from <http://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1346&context=facpub>
- Glaeser, E. L., & Sacerdote, B. (2003). Sentencing in homicide cases and the role of vengeance. *The Journal of Legal Studies*, 32(2), 363-382. Retrieved from <https://litigationessentials.lexisnexis.com/webcd/app?action=DocumentDisplay&crawlid=1&doctype=cite&docid=32+J.+Legal+Stud.+363&srctype=smi&srcid=3B15&k=ec9bacebfc4e4153c29bd6b6bbc7978c>
- Goldstein, A. G., Chance, J. E., & Gilbert, B. (1984). Facial stereotypes of good guys and bad guys: A replication and extension. *Bulletin of the Psychonomic Society*, 22(6), 549-552. Retrieved from <http://psycnet.apa.org/psycinfo/1986-01145-001>
- Gordon, R. A., Michels, J. L., & Nelson, C. L. (1996). Majority group perceptions of criminal behavior: The accuracy of race-related crime stereotypes. *Journal of Applied Social Psychology*, 26(2), 148-159. doi:10.1111/j.1559-1816.1996.tb01843.x
- Greenberg, J., Solomon, S., & Arndt, J. (2008). A basic but uniquely human motivation: Terror management. In J. Y. Shah, W. L. Gardner (Eds.). *Handbook of motivation science* (pp. 114-134). New York, NY: Guilford Press.
- Innocence Project. (2014). *Facts on post-conviction DNA exonerations*. Retrieved July 16, 2014, from [http://www.innocenceproject.org/Content/DNA\\_Exonerations\\_Nationwide.php](http://www.innocenceproject.org/Content/DNA_Exonerations_Nationwide.php)
- Jones, C. S., & Kaplan, M. F. (2003). The effects of racially stereotypical crimes on juror decision-making and information-processing strategies. *Basic and Applied Social Psychology*, 25(1), 1-13. doi:10.1207/S15324834BASP2501\_1
- Kleinfield, J. (2012). A theory of criminal victimization. *Stanford Law Review*, 12-38. Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2166376](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2166376)
- Lenton, A. P., Blair, I. V., & Hastie, R. (2001). Illusions of gender: Stereotypes evoke false memories. *Journal of Experimental Social Psychology*, 37(1), 3-14. doi:10.1006/jesp.2000.1426
- Livingston, R. W., & Brewer, M. B. (2002). What are we really priming? Cue-based versus category-based processing of facial stimuli. *Journal of Personality and Social Psychology*, 82(1), 5-8. doi:10.1037/0022-3514.82.1.5
- MacLin, M. K., & Herrera, V. (2006). The criminal stereotype. *North American Journal of Psychology*, 8(2), 197-208. Retrieved from <http://web.ebscohost.com/ehost/detail?sid=9b231515-abb2-4683-8d9921422efa7641%40sessionmgr112&vid=1&hid=104&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#db=bth&AN=21517986>
- Maddox, K. B., & Gray, S. A. (2002). Cognitive representations of Black Americans: Reexploring the role of skin tone. *Personality and Social Psychology Bulletin*, 28(2), 250-259. doi:10.1177/0146167202282010
- Malpass, R. S., & Kravitz, J. (1969). Recognition for faces of own and other race. *Journal of Personality and Social Psychology*, 13(4), 330-334

- Martin, C. L., & Halverson, C. F. (1981). A schematic processing model of sex typing and stereotyping in children. *Child Development*, 52(4), 1119-1134. Retrieved from <http://www.jstor.org/stable/1129498>
- Osborne, D., & Davies, P. G. (2013). Eyewitness identifications are affected by stereotypes about a suspect's level of perceived stereotypicality. *Group Processes and Intergroup Relations*, 16(4), 488-504. doi:10.1177/1368430212454927
- Payne, B. K. (2001). Prejudice and perception: The role of automatic and controlled processes in misperceiving a weapon. *Journal of Personality and Social Psychology*, 81(2), 181-192. doi:10.1037/0022-3514.81.2.181
- Pendry, L. F., & Macrae, C. N. (1999). Cognitive load and person memory: The role of perceived group variability. *European Journal of Social Psychology*, 29(7), 925-942. doi:10.1002/(SICI)1099-0992(199911)29:7<925::AID-EJSP973>3.0.CO;2-O
- Prentice, D. A., & Miller, D. T. (1999). *Cultural divides: Understanding and overcoming group conflict*. New York, NY: Russell Sage Foundation.
- Sherman, J. W., Groom, C., Ehrenberg, K., and Klauer, K. C. (2003). Bearing false witness under pressure: Implicit and explicit components of stereotype-driven memory bias. *Social Cognition*, 21(3), 213-246. doi:10.1521/soco.21.3.213.25340
- Shoemaker, D. J., South, D. R., & Lowe, J. (1973). Facial stereotypes of deviants and judgments of guilt or innocence. *Social Forces*, 51(4), 427-433. doi:10.1093/sf/51.4.427
- Solomon, S., Greenberg, J., & Pyszczynski, T. (2004). The cultural animal: Twenty years of terror management theory and research. In J. Greenberg, S. L. Koole, and T. Pyszczynski (Eds.). *The handbook of experimental existential psychology*. (pp. 13-34). New York, NY: Guilford Press.
- Sunnafrank, M. U., & Fontes, N. E. (1983). General and crime related racial stereotypes and influence on juridic decisions. *Cornell Journal of Social Relations*, 17(1), 1-15. Retrieved from <http://psycnet.apa.org/psycinfo/1984-20492-001>

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## Chapter 35

# DYSFUNCTIONAL FAMILY ENVIRONMENT ON DIRECT AND INDIRECT AGGRESSION IN ADOLESCENTS

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### ABSTRACT

The effect of a dysfunctional family environment on direct and indirect aggression was examined, testing the mediating role of hopelessness in this relationship. Secondary students (N = 642; aged 12-18) completed the Family Assessment Device (FAD), a self-report measure that assess different dimensions of family functioning (general functioning, problem solving, communication, roles, affective responsiveness, affective involvement, and behaviour control), the Children's Social Behavior Scale Self-report (CSBS-S), which includes measures of direct and indirect aggression, and the Beck Hopelessness Scale (BHS). Hierarchical regression analyses were performed controlling for gender, revealing that unhealthy family patterns predict both direct and indirect aggression, and this prediction may in part be explained through the effect of hopelessness. Knowledge of the risk factors leading to aggressive behaviors may be useful for improving specific intervention programmes to prevent the onset and to diminish adolescent adjustment problems over the course of development.

*Keywords:* family environment, hopelessness, direct aggression, indirect aggression, adolescence.

## 1. INTRODUCTION

Conduct problems in childhood and adolescence are increasing. Aggressive behaviours are especially prevalent among young people and are frequently observed in the school environment (Stevens, De Bourdeaudhuij, & Van Oost, 2002). Although the family is the first context in which children learn social and emotional skills, the school setting provides an important opportunity to interact with peers and has a huge impact on how those skills are developed (Merrell, Buchanan, & Trand, 2006).

Involvement in aggressive incidents has highly negative psychological and social effects in adulthood (Varhama & Björkqvist, 2005), with a strong relationship between early aggressive behaviour and later aggression and delinquency (Farrington, 1991; Olweus, 1979). The general construct of aggression has been defined as intent to hurt or harm others (Berkowitz, 1993). Nevertheless, aggression is a complex phenomenon, and various authors make a distinction between an easily observed and confrontative form, called direct or overt aggression, and a more covert and indirect form, named indirect or relational aggression (Björkqvist, 2001; Crick & Grotpeter, 1995). Direct aggression is defined as behaviours that are intended to harm others through physical or verbal means (e.g., hitting, pushing, named-calling or yelling at others). Indirect aggression is characterised by harming another person through manipulation of their peer relationships, friendships or social status (e.g., excluding a classmate from the social group or spreading rumours about someone). These harmful actions against peers emerge as one of the most troublesome problems at school, with prevalence ranging from 10% to 25% in Australia (Rigby & Slee, 1993), Austria (Klicpera & Gasteiger-Klicpera, 1996), England (Whitney & Smith, 1993), Finland (Björkqvist & Jansson, 2003), Germany (Wolke, Woods, Bloomfield, & Karstadt, 2000), Japan (Morita, 1985), Norway (Olweus, 1978), Spain (Avilés & Monjas, 2005), or United States (Nansel et al., 2001).

A large body of child development literature focuses on risk factors for engaging in aggression. Individual and contextual factors contribute to the development of aggressive conduct during childhood and adolescence (Smith, Bowers, Binney, & Cowie, 1993). With regard to contextual factors, there is an increasing interest in examining features of the family

environment. Theoretical models support the notion that family interaction patterns play a central role in the onset of behavioural problems (George, Herman, & Ostrander, 2006). Child neglect, abuse and maltreatment have severe emotional and behavioural consequences and have been widely studied (Brown, Cohen, Johnson, & Smailes, 1999; Luster & Small, 1997). According to Merrell et al. (2006), it is important to take into account the role of the family regarding the onset and continuance of aggressive behaviours. Attachment, parenting styles and practices, and socioeconomic status have been shown to relate to aggressive outcomes (see Coie & Dodge, 1998, for a review). Rigby (1994) found that being an aggressor at school was significantly linked to the poor psychological functioning of the family. Overall, family functioning is considered to have a relevant influence on adolescent aggression; however, little is known about which specific features of the family could lead to direct versus indirect aggression. Studies rarely make a distinction between these constructs (Bowers, Smith, & Binney, 1992; Rigby, 1994) and focus, for the most part, on direct aggression, which has been linked concurrently and prospectively to familial and parent-child factors (Tremblay, 2001). The majority of studies only paid attention to physical or verbal aggression until nineties, since overt aggression was easily observed in school yards with more evident damage to the victims (Björkqvist & Niemelä, 1992; Lagerspetz, Björkqvist, & Peltonen, 1988). This might be a consequence of a lack of awareness about more covert forms of aggression, which cannot be observed directly, but has been shown to be at least as harmful as direct aggression, many times having worse psychological consequences (Sharp, 1995). Indirect aggression has been investigated in recent years by experimental psychologists, but there is little evidence in applying the concept of indirect aggression to family functioning research. Longitudinal data (Vaillancourt, Miller, Fagbemi, Côté, & Tremblay, 2007) indicated that low socio-economic status, hostile-ineffective parenting, and inconsistent parenting at Time 1 were related to indirect aggression at Time 2, in alignment with results found for direct aggression. McNeilly-Choque, Hart, Robinson, Olsen, and Nelson (1996) showed that children who were members of families with higher socio-economic status displayed more indirect aggression, whereas children in families with lower socio-economic status displayed more direct aggression.

Studies investigating the relationship between hopelessness and aggression show contradictory findings, although most of them suggest that hopelessness tends to contribute to aggressive behaviours. Abramson, Metalsky, and Alloy (1989) define hopelessness as the expectation that highly desired outcomes will not occur accompanied by the expectation that one is unable to change the probabilities of these outcomes. It has been shown that certain characteristics of the family, such as parental control, parental education, and marital status contribute significantly to the appearance of hopelessness (Levy, Jurkovic, & Spirito, 1995). However, the link between hopelessness and aggression has been less studied (Ferdico, 1999).

The first objective of the current study is to examine the influence of specific dimensions of family functioning on the appearance of direct and indirect aggression. This is one of the first studies investigating specific characteristics of family functioning in relation to each type of aggression separately. The second objective is to explore whether hopelessness is related to aggressive behaviour in adolescents. If so, in light of the data linking dysfunctional family environment to hopelessness, it could be hypothesized that hopelessness might mediate the influence of family dysfunction on aggression against peers. Thus, the third objective of this study is to test the mediating role that hopelessness may play between family dysfunction and direct and indirect aggressive behaviour separately. Additionally, gender differences were examined and controlled along the different objectives.

## 2. DESIGN

### 2.1. Participants

Adolescents aged 12 to 18 ( $M = 14.79$  years;  $SD = 1.74$ ) were recruited from six Secondary Schools in the area of Málaga, Spain, resulting in a sample of 642 pupils (331 girls and 311 boys; participation rate of 97%). The researchers asked the school principals for permission to request student participation. The adolescents were free to take part in the study or to decline to do it.

## 2.2. Measures

*Self-reported aggression.* Aggression was assessed with a self-report instrument developed by Crick and Grotpeter (1995), called the Children's Social Behavior Scale Self-report (CSBS-S). This instrument has different subscales to measure: aggression, prosocial behaviour, victimization, inclusion in the class group, and isolation. In this study, only the subscales concerning direct (physical and verbal) and indirect aggression were used. The direct aggression subscale consists of three items (two for physical aggression and one for verbal aggression), and the indirect subscale contains five items. Adolescents reported how often they engaged in aggressive behaviours, according to a 5-point scale from never (1) to all the time (5), (e.g., some kids tell lies about a classmate so that the other kids won't like the classmate anymore. How often do you do this?). Higher scores indicate a higher degree of self-reported aggression. This instrument has been shown to be internally consistent in this sample (direct aggression,  $\alpha = .84$ ; indirect aggression,  $\alpha = .79$ ), and also previous studies (see Leadbeater, Boone, Sangster, & Mathieson, 2006).

*Family environment.* The Family Assessment Device (FAD) was selected to measure which dimensions of the family environment might be risk factors for the development of aggressive behaviour (Epstein, Baldwin, & Bishop, 1983). The FAD is a self-report instrument designed to assess the individual family member's perception of his/her family functioning on each dimension of the McMaster Model of Family Functioning (MMFF; Ryan, Epstein, Keitner, Miller, & Bishop, 2005). It consists of 60 items grouped in six subscales: Problem solving, communication, roles, affective responsiveness, affective involvement, and behaviour control. In addition, a seventh general functioning subscale measures the overall level of the family functioning. It contains items that represent the other dimensions included in the model, with a correlation of .85 in non-clinical samples. Each item can be responded to on a 4-point scale, ranging from never (1) to always (4), (e.g., we make sure members meet their family responsibilities). The response form was reworded from the original English questionnaire to be more understandable in Spanish (strongly disagree to strongly agree was changed to never to always). Internal consistencies were in the range of the originally reported consistencies (see Ryan et al., 2005):  $\alpha = .91$  for general functioning,  $\alpha = .65$  for problem solving,  $\alpha = .78$  for communication,  $\alpha = .73$  for roles,  $\alpha = .79$  for affective responsiveness,  $\alpha = .77$  for affective involvement, and  $\alpha = .74$  for behaviour control. Families were considered healthy if an average overall family functioning score was less than 2 on the 4-point scale, whereas a higher score indicated unhealthy functioning.

*Hopelessness.* The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) was used to assess hopelessness, that is, the degree to which an individual's cognitive schema is characterised by pessimistic expectations about the future. Adolescents were asked to respond to 20 items, on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree), their thoughts over the last two weeks. The response form was reworded from the original questionnaire, which was a dichotomous scale, in order to gain better sensitivity. The possible score range was from 20 to 80, with higher scores indicating higher levels of hopelessness. The internal consistency for this format of the scale ( $\alpha = .84$ ) is in accordance with the original format (Young, Halper, Clark, Scheftner, & Fawcett, 1992). Hopelessness scores based on this scale are known to correlate significantly with clinical ratings of hopelessness (Beck et al., 1974).

## 2.3. Method

In a cross-sectional design, two trained research assistants administered the questionnaires to the students as a part of a larger study on social development. Two sessions of 50 minutes each were conducted on two different days to avoid tiring the students. They wrote a code instead of their names on the questionnaires to preserve their anonymity. When explaining the instructions, the assistants encouraged the pupils to ask if they had any questions and answer honestly.

### 2.4. Data analysis

Prior to main analyses, descriptive statistics and gender differences for each variable included in the study were examined. A hierarchical regression methodology was used to study the effect of FAD dimensions on direct and indirect aggression. Additionally, the role of hopelessness as mediator of these relationships was tested following the procedure suggested by Baron and Kenny (1986).

## 3. RESULTS

Statistical significance was found for direct and indirect aggression, with male adolescents more prone to be aggressive in both cases. Males have also an unhealthier functioning in the affective involvement dimension than female adolescents. Table 1 presents means, standard deviations, and correlations among all variables. The results are presented in two subsections. The first examines the influence of family functioning on direct and indirect aggression. The second explores the influence of hopelessness on aggressive behaviour and tests its mediating role between family functioning and the two forms of aggression.

Table 1. Descriptives and bivariate correlations,  $n = 642$ .

											Females ( $n=331$ )		Males ( $n=311$ )	
	1	2	3	4	5	6	7	8	9	10	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Direct Aggression	-	.50	.20	.14	.15	.16	.18	.12	.09	.08	3.95	1.27	4.87	1.90
2. Indirect Aggression		-	.23	.15	.16	.12	.16	.15	.10	.07	6.14	1.53	6.63	2.26
3. Hopelessness			-	.23	.25	.25	.23	.21	.14	.20	38.70	8.09	39.46	8.54
4. General Functioning				-	.74	.76	.75	.80	.73	.69	1.87	.72	1.95	.73
5. Problem Solving					-	.71	.67	.68	.44	.71	2.20	.59	2.24	.58
6. Communication						-	.62	.68	.47	.57	2.21	.60	2.25	.56
7. Roles							-	.65	.58	.65	2.14	.50	2.16	.52
8. Affective Responsiveness								-	.58	.57	2.03	.70	2.10	.71
9. Affective Involvement									-	.56	1.81	.59	1.94	.67
10. Behaviour Control										-	2.13	.58	2.08	.62

Note: Absolute correlations greater than .14 are significant at  $p \leq .001$  (overall significance level  $p \leq .05$  adjusted at  $p \leq .001$  following Bonferroni correction for multiple comparisons).

### 3.1. Influence of family dimensions on direct and indirect aggression

Table 2 and Table 3 show the results of the regression analyses in which direct and indirect aggression were regressed independently on each family dimension, controlling for gender. Additionally, the interactions of gender and each dimension were also tested.

Table 2. Regression analyses of FAD predicting Direct Aggression.

Equation	Predictor	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	$R^2$ change
1	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	General Functioning	.29	.09	.13	3.34	$\Delta R^2 = .02, F(1, 639) = 11.17^{***}$
2	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	Problem Solving	.41	.11	.14	3.83	$\Delta R^2 = .02, F(1, 639) = 14.65^{***}$
3	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	Communication	.44	.11	.15	4.07	$\Delta R^2 = .02, F(1, 639) = 16.60^{***}$
4	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	Roles	.56	.12	.17	4.55	$\Delta R^2 = .03, F(1, 639) = 20.79^{***}$
5	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	Affective Responsiveness	3.78	.41	.33	9.06	$\Delta R^2 = .01, F(1, 639) = 8.69^*$



Table 2. Regression analyses of FAD predicting Direct Aggression (cont.).

6	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	Affective Involvement	.16	.10	.06	1.63	$\Delta R^2 = .004, F(1, 639) = 2.66, ns$
7	Gender	-.91	.13	-.27	-7.18	$R^2 = .07, F(1, 640) = 51.61^{***}$
	Behaviour Control	.24	.11	.09	2.29	$\Delta R^2 = .008, F(1, 639) = 5.24^*$

**Note:** Gender coded as 1 for boys and 2 for girls.

\*  $p < .05$ , \*\*\*  $p < .001$ , ns = nonsignificant

Table 3. Regression analyses of FAD predicting Indirect Aggression.

Equation	Predictor	B	SE	$\beta$	t	$R^2$ change
1	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	General Functioning	.38	.10	.14	3.69	$\Delta R^2 = .02, F(1, 639) = 13.64^{***}$
2	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	Problem Solving	.53	.13	.16	4.17	$\Delta R^2 = .02, F(1, 639) = 17.40^{***}$
3	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	Communication	.37	.13	.11	2.90	$\Delta R^2 = .01, F(1, 639) = 8.35^*$
4	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	Roles	.58	.15	.15	3.96	$\Delta R^2 = .02, F(1, 639) = 15.67^{***}$
5	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	Affective Responsiveness	.40	.11	.15	3.81	$\Delta R^2 = .02, F(1, 639) = 14.63^{***}$
6	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	Affective Involvement	.26	.12	.08	2.19	$\Delta R^2 = .007, F(1, 639) = 4.80, *$
7	Gender	-.49	.15	-.13	-3.22	$R^2 = .02, F(1, 640) = 10.40^{***}$
	Behaviour Control	.24	.13	.07	1.90	$\Delta R^2 = .006, F(1, 639) = 3.60, ns$

**Note:** Gender coded as 1 for boys and 2 for girls.

$p < .05$ , \*\*\*  $p < .001$ , ns = nonsignificant

The results indicate that all family functioning dimensions significantly predicted both direct and indirect aggression, with two exceptions: Affective involvement was not a statistically significant predictor of direct aggression ( $p = .10$ ), and behaviour control showed only a tendency towards being a statistically significant predictor of indirect aggression ( $p = .058$ ). With regard to direct aggression, the variance explained by each dimension measured with the FAD ranged between 3% for roles and 0.4% for affective involvement. Regarding indirect aggression, the variance explained by each dimension ranged between 2% for general functioning and 0.6% for behaviour control. Gender by itself was significantly predictive of both types of aggression, explaining 7% of the variance for direct aggression and 2% of the variance for indirect aggression. That is, male adolescents were more aggressive than female adolescents in both cases, although differences were considerably smaller with respect to indirect aggressive behaviour. The interactions of gender with the family functioning dimensions did not turn out to be statistically significant, either in regard to direct or indirect aggression.

### 3.2. Influence of hopelessness on aggressive behaviour and its mediating role in the prediction of family functioning on direct and indirect aggression

To investigate whether hopelessness might predict aggressive behaviour, two hierarchical regression analyses were performed, one for each type of aggression. Effects of gender were controlled in the first step. Results from the two analyses showed that hopelessness influenced both direct aggression ( $\beta = .190, t(640) = 5.09, p < .001$ ) and indirect aggression ( $\beta = .223, t(640) = 5.83, p < .001$ ). Next, the possible mediating role of hopelessness in the relationship between family functioning and direct and indirect aggression was tested. To establish mediation, three criteria must be met (Baron and Kenny, 1986). First, family dimensions must significantly predict the two types of aggression. Second, family dimensions

must significantly predict hopelessness. Third, hopelessness must significantly predict both direct and indirect aggression, when introduced together with each dimension of family functioning in the same regression equation. Furthermore, the relationship between family functioning and aggressive behaviour must be reduced or even disappear when hopelessness is controlled.

Findings reported in previous subsection supported the first criterion: With only two exceptions, each dimension of family functioning predicted both direct and indirect aggression. The second criterion was tested with seven regression equations, one for each family dimension of the FAD. Indeed, family dimensions were all predictors of hopelessness: General functioning,  $\beta = .22$ ,  $t(640) = 5.83$ ,  $p \leq .001$ ; problem solving,  $\beta = .25$ ,  $t(640) = 6.62$ ,  $p \leq .001$ ; communication,  $\beta = .25$ ,  $t(640) = 6.47$ ,  $p \leq .001$ ; roles,  $\beta = .23$ ,  $t(640) = 5.86$ ,  $p \leq .001$ ; affective responsiveness,  $\beta = .21$ ,  $t(640) = 5.49$ ,  $p \leq .001$ ; affective involvement,  $\beta = .14$ ,  $t(640) = 3.45$ ,  $p \leq .001$ ; and behaviour control,  $\beta = .20$ ,  $t(640) = 5.21$ ,  $p \leq .001$ . Gender did not predict the appearance of hopelessness, and none of the interactions involving gender were significant. With respect to the third criterion, hopelessness was found to be a good predictor of direct and indirect aggression, as pointed out previously. Table 4 presents the results of testing the third criterion for direct aggression. When hopelessness was introduced into each equation, the effect of the different dimensions on direct aggression decreased, and the effect of behaviour control disappeared. We did not include affective involvement in this group of analyses since it did not predict direct aggression in the first step. Focusing on indirect aggression, Table 5 shows that the predictions of the different dimensions decreased when the effect of hopelessness was controlled. Furthermore, the effects disappeared for communication and affective involvement. Behaviour control was not introduced due its lack of predictive power for indirect aggression.

*Table 4. Hierarchical regression analyses testing the mediation of hopelessness in the relationship between family dimensions and direct aggression, controlling for the effects of gender.*

Equation	Entry Order	Predictor Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup> change
1	1	Gender	-.91	.13	-.27	28.50	$R^2 = .07$ , $F(1, 640) = 51.61^{***}$
		General Functioning	.20	.09	.09	2.30	$\Delta R^2 = .04$ , $F(2, 638) = 15.68^*$
	2	Hopelessness	.03	.01	.17	4.46	
2	1	Gender	-.91	.13	-.27	28.50	$R^2 = .07$ , $F(1, 640) = 51.61^{***}$
		Problem Solving	.29	.11	.10	2.67	$\Delta R^2 = .05$ , $F(2, 638) = 16.63^*$
	2	Hopelessness	.03	.01	.16	4.27	
3	1	Gender	-.91	.13	-.27	28.50	$R^2 = .07$ , $F(1, 640) = 51.61^{***}$
		Communication	.32	.11	.11	2.95	$\Delta R^2 = .05$ , $F(2, 638) = 17.45^*$
	2	Hopelessness	.03	.01	.16	4.23	
4	1	Gender	-.91	.13	-.27	28.50	$R^2 = .07$ , $F(1, 640) = 51.61^{***}$
		Roles	.44	.12	.13	3.55	$\Delta R^2 = .05$ , $F(2, 638) = 19.47^{***}$
	2	Hopelessness	.03	.01	.16	4.19	
5	1	Gender	-.91	.13	-.27	28.50	$R^2 = .07$ , $F(1, 640) = 51.61^{***}$
		Affective Responsiveness	.18	.09	.07	1.95	$\Delta R^2 = .04$ , $F(2, 638) = 14.90^*$
	2	Hopelessness	.03	.01	.17	4.57	
6	1	Gender	-.91	.13	-.27	28.50	$R^2 = .07$ , $F(1, 640) = 51.61^{***}$
		Behaviour Control	.14	.11	.05	1.33	$\Delta R^2 = .04$ , $F(2, 638) = 13.84$ , <i>ns</i>
	2	Hopelessness	.04	.01	.18	4.72	

**Note:** Gender coded as 1 for boys and 2 for girls.

\*  $p \leq .05$ ; \*\*\*  $p < .001$ ; *ns* = nonsignificant

Table 5. Hierarchical regression analyses testing the mediation of hopelessness in the relationship between family dimensions and indirect aggression, controlling for the effects of gender.

Equation	Entry Order	Predictor Variable	B	SE	$\beta$	t	R <sup>2</sup> change
1	1	Gender	-.49	.15	.13	3.22	R <sup>2</sup> = .02, F (1, 640) = 10.40***
	2	General Functioning Hopelessness	.26 .05	.10 .01	.10 .20	2.51 5.14	$\Delta R^2 = .06$ , F (2,638) = 20.31*
2	1	Gender	-.49	.15	.13	3.22	R <sup>2</sup> = .02, F (1, 640) = 10.40***
	2	Problem Solving Hopelessness	.37 .04	.13 .01	.11 .19	2.85 4.95	$\Delta R^2 = .06$ , F (2,638) = 21.27*
3	1	Gender	-.49	.15	.13	3.22	R <sup>2</sup> = .02, F (1, 640) = 10.40***
	2	Communication Hopelessness	.20 .05	.13 .01	.06 .21	1.55 5.27	$\Delta R^2 = .05$ , F (2,638) = 18.25, ns
4	1	Gender	-.49	.15	.13	3.22	R <sup>2</sup> = .02, F (1, 640) = 10.40***
	2	Roles Hopelessness	.41 .05	.15 .01	.11 .20	2.78 5.08	$\Delta R^2 = .06$ , F (2,638) = 21.06***
5	1	Gender	-.49	.15	.13	3.22	R <sup>2</sup> = .02, F (1, 640) = 10.40***
	2	Affective Responsiveness Hopelessness	.29 .05	.11 .01	.11 .20	2.72 5.15	$\Delta R^2 = .06$ , F (2,638) = 20.87***
6	1	Gender	-.49	.15	.13	3.22	R <sup>2</sup> = .02, F (1, 640) = 10.40***
	2	Affective Involvement Hopelessness	.17 .05	.12 .01	.06 .22	1.47 5.59	$\Delta R^2 = .05$ , F (2,638) = 18.12, ns

Note: Gender coded as 1 for boys and 2 for girls.

\*  $p \leq .05$ ; \*\*\*  $p \leq .001$ ; ns = nonsignificant

Therefore, the three criteria of Baron and Kenny (1986) were fulfilled for each dimension, except for the effect of affective involvement on direct aggression and behaviour control on indirect aggression. Interestingly, the relation between family functioning measured with the FAD and both types of aggression can be partially or totally explained through the influence of hopelessness. Figure 1 summarizes the mediating role of hopelessness on each dimension of family functioning and direct and indirect aggression. An examination of the  $\beta$  indices in Tables 2, 3, 4, and 5 reveals that the effect of each dimension on aggression changes when hopelessness is introduced. To test the statistical significance of these changes, the Sobel Test (Sobel, 1982) was conducted, following the procedure of Preacher and Hayes (2004). All the partial and total mediations were found to be statistically significant at  $p \leq .005$  related to both direct aggression ( $z_s = 3.69$  for general functioning;  $z_s = 3.87$  for problem solving;  $z_s = 3.81$  for communication;  $z_s = 3.68$  for roles;  $z_s = 3.60$  for affective responsiveness; and  $z_s = 3.50$  for behaviour control), and indirect aggression ( $z_s = 4.11$  for general functioning;  $z_s = 4.37$  for problem solving;  $z_s = 4.29$  for communication;  $z_s = 4.11$  for roles;  $z_s = 3.99$  for affective responsiveness; and  $z_s = 2.96$  for affective involvement).

Figure 1. Summary of the Mediating Effect of Hopelessness on Direct and Indirect Aggression.

DIRECT AGGRESSION		INDIRECT AGGRESSION
<i>Mediation by Hopelessness</i>		<i>Mediation by Hopelessness</i>
Partial	General Functioning	Partial
Partial	Problem Solving	Partial
Partial	Communication	TOTAL
Partial	Roles	Partial
Partial	Affective Responsiveness	Partial
No	Affective Involvement	TOTAL
TOTAL	Behaviour Control	No

#### 4. DISCUSSION

The present study investigated the extent to which a dysfunctional family environment is a risk factor for the development of direct and indirect forms of aggressive behaviour in adolescents. These six dimensions of family functioning were considered as possible predictors of both direct and indirect aggression. The composite variable for overall family functioning turned out to be a risk factor for both types of aggression. Our findings confirm the influence of a dysfunctional family environment on direct aggression, and expand on prior work by finding a predictive influence on indirect aggression also. Consequently, the more dysfunctional the family, as reported by adolescents, the more direct and indirect aggression they are prone to engage in. That is to say, dysfunctions in: a) the ability to solve problems in relation to the family; b) the clarity and simplicity of the verbal exchange within the family; c) the repetitive patterns of behaviour by which each member of the family has to deal with different tasks; d) the quality, quantity and adaptability of the affection; e) the expression of interest in activities of the others family members, and the degree and manner in which this interest is shown; and f) the pattern used by the family to set the rules and boundaries for appropriate functioning; may lead to the appearance of aggressive behaviours in adolescents.

Therefore, as a general conclusion, family dysfunction is a relevant factor in the appearance of aggression. When there are dysfunctional family patterns, aggression do not depend on a single dimension, but on all of them acting together. In reality, it is unusual for only one pattern to go wrong within a family; when unhealthy functioning occurs, generally it reflects an overall dysfunctional pattern. Furthermore, a dysfunctional family environment increases the risk of both direct and indirect aggression but does not necessarily contribute to one type of aggression over the other, which also is in accordance with previous research (Vaillancourt et al., 2007). This finding suggests that the manifestation of direct or indirect aggressive behaviour may depend on other individual and contextual factors.

In regard to gender differences, male adolescents were found to express more aggressiveness than female adolescents in both direct and indirect ways. Nevertheless, these differences were smaller with respect to indirect aggression. The results are in partial alignment with well-known research on children and adolescents' gender differences in aggressive behaviour, which find boys to use more direct strategies and girls to use more indirect strategies (Björkqvist, Österman, & Kaukianen, 1992; Crick & Grotpeter, 1995; French, Jansen, & Pidada, 2002). However, some studies found no differences regarding indirect aggression between male and female adults and adolescents (Schober, Björkqvist, & Somppi 2009; Toldos, 2005). The higher engagement of males in the two types of aggression in our sample might be explained due to cultural factors related to the Spanish society. Cultural stereotypes in Spain imply positive attitudes towards violence when expressed by males and negative attitudes when expressed by females, which may lead to lower levels of aggression delivered by females (Toldos, 2005).

The other main purpose of this study, that is, testing the role of hopelessness in the relationship between family dysfunction and the two types of aggression, stems from research in which the family environment on the one hand, and aggression, on the other, have been related to this adjustment problem in adolescence. Certainly, the link between a dysfunctional family environment and hopelessness has been well established (Levy et al., 1995). However, as pointed out in the introduction, there are contradictory findings about hopelessness and aggression (Ferdico, 1999). Results of this study first confirm the effect of a dysfunctional family environment on hopelessness, then confirm the effect of hopelessness on both direct and indirect aggression, and, finally, find that part of the effect of a dysfunctional family environment on aggression are explained through hopelessness. Therefore, the hypothesis that unhealthy family patterns play a significant role in explaining both types of aggression through hopelessness is supported.

Concerning the limitations of this study, the cross-sectional design should be noted. The collection of data at only one point in time makes it difficult to establish causal relationships. Nonetheless, the use of regression analysis, according to Wagner (1997), provides a statistical way to isolate the effect of the hypothesized risk factors and to control the overlapping effects among them. In any case, after this first approximation, longitudinal studies are needed to establish temporal sequences, measuring family patterns at one point and aggression at another point in the future. Additionally, it is important to take into account that the family functioning as measured here only provides information from the adolescents' perspective. For a more complete knowledge of the family dynamics, future studies should consider also the perspective of parents.

In summary, a dysfunctional family environment appears to be a risk factor for the onset of direct and indirect aggression, with male adolescents being more prone to develop both types of aggression than female adolescents and hopelessness explains a significant part of this relationship. A sound knowledge of risk factors for aggression may be useful when designing specific intervention programmes directed at preventing and mitigating negative consequences of adolescent aggressive behaviour.

## REFERENCES

- Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, *96*(2), 358-372. doi:10.1037/0033-295X.96.2.358
- Avilés, J. M., & Monjas, I. (2005). Estudio de incidencia de la intimidación y el maltrato entre iguales en la educación secundaria obligatoria mediante el Cuestionario CIMEI (Avilés, 1999) – Cuestionario sobre Intimidación y Maltrato Entre Iguales [Incidence study on intimidation and bullying in compulsory secondary education by CIMEI Questionnaire (Avilés, 1999) - Questionnaire on intimidation and bullying]. *Anales de Psicología*, *21*(1), 27-41.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173
- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology*, *42*(6), 861-865. doi:10.1037/h0037562
- Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control*. New York, NY: Academic Press.
- Björkqvist, K. (2001). Different names, same issue. *Social Development*, *10*(2), 272-274. doi:10.1111/1467-9507.00164
- Björkqvist, K., & Jansson, V. (2003). Tackling violence in schools: A report from Finland. In P. K. Smith (Ed.), *Violence in schools: The response in Europe* (pp. 187-199). London, UK: Routledge Palmer.
- Björkqvist, K., & Niemelä, P. (1992). New trends in the study of female aggression. In K. Björkqvist, & P. Niemelä (Eds.), *Of mice and women: Aspects of female aggression* (pp. 3-16). San Diego, CA: Academic Press.
- Björkqvist, K., Österman, K., & Kaukianen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Björkqvist, & P. Niemelä (Eds.), *Of mice and women: Aspects of female aggression* (pp. 51-64). San Diego, CA: Academic Press.

- Bowers, L., Smith, P. K., & Binney, V. A. (1992). Cohesion and power in the families of children involved in bully/victim problems at school. *Journal of Family Therapy, 14*(4), 371-387. doi:10.1046/j.1992.00467.x
- Brown, J., Cohen, P., Johnson, J. G., & Smailes, E. M. (1999). Childhood abuse and neglect: Specificity of effects on adolescent and young adult depression and suicidality. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*(12), 1490-1496. doi:10.1097/00004583-199912000-00009
- Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In W. Damon, & N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed.) (pp. 779-862). Hoboken, NJ: John Wiley.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*(3), 710-722. doi:10.1111/j.1467-8624.1995.tb00900.x
- Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy, 9*(2), 171-180. doi:10.1111/j.1752-0606.1983.tb01497.x
- Farrington, D. P. (1991). Childhood aggression and adult violence: Early precursors and later-life outcomes. In D. J. Pepler, & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 5-29). Hillsdale, NJ: Lawrence Erlbaum.
- Ferdico, D. I. (1999). Hopelessness and violence in adolescents. *Dissertation Abstracts International: Section B. The Sciences and Engineering, 60*(5-B), 2336.
- French, D., Jansen, E., & Pidada, S. (2002). United States and Indonesian children's and adolescents' reports of relational aggression by disliked peers. *Child Development, 73*(4), 1143-1150. doi:10.1111/1467-8624.00463
- George, C., Herman, K. C., & Ostrander, R. (2006). The family environment and developmental psychopathology: The unique and interactive effects of depression, attention, and conduct problems. *Child Psychiatry and Human Development, 37*(2), 163-177. doi:10.1007/s10578-006-0026-5
- Klicpera, C., & Gasteiger-Klicpera, B. (1996). Die Situation von "Tätern" und "Opfern" aggressiver Handlungen in der Schule [The situation of bullies and victims of aggressive acts in school]. *Praxis der Kinderpsychologie und Kinderpsychiatrie, 45*, 2-9.
- Lagerspetz, K. M. J., Björkqvist, K., & Peltonen, T. (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year-old children. *Aggressive Behavior, 14*(6), 403-414.
- Leadbeater, B., Boone, E., Sangster, N., & Mathieson, L. (2006). Sex differences in the personal cost and benefits of relational and physical aggression in high school. *Aggressive Behavior, 32*(4), 409-419. doi:10.1002/ab.20139
- Levy, S. R., Jurkovic, G. L., & Spirito, A. (1995). A multisystem analysis of adolescent suicide attempters. *Journal of Abnormal Child Psychology, 23*(2), 221-234.
- Luster, T., & Small, S.A. (1997). Sexual abuse history and number of sex partners among female adolescents. *Family Planning Perspectives, 29*, 204-211.
- McNeilly-Choque, M. K., Hart, C. H., Robinson, C. C., Olsen, S. F., & Nelson, L. J. (1996). Overt and relational aggression on the playground: Correspondence among different informants. *Journal of Research in Childhood Education, 11*(1), 47-67. doi:10.1080/02568549609594695
- Merrel, K. W., Buchanan, R., & Trand, O. K. (2006). Relational aggression in children and adolescents: A review with implications for school settings. *Psychology in the Schools, 43*(3), 345-360. doi:10.1002/pits.20145
- Morita, Y. (Ed.). (1985). "Ijime shūdan no kōzō ni kansuru shakai-gaku-teki kenkyū" Ōsakaichiritsudaigaku shakai-gaku kenkyūshitsu [Sociological Study on the structure of Ijime Group]. Osaka, Japan: Osaka City College Sociology Study.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of American Medicine Association, 285*(16), 2094-2100.
- Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Washington, DC: Hemisphere.
- Olweus, D. (1979). Stability of aggressive reaction patterns in males: A review. *Psychological Bulletin, 86*(4), 852-875.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers, 36*(4), 717-731.
- Rigby, K. (1994). Psychosocial functioning in families of Australian adolescent schoolchildren involved in bully/victim problems. *Journal of Family Therapy, 16*(2), 173-187. doi:10.1111/j.1467-6427.1994.00787.x

- Rigby, K., & Slee, P. (1993). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *Journal of Social Psychology, 133*(1), 33-42.
- Ryan, C. E., Epstein, N. B., Keitner, G. I., Miller, I. W., & Bishop, D. S. (2005). *Evaluating and treating families: The McMaster approach*. New York & Hove: Routledge, Taylor & Francis.
- Schober, G., Björkqvist, K., & Somppi, S. (2009). Identifying a new subcategory of aggression: Sex differences in direct non-verbal aggression. *Journal of Aggression, Conflict and Peace Research, 1*(3), 58-70.
- Sharp, S. (1995). How much bullying hurt? The effect of bullying on the personal wellbeing and educational progress of secondary aged students. *Educational and Child Psychology, 12*(2), 81-88.
- Smith, P. K., Bowers, L., Binney, V., & Cowie, H. (1993) Relationships of children involved in bully/victim problems at school. In S. Duck (Ed.), *Learning about relationships. Understanding relationship processes series* (pp. 184–215). London, UK: Sage Publications.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). San Francisco, CA: Jossey-Bass.
- Stevens, V., De Bourdeaudhuij, I., & Van Oost, P. (2002). Relationship of the family environment to children's involvement in bully/victim problems at school. *Journal of Youth and Adolescence, 31*(6), 419-428.
- Toldos, M. P. (2005). Sex and age differences in self-estimated physical, verbal and indirect aggression in Spanish adolescents. *Aggressive behaviour, 31*(1), 13-23. doi:10.1002/ab.20034
- Tremblay, R. E. (2001). The development of physical aggression during childhood and the prediction of later dangerousness. In G. Pinard, & L. Pagani (Eds.), *Clinical assessment of dangerousness: Empirical contributions* (pp. 47–65). New York, NY: Cambridge University Press.
- Vaillancourt, T., Miller, J. L., Fagbemi, J., Côté, S., & Tremblay, R. (2007). Trajectories and predictors of indirect aggression: results from a nationally representative longitudinal study of Canadian children aged 2-10. *Aggressive Behavior, 33*(4), 314-326. doi:10.1002/ab.20202
- Varhama, L., & Björkqvist, K. (2005). Relation between school bullying during adolescence and subsequent long-term unemployment in adulthood in a Finnish sample. *Psychological Reports, 96*(2), 269-272.
- Wagner, B. M. (1997). Family risk factors for child and adolescent suicidal behavior. *Psychological Bulletin, 121*(2), 246-298.
- Whitney, I., & Smith, P. K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research, 35*(1), 3-25.
- Wolke, D., Woods, S., Bloomfield, L., & Karstadt, L. (2000). The association between physical and relational bullying and behaviour problems among primary school children. *Journal of Child Psychology and Psychiatry, 41*(8), 989-1002. doi:10.1111/1469-7610.00687
- Young, M. A., Halper, I. S., Clark, D. C., Scheftner, W., & Fawcett, J. (1992). An item-response theory evaluation of the Beck Hopelessness Scale. *Cognitive Therapy and Research, 16*(5), 579-586.

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## Chapter 36

# RECOGNIZING THE WARNING SIGNS OF VIOLENCE ACROSS THE LIFESPAN

## Samples from Kuwait and the USA

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### ABSTRACT

The World Health Organization (WHO) declared interpersonal violence a world-wide public health crisis (World Health Organization [WHO], 2002). In the United States, victims must be counted in the millions for child abuse (Center for Disease Control and Prevention [CDC], 2006), intimate partner violence (CDC, 1998), and elder abuse (Acierno et al. 2010). Interpersonal violence can be prevented (Office of the Surgeon General, 2001; WHO, 2002) and one powerful form of prevention is violence education (Vieth, 2006). This study compared the effectiveness of violence education curriculums at two universities using the Warning Signs Survey (Berman, Dinkha, Garg, & Swiderski, 2008). The objectives of the study were to assess: the internal consistency of the Warning Signs Survey scales; the perceptions students had about warning signs of destructive behavior; and the utility of the survey for informing instructors about the strengths and weaknesses of their violence education efforts. Subjects included 156 students from Indiana University of Pennsylvania (IUP) and 136 students from the American University of Kuwait (AUK). Internal consistency of survey scales varied with Cronbach's alpha ranging from .5-1.0. AUK and IUP students showed divergent perceptions of the warning signs of destructive behavior. MANOVA indicated that students learned more about violence, suicide, and acceptable parenting strategies with IUP students learning more than AUK students.

*Keywords:* violence prevention, outcome assessment, teaching effectiveness.

## 1. INTRODUCTION

Interpersonal violence harms children, youth, adults, and elders (Acierno et. al, 2010; Center for Disease Control and Prevention [CDC], 1998, 2006). It was labeled a world-wide public health crisis by the World Health Organization (WHO, 2002). Interpersonal violence happens in every community and country around the world (Butchart, Brown, Wilson, & Mikton, 2008) and its prevention would increase community health and wellness through decreasing physical health and mental health problems and even premature death (Brown et al., 2009; Felitti, 2002). While even one exposure to violence has been found to have a negative impact on health (Brown et. al 2009; Felitti, 2002), research indicates that both co-occurrence and polyvictimization are the norm (Hamby & Grych, 2013). Thus, while the Administration for Children, Youth and Families (2006) in the United States indicated that 3.3 million reports of child maltreatment were investigated, it is likely that each child was a victim of more than one form of maltreatment and was victimized on more than one occasion (Hamby & Grych, 2013). For example, a child who is physically abused by a parent is likely to have been abused on more than one occasion (polyvictimization) as well as being emotionally abused as well as physically abused within each incident of abuse (co-occurrence). Interpersonal violence occurs across the lifespan. In the United States, the numbers of victims must be counted in the millions for child abuse (CDC, 2006), intimate partner violence (CDC, 1998), and elder abuse (Acierno et. al, 2010).

Vieth (2006) developed a plan to eradicate interpersonal violence through integrating comprehensive violence education at the undergraduate and graduate levels. With effective educational efforts, future mandated reporters would know how to make accurate reports of interpersonal violence, future investigators of violent incidents would know how to effectively

interview potential victims and perpetrators, future prosecutors would know how to gain convictions in violent cases where adjudication was needed, future psychologists and social workers would understand the dynamics of violence and provide better treatment; future parents would understand child development and use nonviolent, child rearing strategies; and, enough community members would understand the dynamics of abuse to provide a political tipping point in favor of legislation that would support nonviolence. Vieth's plan has been endorsed by the National Partnership to End Interpersonal Violence (NPEIV) and the Institute on Violence, Abuse, and Trauma (IVAT) and many universities across the United States and world-wide are developing interdisciplinary, violence education curriculums that are affiliated with these organizations.

The current study is part of a larger effort to develop effective violence education curriculums at Indiana University of Pennsylvania (IUP) and the American University of Kuwait (AUK). This study sought to evaluate the Warning Signs Survey as an effective outcome instrument for determining the effectiveness of these violence education curriculums. The survey was first developed in 2008 (Berman et al., 2008). It has scales covering destructive interpersonal behavior including the warning signs of: violence, suicide, items not reflecting violence or suicide, a maltreated child, signs of typical childhood, a sexually or physically abusive parent, a neglectful parent, and signs of acceptable parenting.

The objectives of the current study were to assess: the internal consistency of the Warning Signs Survey scales; the perceptions students had about warning signs of destructive behavior; and the utility of the survey for informing instructors about the strengths and weaknesses of their violence education efforts.

## **2. BACKGROUND**

Individuals are not born to be violent but their exposure to violence can begin in utero when a pregnant woman is assaulted (CDC, 2006). The experience of violence can change the architecture of the child's developing brain (National Scientific Council on the Developing Child, 2004, 2005). Each incident of violence is connected to a web of past experiences, a context of individuals, stimuli and environmental cues (Office for Victims of Crime [OVC], 2010). Exactly when an episode of violence will erupt is difficult to predict, the likelihood that one will occur may be evident by the presence of warning signs of emotional, behavioral escalation and increased situational cues (Hamby & Grych, 2013).

Studies on the impact of violence initially looked for specific effects based on type of violence exposure (Hamby & Grych, 2013). However, years of research have led to the conclusion that the impact of victimization is more a function of the number of victimizing and/or traumatizing events a person has experienced (Felitti, 2002). As the number of victimization experiences increases, the likelihood of experiencing serious mental and physical health consequences and even early death has been found to increase (Brown et al. 2009, Felitti, 2002; Hamby & Grych; 2013). Interpersonal violence occurs around the world and is a major public health risk (WHO, 2002). Prevention of violence would correspond to preventing the major cause of death for individuals within the first thirty years of life (Haegerich et al., 2014).

## **3. METHODS**

### **3.1. Subjects**

A total of 292 psychology students participated in the study; 156 were from IUP and 136 were from the AUK. Seventy percent of the sample was between the ages of 18-20 and 31% were 21-23. The gender split was 26% male and 74% female. Thirty one percent were freshman, 31% were sophomores, 19% were juniors, and 18% were seniors. Comparing demographics by country, there were no gender differences however, the AUK sample was significantly older, contained more upperclassmen, and came from less rural areas. The majority of students were taking introductory psychology classes but some came from more advanced courses. Subjects represented a convenience sample of students from courses taught by the study authors.

### 3.2. Measures

The Warning Signs Internet Survey had 143 items on ten scales each containing sentences that described the behavior of an individual. Subjects were asked to identify whether each item represented acceptable behavior or was a sign of destructive behavior towards self or others. For example, on the Physical Abuse Scale, one item was, “the parent has very strict rules and punishes any sign of disobedience”. In response to this item, students indicated if it was a warning sign of physical abuse, sexual abuse, emotional abuse, neglect, or was acceptable parenting. For every scale, there were distracter items reflecting neutral or positive behavior as well as warning signs of destructive behavior. Item order on the survey was randomized within each section of the survey.

## 4. RESULTS

### 4.1. Internal Consistency of scales

The internal consistency of ten scales was examined using the data generated separately for AUK and IUP students at the beginning of the academic term. For a scale to be considered internally consistent its Cronbach’s alpha had to be at least .7 and each item on the scale had to have a correlation with the total scale of at least .2. Data from AUK students indicated that only six of the ten scales met these criteria. Data from IUP students indicated that ten of ten scales met both criteria. Table 1 presents a summary of the Cronbach’s alpha analyses. Table 2 presents a summary of the items which, if removed, would increase the reliability of the scale. The items that would increase the reliability of a scale differed between the AUK and IUP samples.

Table 1. Cronbach Alpha analyses.

Scale	No. of Items	Total	IUP	AUK
Suicide	(9)	.715	.694	.618 <sup>a</sup>
Violence	(9)	.66	.728	.512 <sup>a</sup>
No sign violence/suicide	(13)	.851	.856	.604 <sup>a</sup>
Maltreatment	(16)	.746	.721	.762
Not maltreatment	(18)	.935	.953	.800
Physically abusive	(8)	.851	.895	.783
Sexually abusive	(8)	.772	.752	.781
Emotionally abusive	(8)	.635	.689	.564 <sup>a</sup>
Neglectful	(9)	.777	.734	.793
Acceptable parenting	(11)	.780	.713	.729

Note: n= 136 at AUK and n=156 at IUP.

<sup>a</sup> Scale not reliable based on criterion of greater than or equal to .7 and an item-total scale correlation of .2 or greater.

Table 2. Items that increase reliability of scale if removed.

Scale	IUP	AUK
Suicide	impulsivity	threats to harm self
Violence	not respected	victim of violence gang membership rejected by peers victim of bullying
Not v/s	old-fashioned ideas feeling less attractive	swearing taking medication
Maltreatment	signs of fear frequent changes	
Not maltreatment	non-suspicious injury	non-suspicious injury

Table 2. Items that increase reliability of scale if removed (cont.).

Physically Abusive	tie with rope	
Sexually abusive	on lap	
Emotionally abusive	pornography channel	
	threats to harm pet	told not important
Neglectful	told to lie	told to lie
	drugs/weapons	
Acceptable parenting	parent drinks	

Note: n=136 at AUK and 156 at IUP.

## 4.2. Perceptions of the warning signs of destructive behavior

**4.2.1. Perceptions of warning signs at beginning of term.** Student perceptions of each item on the Warning Signs Survey were examined at the beginning of the term. A decision was made that if 50% or more of the students endorsed it as a warning sign of a particular destructive behavior, then the item was defined as being perceived as being a warning sign of that destructive behavior. Each scale of the survey had items intended to reflect a warning sign of a particular destructive behavior as well as normative behavior and/or distracter items.

Using this 50% criterion, 7 of 9 of the intended warning signs of suicide were perceived by students at IUP to be warning signs of suicide. In contrast, only 2 of 9 of these items were perceived by students at AUK to be warning signs of suicide. The two items that AUK and IUP students agreed were warning signs of suicide included "... they had no future," and "...the intent to harm self." Items that IUP students saw as warning signs that AUK students did not include, "...ending long standing friendships," "...expressing hopelessness," and "...giving away important possessions." Two items that students from both countries misperceived as not relevant to suicide, were "...showing an increase in impulsiveness," and "... a significant change in sleeping patterns."

Students in both countries showed highly congruent opinions about what might constitute warning signs of violence. At IUP, 8 of 9 items intended to indicate violence were perceived as warning signs of violence. Similarly, at AUK, 7 of 9 of these were endorsed as warning signs. One item not endorsed by students from both countries as a warning sign of violence was, "... being rejected by peers." There were sixteen intended warning signs of a maltreated child embedded within approximately the same number of distracter items. For both countries, students appeared to have developed a response set of endorsing every single item as a potential warning sign.

There had been nine items intended to be signs of a physically abusive parent. AUK and IUP students endorsed eight of these as warning signs of a physically abusive parent. The only item both samples did not consider a warning sign included, "... having a ten year old stand in the corner for four hours." There had been eight items intended to be warning signs of a sexually abusive parent. AUK and IUP students endorsed all eight at the beginning of the semester. There had been eight items intended to be warning signs of an emotionally abusive parent. AUK students endorsed seven of these as warning signs. IUP students only endorsed six of them as warning signs. The one item that students in both countries did not endorse as a warning sign of emotional abuse was, "... one parent drinking heavily and then asking the youth to lie to the other parent about it."

There had been ten items intended to reflect warning signs of a neglectful parent. IUP students recognized nine of these ten and AUK recognized seven of them. Students from both countries did not perceive it as neglectful for, "... a ten year old must always remain inside and never interact with other youth." In addition, AUK students did not see it as neglectful when, "... a parent never showed physical affection," or, "if the parent made illegal drugs while the youth was in the room and exposed the youth to danger due to parental drug use." Finally, there were eleven items intended to reflect signs of acceptable parenting, IUP students endorsed them

all at the beginning of the semester. AUK students considered a number of these items as unacceptable including, “Parent makes all the rules in the family and expects the youth to obey without arguing,” “Parent searches youth’s room for drugs and alcohol after youth has been behaving strangely all weekend,” and, “Parent expects youth to work for the family business after school and on weekends.”

**4.2.2. Knowledge gained through psychology course work.** By the end of the term, IUP students increased their knowledge of the warning signs of suicide, violence, and behaviors that were not signs of violence or suicide; however, knowledge of the warning signs of neglectful parenting decreased. Students from AUK showed no increases in knowledge; their recognition of the warning signs of violence and neglectful parenting decreased. Item analysis indicated these decreases reflected re-categorization of an item from one destructive category to another. IUP and AUK students knew a majority of the items on the Maltreated Child, Sexually Abusive Parenting Scale, Physically Abusive Parenting Scale, and Acceptable Parenting Scale at the beginning of the term; these ceiling effects meant that these scales could not reflect any increases in knowledge at the end of the term. Table 3 summarizes the results of the two way ANOVAS for each scale.

Table 3. Two-Way ANOVA accuracy scores by country comparison.

Scale	No. of Items	Main effect	Interaction	
			USA	Kuwait
Suicide	9	Not significant	Increased *	Stable
Violence	9	Not significant	Increased *	Decreased *
Not v/s	13	Significant *	Increased *	Stable
Maltreatment	16	Not significant	Stable	Stable
Not maltreatment	18	Not significant	Stable	Stable
Physically abusive	8	Not significant	Stable	Stable
Sexually abusive	8	Not significant	Stable	Stable
Emotionally abusive	8	Not significant	Stable	Stable
Neglectful	9	Significant *	Decreased *	Decreased *
Acceptable parenting	11	Not significant	Stable	Stable

Note: n = 136 AUK and n = 156 IUP.

\* p < .05.

### 4.3. Utility of survey for instructors

The Warning Signs Survey provided instructors with valuable insights into the strengths and weaknesses of their violence education curriculums. Strengths included that IUP students were learning more about the warning signs of some destructive behavior. However, weaknesses included that the violence curriculums at AUK and IUP were decreasing student accuracy in recognizing the warning signs of neglectful parenting and some knowledge of warning signs could not be assessed due to significant ceiling effects on some scales.

The survey asked students to indicate where they were learning accurate information about destructive behavior. IUP students indicated receiving the most accurate information from their academic courses. AUK students reported receiving the most accurate information from educational TV. In addition, AUK students were almost twice as likely to have indicated that they learned about destructive behavior from personal exposure to violence as IUP students (14% compared to 8.6%). In addition, AUK students indicated being twice as likely to be exposed to a dangerous neighborhood or country as IUP students (21.8% compared to 13%). Table 4 provides further details about these differences.

Table 4. Sources of knowledge about violence.

Source of Knowledge	IUP	AUK
	% indicated provided a great deal of useful information	
Academic Coursework	42.8% <sup>a</sup>	33.8%
Dangerous Neighborhood: great deal	13.0%	21.8%
News Program	18.2%	31.9%
Educational TV/Movies	25.7%	41.0% <sup>a</sup>
Personal Exposure	8.6%	14.1%
Recreational TV/Movies	11.7%	25.4%
Family Teaching	22.2%	34.8%
Personal Reading	23.2%	32.8%

**Note:** n=156 (USA); n=136 (Kuwait)

<sup>a</sup> This was the source rated as most helpful of all sources of information about violence.

## 5. DISCUSSION

Interpersonal violence is a serious problem and reducing it would increase physical and psychological health and increase longevity (Felitti, 2002). There are many violence prevention efforts that are ongoing worldwide (WHO, 2008) and best practices need to be empirically validated and widely spread (Vieth, 2006). This study investigated the effectiveness of the Warning Signs Survey as an outcome instrument for evaluating violence education curriculums. The results of the study indicated that survey results could provide instructors with important curricular feedback. For example, survey results indicated that students at IUP were learning accurate information about violence and suicide and both AUK and IUP students were not learning the warning signs of neglectful parenting. Results also indicated that students at both AUK and IUP were able to recognize severe incidences of physical and sexual abuse prior to taking psychology courses. Thus, to improve students’ ability to recognize warning signs of some forms of violence, the more subtle signs of them needed to be added to both the survey and the violence education curriculums.

Cultural differences were found between the perception of AUK and IUP about warning signs of some destructive behavior. For example, only IUP students considered spending time with an aggressive gang of peers to be a warning sign of violence. There are many possible explanations for these findings. First, they may reflect real cultural differences. Most of the peers that AUK students spend time with are cousins or long time family friends. Beside Kuwaitis, the majority of people who live in Kuwait are expatriated and those individuals stay within their close circle of some family and more friends. Therefore, an aggressive gang of peers is not viewed negatively when the peer is someone who is seen as a family member. Alternatively, differences on items may be due to simple misunderstandings of the meanings of the items, a lack of knowledge of these topics, or the conservative attitude Kuwaiti society has towards domestic violence and other forms of interpersonal violence that might lead AUK students to discount some warning signs. Finally, the survey was lengthy. While proficiency in English is a requirement of AUK, it was still not the language that AUK students were most proficient in. Thus, as they progressed through the survey, students may have lost their motivation for thinking through each item carefully.

If violence education curriculums do not teach students how to identify the warning signs of destructive behavior, they are in need of revision. From this standpoint, the curriculums being taught at both AUK and IUP need revision to include the more subtle signs of an abused child and destructive parenting practices. In addition, the curriculum at AUK might need to strengthen its didactic material related to all violence warning signs. However, differences

between the knowledge of IUP and AUK students could reflect their comfort in stating what they know. There are many sources of censorship that attempt to protect the image of Kuwaiti culture and discourage a discussion of destructive behavior. This taboo is the result of many factors including the false belief that domestic violence does not occur in Kuwait, that religious teachings forbid such violence, that all Kuwaiti family systems are warm and cohesive, and that it is more important to protect the image of Kuwaiti society than educate the population about the realities of interpersonal violence. While they might be more uncomfortable discussing violence, survey results

indicated AUK students had greater personal exposure to dangerous neighborhoods and being personally exposed to violence, than IUP students. This greater exposure suggests that AUK students need to know more warning signs of violence than IUP students in order to remain safe.

While media in the United States is replete with violence, much of it devoid of realistic consequences to violence (Smith & Donnerstein, 1998). In contrast, Kuwait was a warzone for seven months during the Iraq-Kuwaiti war and continues to share borders with countries in the midst of violent conflict. While the USA military has been heavily in much of this conflict, students at IUP have had limited exposure to the conflicts directly. These differing contexts for violence underscore the need for violence prevention efforts to be tailored to the unique needs and experiences of different cultural groups.

At this time, violence prevention in the United States face the barriers of counteracting pervasive messages from violent media and from cultural messages that violence is a problem of individuals not of cultural attitudes (Alexander et al., 1998). Violence prevention in Kuwait faces the barrier that educational materials on the issues are considered irrelevant and the topics relevant to violence prevention are considered taboo.

## 6. FUTURE DIRECTIONS

The Warning Signs Survey has been significantly revised to reduce ceiling effects and to include items reflecting interpersonal violence across the lifespan. This revised survey has been evaluated using the data from 700 IUP students. Cronbach's alphas now range from .7-1.0 on all scales. This survey has been translated into Arabic at AUK. Students at AUK have taken the survey in English and in Arabic. A comparison of student perceptions of the warning signs of destructive behavior will be carried out to examine if student perceptions of the warning signs of violence are influenced by the language in which the warning sign is expressed.

## REFERENCES

- Acierno, R., Hernandez, M. A., Amstadter, A. B., Resnick, H. S., Steve, K., Muzzy, W., & Kilpatrick, D. G. (2010). Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: The National Elder maltreatment study. *American Journal of Public Health, 100*(2), 292-297.
- Administration for Children, Youth and Families. (2006). *Child maltreatment 2006* (U.S. Department of Health and Human Services Report). Retrieved from <http://archive.acf.hhs.gov/programs/cb/pubs/cm06/cm06.pdf>
- Alexander, J. F., Pugh, C., Parsons, B., Barton, C., Gordon, D., Grotper, J., Hansson, K., Harrison, R., Mears, S., Mihalic, S., Schulman, S., Waldron, H., & Sexton, T. (1998). Functional family therapy. In D. S. Elliott (Ed.), *Blueprints for violence prevention series*. Boulder, CO: Center for the Study and Prevention of Violence, Institute of Behavioral Science, University of Colorado at Boulder.
- Berman, P. Dinkha, J., Garg, R. & Swiderski, C. (2008). Using digital technology to promote effective education on violence prevention. In M. Jaiswal, & R. Garg (Eds.) *Enterprise systems and business process management: Global best practices*. Macmillan Advanced Research Series. Delhi, India: Macmillan India Ltd.
- Brown, D. W., Anda, R. F., Tiemeier, H., Felitti, V. J., Edwards, V. J., Croft, J. B., & Giles, W. H. (2009). Adverse childhood experiences and the risk of premature mortality. *American Journal of Preventive Medicine, 37*(5), 389-96. doi:10.1016/j.amepre.2009.06.021

- Butchart, A., Brown, D., Wilson, A., & Mikton, C. (2008). *Preventing violence and reducing its impact: How development agencies can help*. Geneva, Switzerland: World Health Organization Press.
- Center for Disease Control and Prevention. (1998). Lifetime annual incidence of intimate partner violence and resulting injuries – Georgia, 1995. *Morbidity and Mortality Weekly Report*, 47(40), 846-853.
- Center for Disease Control and Prevention. (2006). *Intimate partner violence during pregnancy, a guide for clinicians*. Retrieved October 25, 2008, from <http://www.cdc.gov/reproductivehealth/violence/intimatepartnerviolence/>
- Felitti, V. J. (2002). The relation between adverse childhood experiences and adult health: Turning gold into lead. *Permanente Journal*, 6(1), 44-47.
- Haegerich, T. M., Dahlberg, L. L., Simon, T. R., Baldwin, G. T., Sleet, D. A., Greenspan, A. I., & Degutis, L. C. (2014). Prevention of injury and violence in the USA. *The Lancet*, 384(9937), 64-74. doi:10.1016/S0140-6736(14)60074-X.
- Hamby, S. & Grych, J. (2013). *The Web of violence: Exploring connections among different forms of interpersonal violence and abuse*. New York, NY: Springer.
- National Scientific Council on the Developing Child. (2004). *Children's emotional development is built into the architecture of their brains* (Working paper 2). Retrieved from [http://developingchild.harvard.edu/index.php/download\\_file/-/view/70/](http://developingchild.harvard.edu/index.php/download_file/-/view/70/)
- National Scientific Council on the Developing Child. (2005). *Excessive Stress Disrupts the Architecture of the Developing Brain* (Working Paper 3). Retrieved from [http://developingchild.harvard.edu/index.php/download\\_file/-/view/469/](http://developingchild.harvard.edu/index.php/download_file/-/view/469/)
- Office for Victims of Crime. (2010). *In their own words: Domestic abuse in later life*. Madison, WI: National Clearinghouse on Abuse in Later Life/Wisconsin Coalition against Domestic Violence. Retrieved from <http://www.ovc.gov/publications/infores/pdftxt/InTheirOwnWords.pdf>
- Office of the Surgeon General. (2001). *Youth Violence: A Report from the Surgeon General*. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK44294/>
- Smith, S. L., & Donnerstein, E. (1998). Harmful effects of exposure to media violence: Learning of aggression, emotional desensitization, and fear. In R. G. Geen, & E. Donnerstein (Eds.), *Human Aggression: Theories, Research, and Implications for Social Policy* (pp. 167-202). New York, NY: Academic Press.
- Vieth, V. (2006). Unto the third generation: A call to end child abuse in the United States within 120 years (revised and expanded). *Hamline Journal of Public Law & Policy*, 28(1), 85.
- World Health Organization. (2002). *Recommendations from the World report on violence and health*. Retrieved October 12, 2012, from [http://www.who.int/violence\\_injury\\_prevention/violence/world\\_report/en/wrvhrecommendations.pdf](http://www.who.int/violence_injury_prevention/violence/world_report/en/wrvhrecommendations.pdf)

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