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Psychology Applications & Developments IV

Edited by Clara Pracana & Michael Wang



Advances in Psychology and Psychological Trends

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

Edited by: Prof. Dr. Clara Pracana and Prof. Michael Wang



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FOREWORD

InScience Press is pleased to publish the book entitled *Psychology Applications & Developments IV* as part of the Advances in Psychology and Psychological Trends series. These series of books comprise authors' and editors' work to address generalized research, focused in specific sections in the Psychology area.

In this fourth volume, a committed set of authors explore the Psychology field, therefore contributing to reach the frontiers of knowledge. Success depends on the participation of those who wish to find creative solutions and believe in their potential to change the world, altogether, to increase public engagement and cooperation from communities. Part of our mission is to serve society with these initiatives and promote knowledge. Therefore, it is necessary the strengthening of research efforts in all fields and cooperation between the most assorted studies and backgrounds.

In particular, this book explores six major areas within the general theme of Psychology, divided into six sections: Clinical Psychology, Psychoanalysis and Psychoanalytical Psychotherapy, Cognitive and Experimental Psychology, Social Psychology, Legal Psychology and Educational 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 its authors were invited to extend them significantly to once again undergo an evaluation process, afterwards the authors of the accepted chapters were requested to make corrections and improve the final submitted chapters. This process has resulted in the final publication of 27 high quality chapters organized into 6 sections. The following sections' small description and chapters' abstracts provide information on this 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 thematic related to individuals well-being and improvement of quality of life.

Chapter 1: *Racial-Ethnic Microaggressions, Daily Hassles, and Mental Health Concerns among Students*; by Arthur W. Blume. Racial-ethnic microaggressions have been described as statements, actions, or symbols that insult or put down people because of groups differences based on race and ethnicity. Some have characterized racial-ethnic microaggressions as similar to daily hassles, commonly experienced everyday stressors. However, the relationship of microaggressions

with daily hassles has not been examined empirically. In addition, the relationships of these two constructs with certain mental health outcomes has not been examined simultaneously. The study discussed in this chapter examined the relationship of racial-ethnic microaggressions with daily hassles experienced by racial-ethnic minority college students ($n = 244$), and then examined the relationships of those stressors with symptoms of anxiety and alcohol related consequences. Racial-ethnic microaggressions were significantly associated with daily hassles among minority college students, although the association suggested an unexpectedly modest relationship ($r = .22, p < .005$). In addition, both microaggressions and daily hassles were significantly associated with anxiety symptoms ($R^2 = .24, p < .001$), but only binge alcohol use and daily hassles were found to be significantly associated with alcohol related consequences ($R^2 = .18, p < .001$). The chapter concludes by discussing the significance of the study results for racial-ethnic minority students and the universities they attend.

Chapter 2: *Empathy: How Much is Right? A Methodology for the Management of Empathy in the Context of Healthcare*; by Shulamith Kreitler. The paper describes an innovative program "Empathy without Compassion Fatigue" for health professionals designed to enable them to manifest empathy without suffering compassion fatigue (CF). It includes four distinct parts. The first is designed to promote the creation of a motivational disposition for bounded empathy. The second is targeted to produce a cognitive mental set enabling the individual to focus on interpersonally-shared reality rather than on the subjective personal meanings. The third is designed to promote the expansion of meaning assignment of the situation in terms of meanings other than those that support empathy. The fourth is targeted to enhance the differentiation between the self and the other. The first part is based on the cognitive orientation theory, the second and third parts are based on the Kreitler Meaning System, the fourth is based on the self-identity approach. An empirical demonstration of the implementation of the program with nurses provided evidence for its feasibility and potential efficacy.

Chapter 3: *The Learned Helplessness Genesis Concept as the Basis for Medico-Psychological Facilitation at the University*; by Olesya Volkova, Irina Loginova, Ivan Artyukhov, Marina Petrova, & Darya Kaskaeva. In the course of the learned helplessness genesis concept development we discovered new opportunities for finding emergency features in the cross point of the learned helplessness theory by M. Seligman, concept of cultural and historical development of a person by L.S. Vygotskij and method of transpective analysis by V.E. Klochko. The combination of three theories allowed creating The Technology of the Learned Helplessness Genesis Study which was widely tested on different samples of respondents, including representatives of the educational process participants at the Krasnoyarsk state medical university (Russia). Large variety of supportive, correctional and preventive actions, short and long-time programs aimed to decrease the learned helplessness manifestations

were implemented in the system of medico-psychological facilitation of the medical university. Students and teaching staff of the university, patients of university clinic, healthcare family centre and psychological centre were suggested different tools to overcome learned helplessness. The learned helplessness genesis concept as the basis for medico-psychological facilitation at the university allows assimilation of new experience in a context of psychological consultation and the non-drug therapy directed to maintenance of self-actualization process, personality development, strengthening of psychological wellbeing and, as a result, opening of new life resources and potentialities of the personality.

Chapter 4: *Human Life-World Stability as a Tool Against Learned Helplessness*; by Irina Loginova, Olesya Volkova, & Daria Kaskaeva. The paper reveals the idea considering life self-fulfillment of a human being from the position of anthropological psychology which is framed by historical development of the psychological science and finds reflection in different theories and provisions. The paper presents the analysis of studying the human life-world stability as a factor preventing learned helplessness. It was revealed, that the stagnating nature of the life-world stability manifestation does not contribute to productive life process and optimal self-realization. It also forces the learned helplessness formation. The constructive nature predominance of the human life-world stability contributes to the preservation of health, personal growth and creativity, as well as determines the learned helplessness prevention. The results of the research demonstrate that the human life-world stability phenomenon and the learned helplessness are overlapped states, which point out different sides of effective/ ineffective and productive/ unproductive life self-fulfillment. This fact opens new prospective of interdisciplinary studies wide by the context and deep by the approach. These points urge the necessity of developing the system of psychological support including psychotherapy, psycho correction and psychological prevention of aimed at solving the problem of unconstructive life-world stability and learned helplessness of the person.

Chapter 5: *Compassion Satisfaction, Compassion Fatigue and Personality Traits in Slovak Helping Professionals*; by Miroslava Köverová. This chapter is focused on the personality correlates of compassion satisfaction (CS) and secondary traumatic stress (STS) in helping professionals. The aim of this study is to explore the relationships between selected personality variables, CS and STS among helping professionals in Slovakia. Three separate studies were conducted, each of which was focused on different personality variables (Study 1: optimism, self-esteem, emotional well-being, anxiety, depression; Study 2: Five-Factor personality traits; Study 3: interpersonal behavior). The participants (236 in Study 1; 101 in Study 2 and 94 in Study 3; helping professionals working in social-care institutions, health care and rescue services) completed the Professional Quality of Life scale, Life Orientation test – revised, Rosenberg Self-Esteem scale, Emotional Habitual Subjective Well-Being scales, State-Trait Anxiety Inventory, Beck Depression

Inventory, NEO Five-Factor Inventory and Interpersonal Check List. The results showed that CS and STS were significantly correlated with, as well as predicted by, the selected personality variables. The findings highlight the importance of emotional well-being, conscientiousness and extraversion in promoting CS and the significance of emotional well-being and interpersonal behavior in reducing STS. This will be used as a background in the upcoming intervention programs for Slovak helping professionals which will be designed to help them increase CS and decrease STS.

Chapter 6: *Perceived Stress and Burnout in Relation to Self-Care Activities in Helping Professionals*; by Beáta Ráčová. The main aim of this study was to explore the level of perceived stress and burnout syndrome among Slovak helping professionals as well as to clarify the relationship between the negative consequences of helping (stress and components of burnout syndrome) and performed activities of self-care. The study included 745 helping professionals in Slovakia in the age range was 20-65 years ($M = 44.04$; $SD = 10.33$ of whom 89% were women. The respondents completed the Slovak adaptation of the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996), Slovak version of the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) and the Performed Self-Care Questionnaire (Lichner, Halachová, & Lovaš, 2018). In general, the results showed a moderate level of perceived stress, slight level of exhaustion, low level of depersonalization and moderate to high level of personal accomplishment in this sample. The results also suggest that Slovak helping professionals perform more psychological than physical self-care activities. In general, the linear regression analyses indicate that performed self-care, especially psychological self-care and self-care at work, are significant predictors of burnout syndrome and perceived stress. The results of this study will contribute to the preparation of preventive programs for Slovak professionals, which is one of the primary objectives of the broader grant project, which the current study is a part of.

Chapter 7: *Gender Perspective on the Trait Emotional Intelligence as a Predictor of Career Indecision*; Eva Sollarová & Lada Kaliská. Emotional intelligence (EI) contributes to career decision-making. In the paper, the influence of trait EI on career decision-making, specifically on career indecision and career decision-making difficulties, plus gender differences, is investigated in a sample of 156 high-school students ($M_{age}: 17.7$ / $SD=.40$ /; 59% of females) by t-test, correlation and regression analysis. Trait EI was assessed by *Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF)*; Petrides, 2009), career decidedness by *Career Decidedness Scale (CDS)*; Lounsbury, & Gibson, 2011) and career decision-making difficulties by *Emotional and Personality Career Difficulties Scale (EPCD)*, Saka, Gati, & Kelly, 2008). Results: 1. no inter-gender differences in the global trait EI, emotional and personality-related aspects of career decision-making difficulties, and career decidedness; 2. a general trend of positive relations between trait EI and career decidedness and negative relations

between trait EI and career decision-making difficulties; 3. trait EI as a significant negative predictor of career decision-making difficulties, over and above decidedness in both samples, where trait EI predicted a significant 8% of unique variance in career decision-making difficulties after controlling for decidedness level in females sample and up to 5% in males sample supporting the incremental validity of trait EI, and its potential to predict difficulties in career decision-making.

Chapter 8: *Individual and Social Correlates of Self-Harm among Slovak Early Adolescents*; by Anna Janovská, Marcela Štefaňáková, & Beáta Gajdošová. Background: Adolescence is the period of life in which intentions of self-harming thoughts and behaviour are initiated and may escalate. Self-esteem, self-control, satisfaction with life, social support and substance use seem to be important factors related to such behaviour. Aim: The study explored the relationship between self-harming thoughts/behaviour and self-esteem, self-control, satisfaction with life, alcohol consumption and social support. Sample and methods: A representative sample of 572 (50.1% male) elementary school pupils (age: M=12.49 years, SD=.59) was collected within a school-based universal prevention project. Binary logistic regression was used to analyse the data. Findings: Self-harming thoughts of adolescents were found to be negatively associated with self-control ($p=.048$), self-esteem ($p<.001$) and positively associated with alcohol consumption ($p=.003$). Self-harming behaviour was found to be negatively associated with self-esteem ($p=.002$), supportive relationships at home ($p=.029$) and satisfaction with life ($p=.033$). A positive relationship between alcohol consumption and self-harming actions of adolescents ($p=.014$) was found. Our data did not support the existence of gender differences in these behaviours. Conclusions: The study has contributed to our understanding of the factors associated with self-harming behaviour among adolescents. This is a finding that can be used for targeting prevention programmes.

Chapter 9: *Factors Related to Life Satisfaction, Cultural Resilience and Emigration Intentions Among Slovak University Students*; by Bohuš Hajduch, Oľga Orosová, & Marta Dobrowolska-Kulanová. We focused on satisfaction with state's economy (ECONOMY), state of education (EDUCATION), job satisfaction (JOB) and satisfaction with household income (INCOME) as possible factors related to life satisfaction (LS) of young people in Slovakia. Cultural resilience (CR) was also hypothesized to affect emigration intentions (EI). We also considered life satisfaction (LS) as a potential intervening variable of the relationship between CR and EI. The main objective was to explore various factors related to LS. Relationship between CR, LS and EI was also addressed. Two samples were used in the data analysis. Sample 1 was ESS (European Social Survey) sample (young Slovak people <30yr, N=117, M=25.7, SD=2.8) and sample 2 consisted of Slovak university students (N=443, M=22.1, SD=1.72).). Linear regressions were used for the analyses. All factors, i.e. EDUCATION, JOB, ECONOMY and INCOME

significantly contributed to LS of young people in Slovakia. CR affects EI directly as well as indirectly through LS, which was found to be a significant mediator of this relationship in sample 2. University students who scored lower in LS had stronger intentions to emigrate.

Chapter 10: *Affective Styles and Difficulties in Emotion Regulation*; by Sarah Lall. Emotion regulation refers to “the process by which people influence which emotions they have, when they have them, and how they experience and express these emotions”. Research studies substantiate that emotion regulation plays a pivotal role in an individual’s mental health and various aspects of daily functioning. Affective style, a closely linked construct, is a typical tendency to use some emotion regulatory strategies over others. The present study explores the relationships among affective styles (concealing, tolerating and adjusting) and specific difficulties in emotion regulation (awareness, quality, goals, impulse, non-acceptance and strategies). Self-report measures on affective style and difficulties in emotion regulation were given to a sample of 196 individuals in the 17-30 age range. Difficulties engaging in goal directed behavior, a lack of access to emotion regulation strategies, and a lack of clarity in emotional experiences emerged as significant predictors of impulse control difficulties. An adjusting affective style was found to significantly predict access to emotion regulation strategies, and a tolerating affective style was negatively correlated with a lack of access to emotion regulation strategies, and a lack of clarity in emotions. The findings of the study have important implications in understanding psychopathology, as well as in planning intervention for vulnerable populations.

Section 2, entitled “Psychoanalysis and Psychoanalytical Psychotherapy”, presents a chapter that focuses on how therapy and therapists have been represented in the cinematographic context.

Chapter 11: *From Screen to Therapeutic Setting: Images of Therapy Inside and Outside the Office*; by Pedro Oliveira. In the Western world, the influence of American culture in entertainment, film and music is everywhere. Popular interpretations of Freud, expressed in American products like Woody Allen’s filmography, *The Silence of the Lambs* or series like *The Sopranos*, abound in American culture. The abundant literature connecting film and psychotherapy suggests a deeply entrenched cultural liaison between the two, powerful enough to influence and shape clients’ personal experiences of psychotherapy. Using my double training in psychology and anthropology, I take a visual ethnography approach to the theme of film and psychotherapy. Thus, after conducting a literature review on the theme of film and psychotherapy, I proceed by re-visiting some the classic film examples on psychotherapy portrayal as visual artefacts, i.e., as cues to the cultural representation of psychotherapy. Finally, a dialogue between everyday life clinical vignettes and psychotherapy as cultural/film phenomena is put forward as one recommended path for future thinking and research.

Section 3, entitled “Cognitive Experimental Psychology”, delivers chapters concerning, as the title indicates, studies and research in the area of behavior from the point of cognitive aspects. Concepts as attention and personality are presented here.

Chapter 12: *The Relationship Between Color Preference and Reaction Time*; by Shengai Jin & Yasuhiro Kawabata. This study investigated the relationship between preference for color combinations and reaction times for their evaluation among participants aged between 20 and 30 years. In this study, we found that: 1. among color combinations, light tones were generally preferred over vivid, dark tones; the most preferred color combination was Y & G (including yellow-green and green-yellow), whereas the most disliked color combination was R & G (including red-green and green-red). 2. The evaluation of color preference for the more popular light tones had a weak, negative correlation with reaction time, whereas the evaluation of color preference for the disliked dark tones had a positive correlation with reaction time. Thus, preferred colors such as the Y & G combination and the single-color blue were associated with shorter reaction times than disliked colors such as the combination of R & G or the single color yellow. 3. The reaction time for single-colors was generally longer than for the color combinations.

Chapter 13: *Attentional Variables and BCI Performance: Comparing Two Strategies*; by Gemma Candela, Eduardo Quiles, Nayibe Chio, & Ferran Suay. The objective of this chapter is to evaluate task factors and user factors affecting Motor Imagery Brain Computer Interfaces (MI-BCI) performance. Brain computer interface (BCI) technology has been under research for several decades. Nevertheless, its practical applications have been mostly ad hoc solutions for individual users. In order to become an alternative in clinical use BCI performance must be improved. In our experiment fifty subjects performed two different EEG based MI-BCI tasks. The participants controlled a BCI task with an action-action motor imagery strategy versus an action-relaxation strategy. BCI performance and subject attentional traits were evaluated for every user under both experimental conditions. Our results show a better performance when the task was controlled with an action-action strategy versus an action-relaxation strategy. Moreover, in the action-action strategy a constant performance improvement was achieved with short term training. It can be hypothesized that for most subjects it is easier to switch from an action strategy to another action strategy than to switch from an action strategy to a relaxation strategy. Regarding user factors, impulsivity seems to be inversely related to the ability to master the BCI-task. Processing speed and cognitive flexibility can also predict a better performance in MI-BCI based tasks.

Chapter 14: *How do Emerging Adult Children Read their Parents' Minds?*; by Mizuka Ohtaka. Ames and Mason (2012, for a review) argued we read others' minds based on others' behaviour and our own minds. On the basis of the argument, this study hypothesised that young adult children infer their parents'

attitudes towards their spouses based on their parents' emotional expressions and disposition as well as their own attitudes towards their parents. The research was conducted by way of a survey among 335 undergraduates. It required participants to respond to questions about their parents. The hypothesis was tested by analysing 199 answers from participants whose parents were married couples and all lived together. The results indicated children read their parents' attitudes towards their spouses based on their parents' emotional expressions. Moreover, some variations were observed with regard to gender differences between children and parents. While sons did not infer their mothers' minds by their mothers' disposition, daughters did. While children inferred their mothers' minds by projecting their own minds, they did not infer their fathers' minds in the same manner. A future study including an examination of children's perceived similarity with their parents, perspective taking of their parents as well as the self-other overlap between children and parents could be useful.

Chapter 15: *Enhancing Verbal Reasoning through Chess Training*; by Ebenezer Joseph, Veena Easvaradoss, David Chandran, & S Sundar Manoharan. Verbal reasoning is the ability of a person to understand the meaning of verbal information, enabling the individual to further process the verbal information placed before them. This study assessed the outcome of 1-year chess intervention on the verbal reasoning of children. A pretest-posttest with control group design was utilized, with 70 children in the experimental group (mean age 11.05 years; SD 2.49) and 81 children in the control group (mean age 11.10 years; SD 2.37). Children of both genders, studying in two governments and two private schools (grades 3–9), formed the sample. The experimental group received weekly chess training for an hour, while the control group participated in extracurricular activities. Verbal reasoning was measured by Binet–Kamat Test of Intelligence. The chess intervention included Winning Moves Chess Learning Curriculum, video lectures, demonstration board, on-the-board playing, chess workbooks, and studying tactical and end game positions by case studies. Analysis of covariance revealed significant gains in verbal reasoning in the experimental group compared to the control group, indicating a link between chess training and verbal reasoning. Strengthening verbal reasoning skills leads to significant outcome in the child's overall development and academic performance.

Section 4, entitled “Social Psychology”, gives a glance on projects from a psycho-social perspective. Themes vary from traumas, well-being, motivational potential as well as health promoting habits.

Chapter 16: *Militant Strategy and its Subjective Consequences*; by André Sales, Flávio Fernandes Fontes, & Silvio Yasui. Using Michel Foucault's archaeological and genealogical tools, we reviewed texts, discourses, and practices developed under the planning and execution of the Russian Revolution. The main aim is to examine how this event has played a crucial role in the current subjectivation

process of some protestors and social movement participants in Brazil. The analyzed data emphasize three anchor points in understanding the militant subjectification process: a) Government Democratic Centralism; b) economic Stakhanovism; and c) cultural Zhdanovism. We concluded that it is possible to establish a relationship between Soviet dictatorship practices at the beginning of the twentieth century and the rigid ways of feeling, thinking and acting of many contemporary subjects when they take militant action to change social norms in Brazil.

Chapter 17: *Students' Emigration Intentions and Emigration Plans in the Context of the Migration Belief Model*; by Marta Dobrowolska-Kulanová & Oľga Orosová. Background: The Migration Belief Model (MBM) assumes that emigration intentions and emigration plans are determined by perceived economic threat, perceived emigration benefits, perceived emigration barriers and emigration self-efficacy. Objective: To examine the relationships between factors of the MBM and emigration intentions and plans separately. In addition, to explore the relationship between emigration intentions and emigration plans. Methods: Data were collected online at 17 universities in Slovakia (n=489, 76.5% women, M=22.8, SD=3). Emigration intentions, emigration plans and factors of the MBM were identified. A linear regression and a multinomial logistic regression were used. Findings: 24% of students planned to emigrate long-term. The factors of the MBM explained about 33.6% of variance in emigration intentions and 32.9% in emigration plans. Those who reported higher level of emigration intentions or plan a long-term stay abroad were more likely to report a higher level of perceived economic threat, perceived emigration benefits and emigration self-efficacy and a lower level of perceived emigration barriers than those with lower level of emigration intentions or without a plan to leave. Emigration intentions explained about 52% of variance in emigration plans. Conclusion: The findings have supported the relevance of the MBM in the study of emigration intentions and plans.

Chapter 18: *Effectiveness of the Universal Drug Prevention Program: Teachers' Engagement, Lifetime Alcohol Use, Normative Beliefs and Self-Control among Early Slovak Adolescents*; by Beáta Gajdošová, Oľga Orosová, Anna Janovská, & Marcela Štefaňáková. This study addressed the effectiveness of the Unplugged prevention program which was tested in Slovakia at 60 primary schools. The aim was to explore the differences in psychological factors as well as in alcohol use measured at different time points; before T1, n=1295, 52.3% girls, age=11.52, SD=0.61 and 12 months after the implementation of the program T2, n=872. The data were analysed by using mixed ANOVAs with 3 groups differing in the level of teachers' engagement (control group CG, an experimental group EGLE with low teacher engagement and an experimental group with high engagement EGHE – teachers provided more than 6 feedback reports after all 12 sessions) and the dependent variables (alcohol use, normative beliefs, self-control) measured before

and after program implementation (T1 & T2). It has shown an increase in alcohol use and normative beliefs regarding the drinking of friends over time regardless of the level of teachers' engagement. A long-term effect of teachers' engagement was found in relation to self-control. The level of self-control in the group with highly engaged teachers did not significantly change over time while it was found to decrease in the other groups.

Chapter 19: *Rich Experiences in Natural Environment in Childhood Cultivate Attachment to Community*; by Keiko Katagiri. Japan shares the problem of urbanization. As governments provide inadequate public services to their citizens, mutual support among residents is necessary. This study aims to examine whether childhood experiences in the natural environment cultivate attachment to community when one becomes an adult. In 2014, an internet survey was conducted among residents of Kobe City and its suburbs. The sample size was 1,017, aged 18 to 90 years. Items input in the analyses were experiences with natural environment during childhood, importance of natural environment during childhood, and attachment to their community. Respondents were divided into four groups by gender and whether living in suburban or urban area. Multiple group structural equation modeling was conducted. The scores of the richness of natural environment of residents in suburban were higher than those of their counterparts in urban area. People who had lived in a rich natural environment in their childhood believed that natural experiences are important; those who held such beliefs correlated positively with attachment to community. This study suggests that living in a rich natural environment and having experiences in nature during childhood cultivate attachment to community when one becomes an adult. This finding implies that providing rich experiences in nature to children is important to cultivate attachment to community.

Chapter 20: *Parent-Child Processes and Health Risk Behaviour among Young Slovak Adolescents: The Mediating Role of Self-Esteem and Self-Control*; by Ondrej Kalina & Maria Bacikova. Lower levels of self-esteem (SE) and self-control (SC) have frequently been associated with a full range of health risk behaviours such as alcohol use or smoking. However, much less scientific attention has been paid to the role of parental processes (PP) as possible mediators. A cross-sectional representative dataset from primary schools was used (N=572, M=12.49 years, SD=0.65, 51.1 % boys). Four types of PP (child disclosure, parental solicitation, parental knowledge and parental monitoring) were measured. With respect to risk behaviours, respondents were asked about the frequency of smoking, alcohol use and being drunk during their lifetime. By combining all three variables, a single – behavioural risk index variable was created. Regression models and mediation analyses were used for data analysis in SPSS 21. The adolescents scored low in the behaviour risk index with no gender differences. The results showed negative associations between SC and risk behaviour for both boys and girls and negative associations between SE and risk behaviour for girls only.

The analysis has confirmed only a mediation effect of child disclosure and parental monitoring on the relationship between self-esteem, self-control and risk behaviour. The quality of parent-child processes may explain the role of self-esteem and self-control among adolescents and thus protect adolescents from risk behaviour.

Chapter 21: *Attitude of Students of Universities and Colleges to the Demographic Policy of the Russian*; by Olga Deyneka. Population and its reproduction is necessary attribute of the existence of the state. The process of depopulation generates economic problems, leading to a decrease in the state's geopolitical status. The purpose of this study was to study the attitude of student youth towards demographic policy in modern Russia. The study involved students of universities and colleges of St. Petersburg (N=109+97=206, 68% females; aged about 20 years). Attitudes of students to the demographic policy of the Russian Federation and were assessed by author's multi factorial questionnaires (Deyneka, 2013). Attitude to children as a condition for the reproduction of the population studied using method of ranking associations. The validity and reliability of the methods used were tested. The results showed a generally favorable, but somewhat contradictory attitude to demographic policy and the state. Students believe that measures to stimulate the state fertility are not enough. At the same time, the idea of peoples saving as a national idea of modern Russia received serious support among students. The attitude to the family and children turned out to be more traditional than relying on postmodern values. The material factor plays an important role in the students' plans for their future self-realization as parents.

Chapter 22: *Value Components of Latent Political Extremism: Results of Factor Analysis*; by Olga Deyneka. The purpose of this study was empirical testing of correlation between the "weak signals" of propensity to extremism and characteristics of the system of value orientations of the students. The exploratory research involved 126 students of mathematical specialties of universities of St. Petersburg and Minsk. It established that an uncritical attitude toward extremism is more characteristic to the young people with a low significance of family values and high entertainment value (hedonistic orientation). In addition, we solved the problem of construct validity of the base questionnaire using confirmatory factor analysis and structural equation modeling. The factorial matrix of the questionnaire "Psychological preconditions of extremism" includes "the factor of normative and value prerequisites for extremism", "radicalism in relation to the country's leadership and its information policy" and "factor of uncertainty / confidence in themselves and their future." The model has shown that male students are more prone to extremism statements and manifestation of extremist attitude than female students are.

Section 5, entitled “Legal Psychology”, explored in this chapter, provide information on juvenile delinquency in Brazil and juvenile offender as a victim of domestic violence.

Chapter 23: *Brazilian Adolescent Offenders’ Characteristics and the Contexts of Institutions for Young Offenders. A Literature Review*; by Thiago Sandrini Mansur, Danielly Bart do Nascimento, Edinete Maria Rosa, & Elisa Avellar Merçon-Vargas. The goals of this chapter were to identify the main social and demographic characteristics of adolescent offenders and the contexts of detention institutions for these youth in Brazil. For that, we conducted a literature review of articles published between 1990 and 2017 in Brazilian Psychology journals. A total of 27 articles were analyzed: 12 addressed adolescent offenders’ social and demographic characteristics and 15 the contexts of institutions for young offenders. Results indicated that young offenders were predominantly male, poor, marginalized, from minority racial groups (e.g., black), and with low level of education. Moreover, most of the detention settings were highly marked by coercion and punishment, far from what is recommended by national and international agreements and laws (e.g., the United Nations Convention on the Rights of the Child). Thus, the harshness of Brazilian juvenile justice affects mostly the poorest and marginalized social groups, perpetuating prejudices rooted in the society. Adolescent offenders are stigmatized as violent and dangerous and, therefore, excluded from the society; they often remain excluded after leaving detention institutions. We call attention to the need to develop policies promoting citizenship, establishing supporting networks for adolescents and families, also guaranteeing access to health, education, culture, and leisure.

Chapter 24: *Criminal Behaviour of a Juvenile Offender as a Victim of Domestic Violence*; by Alexander Usachev & Liubov Kotlyarova. The article presents the results of the research of the criminal behaviour of adolescents underwent domestic violence, who committed crimes against family tyrants and other persons. The analysis of the criminal acts includes studying procedural documents of the criminal cases. The comparative analysis of the behaviour of the juvenile offenders, who committed a crime against the family tyrant, and of those who abused third persons has been carried out. In all the cases the criminal offenses have been committed in a manner similar to the one that had been used by the abusers against the adolescents, but the crimes against the family tyrant are characterized by more pronounced aggressiveness and cruelty. In the crimes against third persons the criminal acts are less aggressive. The analysis of the communicative relations between the criminal and the victim has showed that in most of the cases there was a hostile relationship between the family tyrant and the juvenile offender. In the moment prior to committing the crime the adolescents provoked development of a bitter conflict. In the cases of committing a crime against third persons the offence arouses unexpectedly for a victim, without any communicative interaction between the victim and the abuser.

Section 6, 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 25: *Effectiveness of the Program Unplugged on Descriptive Normative Beliefs with Respect to Dosage as a Part of Fidelity Measurement*; by Marcela Štefaňáková, Oľga Orosová, & Anna Janovská. Objective: The main aim of the study is to examine the shorter-term and the longer-term effectiveness of the school-based drug prevention program Unplugged on alcohol and drunkenness descriptive normative beliefs as well as the moderation effect of gender. The aim of the study is also to highlight the importance of measuring the implementation fidelity. Method: In the school year 2013/2014, the program Unplugged was implemented in Slovak primary schools. The study was a cluster randomized controlled trial with data collection conducted immediately before the program implementation (T1), immediately after the program implementation (T2) as well as 12 months later (T3). The schools were randomly assigned to an experimental (N=641) and a control group (N=654). The experimental group was exposed to the drug prevention program consisting of 12 lessons. Results: The results confirmed that the Unplugged program works differently for boys and girls in a longer-term. The girls in the experimental group had a lower level of descriptive normative beliefs regarding the number of friends who use alcohol and who get drunk compared to boys. Also, the results show that completing the whole preventive program is important for assessing its effectiveness.

Chapter 26: *The Predictors of Smoking Status among Slovak School Children*; by Oľga Orosová, Beáta Gajdošová, Anna Janovská, & Marcela Štefaňáková. The aims of this study were to explore (i) the incidence of risk factors associated with the change of the current smoking status from a non-smoker to a smoker among Slovak schoolchildren, (ii) the effect of the European school-based social influence intervention program Unplugged on the change in smoking status among schoolchildren using follow-up testing, (iii) the direct and indirect effects of parental knowledge change regarding children’s behavior on the change of the current smoking status through the change in normative beliefs, as well as through the change in availability of cigarettes when an 18 month period was considered. The most powerful predictors of change in smoking status were a higher level of normative beliefs and availability of cigarettes. The effect of the Unplugged intervention on the change in pupils’ smoking status was not found. The indirect effect of the decrease in parental knowledge on the change in smoking status through the increase in normative beliefs, as well as through the increase in the availability of cigarettes was found when the period between T1 and T2 was considered.

Foreword

Chapter 27: *Personality Traits and Locus of Control as Predictors of Students' Self-Efficacy*; by Snežana Stojiljković, Gordana Djigić, & Mila Dosković. The research problem was to determine whether the students' self-efficacy can be predicted based on their personality traits and locus of control. The sample consisted of 200 high school students (100 females), aged 18-19. Personality traits were defined in accordance with the Big Five plus Two model (Smederevac, Mitrović, & Čolović, 2010) supposing the existence of seven broad personality dispositions: extraversion, neuroticism, openness to experience, conscientiousness, aggressiveness, positive valence, negative valence. The LOC scale (Bezinović, 1990) was used to determine whether a person believes that he/she is responsible for his/her behavior and actions or that is due to external circumstances. Self-efficacy (social, academic, and emotional) was measured by the questionnaire SEQ-C (Muris, 2001). The data were processed by the multiple regression analysis procedures, firstly including personality traits as predictors and secondly adding locus of control in the model. Extraversion and locus of control were shown as significant predictors of social self-efficacy of students. Conscientiousness, negative valence, openness and locus of control were predictors of students' academic self-efficacy. Emotional self-efficacy of students could be predicted by positive valence and aggressiveness. The results showed that personality characteristics, especially traits, were better predictors of social and academic self-efficacy than of emotional one.

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Section 1
Clinical Psychology

Chapter #1

RACIAL-ETHNIC MICROAGGRESSIONS, DAILY HASSLES, AND MENTAL HEALTH CONCERNS AMONG STUDENTS

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ABSTRACT

Racial-ethnic microaggressions have been described as statements, actions, or symbols that insult or put down people because of groups differences based on race and ethnicity. Some have characterized racial-ethnic microaggressions as similar to daily hassles, commonly experienced everyday stressors. However, the relationship of microaggressions with daily hassles has not been examined empirically. In addition, the relationships of these two constructs with certain mental health outcomes has not been examined simultaneously. The study discussed in this chapter examined the relationship of racial-ethnic microaggressions with daily hassles experienced by racial-ethnic minority college students ($n = 244$), and then examined the relationships of those stressors with symptoms of anxiety and alcohol related consequences. Racial-ethnic microaggressions were significantly associated with daily hassles among minority college students, although the association suggested an unexpectedly modest relationship ($r = .22, p < .005$). In addition, both microaggressions and daily hassles were significantly associated with anxiety symptoms ($R^2 = .24, p < .001$), but only binge alcohol use and daily hassles were found to be significantly associated with alcohol related consequences ($R^2 = .18, p < .001$). The chapter concludes by discussing the significance of the study results for racial-ethnic minority students and the universities they attend.

Keywords: microaggressions, daily hassles, anxiety, alcohol, minorities.

1. INTRODUCTION

College students often face many stressors as they strive to complete their education, and sometimes those stressors contribute to unhealthy behaviors and poor outcomes. For example, alcohol abuse and anxiety are common experiences on college campuses and have been linked to negative health outcomes (American College Health Association, 2013; Thompson, Davis-MacNevin, Teehan, & Stewart, 2017) as well as negative academic outcomes (El Ansari, Stock, & Mills, 2013; Seipp, 1991). Racial-ethnic minority college students often face additional stressors, many associated with anxiety and alcohol use, and those stressors may be compounded if the university is majority White (Blume, Lovato, Thyken, & Denny, 2012; Fisher & Hartmann, 1995; Lopez, 2005; Suarez-Balcazar, Orellana-Damacela, Portillo, Rowan, & Andrews-Guillen, 2003). Since racial-ethnic students are particularly at risk for not finishing college, special consideration for potential barriers such as these is important when considering university student retention strategies (Schmaling, Blume, Engstrom, Paulos, & De Fina, 2017).

Daily hassles are common, every day, nagging stressors that are experienced as personally annoying (e.g., a traffic jam) and differentiated from major life events (e.g., death of a loved one) (Kanner, Coyne, Schaefer, & Lazarus, 1981). Since they happen routinely, daily hassles are a chronic source of stress for people. Interestingly, the effect of stress from daily hassles can be extremely aversive and sometimes associated with worse

A. Blume

health and mental health outcomes than the experience of major life events (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Vinkers et al., 2014). There is evidence that daily alcohol use for college students may often be a function of the experience of stress on that particular day (Park, Armeli, & Tennen, 2004), suggesting that daily hassles may be especially relevant to the drinking behaviors of students.

Some have suggested that the experience of prejudice and discrimination is akin to the experience of daily hassles (e.g., DuBois, Burk-Braxton, Swenson, Tevendale, & Hardesty, 2002; Lay & Safdar, 2003). Certainly prejudice and discrimination have been linked to poor health and mental health outcomes among racial and ethnic minorities (Pascoe & Smart Richman, 2009; Williams & Mohammed, 2009; Williams, Neighbors, & Jackson, 2003). But whether the consequences of prejudice and discrimination may be associated with mental health risks among racial and ethnic minorities in a way that is similar to the consequences of daily hassles has not previously been investigated.

2. BACKGROUND

Racial and ethnic microaggressions are commonly experienced acts of prejudice and discrimination that occur as a result of biased attitudes and stereotypes toward racial and ethnic minorities. Racial and ethnic microaggressions may be verbal or non-verbal (Sue, 2010; Sue et al., 2007). Verbal microaggressions can range from slurs and insults to stereotyped assumptions. Non-verbal microaggressions can range from behavior that isolates or excludes to environmental symbols that convey stereotyped assumptions and group based insults. Greater numbers of microaggressions have been associated with a variety of mental health concerns including anxiety, depression, and substance abuse (Blume et al., 2012; Donovan, Galban, Grace, Bennett, & Felicié, 2013; Nadal, Griffin, Wong, Hamit, & Rasmus, 2014; Torres & Taknint, 2015). Microaggressions are considered to be more subtle and covert than overt acts of racism such as hate crimes. Because microaggressions tend to be more subtle, they may leave the victim in a state of great confusion and ambiguity about the intentionality and motive of the transgression (Sue et al., 2007). Unfortunately, racial and ethnic microaggressions have been found to be common experiences on campuses in the US (Blume et al., 2012; Suárez-Orozco et al., 2015). Because of the regular and chronic frequency of their occurrences, and with the nagging subtlety in which they frequently occur, one might assume that a microaggression would likely be similar in potential impact to a daily hassle rather than a discriminatory hate crime (arguably a major life event). Therefore, microaggressions would be an excellent construct to examine in order to test whether more covert acts of prejudice may have similarities to daily hassles.

In addition, little is known about the cumulative impact, if any, of daily hassles and microaggressions among racial-ethnic minority college students. Since racial-ethnic minority students tend to be greatly underrepresented in historically White universities in the US and prone to leaving universities prior to graduation (Schmaling et al., 2017), the cumulative burden of these stressors may be important to understand. As far as is known, the relationship of daily hassles and microaggressions have never been examined simultaneously as two potential stressors associated with student mental health risks.

3. METHOD

3.1. Participants

The present study included 244 self-identified racial and ethnic minority students that attended a historically White university and were enrolled in Introductory Psychology courses that included the option of research participation for partial course credit. First year students were heavily represented in the sample (48%), followed by sophomores (28%), juniors (16%), and seniors (8%). The predominant group represented in the sample was African American (57%), followed by Asian American (23%), Latinx (17%), and American Indian and Alaska Native (3%). Five participants identified with more than one ethnic group. A majority of the sample was female (70%) and the mean age of participants was found to be 20.5 years.

3.2. Measures

Participants completed a number of measures related to mental health concerns, daily hassles, and microaggressions. In this particular examination, the mental health measures of interest included the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985), a widely used assessment of alcohol consumption among college students; the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989), a widely used 23-item (possible range of scores 0-69) assessment of alcohol related consequences specific to the university experience; the Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988), a widely used 21-item (possible range of scores 0-63) clinical assessment of anxiety symptoms; and the Inventory of College Students' Recent Life Experiences (ICSRLE; Kohn, Lafreniere, & Gurevich, 1990), a 49-item measure (possible range of scores 0-147) used to assess daily hassles specific to college students. The microaggressions scale assessed the frequency of occurrence of 51 different types of microaggressions commonly experienced on college campuses as perceived by the participant (Blume et al., 2012). Greater details about the measure and its development are provided in the aforementioned article. Total scores from the RAPI, BAI, ICSRLE, and microaggressions measure were calculated and used for subsequent analyses. Total binge drinking events were calculated for the two week period immediately preceding the assessment from the DDQ using the commonly used definition of binge drinking in the U.S. (five drinks per drinking occasion for males and four drinks per drinking occasion for females; Wechsler, Dowdall, Davenport, & Rimm, 1995).

3.3. Procedure

After providing informed consent, participants completed an assessment battery online that included self-reported demographic data and the measures of interest for this study. Students were compensated with partial course related credit. Assessment occurred at one point of time. Institutional IRB (ethics board) approval was obtained prior to recruitment for the study, with protections in place to prevent risks to participants and to ensure confidentiality. Informed consent was obtained prior to study participation.

3.4. Results

The internal consistency for the study measures was excellent with $\alpha = .926$ for the BAI, $\alpha = .945$ for the ICSRLE, $\alpha = .917$ for the RAPI, and $\alpha = .914$ for the racial-ethnic microaggressions measure. Using the US commonly accepted definition for binge drinking events described in the measures section above (Wechsler et al., 1995), the study sample reported a mean of 2.952 binge drinking events as assessed DDQ binge drinking events during previous month ($SD = 4.324$). The mean total RAPI alcohol related consequences

scores were 13.632 ($SD = 12.417$), indicating that the sample was experiencing some alcohol related consequences that might be impacting their education. The study sample had a mean BAI Anxiety Symptoms score of 11.377 ($SD = 10.228$), corresponding to a mild range of anxiety (Beck & Steer, 1993). With the ICSRLE daily hassles scores, the sample was found to have a mean of 97.82 ($SD = 24.25$) that would be classified in the upper range of possible scores. Finally, the students reported experiencing a mean of 8.132 microaggressions per day over the last month or approximately 1 racial-ethnic microaggression every 3 hours.

Data from the ICSRLE and microaggressions measure underwent square root transformations to normalize distribution of scores prior to analyses. The first analysis was used to test whether there was evidence that racial-ethnic microaggressions and daily hassles may be similar constructs. In order to test this relationship, a Pearson product moment correlation analysis was conducted to examine the relationship of total transformed racial-ethnic microaggression scores and total transformed ICSRLE daily hassle scores. The analysis found a very modest but statistically significant relationship between the two variables ($r = .22$; $p < .005$).

Two multifactorial linear regression analyses were conducted to examine the relationships of microaggressions and daily hassles (simultaneously entered as a block) with the mental health variables of interest. In the first of these analyses, the relationship of the transformed racial-ethnic microaggressions and daily hassles scores with anxiety symptoms were examined. The full model was found to be statistically significant ($R^2 = .24$, $p < .001$; see Table 1), and both racial-ethnic microaggressions and daily hassles scores were found to be significantly associated with total number of anxiety symptoms as assessed by the BAI. In the second of these analyses, the number of binge alcohol events over the previous month, the transformed racial-ethnic microaggressions scores, and the transformed ICSRLE daily hassles scores were examined with the RAPI alcohol related consequences scores. The full model was found to be statistically significant ($R^2 = .18$, $p < .001$; see Table 2), with binge drinking events and daily hassles found to be significantly associated with total number of alcohol related consequences. However, a significant association between racial-ethnic microaggressions with RAPI consequences scores was not found in the analysis.

Table 1.
Regression model of Beck Anxiety Inventory scores (N = 195).

<u>Predictor Variable(s):</u>	<u>Beta</u>	<u>t</u>	<u>95% C. I.</u>
Microaggressions last month	.132	2.044*	0.003 to 0.191
Daily hassles last month	.445	6.903**	2.463 to 4.433

Table 1 Notes: Microaggressions and Daily Hassles = square root transformation of total raw scores. $R^2 = .24$; $F(2, 192) = 30.48$; $p < .001$ for the full model. Betas, t values, and 95% confidence intervals for each regression coefficient listed are for the full model. * $p < .05$; ** $p < .01$
VIF = 1.05 and 1.05 respectively.

Table 2.
Regression model of total Rutgers Alcohol Problem Index consequences scores (N = 152).

<u>Predictor Variable(s):</u>	<u>Beta</u>	<u>t</u>	<u>95% C. I.</u>
Total binge drinking events last month	.265	3.547**	1.061 to 3.731
Microaggressions over last month	.090	1.125	-.085 to .308
Daily Hassles over last month	.271	3.389**	1.078 to 4.094

Table 2 Notes: Microaggressions and daily hassles = square root transformation of total raw scores. $R^2 = .18$; $F(3, 148) = 10.79$; $p < .001$ for the full model. Betas, t values, and 95% confidence intervals for each regression coefficient listed are for the full model. ** $p < .01$
VIF = 1.010, 1.146, and 1.153 respectively.

4. FUTURE RESEARCH DIRECTIONS

Developing campus interventions to educate the student body and potentially reduce the number of microaggressions would be helpful, as would understanding the compounded burden that students experience related to both the daily hassles of university life and the commonly experienced microaggressions on and off campus. Sometimes microaggressions may be addressed appropriately on campus by faculty and administrators, but improvements are sorely needed (Sue, Lin, Torino, Capodilupo, & Rivera, 2009). Although there may be programmatic means currently in place to address the needs of racial-ethnic college students in the face of these threats, as discussed in the Conclusion/Discussion section that follows, much more research is needed to better address the dual threats of daily hassles and microaggressions in order to enhance the health, well-being, and academic success of our students. New campus interventions will need to be developed and tested, not only to support students who experience racial-ethnic microaggressions, but also to transform the very nature of campus cultures to be more welcoming of diverse students.

5. CONCLUSION/DISCUSSION

The measures of the study all demonstrated excellent internal consistency, increasing confidence in study results. The significant correlation of microaggressions with daily hassles suggests that microaggressions and daily hassles may have some commonality but the relationship appears to be very modest. The modest relationship could indicate that microaggressions and daily hassles are more different than similar. The multiple regression analyses found relationships that were perhaps more robust for anxiety symptoms than for alcohol use behavior. Microaggressions and daily hassles were independently associated with anxiety symptoms (Table 1), suggesting that both are independent sources of anxiety for racial-ethnic college students. Binge drinking events and daily hassles were significantly associated with alcohol related consequences (Table 2), suggesting that daily hassles may have different relationships with alcohol use behavior than microaggressions for racial-ethnic students. It is plausible that heavy or risky drinking was a response to

microaggressions as found in a previous study (Blume et al., 2012). Perhaps the drinking was carried out with greater vigilance due to the context of the microaggressions, placing students on alert to risks and therefore minimizing the likelihood of consequences. However, this is a highly speculative and experimental research will be needed to test this particular hypothesis under controlled conditions. However, victims of microaggressions tend to have more guarded and cautious social interactions under conditions where they feel they are in the minority and therefore vulnerable (Sue, 2010).

Limitations of the study include a cross-sectional quasi-experimental design, a non-randomly selected sample, and the use of one assessment per construct. The study also was bound by the strengths and limitations of online survey research. However, the study includes several strengths despite the limitations. Strengths include the first examination of the relationship of microaggressions with daily hassles, and the examination of both constructs in concert with mental health variables known to be problematic for promoting a positive campus climate (Harwood, Hunt, Mendenhall, & Lewis, 2012; Solórzano, Ceja, & Yosso, 2000), therefore a threat to student persistence. In subsequent studies, investigators may wish to account for both constructs when examining mental health outcomes among racial-ethnic minority college students at historically White universities. Further examination of this relationship seems warranted. Both microaggressions and daily hassles were significantly associated with mental health variables, although the patterns of results appear to be different for each construct.

When considering clinical interventions in universities, the results suggest that campus microaggressions and daily school related hassles may be largely independent sources of student stress for racial and ethnic minority students. Effective interventions designed to improve student outcomes and persistence to graduation may need to include strategies to empower racial-ethnic minority students to cope skillfully with both microaggressions and daily hassles. In particular, there is evidence that racial socialization that accentuates cultural pride and prepares students for the experience of bias can be helpful (Brown & Tylka, 2011; Hughes et al., 2006). In addition, creating the circumstances to make racial-ethnic students feel that they belong and are welcomed in the university community may support racial-ethnic student persistence (Cohen & Garcia, 2007; Steele, Spencer, & Aronson, 2002). Finally, as mentioned, efforts to change academic culture to be more welcoming while providing support networks to counter the potential stressful impacts of prejudice (including microaggressions) hold great promise (Lee & Barnes, 2015). Novel interventions that incorporate these elements and include skills training that address the specific experiences of microaggressions and daily hassles are needed to improve retention rates of racial-ethnic minority students.

In the US, many more racial-ethnic minority students are enrolling in universities in recent years, with many matriculating in universities that have historically served a White majority student body. Improving the persistence to graduation of those students is an important institutional goal to appropriately meet the needs of these students (Schmaling et al., 2017). Creating a safe academic climate that minimizes the experiences of racial-ethnic microaggressions and simultaneously provide students with the tools to succeed in coping with microaggressions and daily hassles will greatly improve the retention of racial-ethnic minority university students in the future.

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KEY TERMS & DEFINITIONS

Daily hassles: routine and annoying stressors that emerge from every day experiences, to be contrasted with major life events.

Racial-ethnic microaggressions: common acts of verbal or non-verbal prejudice toward racial and ethnic minorities that emerge from stereotyped beliefs that tend to be more subtle and ambiguous in expression than overt acts of hate, but still contribute to significant psychological distress to the detriment of health and well-being.

Stereotyped beliefs: specifically for this article, these are often schemas of thoughts and attitudes that contribute to individuals assigning vast and prejudiced generalizations about the attributes of members of racial-ethnic minority groups.

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Chapter #2

EMPATHY: HOW MUCH IS RIGHT?

A methodology for the management of empathy in the context of healthcare

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ABSTRACT

The paper describes an innovative program "Empathy without Compassion Fatigue" for health professionals designed to enable them to manifest empathy without suffering compassion fatigue (CF). It includes four distinct parts. The first is designed to promote the creation of a motivational disposition for bounded empathy. The second is targeted to produce a cognitive mental set enabling the individual to focus on interpersonally-shared reality rather than on the subjective personal meanings. The third is designed to promote the expansion of meaning assignment of the situation in terms of meanings other than those that support empathy. The fourth is targeted to enhance the differentiation between the self and the other. The first part is based on the cognitive orientation theory, the second and third parts are based on the Kreitler Meaning System, the fourth is based on the self-identity approach. An empirical demonstration of the implementation of the program with nurses provided evidence for its feasibility and potential efficacy.

Keywords: empathy, compassion fatigue, bounded empathy, cognitive orientation, meaning.

1. INTRODUCTION

1.1. The role of empathy in the health professions

Empathy is commonly considered as an important resource for health professionals. They are expected to manifest empathy when in contact with patients so as to express how much they care, which in turn enhances the empowerment of the patients and their mobilization to invest in the recovery process (Kim, Kaplowitz, & Johnston, 2004). Health professionals of all disciplines tend to feel an obligation for the empathic ability, while patients often include empathy as a criterion for evaluating the expertise and trustworthiness of the doctors.

1.2. The problems of empathy

It has been noted that empathy is probably a limited resource. If activated a lot it may become depleted temporarily but if the depletion-restoration process is repeated often, the activation of empathy may undergo habituation and culminate in compassion fatigue (CF). CF has been found in 16% to 85% of health care workers in different contexts (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010).

CF is characterized by a gradual lessening of compassion over time. It is common among individuals working with trauma victims. The symptoms of CF are hopelessness, a decrease in experiences of pleasure, constant stress and anxiety, sleeplessness or nightmares, a pervasive negative attitude, cynicism, a decrease in productivity, difficulty to concentrate,

and feelings of incompetency and self-doubt. Symptoms of this kind may cause a decrease in the health professional's efficacy at work and eventually to limiting his or her contact with patients. CF appears to be a major constituent of burnout of healthcare professionals (Figley, 1995). Major risk factors include job overload, lack of support, excessive empathy and life demands (Sacco, Ciurznski, Harvey, & Ingersoll, 2015).

There is a great interest in conserving the health professionals' ability to continue functioning on the optimal level. One prerequisite for attaining this goal concerns the management of empathy manifestations. The issue is not limited only to preserving the health professionals' ability to manifest empathy and to reducing the conditions for CF. Manifesting high degrees of empathy may be disconcerting for at least some patients. The excessive expressions of empathy may overwhelm them, cause discomfort and make them feel obliged to their doctor to a degree they would like to avoid or feel unable to assume. Expressing a lot of empathy may be also uncomfortable or difficult for at least some health professionals, for personal reasons or because they may consider it inadequate for some patients, or because it reduces the distance between them and the patients in a manner that may interfere with their work as health professionals. As noted, eventually too frequent or too strong expressions of empathy may result in CF (Bloom, 2016).

However, reducing seriously the expressions of empathy on the part of health professionals is also not the right solution. If too little empathy is expressed toward the patient, it may reduce the cooperation of the patient with one's doctor and lower adherence with the treatment implementation. It may result in increasing the distance between the health professional and the patient to a degree that may harm the patient, cause misunderstandings in the communication about health issues between health professional and the patient, and may even cause a sense of guilt in the health professional who may feel that one's low empathy expressions contradict one's conscience as a human being and as a health professional (Haque & Waytz, 2012).

In sum, the problem of empathy seems to be broader than simply combating CF. It encompasses also the issue of regulating the manifestations of empathy in line with the requirements of the situation and the tendencies of the health professional. Hence, the required tools should help healthcare professionals to manage and control the expressions of empathy in the healthcare context.

1.3. Common means for reducing compassion fatigue

Awareness of CF and its role in promoting burnout has led doctors and other health practitioners to come up with different proposals for combatting or preventing CF. These are mostly based on common sense and personal experience. They emphasize self-care, such as getting enough sleep, regular meals, physical exercise, breaks during working time, vacations, working fewer hours, having fun and entertainment; spending time with family and friends, and getting professional help in case the listed measures provide no help (Pfifferling & Gilley, 2000). Further more specific suggestions are reducing exposure to situations in which empathy is required (e.g., by switching to research or administrative work), or focusing on self-reflection, which may help in identifying what is important for oneself and living in accordance with it. There is little if any evidence whether suggestions of this kind have been applied or their effects on CF tested. A study with health care workers in pediatric oncology found that CF was lowered by two relief-inducing actions: interacting with people (who are not colleagues or patients) and bodily activities, such as sport (Toren et al., 2016). Mindfulness is the means that has been most commonly used for reducing CF. Several studies reported positive results following participation in several mindfulness sessions (Duarte & Pinto-Gouveia, 2016). Teaching resilience had no

appreciable effect on CF (Jakel et al., 2016; Pfaff, Freeman-Gibb, Patrick, DiBiase, & Moretti, 2017). Only a minimal effect on CF was reported following participation in a formalized educational program (Klein, Riggenbach-Hays, Sollenberger, Harney, & McGarvey, 2017).

2. OBJECTIVES

The purpose of the paper is to describe a program "Empathy without CF" for enabling health professionals to manage and control the expressions of empathy to patients to the adequate degree according to their judgment. The program is designed to provide means to facilitate adjusting the degree of expressed empathy to the situation, the patient and the health professional, including guarantee for the reduction of the chances for CF. A preliminary limited empirical demonstration supporting the application of the program is presented.

3. THE PROGRAM "EMPATHY WITHOUT CF"

3.1. Some assumptions that have led to the program "Empathy without CF"

Several assumptions have led to the development of the program "Empathy without CF".

Empathy and compassion are tendencies of limited quantity and get depleted when activated, similarly to self-control (Muraven & Baumeister, 2000). Hence, these emotional tendencies need to be exercised with caution, under control. A caretaker is advised to acquire a useful and easily applied set of tools for controlling at will one's empathic responses while avoiding the danger of accumulating CF.

Individuals differ in their basic capacity to empathize and to manifest their empathy (Davis, 1983). Yet some professions, especially healthcare, require this skill. Hence it is necessary to examine the possibilities for training this skill so that it can be applied at will.

It is possible to control empathy and regulate its manifestation in line with different contextual characteristics. For example, the impact of mindfulness training on reducing CF was mediated by self compassion which acts as a factor that focuses empathy on the other (Raab, 2014). Further, the degree of empathy by therapists towards another person depends on whether that person belongs to an in-group or an out-group of the observer and whether the event that has affected that person is positive or negative (Cikara & Fiske, 2011). Studies with mental health workers showed that empathy is continuously in a state likely to be affected by contextual factors and social contingencies (Santamaria-Garcia et al., 2017).

Empathy consists not only of the experience of the empathizer but includes also behavioral manifestations of empathy. The behavioral component of empathy plays a role in determining the effects of empathy on other people, including patients. It is possible that what affects another person is not the experience of empathy by the health professional but rather the external behavioral manifestations that are identified as expressive of empathy.

The behavioral component of empathy requires dealing with both the motivational tendency for empathy and the manner of its implementation, as is evident in the program of "Empathy without CF".

3.2. Outlines of the program "Empathy without CF"

The program "Empathy without CF" developed slowly, mainly through gradual adaptations after a series of applications and demonstrations of the program in different settings.

The program includes four parts, each introducing one strategy. The first (Part A.) focuses on producing the motivation for controlled empathy; the second (Part B.) deals with creating the mental set supporting controlled empathy; the third (Part C.) is devoted to enhancing the kinds of meanings in the situation that turn one's attention to aspects other than those expressing empathy; and the fourth (Part D.) promotes focusing on the other as an entity separated from oneself. Each of the four parts is presented separately, introduced by the supporting theoretical and methodological background, and describing the means of actual intervention.

3.3. Part A. Formation of a motivational disposition for "bounded empathy"

The first part in the Empathy without CF program is the formation of a motivational disposition designed to support the emergence and manifestation of "bounded empathy". The motivational disposition is a tendency for behavior acquired and strengthened in the framework of the cognitive orientation theory, which specifies conditions and components of dispositions for behaviors and for physiological states (Kreitler & Kreitler, 1982). Dispositions of this kind need not be conscious, nor controlled by volition, and are not the product of decision making, or of rational considerations of costs and benefits. By applying Part A. of the program, the healthcare provider may acquire this motivational tendency and maybe enhance it from time to time. Once acquired it will be set in operation in the treatment situation automatically or at will.

A motivational disposition is the function of a set of specific cognitive beliefs. The beliefs include four types: beliefs about oneself (e.g., I like to understand others), beliefs about rules and norms (e.g. One should try to understand others), beliefs about goals (e.g. I would like to be able to understand others), and beliefs about reality and others (e.g., Understanding others is often difficult). The beliefs refer to specific themes that represent meanings identified as underlying the specific behavior. The themes are the result of a standard interviewing method employed with pretest subjects and based on a sequential three-step probing procedure focused on repeatedly requesting the meaning of the preceding response. The selected themes are meanings occurring in the final step in over 50% of the pretest subjects evidencing the behavior of interest and those occurring in fewer than 50% of those not manifesting that behavior. The motivational disposition may be assessed by a CO questionnaire (Kreitler, 2004).

The core of the motivational disposition consists of the themes. The themes for bounded empathy are the following: 1. Replacing actual emotions by emotional attitudes; 2. Controlling the situation; 3. Controlling oneself; 4. Guarding oneself; 5. Emphasis on manifesting expertise; 6. Adjusting the means to the needs; 7. Distinguishing between means and ends; 8. Not wasting resources; 9. Separating the inner world from the external one.

The intervention for creating the motivational disposition for bounded empathy consists in mobilizing in the subject sufficient support for the themes constituting the motivational disposition by evoking in the subject beliefs of the four types in regard to each of the themes.

Theme 1: The intervention focuses on beliefs emphasizing, for example, that evoked emotions in the health professional as well as in the patient may be distractive insofar as the goals of treatment are concerned, or on beliefs supporting emotional attitudes as a more efficient means for evoking in patients feelings similar to those supposedly evoked by actual empathy, i.e., feeling accepted, appreciated, cared about, encouraged, listened to, and

evoking concern and interest in the physician. The behaviors of the healthcare professional that evoke these feelings without emotional investment are: being attentive, asking questions, listening to the answers, being polite, making the impression of not being time pressured, giving hope. Behaviors that need to be avoided are telling about oneself and one's reactions, and imitating the patient's posture and movements.

Theme 2: The intervention for strengthening the healthcare provider's control of the situation focuses on promoting beliefs, such as control of the situation reduces the patients' anxiety, strengthens their confidence in the treatment and awareness of its goals, and encourages them to act empowered. It also enhances the doctor's ability to focus on a precise implementation of the treatment.

Theme 3: The intervention for enhancing self-control focuses on beliefs emphasizing the value of independence and autonomy, the power to attain one's goals, assuming responsibility, and the ability to plan.

Theme 4: Beliefs promoted for supporting the theme of guarding oneself are those emphasizing the importance of taking care of oneself continuously, of keeping oneself fit mentally and physically, and of the duty to guard one's special gifts and expertise as a healthcare provider.

Theme 5: The theme concerning the importance of expertise may be promoted by beliefs such as, expert healing skills are rare and difficult to acquire, patients need to benefit maximally from the particular skills of the healthcare.

Theme 6: The theme which focuses on adjusting the means to the needs, may be promoted by beliefs, such as the importance of maintaining a realistic view, flexibility and parsimony in using one's resources adequately.

Theme 7: The theme which stresses the distinction between means and ends, may be promoted by beliefs, such as control requires focusing on the goals and adapting the means to attaining them.

Theme 8: The theme which focuses on preserving the resources, may be promoted by beliefs such as the limited amount of precious resources and the need to manage carefully such resources.

Theme 9: The theme which focuses on separating the inner world from the external one, may be promoted by beliefs such as keeping one's privacy, and preventing exposure of one's possible weaknesses which may be exploited by others.

In interventions targeting the generation of a motivational disposition it is important to focus (a) on mobilizing supporting beliefs provided by the participants themselves, (b) to get support of beliefs of the four types, and (c) to strengthen support for at least half of the involved themes (Kreitler, 2004). Once acquired, the motivational disposition for bounded empathy may be strengthened further at the participant's decision, and may be evoked in any number and type situations other than healthcare.

3.4. Part B. Creation of a mental set that regulates one's internal and external emotional reactions with a focus on the interpersonally-shared mode of meaning

The mental set that promotes bounded empathy and safeguards the healthcare professional from CF is based on the meaning system approach (Kreitler, 2014). According to the meaning system theory every meaning may be stated or expressed in one of the two major modes of meaning: the interpersonally-shared mode or the personal-subjective mode. The former is used mainly in interpersonal communication, the latter for the expression of personal experiences and approaches. Meaning may be considered as consisting of meaning units defined by a referent which states to what meaning is assigned and the assigned

contents, e.g., table – a piece of furniture. The two modes of meaning differ in the nature of the bond between the referent and the assigned contents, rather than in the referents or the contents themselves. The differences are structural. The interpersonally-shared mode uses mainly the attributive relation (e.g., Love – is an emotion) and the comparative relation (e.g. Love –resembles happiness, but differs from hatred), and the personal-subjective mode of meaning expresses meanings in the illustrative-exemplifying form (e.g., Love – a mother holds her baby and kisses him) or by the use of metaphors or symbols (e.g. Love – is like the spring of life). Previous studies showed that it is possible to activate one or the other mode temporarily by cognitive means and that the activation is followed by cognitive and emotional manifestations corresponding to the different modes, e.g., better logical thinking and verbal memory in the case of interpersonally-shared mode and better recognition of emotional cues and stronger emotional empathy in the case of the personal mode (Kreitler, 1999; 2009, 2017). Hence, promoting the interpersonally-shared mode of meaning results in lowering emotional empathy.

The training of mental set creation includes the three following steps:

(1) The first step consists in learning to identify the two modes of meaning. This is done by presenting to the participants examples of both modes for identification and by requesting active production of examples in both modes.

(2) The second step consists in learning to switch between the two modes of meaning, by practicing the switch, first at the instruction of the trainer, and then by self-instruction. The latter case mimics the situation when the person activates one or another meaning mode at will.

(3) The third step consists in learning to establish the interpersonally-shared meaning by focusing intentionally on the interpersonally-shared meaning and overlooking the personal-subjective meanings in the situation of treating patients. For example, concerning a symptom described by a patient, it is recommended to focus on the general diagnosis indicated by the symptom rather than on the specific subjective meaning assigned to it by the patient.

3.5. Part C. Meaning-assignment to a present or unfolding situation in terms of meanings differing from those characterizing empathy

This part of the training is also based on the meaning system but in a different manner than the second part (see section 3.4). The meaning system includes a comprehensive set of variables characterizing different ways in which a person assigns meaning to stimuli, situations and constructs. The variables describe contents, relations, forms of expression and handling of the stimuli. A previous study showed the kind of meaning assignment tendencies characteristic of individuals scoring high on empathy scales i.e., Toronto Empathy Scale (Spreng, McKinnon, Mar, & Levine, 2009) and the Interpersonal Reactivity Index (Davis, 1983). These were primarily tendencies to focus on the active agents in a situation, cognitions, judgments and evaluations, emotions evoked in oneself or observed in others, sensory qualities, sensory experiences, impressions, examples and illustrations, metaphors, declarative statements, positive statements, nonverbal expressions mostly gestural, and focusing on inputs close to those presented. These tendencies constitute the meaning profile of empathy (Kreitler, 2014). The third part of the training consists in promoting in the individual assignment of meanings that differ from those constituting the meaning profile of empathy.

Two major goals are attained by this strategy. One goal is extending the overall meaning assignment of the individual in the given situation, and the second goal is directing the assignment of meanings to those aspects of meaning that promote reduction of empathy

rather than its evocation. The training consists in (a) identifying referents (i.e. the objects or constructs to which meaning is assigned), (b) learning about the meaning variables (i.e., the major categories of contents and kinds of relations that constitute meaning) and (c) assigning meaning values (i.e., actual meaning responses) to the different identified referents. Referents are trained for example by directing participants to name or point out specific objects in treatment situations that may be presented verbally or visually (e.g., chair, stretcher, window, doctor). Meaning variables are trained by presenting to the participants the content categories and kinds of meaning that are not related to empathy, describing each, providing examples for each and asking the participants to provide examples on their own. Relevant meaning variables are, for example, actions, functions, manner of operation, structure, materials, qualities of time, qualities of space, size and dimensions, possessions and belongingness, negative statements, conjunctive and disjunctive statements, associations, etc. Assigning meaning values to identified referents is trained by asking the participants to produce varied meaning responses (at least 3) describing selected referents in the therapeutic situation, e.g., chair – a piece of furniture, is made of wood, serves for sitting; stethoscope – a medical instrument, used for listening to sounds in the body, during patient examination.

3.6. Part D. The self-other differentiation

The fourth part of the training deals with enhancing awareness of the gap between the self and the other. This entails focusing on differences between oneself and the other person so as to emphasize the special qualities of the "other" as compared to the "self", obviously excluding derogatory evaluations (Bullock & Trombley, 1999). Different theoretical approaches to the development of self-identity focus on the role of awareness of the distinctions between the self and the other, for example, in terms of physical, social or attitudinal characteristics (Cinoğlu, & Arıkan, 2012). One's self identity was found to be based on cognitions regarding features in which one shares with others or in which one differs from others (Miller, 2008; Horowitz, 2012). The gap between the former and latter cognitions may vary and could be modified by attention. A decrease in the gap may be manifested in increased altruism and empathy, while an increase in the gap is related to enhanced concern with one's own needs and self-interests (Fowler & Kam, 2007). The gap is increased when one focuses on the features whereby one differs from others (Miller & Ratner, 1998). It is likely that under these circumstances empathy is decreased.

The rationale underlying this part of the program is that empathy is a function related to the self in a double sense: first, it is a function of the self like all other emotions; and secondly, this relation is enhanced because empathy consists precisely in blurring the boundaries between self and other by emphasizing "I can feel what you feel". Accordingly, Part D of the training focuses on strengthening awareness of the gap between "I" and "the other", by promoting responses that exemplify and emphasize the differences. For example, the participants are asked to focus first on themselves, by noting different parts of their body (at least 3, e.g., their legs, chest, face), to state to oneself 3 different sensory qualities one has: e.g., my hair/face/color vision/taste... and 3 different traits one has: e.g., I am intelligent/patient/impulsive. Further, the participant is requested to state to oneself three statements expressing differences between oneself and one's patient (for example, I differ from my patient in age/gender/profession/my patient's experiences differ from the ones I have had etc.). This part may include also statements distinguishing between "patient's feelings", "feelings I have experienced", "my feelings due to identification with the patient" and "my feelings towards the patient and in reaction/response to the patient".

3.7. Some general remarks about the program "Empathy without CF"

The program consists of a set of strategies that function as tools for controlling the manifestations and use of empathy by the healthcare professional. The program may be acquired and practiced prior to addressing patients in the healthcare context. Not all parts need to be applied each time or in a specific order. Most importantly, if practiced, the program does not need extra constant training for ensuring its utility in regard to empathy. The mere use of the program is guarantee enough that it will be kept in shape. Eventually it will be evoked automatically when the individual is confronted with stimuli for empathy. Moreover, the program may be applied also in contexts other than that of healthcare. It is general enough to be applicable in any interpersonal context which may evoke empathy. Further, the program can and should be applied for controlling empathy to different degrees, ranging from enhancing empathy to moderating its manifestations to the degree judged to be adequate by the individual. Hence, the program may be used by health practitioners for the control of their emotional behavior and the enrichment of their cognitive approach in any context in which they function.

4. EMPIRICAL DEMONSTRATION

4.1. Objectives and method

The objective of the study that will be described briefly was to demonstrate the effectiveness of the new current version of the four parts of the program "Empathy without CF". The participants were nurses who have been working in pediatric oncology wards for over 10 years. CF was assessed by the Compassion Fatigue Scale Revised (Gentry, Baranowsky, & Dunning, 2002), based on the original Figley (1995) scale, which includes 13 items each rated on a

10-point, visual, analog-type Likert-type scale (1 = *never or rarely*, 10 = *very often*) (see Adams, Boscarino, & Figley, 2008, pp. 242, 249). The subjects were divided randomly into two groups, with 8 participants in each: the experimental group got the training in line with the program of "Empathy without CF" and the control group did not get it. In the experimental group the training included all four parts of the program in the order described above (section 3), and lasted 2 hours, with about 30 minutes devoted to each part. The training was performed by two psychology students according to the guidelines. In the control group the participants were asked to discuss their work for two hours, in the presence of two psychology students. The experimental and control groups met on different times in order to prevent effects due to interactions between the subjects in the two groups. All subjects were administered the CF scale prior to the beginning of the study, and again four weeks after its termination, during which time all subjects continued their regular work. The subjects were told that they are participating in a preliminary exploration designed to examine the feasibility of a program. The hypothesis was that CF would decline in the experimental group but not in the control group.

Table 1.
Means and SDs of CF in the pre-test and post-test phases in the experimental and control subjects.

	Experimental Pre	Experimental Post	Control Pre	Control Post	T-Test
Mean	7.3	5.9	6.9	7.1	
SD	1.6	1.2	1.9	2.1	
Exp. Pre & Control Pre					T = 0 . 4 5 , p=0.66
Exp. Pre & Exp. Post					T = 1 . 9 8 , p=0.06
Control Pre & Control Post					T = 0 . 1 9 , p=0.84
Exp. Post & Control Post					T = 1 . 4 0 , p=0.18

4.2. Results and discussion

The results presented in table 1 show that the experimental and control groups did not differ in CF prior to the training, so that no selection bias can be assumed. The important result is that in the experimental group the scores of CF declined after the training, as expected. However, the change was only of borderline significance. There was no comparable change in the control group.

The two obvious reasons for the not quite significant result are first, the small sample size, and second, the highly limited time devoted to the training itself. Actually, it is surprising that the results show a tendency in the expected direction despite the short training time. Indeed, the result obtained under these unfavorable conditions is itself a kind of evidence for the power of the training program. The latter conclusion is supported also by the suggestive but not significant results obtained in a previous study which the impact of training the separate parts of the program (Kreitler, 2018). Be it as it may, the presented results suggest the feasibility of the program and its potential power even if implemented under highly curtailed temporal conditions. Future research is needed for examining the extent of improvement in reducing CF that could be attained by longer investment in the training. Further, it is likely that after a brief training, the effects of the program will be enhanced and become habitual through the mere repeated application of its tools by the health professionals themselves, without additional training by experts.

5. SUMMARY AND CONCLUSIONS

A four-tier program for attaining Empathy without CF is based on two separate theoretical approaches – the cognitive orientation theory that deals with shaping motivational dispositions and the meaning theory that deals with mental sets and meaning assignment.

Accordingly, the program includes a part that focuses on producing in the healthcare professionals a motivational disposition for bounded empathy, another part that deals with producing the adequate meaning-based mental set, a third part that focuses on expanding meaning assignment in the situation beyond the elements supporting empathy, and a fourth part that enhances the gap between the self and the other in a manner that puts checks on the evocation of empathy. Each of the four parts deals with a specific well defined aspect of the issue of empathy and has a unique contribution to the attainment of the goal. While the motivational disposition contributes to determining the goal of the behavior, the meaning-based set and meaning assignment contribute to the operational aspect by rendering the attainment of bounded empathy possible and shaping its actual manner of operation. Hence, the four parts can be applied separately at the individual's will. Further, each of the parts may be used in different degrees of completeness or intensity so as to modulate the total effect on empathy. Similarly, the different parts may be combined in different forms, so as to attain varying outputs in terms of empathy. It is possible to select one or another part on the basis of personal preference. A further advantage of the program is that it does not deal openly and directly with empathy and its weakening for reducing CF. The theoretical approaches focus the training on major underlying processes of motivation and meaning which do not mention empathy directly and hence prevent the involvement of conscious attitudes towards empathy and the evocation of responses based on social desirability or resistance.

The described possibilities of application demonstrate the wide range of potential uses of the four parts of the program in different combinations. These include the different varieties of empathic expressions, such as enhancement, regular manifestation, moderated manifestation, decreased expression, or replacement of empathy by empathy-mimetic behavior. All these forms are examples of controlled empathy. There are additional kinds of empathic expression. These and others could be non-voluntary expressions of empathy as well as controlled expressions, dependent on the choice and decision of the individual. Choices of this kind reflect to varying degrees the individual's goals, norms, self image and perceptions of context. Most importantly, acquiring the tools of the program enable the individual to regulate the expressions of empathy in the healthcare context so that they do not fall below the level necessary for satisfying the patients' needs but at the same time prevent the generation of CF and conform to the healthcare professional personal tendencies. The program is designed for use by all health care providers on all levels, including the professional ones as well as the informal and non-professional ones, all of whom had been shown to suffer from CF.

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Short biographical sketch: Professor Shulamith Kreitler was born in Tel-Aviv and got her education at Bar Ilan University in Israel, her PhD (summa cum laude) at Bern University (Switzerland) and her post doc at Yale University in the USA. She has been a professor of psychology at Harvard University, Princeton University and at Yale University in the USA as well as at Vienna University (Austria), and for over 40 years full professor of psychology at Tel-Aviv University. At present she is professor emeritus at the school of psychological sciences Tel-Aviv university. She has founded and directed the Unit of psychooncology at the Sourasky Tel-Aviv Medical Center for 20 years and works now as the head of the Psychooncology Research Center at the Sheba Medical Center at Tel-Hashomer. She has written over 300 articles in scientific journals and 16 books. Her major scientific contributions are in the domains of human motivation (the "cognitive orientation theory"), cognition (the meaning system) and health psychology. She has developed an innovative approach to studying the interactions of body and mind and clarifying the impact of psychological processes on physiological phenomena relevant for diseases, mainly cancer

Chapter #3

THE LEARNED HELPLESSNESS GENESIS CONCEPT AS THE BASIS FOR MEDICO-PSYCHOLOGICAL FACILITATION AT THE UNIVERSITY

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ABSTRACT

In the course of the learned helplessness genesis concept development we discovered new opportunities for finding emergency features in the cross point of the learned helplessness theory by M. Seligman, concept of cultural and historical development of a person by L.S. Vygotskij and method of transpective analysis by V.E. Klochko. The combination of three theories allowed creating The Technology of the Learned Helplessness Genesis Study which was widely tested on different samples of respondents, including representatives of the educational process participants at the Krasnoyarsk state medical university (Russia).

Large variety of supportive, correctional and preventive actions, short and long-time programs aimed to decrease the learned helplessness manifestations were implemented in the system of medico-psychological facilitation of the medical university. Students and teaching staff of the university, patients of university clinic, healthcare family centre and psychological centre were suggested different tools to overcome learned helplessness.

The learned helplessness genesis concept as the basis for medico-psychological facilitation at the university allows assimilation of new experience in a context of psychological consultation and the non-drug therapy directed to maintenance of self-actualization process, personality development, strengthening of psychological wellbeing and, as a result, opening of new life resources and potentialities of the personality.

Keywords: the learned helplessness genesis concept, medico-psychological facilitation, university.

1. INTRODUCTION

The learned helplessness as form of human life organization is the catalyst of psychological instability and somatic illness, it determines decrease in resilience of personality to harmful influences of the external environment, contributes to the development and exacerbation of psychological damages and somatic diseases of various etiologies. The helplessness is formed and “taught” gradually, under the influence of a factor of social response to failures in life events or features of somatic health rather than level of stress factor or disease nature and their objective influence on personality.

Studying the problem of the learned helplessness as a phenomenon being formed in ontogenesis, under the influence of external and internal determinants of development, such as social environment and physical condition of a human body, is important to consider conceptual provisions of the cultural and historical concept of person’s mentality origin in which an attempt of solving the problem of person’s consciousness origin and development is made.

Studying the formation mechanisms and correction ways of “the learned helplessness” phenomenon demands considering an environmental factor, on the basis of studying patterns of behavior mastered by means of interaction with the environment, mechanisms of fixing and maintenance of these patterns, and also their combinations to the specific physiological state caused by somatic factors.

2. BACKGROUND

Martin Seligman (Seligman, 1975, 1993), the founder of Positive Psychology and the learned helplessness theory, considers that the optimistic or pessimistic attitude to reality is directly interconnected with perception of parental behavior models. Dr. M. Seligman specifies that this style is not only appropriated as behavior model, it “is improved” and becomes stronger in consciousness by means of such methods as criticism from parents, teachers and other representatives of an adult environment. The learned helplessness stems from pessimistic perception of life, has foundations in situations of life crises, such as stress provoked by death of the relatives, divorce in a family, recurrence of violence cases in a family, illness of relatives, low level of own health etc.

Whatever occurred in life of the child in the close intra family and external social environment it affects directly the formation of experience picture of the child, as certain integrity of perception of the whole world picture. It is important that in relationships with children there not be neutral emotional reactions. Cases of frequent, systematic negative experience steadily form the pessimism, being characterized by generalization. And, if the help in overcoming the negative attitude to a series of situations doesn't happen in due time, negative attitude, expectation of negative result, feeling of futility of any efforts to receive significant, good, valuable, desirable result (that is group of the learned helplessness markers) predetermines all reactions of the child to situations in the future. The similar relation is rather steadily fixed, including, and concerning education process that is a serious problem of an educational system and training at all stages of ontogenesis (M. Seligman, 1975, 1993).

According to the main concepts of cultural historical approach by Russian scientist L.S. Vygotskij (Vygotskij, 2003) the development of a person is based on interiorization, which is transformation process of inter psychological relations into intra psychological. In ontogenesis at first the adult affects the child with the word, inducing him to do something. Then the child adopts a way of communication and learns to influence the adult with the word. After that the child starts influencing the word himself. In the families, having child with weak somatic health, the psychological system is broken: deficiency of relationship revealed in problems of relations with mother, replacement of the father from psychological life of a family, posing child as weak and unable, which results violation of normal child identity formation. Connecting the ideas of Positive Psychology and cultural historical approach it is possible to claim that people having weak health “learn” helplessness gradually, under not the influence of somatic state, but under the determination of the factor of social response to features of somatic health (Volkova, 2013a, 2013b, 2014a, 2014b, 2015, 2016a, 2016b).

In development of a complex research technology aimed at revealing the process of the learned helplessness formation in the course of human life, the transpective analysis is one of the significant tools, “performed through the analysis of human activities products which are kept in culture” (Klochko, Galajinsky, Krasnoryadtseva, & Lukyanov, 2014, p. 145) and opening for the researcher space for reconstruction of “the world image of a human and way of human life in a historical transpection” (Klochko, Galajinsky, Krasnoryadtseva, & Lukyanov, 2014, p. 146). Considering that everything is unpredictable and nothing repeats in the history, as it is obviously impossible to determine and predict the future of the person by his past, as well as the future of society relying on its historic facts, the transpective analysis opens certain opportunities in this direction.

A number of the contradictions arising by consideration of psychological phenomena, characterizing the complete person meaning existence continuity in space and time are removed when “it is only about the present which, however, undertakes with its tendency. Both the past and the future “contact” the present setting a perspective (context) of the analysis. However, a sheaf “past-present” and “future-present” aren't full from space-time position, designating a cut became in the first case, or a cut predicted, which still not became (and it is unknown whether it will be or what), in the second.

3. OBJECTIVES

The theoretical and empirical analysis of contemporary psychology confirms the importance of integrated system approach in diagnostics of the learned helplessness formation mechanisms in the course of personality development. Creation of the specific unique tools directed not only on a research of the factors which have made negative impact in the course of ontogenesis and acted as the catalyst of the helpless identity development but also on aim points for psychological correction within psychological consultation and non-drug therapy for the purpose of achieving the psychological wellbeing of the person seems extremely important. Psychological wellbeing in itself as a conscious state can't be followed by feeling of helplessness priori, but, on the contrary, is a resource state, basic in the course of self-actualization of the personality (Volkova, 2013a, 2013b, 2014a, 2014b, 2015, 2016a, 2016b).

The offered psycho correctional, psychotherapeutic and psycho preventive programs which are logging in psychological assistance can be used in the course of medico-psychological facilitation of medical staff, teachers, and patients having somatic diseases of a different etiology.

4. METHODOLOGY

The general provisions of the learned helplessness theory developed by M. Seligman, the concept of cultural and historical development of personality designed by L.S. Vygotsky and the basic principles of the transpective analysis highlighted by V.E. Klochko have been defined as the methodological bases of the learned helplessness genesis concept.

The methodology of this research was developed in the cross points of above-mentioned concepts for finding new emergency features of new concept – concept of the learned helplessness genesis - which combines specific ideas of contemporary studies and allow to develop new scientific point of view on the learned helplessness phenomena and its genesis.

In our concept the genesis of the learned helplessness is a result of ineffective influence of social environment (family members, relatives, educators, tutors, doctors etc.) of the person on his activity, which has specific way of organization in situation of stress, burn out and somatic disease. The state of the learned helplessness has its roots in the past experience of the person, negatively effects its present life frustrating the process of self-implementation and self-actualization, and also can become the base for negative consequences of possible variants of future life.

So, the system of medico-psychological facilitation against the learned helplessness genesis at the university should be aimed at all the groups of educational process members and be oriented on the past, present and the future experience of the facilitation system participants.

The system of learned helplessness prevention based on the concept of the learned helplessness genesis developed by Volkova O.V. was applied on the basis of the Krasnoyarsk state medical university within educational programs, medical and psychological support of the participants of educational and healing process (Volkova, 2016b).

The technology of the learned helplessness genesis research which has been developed and approved within the concept and also the system of psychological prevention allows optimizing and increasing the efficiency of medico-psychological and pedagogical facilitation and its implementation within different groups of the population having signs of the learned helplessness genesis or being in the conditions promoting his emergence.

5. DISCUSSION

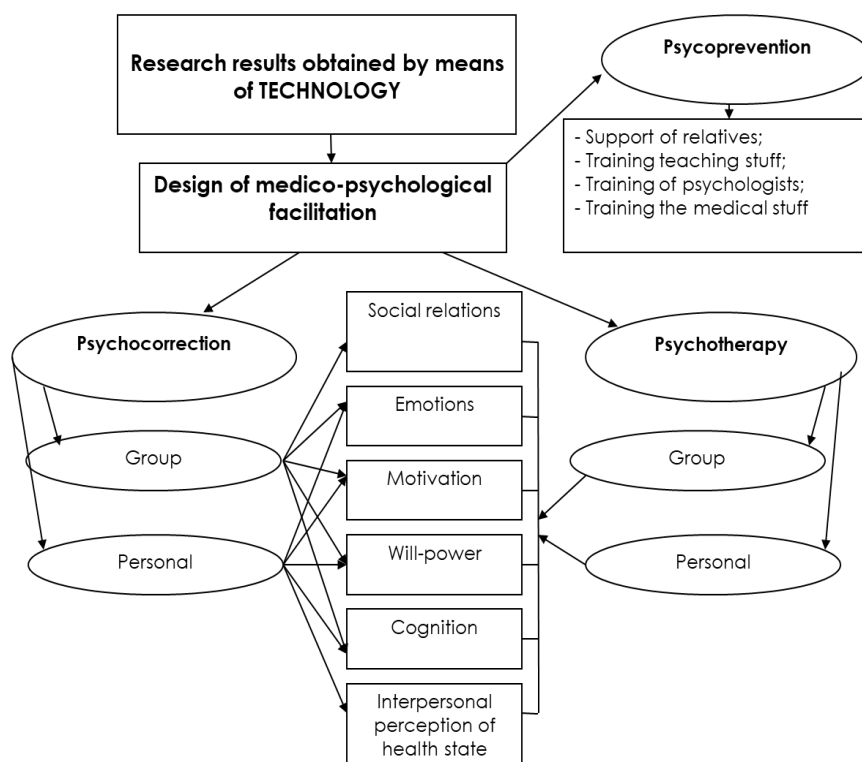
The learned helplessness becomes a real problem destructing the whole human generation in the role of active future creators, life investigators, who are responsible for their own life, physically mature and stable, strong in defending their life position and perspectives. This problem becomes more urgent in the situation of medical university. Future doctors, patients of university clinic and their relatives, teaching staff of the university sometimes demonstrate signs of the learned helplessness which manifestoes with depression, personal and professional out burn, high level of stress, lack of motivation, low interest to life issues, and general decrease of learning and living activity, absence of involvement in life as a process.

The medico-psychological facilitation based on the learned helplessness genesis concept was aimed at different categories of medico-educational process at the Krasnoyarsk state medical university (Krasnoyarsk, Russia).

Large variety of supportive, correctional and preventive actions, short-time and long-time programs aimed to decrease the learned helplessness manifestations were implemented in the system of medico-psychological facilitation of Krasnoyarsk state medical university. Students and teaching staff of the university, patients of university clinic and healthcare family center, and clients of psychological center were suggested different tools to overcome learned helplessness.

As an illustration for the efficiency estimation of the psychological programs aimed at prevention of the learned helplessness state we can offer the results of the long-time preventive program organized for the students of Clinical Psychology specialty (Krasnoyarsk state medical university), which lasted for 4 years (2014-2017), the total amount of participants is 136 people. Elements of the program have been realized in a format of a practical training, pedagogical, psychological and supervision practicing, individual consultations on the basis of the psychological center and also group trainings within the volunteer movement.

Figure 1.
The system of medico-psychological facilitation against the learned helplessness at the medical university.



Among criteria for prevention system effectiveness evaluation two major groups of indicators were generalized:

1st group: indicators of professional competences formation in relation of overcoming the learned helplessness state in groups of people having different characteristics of somatic health; 2nd group: indicators of personal changes such as decrease in expressiveness of prerequisites to emergence of the learned helplessness state demonstrated by participants of the prevention program - students of Clinical Psychology specialty.

Table 1.
The results of learned helplessness preventive program among students - clinical psychologists, %

Feature	Before preventive program	After preventive program
Signs of changes in professional competences		
High level of theoretical competence in the field of the features and signs of the learned helplessness as a state	21	62
High level of motivation on conducting the scheduled psychological support directed to prevention of the learned helplessness state	18	89
High level of predictive ability to identification of prerequisites and conditions of the learned helplessness state emergence	3	37
High level of ability to develop variations of psychological prevention programs for satisfaction of specific preventive needs of target group participants	0	59
Experience in development, organization and implementation of the preventive programs directed to overcoming the learned helplessness state	0	99
High level of empathy, initiative, inclusiveness in scheduled preventive psychological programs against the learned helplessness	36	83
Signs of personal changes		
High level of motivation on searching and overcoming of own psychological difficulties	12	76
High level of emotional intelligence development	18	71
High level of autonomy, independence	27	68
High level of somatic and psychological wellbeing (value judgment)	27	72
High level of search activity	23	63

The results presented in Table 1 (obtained by self-assessment questionnaire) clearly demonstrate the importance of the organization and implementation of the preventive actions directed to overcoming the learned helplessness state in groups of representatives of the helping professions as parallel increase in professional competence and prevention of a the learned helplessness signs of future specialist psychologist allows to assume its big efficiency in temporary prospect concerning potential professional activity: irradiating the condition of own autonomy, independence and search activity as well as mastering own psychological tools aimed at decrease in risk of the learned helplessness state emergence the representative of the helping profession becomes an invaluable element of preventive measures system.

Medico-psychological facilitation organized in groups of students- future doctors was aimed at overcoming signs of the learned helplessness in specially designed training programs, psycho correctional programs and by means of personal psychotherapy. The general idea of this facilitation is educating future doctors in the question of potential danger of the learned helplessness as doctors so their patients, mastering skills of defining the signs of the learned helplessness and formation of competence in decreasing this state.

The training and correctional programs aimed at teaching staff of the university were oriented at decrease of professional out burn as well as understanding the potential negative effects of the learned helplessness state. One of the directions of facilitation was aimed at teaching the university staff to overcome the helpless state and to transit these skills to their students by demonstration of initiative, support, and active life position.

The directions of medico-psychological facilitation oriented at patients of university clinics and medical family centers suggest complex support for patients and their relatives on overcoming the state of the learned helplessness in the situation of disease. Psychocorrection and psychotherapy have such objectives as increase of motivation to recovery, decrease of anxiety, will-power development and design of new effective life strategies in situation of somatic disease.

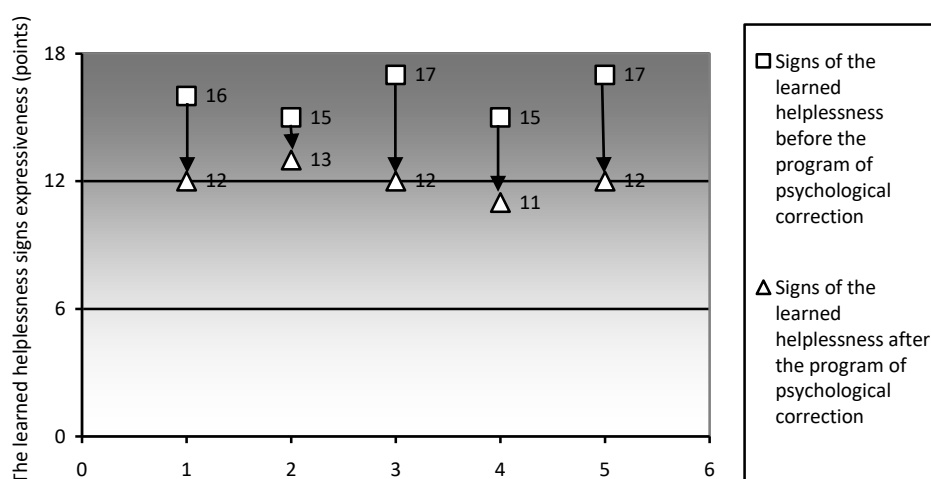
The general line for implementation of the system of medico-psychological facilitation is based on the major idea of The Technology of the Learned Helplessness Genesis study: psychotherapy of the problems of the past life, psychocorrection of the present helpless state and psycho prevention of the negative effects of possible or diagnosed learned helplessness.

One of the parts of the general system of psychological facilitation against the learned helplessness was a program directed to decrease in level of helplessness and neurotization through decline in a secondary alexithymia among cardiological profile patients was approved. Specially organized programs of group work testified in favor of their effectiveness including the following achievements. Before correctional programs attending physicians noted such bright signs of the learned helplessness at patients of cardiological ward as suppressed mood, indifference, uneasiness, the reduced motivation to treatment, lack of interest in communication with roommates, untidy appearance, violation of hygienic norms, frequent demonstration of passive and aggressive reactions concerning other patients and medical personnel. Collaborative activity within the correctional actions has made positive impact on a psycho emotional condition of the patients (the emotional background has improved, communicative and physical activity has increased, the anxiety and tension has decreased), patients had found an aspiration to maintenance tidy appearance, become following for hygiene, the nature of communication with medical personnel became more optimized and effective, etc.

From the total number of patients of cardiological ward for the purpose of detection of tendencies to positive results in respect of overcoming the learned helplessness state we have selected 12 people who have shown similar results in respect of the expressed signs of the learned helplessness by the results of the questionnaire "Subjective analysis of the learned helplessness genesis" by O.Volkova, which were transferred to points in compliance with interpretation scale (The full description of the technology of the learned helplessness study is presented in the book "Learned helplessness: the technology of genesis study" by Volkova (2018)). The results were obtained within the specially organized "School for patients" which activity is aimed at psychological support and increasing the medical care efficiency, as well as decrease the signs of the learned helplessness. Before implementation of the correctional program such signs of the learned helplessness as the low level of motivation, pessimistic perception of own state of health, violation in the emotional sphere (aggression, anxiety, irritability, emotional lability, apathy), violations in the sphere of social contacts, an external locus were the brightest.

The results received after performing repeated diagnostics have allowed to find the tendencies reflected in the Figure 2.

Figure 2.
The schedule of tendency changes of the learned helplessness signs before and after the program of psychological correction (patients of cardiological ward).



Comments: Y axis

1. External locus of control;
2. Negative attitude to own state of health;
3. Violations in emotional sphere;
4. Violations in social communication;
5. Violations in motivation sphere

Tendencies to overcoming the learned helplessness state were shown in increase in motivation on recovery and the general activity, emergence of signs of optimism concerning change of own somatic state, decrease in aggression, anxiety, apathy, emergence of positive emotions, sense of humour, aspiration to keep in touch and enter communication with a social environment, emergence of internal locus of control expressiveness concerning general self-care and care of own somatic health.

The two given examples can just illustrate the opportunities of presented system. The medico-psychological facilitation aimed at solving the problem of the learned helplessness has a lot of opportunities to be effective in the structure of educational process, psychological support and medical services at the medical university.

6. CONCLUSION

The system of psychological prevention of the learned helplessness genesis is defined as the perspective direction of the rendering system of psychological facilitation focused on creation of the special conditions for development of the personality identity promoting increase in its resistance concerning genesis of the learned helplessness. The learned helplessness genesis concept as the basis for medico-psychological facilitation at the university allows assimilation of new experience in a context of psychological consultation and the non-drug therapy directed to maintenance of self-actualization process, personality development, strengthening of psychological wellbeing and, as a result, opening of new life resources and potentialities of the personality.

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Chapter #4

HUMAN LIFE-WORLD STABILITY AS A TOOL AGAINST LEARNED HELPLESSNESS

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ABSTRACT

The paper reveals the idea considering life self-fulfillment of a human being from the position of anthropological psychology which is framed by historical development of the psychological science and finds reflection in different theories and provisions.

The paper presents the analysis of studying the human life-world stability as a factor preventing learned helplessness.

It was revealed, that the stagnating nature of the life-world stability manifestation does not contribute to productive life process and optimal self-realization. It also forces the learned helplessness formation.

The constructive nature predominance of the human life-world stability contributes to the preservation of health, personal growth and creativity, as well as determines the learned helplessness prevention.

The results of the research demonstrate that the human life-world stability phenomenon and the learned helplessness are overlapped states, which point out different sides of effective/ ineffective and productive/ unproductive life self-fulfillment. This fact opens new prospective of interdisciplinary studies wide by the context and deep by the approach. These points urge the necessity of developing the system of psychological support including psychotherapy, psycho correction and psychological prevention of aimed at solving the problem of unconstructive life-world stability and learned helplessness of the person.

Keywords: cultural-historical psychology, system anthropological approach, life self-fulfillment, human life-world stability, learned helplessness.

1. INTRODUCTION

The human life-world stability is considered in psychology as an essential indicator of the success of the life self-fulfillment and opportunities of transfer inherent of him (man) into reality. The growth (formation, discovery) of a unique living space takes place due to this transfer. This space provides a person with freedom from rigid dependence on constantly changing situations, characterizes the degree of his openness to the world and sets the direction of movement of the psychological system (Klochko, Galajinsky, Krasnoryadtseva, & Lukyanov, 2014). At this level, a human becomes capable of discovering new correspondences that are the cause of interaction with the world.

The human life-world stability can be connected with the life self-fulfillment. The reference to the concept of “life self-fulfillment” is also connected with the idea that human being formation, as a question of contemporary psychological science, concerns the way of person’s self-presentation to the world which itself opens new possibilities to the personality. The paradigm being formed in psychological science, which is characterized

with a systemic redefining the subject of the science and leading researchers to understanding a human being as a self-fulfilled system, explains the designation of the psychic in a human being formation through comprehension of mission and designation of a human being as a higher system defining “from above” the possibilities of psyche and its role in the self-fulfillment processes.

The human life-world stability allows choosing the optimal mode of the psychological system functioning: a process of life activity organized in a special way by the person, contributing to the health preservation, personal growth and creativity. In the absence or lack of human life-world stability expression a person demonstrates the identity not of his entire life but only of its fragments, individual events and situations (Blauberg, 2003).

The idea of considering life self-fulfillment of a human being from the position of anthropological psychology is framed by historical development of contemporary psychology. It finds reflection in theories and the provisions realizing “breakthroughs” to a new ideal of rationality. The generating interaction of a human being with the environment is revealed in finding his own multidimensional world, the living world, the living space in which there is a self-fulfillment of a human being. Such enrichment of a psychological science in respect of anthropological ideas is considered by us as “a future challenge” on which the possibility to answer in the present is prepared by last achievements of science (Loginova, Chupina, & Zhivaeva, 2012; Klochko et al., 2014).

Referring to the problem of evolutionary movement Bergson in his work “Creative evolution” noted that life is characterized by the self-creation possibility, the result of continuous creation of oneself (Blauberg, 2003). According to the Bergson, life is a kind of result which changes each time under influence of the newly obtained forms of this life: if he (a human being) follows “the natural direction then it will be development in the form of tension, continuous creativity and free activity” (the author names this orderliness a living one) and if he turns back there is other form of an order that is the inertia and automatism. It is necessary to understand that the free activity underlies the life self-fulfillment.

Systemic anthropological psychology became the methodological basis of the research since processes of life self-fulfillment of a human being can be comprehended only within the context of a whole human being that is included in diverse and various communications and relations with a reality but lives and operates as a unity (Klochko et al., 2014).

It is suggested that the problem of optimal life self-fulfillment strategy correlates with both problem of human life-world stability (constructive, unconstructive, stagnant) and problem of learned helplessness of the person. These two problems are similar in their definition and revealing the level of responsibility of the person for his life (Deci & Ryan, 2000).

Studying the problem of the “learned helplessness” (Seligman, 1993) as a phenomenon being formed in ontogenesis, under the influence of external and internal determinants and factors, such as social environment and physical condition of a human body, is important to consider conceptual provisions of the cultural and historical concept of a person’s mentality origin in which an attempt of solving the problem of a person’s consciousness origin and development is made. Psychological wellbeing itself as a conscious state can’t be followed by feeling of helplessness priori, but, on the contrary, is a resource state, basic in the course of self-actualization of the personality (Volkova, 2016).

It concerns not life self-implementation of the person and life itself as processes “existing separately”, but personal inclusiveness in evolutionary processes (ontogenetical and a phylogenetical order). They are characterized by the increasing release of the person “from the dictatorship of the determination according to the personal need normalizing his

life” and the increasing submission of “extra normative opportunities determination by the nature” (Loginova, 2012). This inclusiveness opens human new opportunities for development and formation. It is impossible to ignore the fact that the person (in onto-and phylogeny) is constantly changing: changing at the same time own ideas about the world and own personality, reinterpreting and overestimating the past, keeping thereby both own historicity, and historicity of the phenomena studied by him in a certain logic – transpective (Loginova, 2012).

This coexistence of the person and his world as life spaces in unity of times, inseparably linked, forms a continuum of life self-implementation of the person which characteristic is possible only from such point of view which holds a set of threads in a uniform sheaf, coming out to a tendency of personal development.

Consequently, it makes the opportunity to suggest that the human life-world stability allows prevention the learned helplessness development providing higher flexibility in real-life situations, realization of the authentic position concerning own life, self-congruency.

2. BACKGROUND

Conducting research, it seemed to us important to find proof that the orientation of life self-fulfillment as development of a human resource in the course of life coincides with how it was defined by L. Vygotsky with reference to development of the higher mental functions and a human being as their systemically important basis: “The whole development is that function development goes from me to I” (Vygotskiy, 2003). In this view, a problem related to occurrence, existence, transformation, development and self-development of a human being in unity with the world, its individual life strategy act defined in relation to the chosen strategy of life potential realization (Deci & Ryan, 2000).

A systemically important basis of the work is the understanding of a human being as a complex self-organized system which mode of existence is the self-development providing progress of a human being in a direction of complication of a psychological system (Galazhinskiy & Klochko, 2007). Thus, the attribute “life” bears special loading specifying the extent of “place-time” developing self-realization (it is not the one-stage act of own potential realization) where a human being makes effort on the ways to oneself opening “human” spaces in oneself and developing one’s resource.

Having defined a human being as a self-organized system it is possible to outline the process of manufacture and generation by the new system which is immediately included into further determination of the system self-organization as a form in which its development is carried out. To understand life self-fulfillment of a human being as a product of the latter and his life means possibility to understand and the human being itself is the most mysterious event of the world. In turn, recognizing living subjectivity as “the concrete unique general” - living life of reality, concept “life” fills the life activity of a human being with the real cultural-historical content. That is why in each separate act, action, life activity and life creation a human being’s life self-fulfillment reveal its essential features and increases them in an incessant vital stream where a human being “feels oneself a part of this mighty impulse of life” (Blauberg, 2003) embodying in process of life the creativity, continuous formation, the vast variety as that infinite number of freedom degrees that defines boundless possibilities of a human being. In the point of overlapping of possibility of a human being and reality conditions is the starting point for the “successful life” of a human being as a guarantee of achieving the purpose in realization of each action. That is why achieving the purpose of a human being gives the latter (a human being) the

greatest subjective satisfaction that covers success of life self-fulfillment. Productivity of a human being's self-realization depends on many psychological qualities of the latter, developing which increases the efficiency, masters various forms of self-realization accompanied by different levels of aspiration expressiveness to personal growth and development, characteristics of motivation and needs spheres and mindsets of a human being. Along with personal qualities among the factors promoting effective self-realization, it is possible to emphasize a high social status and an educational level expanding living space of a human being.

All these indicators, in our opinion, have a direct reference to life self-fulfillment of a human being, i.e. balancing between order and chaos which Prigozhin (1997) named movement "from life to formation and back" when the accent is shifted from balance position to instability condition where the structure is generated and reconstructed. This single moment of fixation to balance, to stability along with an openness which "breaks" the established rules is related to the life self-fulfillment of a human being as specially built relation with the world around pointing on the issue regarding the fact whether the life is that a human being (under the formula "I live") performs or it is something that is performed in a human being (under the formula "I am lived"). Being a mean for realization of the vital project, life self-fulfillment acts as the special value allowing setting frameworks to the new life standard contextually entering wider problematic field as compared to issues of social and economic functioning of a society. Since in life self-fulfillment the inherent form of transition of possibility into the reality proves special, only to a human being, and as a source of such behavior "intense possibility" consideration of the given phenomenon and its "consequences" can go in a direction of the human life content (Klochko, 2005). It is a question not so much of a basis of a new economic coil, but of the reference to a human being which once again becomes "a measure of all things", acting simultaneously as the carrier of this life standard and the figure focused on creation of life conditions adequate to this standard and providing to it a wide spectrum of possibilities (Berdyayev, 2006).

3. DESIGN

The study was comparative and organized in the two samples to reveal the degree of trait manifestation. All respondents provided voluntary informed consent to participate in the study in accordance with the norms of the Local Ethics Committee of Krasnoyarsk State Medical University. The study was conducted from 2012 until 2016.

The study involved students of the Clinical Psychology Faculty who signed the agreement to participate in study by the typical informed consent. The number of students is 238 people. The students were divided into two groups according to the quality of the manifestation of the human life-world stability.

- The first group – students characterized by the manifestation of unconstructive human life-world stability.
- The second group – students characterized by the manifestation of constructive human life-world stability.

Table 1.
Distribution of respondents by parameters within groups.

Options	Gender		Age
	Women	Men	
First group	70%	30%	20,2±0,7
Second group	70%	30%	20,4±0,5

4. OBJECTIVES

The main objective of the research was to study the human life-world stability as a tool against the learned helplessness and is pointed out by two questions:

1) Can a human, characterized by the life-world stability, resist the learned helplessness?

2) What methods and strategies a human uses as the tools of confrontation with learned helplessness?

5. METHODS

The methodology “Investigation of the human life-world stability” (Loginova, 2012) was used as the main research method, which allows to study the features of the human life-world stability in the process of real-life activity (Loginova, 2012). This method is aimed at studying the features of the organization of human life and allows revealing the manifestations of the life stability (constructive, unconstructive, and stagnant).

The next research tool was “The technology of complex analysis of learned helplessness genesis” (Volkova, 2016). The technology was elaborated as the result of studying of unique ways of learned helplessness development and identification of its place in life of a specific person. The formation mechanisms and prevention ways of “the learned helplessness” phenomenon demands considering an environment factor, studying patterns of behavior mastered by means of interaction with the environment, mechanisms of fixing and maintenance of these patterns, and also their combinations to the specific physiological state caused by somatic factors. Studying the influence of a unique complex containing the specified structural elements as the model forming learned helplessness in ontogenesis since the period of the preschool childhood till adulthood, is one of the objectives of this research.

Mathematical processing of the obtained results was carried out using the SPSS Statistics 21 software package.

6. RESULTS

All results of two groups respondents on the method “Investigation of the human life-world stability” were systematized in accordance with the instruction and are presented in Table 2.

Human Life-World Stability as a Tool Against Learned Helplessness

Table 2.
Results of the human life-world stability of two groups.

Options	First group	Second group
Temporary of events tendency	The present 30% The past 40% The past - the present 30%	The present - the future 60% The past - the present - the future 40%
The ratio of verbs	The present 40% The past 40% The past - the present 20%	The present - the future 60% The past - the present - the future 40%
Criterion for the described events content selecting	Chronotopic 20% Topological 20% Biographical 60%	Chronotopic 30% Topological 60% Biographical 10%
General emotional background of events	Positive 30% Neutral 40% Negative 30%	Positive 60% Neutral 30% Negative 10%
The meaning of the described life events	The overall direction of the development line is conserved 20% General orientation is not withheld 30% Center of the development line 20% Completion of the development line 30%	The overall direction of the development line is conserved 50% General orientation is not withheld 30% The beginning of the development line 20%
Attitude to events	Value 15% Responsible 5% Rational 80 %	Value 60% Responsible 20% Rational 20%
Continuity of personal history	Retained 5% Situationally 30% Missing 65%	Retained 75% Situationally 20% Missing 5%
Author reflexive position	Holistic reflexive position 10% Situational reflexive attitude 30% Absence of a reflexive relation 60%	Holistic reflexive position 60% Situational reflexive attitude 25% Absence of a reflexive relation 10%

Differences between these groups are statistically significant ($t = -11.35$ at $p < 0.001$).

Table 3.
Study results in the clinical and control samples.

First group		Second group		<i>t-test</i>	<i>p</i>
μ	δ	μ	δ		
28.69	7.73	62.67	10.24	-11.35	0.001

The next step was to match the results of the human life-world stability and learned helplessness measurements. It was found that 85% of students characterized by the manifestation of unconstructive human life-world stability have signs of the learned helplessness state. In this case, 65% of this education was stably manifested, and

20% - situationally. It was found that 15% of students characterized by the manifestation of constructive human life-world stability have the signs the learned helplessness. In this case, only 5% of this education was stably manifested, and 10% - situationally.

The research results revealed that students characterized by the manifestation of unconstructive human life-world stability choose the following ways of confronting the learned helplessness:

- external support,
- appeal to a psychologist / psychotherapist,
- writing an analytical diary,

While, students characterized by the manifestation of constructive human life-world stability choose the following ways of confronting the learned helplessness:

- self-control,
- reflective attitude to events,
- regular self-assessment of emotional state.

7. CONCLUSION

It was founded, that the stagnating nature of the life-world stability manifestation does not contribute to productive life and optimal self-realization. It also forces the learned helplessness formation.

The constructive nature predominance of the human life-world stability contributes to the health preservation, personal growth and creativity, as well as learned helplessness prevention.

The results of the research demonstrate that the human life-world stability phenomenon and the learned helplessness are overlapped states, which point out different sides of effective/ ineffective and productive/ unproductive life self-fulfillment. This fact opens new prospective of interdisciplinary studies wide by the context and deep by the approach being oriented to the following objectives in the system of psychological facilitation:

- 1) Decrease in number and intensity of psychological difficulties in relationship with the close social environment;
- 2) Subjective perceptions of own psychological state as improving;
- 3) Increase in indicators of psychological and physical health;
- 4) Increase in level of search activity;
- 5) Increase in level of independence;
- 6) Increase in stress resistance;
- 7) Development of emotional intelligence;
- 8) Improvement of an emotional state, increase in vitality, social activity.

These points urge the necessity of developing the system of psychological support including psychotherapy, psycho correction and psychological prevention which are aimed at solving the problem of unconstructive life-world stability and learned helplessness of the person.

Thus, within the limits of the systemic anthropological psychology consistently developing ideas of cultural-historical psychology in a post-nonclassical key, life self-fulfillment of a human being acts as the process mechanism which is a transition of possibilities to the reality, transition of a human resource to the potentialities leading a human being to limits of his personal life in those points, sectors, segments of the life world in which environment answers its possibilities with occurrence of new value and semantic measurements.

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Chapter #5

COMPASSION SATISFACTION, COMPASSION FATIGUE AND PERSONALITY TRAITS IN SLOVAK HELPING PROFESSIONALS

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ABSTRACT

This chapter is focused on the personality correlates of compassion satisfaction (CS) and secondary traumatic stress (STS) in helping professionals. The aim of this study is to explore the relationships between selected personality variables, CS and STS among helping professionals in Slovakia. Three separate studies were conducted, each of which was focused on different personality variables (Study 1: optimism, self-esteem, emotional well-being, anxiety, depression; Study 2: Five-Factor personality traits; Study 3: interpersonal behavior). The participants (236 in Study 1; 101 in Study 2 and 94 in Study 3; helping professionals working in social-care institutions, health care and rescue services) completed the Professional Quality of Life scale, Life Orientation test – revised, Rosenberg Self-Esteem scale, Emotional Habitual Subjective Well-Being scales, State-Trait Anxiety Inventory, Beck Depression Inventory, NEO Five-Factor Inventory and Interpersonal Check List. The results showed that CS and STS were significantly correlated with, as well as predicted by, the selected personality variables. The findings highlight the importance of emotional well-being, conscientiousness and extraversion in promoting CS and the significance of emotional well-being and interpersonal behavior in reducing STS. This will be used as a background in the upcoming intervention programs for Slovak helping professionals which will be designed to help them increase CS and decrease STS.

Keywords: compassion satisfaction, compassion fatigue, personality traits, helping professionals.

1. INTRODUCTION

Professional helping is associated with a variety of positive and negative consequences such as compassion satisfaction, compassion fatigue, burnout, perceived stress and secondary traumatic stress. These have been well described in the scientific literature (Figley, 1995; Figley, 2002; Figley & Stamm, 1996; Maslach, 2003; Maslach, Schaufeli, & Leiter, 2001; Stamm, 2010). Compassion satisfaction (CS) refers to the positive feelings about work as a result of helping; a helper views his/her work as useful, meaningful and valuable and also feels positively about his/her colleagues (Stamm, 2010). On the contrary, compassion fatigue refers to the negative effects of helping in the cognitive, emotional and behavioral domain (Figley, 2002). These are connected with the helper's exposure to the problems and traumas of his/her clients or patients (Bride, Radey, & Figley, 2007; Figley, 1995; Figley, 2002). The symptoms of compassion fatigue are also described by the terms secondary traumatic stress (STS), secondary traumatic stress disorder, secondary victimization and vicarious traumatization (Bride et al., 2007; Figley, 2002; McCann & Pearlman, 1990). There is an emphasis on the indirect (secondary, vicarious) effect of the traumatic experience of clients/patients on the helper who can start to feel traumatized as a result of helping (Bride et al., 2007; Figley, 2002; McCann

& Pearlman, 1990). However, it is important to distinguish the STS experienced by helpers from the primary stress experienced by their clients/patients (Figley, 2002). STS is often associated with burnout (Figley, 1995; Figley, 2002). Burnout (BO), as part of compassion fatigue, has been defined as “a result of frustration, powerlessness, and inability to achieve work goals” (Figley, 2002, p. 19) and mainly refers to the symptoms of emotional exhaustion of a helper (Stamm, 1999; Stamm, 2010). The unidimensional conceptualization of BO by Figley (2002) and Stamm (1999; 2010) differs from the model of burnout by Maslach (2003) in which BO is viewed as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment.

2. BACKGROUND

Research studies have shown that the positive and negative consequences of helping (CS, compassion fatigue – BO and STS) are correlated with various psychological variables such as empathy (Figley, 2002), mastery (Adams, Boscarino, & Figley, 2006), helplessness (Killian, 2008), trauma history of a helper or his/her experience of negative life events (Adams et al., 2006; Killian, 2008), mindfulness and emotional separation (Thomas & Otis, 2010), wellness (Lawson & Myers, 2011), satisfaction with work and relationships in the workplace (Ray, Wong, White, & Heaslip, 2013; Stamm, 2010), anxiety and depression (Hegney et al., 2014; Köverová, 2016; Tremblay & Messervey, 2011), self-esteem, dispositional optimism and emotional well-being (Köverová, 2016; Köverová & Ráczová, 2017).

The role of personality traits (according to the Five-Factor Model and Leary's interpersonal circumplex model) in explaining the positive and negative effects of helping has also been supported in several studies (Alarcon, Eschleman, & Bowling, 2009; Armon, Shirom, & Melamed, 2012; Bakker, Zee, Lewig, & Dollard, 2006; David & Quintão, 2012; Geuens, Bogaert, & Franck, 2017; Judge, Heller, & Mount, 2002; Swider & Zimmerman, 2010; Yu, Jiang, & Shen, 2016; Zellars, Hochwater, Hoffman, Perrewé, & Ford, 2004). Alarcon et al. (2009) found that BO was significantly correlated with emotional stability, extraversion, conscientiousness and agreeableness. Armon et al. (2012) identified that neuroticism positively predicted global burnout and negatively predicted emotional exhaustion whereas conscientiousness negatively predicted global burnout and positively predicted emotional exhaustion. Bakker et al. (2006) reported that emotional exhaustion was predicted by emotional stability; depersonalization was predicted by emotional stability, extraversion and intellect/autonomy; and personal accomplishment was predicted by extraversion and emotional stability. Yu et al. (2016) found that conscientiousness and openness were correlated with high levels of CS whereas neuroticism predicted high levels of compassion fatigue and BO. Zellars et al. (2004) reported that neuroticism predicted high levels of emotional exhaustion and depersonalization whereas extraversion predicted high levels of personal accomplishment. Geuens et al. (2017) tested the relationships between burnout, personality traits (Five-Factor Model) and interpersonal behavior (interpersonal circumplex model). In their study, emotional exhaustion was predicted by neuroticism, submissive-friendly behavior and dominant-friendly behavior; depersonalization was predicted by neuroticism, conscientiousness, friendly behavior, submissive-friendly behavior and dominant-hostile behavior; and personal accomplishment was predicted by neuroticism, conscientiousness, openness and hostile behavior (Geuens et al., 2017).

Although our previous research (Köverová, 2016) has offered an insight into the psychological correlates of CS, BO and STS in Slovak helping professionals, little is known about the personality predictors of the positive and negative effects of helping in

this group. This chapter presents the results of three separate studies which examined the personality correlates and predictors of the positive and negative effects of helping (CS and STS) among Slovak helping professionals. In each study, different personality variables were tested: optimism, self-esteem, emotional well-being, anxiety, depression (Study 1); Five-Factor personality traits (Study 2) and interpersonal behavior (Study 3).

3. OBJECTIVES

The objectives of the first study were (1) to explore the associations between selected psychological variables (optimism, self-esteem, emotional well-being, anxiety and depression) and the positive and negative consequences of helping (CS and STS); and (2) to identify the significant psychological predictors of CS and STS among Slovak helping professionals. It was hypothesized that optimism, self-esteem, emotional well-being, anxiety and depression would be (1) significantly correlated with and (2) would be able to predict CS and STS in Slovak helping professionals.

The objectives of the second study were (1) to test the relationships between the Five-Factor personality traits, CS and STS; and (2) to identify the significant Five-Factor personality predictors of CS and STS among Slovak helping professionals. It was hypothesized that the Five-Factor personality traits would be (1) significantly correlated with and (2) would be able to predict CS and STS in Slovak helping professionals.

The objectives of the third study were (1) to analyze the associations between interpersonal behavior, CS and STS; and (2) to identify the significant interpersonal predictors of CS and STS among Slovak helping professionals. It was hypothesized that interpersonal behavior would be (1) significantly correlated with and (2) would be able to predict CS and STS in Slovak helping professionals.

4. METHOD

4.1. Study 1

4.1.1. Participants

The participants in the first study were 236 helping professionals: educators (47%), health professionals (30.1%), social workers (12.7%), psychologists (7.2%) and teachers (3%) employed in social-care institutions in Slovakia: children's homes (69.9%), health care and rescue services (30.1%). More women (89.8%) than men (9.7%) participated (1 person did not report their gender). The age of the participants was 20-61 years ($M = 40.18$; $SD = 11.44$) and the length of their working experience was 0-42 years ($M = 11.26$; $SD = 10.59$). Participation in the research was voluntary and anonymous.

4.1.2. Instruments

The Professional Quality of Life scale (ProQOL 5; Stamm 2010; Slovak adaptation Köverová, 2016; Köverová, in press). The ProQOL 5 is a 30-item self-report measure of compassion satisfaction (CS; e.g. "My work makes me feel satisfied."), burnout (BO; e.g. "I feel worn out because of my work as a helper.") and secondary traumatic stress (STS; e.g. "I feel as though I am experiencing the trauma of someone I have helped."). A 5-point scale is used to indicate the frequency of experiencing the positive and negative consequences of helping in the last 30 days (1 = never; 5 = always). A confirmatory factor analysis of the Slovak version of the ProQOL only supported the two-factor model of CS and STS (Köverová, in press). Therefore, only the two subscales were analyzed in this

study. The internal consistency estimates (Cronbach α) of CS and STS were 0.845 and 0.797, respectively.

Life Orientation Test-revised (LOT-R; Scheier, Carver, & Bridges, 1994; Slovak adaptation Köverová & Ferjenčík, 2013). The LOT-R is a 10-item self-report measure of dispositional optimism (e.g. "In uncertain times, I usually expect the best."). The answers are rated on a 5-point scale (0 = strongly disagree; 4 = strongly agree). In this study, the internal consistency estimate (Cronbach α) of the scale was 0.679.

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965; Slovak adaptation Halama & Bieščad, 2006). The RSES is a 10-item self-report measure of global self-worth (e.g. "I feel that I have a number of good qualities."). The level of positive and negative feelings about the self is rated on a 4-point scale (1 = strongly disagree; 4 = strongly agree). In this study, the Cronbach α estimate of the scale was 0.794.

Emotional Habitual Subjective Well-Being scales (SEHP; Džuka & Dalbert, 2002). The SEHP is a 10-item self-report measure of emotional component of well-being consisting of two scales: the scale of the positive state of mind (4 emotions and physical states - joy, pleasure, happiness, energy) and the scale of the negative state of mind (6 emotions and physical states - fear, anger, sadness, shame, guilt, pain). A 6-point scale is used to indicate the frequency of experiencing the positive and negative emotions and physical states (1 = almost never; 6 = almost always). In this study, the internal consistency estimates (Cronbach α) were 0.769 (scale of positive state of mind) and 0.705 (scale of negative state of mind).

State-Trait Anxiety Inventory, Trait version (STAI X-2; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983; Slovak adaptation Müllner, Ruisel, & Farkaš, 1980). The STAI X-2 is a 20-item self-report measure of anxiety as a trait. A 4-point scale (1 = almost never; 4 = almost always) is used to indicate the frequency of the usual feelings of a person (e.g. "I am happy." - reverse coded). In this study, the Cronbach α estimate of the scale was 0.863.

Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996; Slovak translation Praško, Buliková, & Sigmundová, 2009). The BDI is a self-report measure of the severity of depression. A 4-point scale is used to indicate the severity of 21 depression symptoms (0 = low severity; 3 = high severity). In this study, the Cronbach α estimate of the scale was 0.833.

4.1.3. Statistical analyses

IBM SPSS Statistics 21 software was used to analyze the data. Pearson correlations were used to test the relationships between the positive and negative consequences of helping (CS, STS) and selected psychological variables (optimism, self-esteem, emotional well-being, anxiety and depression). Two separate regression analyses (Enter method) were used to identify the predictors of CS and STS. The tested predictors were optimism, self-esteem, emotional well-being (positive and negative state of mind), anxiety and depression.

4.2. Study 2

4.2.1. Participants

The participants in the second study were 101 health professionals employed in hospitals and social-care institutions in Slovakia (40.6% nurses; 59.4% care assistants). More women (90.1%) than men (9.9%) participated. The age of the participants was 20-66 years ($M = 41.55$; $SD = 10.46$) and the length of their working experience was 0.5-47 years ($M = 14.18$; $SD = 11.18$). Participation in the research was voluntary and anonymous.

4.2.2. Instruments

The Professional Quality of Life scale (ProQOL 5; Stamm 2010; Slovak adaptation Köverová, 2016; Köverová, in press) was used to measure the positive and negative effects of helping (CS and STS). (See 4.1.2. for a detailed description of this measure). In this study, the internal consistency estimates for CS were 0.570 (Cronbach α) and 0.786 (McDonald's ω); and the internal consistency estimates for STS were 0.535 (Cronbach α) and 0.710 (McDonald's ω).

NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992; Slovak adaptation Ruisel & Halama, 2007). The NEO-FFI is a 60-item measure of personality traits based on the Five-Factor Model: neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A) and conscientiousness (C). The answers are rated on a 5-point scale (0 = strongly disagree; 4 = strongly agree). In this study, the internal consistency estimates (Cronbach α) of the scales were 0.608 (N), 0.540 (E), 0.499 (O), 0.563 (A) and 0.616 (C). The internal consistency (McDonald's ω) of the scales were 0.639 (N), 0.606 (E), 0.521 (O), 0.564 (A) and 0.785 (C). Due to the values of α and ω coefficients, only the N, E and C scales were used in the analyses.

4.2.3. Statistical analyses

Jamovi 0.8.1.13 and IBM SPSS Statistics 21 software were used to analyze the data. Pearson correlations were used to test the relationships between CS, STS and the three personality traits (N, E, C). Two separate regression analyses (Enter method) were used to test if N, E and C predicted CS and STS.

4.3. Study 3

4.3.1. Participants

The participants in the third study were 94 helping professionals: nurses (52.1%), firemen (31.9%) and doctors (16%) working in health care and rescue services in Slovakia. In the sample, 58.5% were women and 41.5% were men. They were aged between 20-64 years ($M = 37.50$; $SD = 9.95$) and their length of working experience was 0-45 years ($M = 15.38$; $SD = 10.81$). Participation in the research was voluntary and anonymous.

4.3.2. Instruments

The Professional Quality of Life scale (ProQOL 5; Stamm 2010; Slovak adaptation Köverová, 2016; Köverová, in press) was used to measure CS and STS. (See 4.1.2. for a more detailed description of this measure). In this study, the internal consistency estimates (Cronbach α) were 0.833 for CS and 0.866 for STS.

Interpersonal Check List (ICL; LaForge & Suczek, 1955; Slovak adaptation Kožený & Ganický, 1976). The ICL is a self-report measure of interpersonal behavior. From a list of 128 items, a person selects those which best describe his own interpersonal behavior. The results reflect the intensity of eight interpersonal behaviors. In this study, the internal consistency (split-half) estimates of the eight scales ranged from 0.664 to 0.833 (Table 5).

4.3.3. Statistical analyses

IBM SPSS Statistics 21 software was used in the analyses. Pearson correlations were used to test the relationships between CS, STS and interpersonal behaviors. Two separate regression analyses (Enter method) were used to identify the interpersonal predictors of CS and STS.

5. RESULTS

5.1. Study 1

The descriptive statistics showed that the helping professionals in the first study experienced the positive consequences of helping more than the negative effects. They showed moderate to high levels of CS ($M = 3.70$; $SD = 0.58$), optimism ($M = 2.51$; $SD = 0.56$), and self-esteem ($M = 3.20$; $SD = 0.40$); moderate levels of a positive state of mind ($M = 3.62$; $SD = 0.81$); low to moderate levels of a negative state of mind ($M = 2.28$; $SD = 0.57$), anxiety ($M = 2.08$; $SD = 0.35$) and STS ($M = 2.30$; $SD = 0.54$); and low levels of depression ($M = 0.25$; $SD = 0.24$).

Table 1.

Pearson correlations between compassion satisfaction (CS), secondary traumatic stress (STS) and selected psychological variables.

	CS		STS	
	r	p	r	p
Optimism	0.307	<0.001*	-0.290	<0.001*
Self-esteem	0.237	0.001*	-0.365	<0.001*
Positive state of mind	0.499	<0.001*	-0.081	0.243
Negative state of mind	-0.156	0.024	0.378	<0.001*
Anxiety	-0.315	<0.001*	0.386	<0.001*
Depression	-0.347	<0.001*	0.248	<0.001*

Table 2.

Predictors of compassion satisfaction (CS) and secondary traumatic stress (STS).

	Predictors	R ²	B	β	t	p
CS	Optimism	0.298	0.118	0.109	1.408	0.161
	Self-esteem		-0.084	-0.057	-0.719	0.473
	Positive state of mind		0.323	0.438	6.247	<0.001*
	Negative state of mind		-0.035	-0.033	-0.495	0.621
	Anxiety		0.118	0.070	0.738	0.461
	Depression		-0.514	-0.212	-2.799	0.006*
STS	Optimism	0.241	-0.063	-0.068	-0.842	0.401
	Self-esteem		-0.237	-0.184	-2.240	0.026
	Positive state of mind		0.106	0.166	2.284	0.023
	Negative state of mind		0.204	0.223	3.194	0.002*
	Anxiety		0.330	0.226	2.286	0.023
	Depression		-0.038	0.165	-0.227	0.820

The correlation analyses revealed several significant ($p \leq 0.004$; after Bonferroni correction: $p = 0.05/12$) weak to moderate relationships between the tested variables (Table 1). Optimism and self-esteem correlated positively with CS and negatively with STS. Anxiety and depression correlated negatively with CS and positively with STS. High

levels of a positive state of mind were associated with high levels of CS. High levels of a negative state of mind were associated with high levels of STS (Table 1).

The regression analyses (Enter method) revealed that optimism, self-esteem, a positive state of mind, a negative state of mind, anxiety and depression were significant predictors of CS and STS (Table 2). The amount of variance explained by the tested predictors was 29.8% for CS and 24.1% for STS. A Bonferroni correction ($\alpha = 0.05/6$) was conducted to adjust the significance level of the p-value for each predictor to ≤ 0.008 . The significant predictors of CS were a positive state of mind ($\beta = 0.438$; $p < 0.001$) and depression ($\beta = -0.212$; $p = 0.006$). STS was significantly predicted by a negative state of mind ($\beta = 0.223$; $p = 0.002$).

5.2. Study 2

Helping professionals in the second study reported moderate to high levels of CS ($M = 3.98$; $SD = 0.69$) and low to moderate levels of STS ($M = 2.30$; $SD = 0.59$); moderate levels of neuroticism ($M = 2.24$; $SD = 0.55$) and extraversion ($M = 2.93$; $SD = 0.50$); and moderate to high levels of conscientiousness ($M = 3.79$; $SD = 0.62$).

Table 3.
Pearson correlations between compassion satisfaction (CS), secondary traumatic stress (STS) and Five-Factor personality traits (N, E, C).

	CS		STS	
	r	p	r	p
Neuroticism	0.018	0.428	0.122	0.112
Extraversion	0.338	<0.001*	-0.031	0.380
Conscientiousness	0.387	<0.001*	-0.047	0.320

Table 4.
Five-Factor personality traits (N, E, C) as predictors of compassion satisfaction (CS) and secondary traumatic stress (STS).

	Predictors	R ²	B	β	t	p
CS	Neuroticism		0.284	0.226	2.288	0.024
	Extraversion	0.248	0.488	0.352	3.459	0.001*
	Conscientiousness		0.360	0.323	3.528	0.001*
STS	Neuroticism		0.145	0.135	1.198	0.234
	Extraversion	0.017	0.049	0.041	0.356	0.723
	Conscientiousness		-0.037	-0.039	-0.368	0.714

The analyses revealed that only CS was significantly correlated with, and predicted by, the Five-Factor personality traits (Table 3, Table 4). Statistically significant positive and moderate relationships ($p < 0.008$; after Bonferroni correction $p = 0.05/6$) were found between CS and conscientiousness ($r = 0.387$; $p < 0.001$), and between CS and extraversion ($r = 0.338$; $p < 0.001$). Extraversion and conscientiousness were also significant predictors of CS ($p < 0.016$; after Bonferroni correction $p = 0.05/3$). High levels of extraversion and conscientiousness predicted high levels of CS ($\beta = 0.352$, $p = 0.001$; $\beta = 0.323$, $p = 0.001$, respectively).

No significant relationships were found between STS and the Five-Factor personality traits. Neither were N, E and C able to predict the levels of STS.

5.3. Study 3

Helping professionals in the third study reported moderate to high levels of CS ($M = 3.87$; $SD = 0.56$) and low levels of STS ($M = 1.94$; $SD = 0.59$). The descriptive statistics for the eight scales of interpersonal behavior are presented in Table 5.

Table 5.
Descriptive statistics for interpersonal behavior and Pearson correlations between compassion satisfaction (CS), secondary traumatic stress (STS) and interpersonal behavior.

	M	SD	Spearman-Brown coefficient	CS		STS	
				r	p	r	p
PA - Autocratic	4.38	1.33	0.833	0.182	0.040	0.325	0.001*
BC - Narcissistic	3.97	1.06	0.727	0.228	0.014	-0.009	0.465
DE - Aggressive	3.70	1.26	0.720	0.067	0.260	0.258	0.006
FG - Distrustful	3.00	1.48	0.693	-0.143	0.084	0.288	0.002*
HI - Self-effacing	3.16	1.34	0.784	-0.238	0.010	0.080	0.221
JK - Dependent	3.97	1.14	0.785	-0.061	0.281	0.131	0.104
LM - Cooperative	4.93	1.22	0.664	0.068	0.256	0.012	0.453
NO - Responsible	4.90	1.18	0.829	-0.008	0.471	0.256	0.006

Table 6.
Octants of interpersonal behavior as predictors of compassion satisfaction (CS).

Predictors	R ²	B	β	t	p
PA - Autocratic	0.203	0.082	0.193	0.991	0.325
BC - Narcissistic		0.119	0.224	1.409	0.162
DE - Aggressive		0.002	0.005	0.027	0.978
FG - Distrustful		-0.061	-0.160	-1.074	0.286
HI - Self-effacing		-0.107	-0.254	-1.472	0.145
JK - Dependent		-0.068	-0.139	-0.693	0.490
LM - Cooperative		0.158	0.343	1.959	0.053
NO - Responsible		-0.086	-0.180	-0.913	0.364

No significant relationships were found between CS and interpersonal behavior (Table 5). Neither were the interpersonal traits able to predict the levels of CS (Table 6).

The analyses revealed that only STS was significantly correlated with, and predicted by, interpersonal behavior (Table 5, Table 7). Statistically significant ($p < 0.003$; after Bonferroni correction $p = 0.05/16$) low to moderate and positive relationships were found between STS, autocratic behavior ($r = 0.325$; $p = 0.001$) and distrustful behavior ($r = 0.288$; $p = 0.002$). Distrustful behavior was also the strongest statistically significant ($p < 0.006$; after Bonferroni correction $p = 0.05/8$) predictor of STS ($\beta = 0.493$; $p = 0.001$). The second most significant predictor of STS was narcissistic behavior ($\beta = -0.417$; $p = 0.005$). High levels of STS were predicted by high levels of distrustful interpersonal behavior and low levels of narcissistic interpersonal behavior.

Table 7.
Octants of interpersonal behavior as predictors of secondary traumatic stress (STS).

	Predictors	R ²	B	β	t	p
STS	PA - Autocratic		0.220	0.497	2.782	0.007
	BC - Narcissistic		-0.232	-0.417	-2.856	0.005*
	DE - Aggressive		-0.099	-0.212	-1.384	0.170
	FG - Distrustful	0.327	0.197	0.493	3.592	0.001*
	HI - Self-effacing		-0.097	-0.220	-1.390	0.168
	JK - Dependent		0.076	0.148	0.804	0.423
	LM - Cooperative		-0.119	-0.246	-1.526	0.131
	NO - Responsible		0.149	0.298	1.645	0.104

6. DISCUSSION

This research presents the findings of a national Slovak research project focused on the positive and negative consequences of professional helping. The aim of the studies presented in this chapter was to identify the significant personality correlates and predictors of CS and STS in Slovak helping professionals working in health-care and social-care institutions. Three separate studies were conducted, each of which was focused on different personality variables (Study 1: optimism, self-esteem, emotional well-being, anxiety, depression; Study 2: Five-Factor personality traits; Study 3: interpersonal behavior). It was found that CS and STS were significantly correlated with, as well as predicted by, the selected personality variables.

In Study 1 and in line with the results of previous studies (Hegney et al., 2014; Köverová, 2016; Tremblay & Messervey, 2011), significant correlations were found between CS and STS and optimism, self-esteem, emotional well-being (positive and negative state of mind), anxiety and depression. CS and STS were also predicted by the tested psychological variables and especially by emotional well-being (positive and negative state of mind). The important role of emotional well-being in the prediction of CS and STS among helping professionals was also observed by Köverová and Ráciová (2017) in another study.

In the first study, CS was most strongly correlated with, as well as best predicted by, a positive state of mind. Its second most significant predictor was the level of depression. This finding suggests that the absence of depression symptoms is associated with high levels of CS in helping professionals whereas an increased severity of depression symptoms can reduce the level of CS. STS was most strongly correlated with anxiety and negative state of mind while the latter was also its only and strongest significant predictor. These findings highlight the importance of emotional well-being in promoting CS and reducing STS in helping professionals. A high frequency of experiencing positive emotions at work (happiness, joy, pleasure, energy) is associated with high levels of CS. On the contrary, a high frequency of experiencing negative emotions at work (fear, anger, sadness, shame, guilt, pain) can increase levels of STS. However, it is important to consider the role of optimism, self-esteem, anxiety and depression in relation to CS and STS based on their mutual relationships.

In Study 2, the Five-Factor personality traits (extraversion and conscientiousness) were significantly correlated with the positive effects of helping. CS was also best predicted by extraversion and conscientiousness. These findings suggest that helping professionals with high levels of extraversion (sociable, talkative, active, assertive, happy, energetic, optimistic) and conscientiousness (reliable, effective, organized, systematic, goal-oriented) are more likely to experience high levels of CS. The relationships between the positive effects of helping (CS, personal accomplishment) and the Five-Factor personality traits (extraversion and conscientiousness) have also been supported in previous research (Bakker et al., 2006; Yu et al., 2016; Zellars et al., 2004). Although research has also demonstrated that neuroticism correlates with global burnout, emotional exhaustion and depersonalization (Alarcon et al., 2009; Armon et al., 2012; Bakker et al., 2006; Geuens et al., 2017; Zellars et al., 2004), no significant relationships were found between any of the Five-Factor personality traits and the negative effects of helping (STS) in Study 2.

In Study 3, interpersonal behavior was only significantly related to the negative effects of helping (STS). High levels of STS were correlated with autocratic behavior (PA) and distrustful behavior (FG), which was also the strongest predictor of STS. The explanation for the former finding could be that helping professionals with autocratic interpersonal behavior tend to have more control and influence over their clients and thus are more involved in helping (Kožený & Ganický, 1976). As a result, STS can start to develop faster. Helpers with distrustful behavior can be at risk of STS because they tend to keep a psychological distance from others which helps them maintain emotional stability (Kožený & Ganický, 1976). This interpersonal strategy seems inappropriate in professional helping since working with a traumatized client requires the closer engagement of a helper. Therefore, when a distrustful helper is confronted with trauma, STS can increase.

In the third study, low levels of STS were also predicted by narcissistic behavior (BC). This is described as self-oriented behavior, i.e. self-confident, independent, self-reliant, self-satisfied, egoistic (Kožený & Ganický, 1976). A helper with this interpersonal strategy is less able to understand the problems and feelings of the clients and will therefore experience low levels of STS. On the contrary, the high empathy of a helper is connected with high levels of secondary traumatic stress (Figley, 2002). Similar results were presented in the study by Geuens et al. (2017) who found that dominant-hostile (BC) behavior was able to predict depersonalization among nurses. Depersonalization describes the emotional distance of a helper from the clients and subsequent negative emotions and attitudes towards them (Maslach et al., 2001). Although empathy is an important ability for helping professionals, emotional distance and low empathy can be considered as protective factors of the negative effects of helping.

One of the limitations of the studies was the gender disproportion towards women in the samples. This reflects the predominance of women in helping professions in Slovakia and did not allow us to analyze the predictors of CS and STS separately for each gender. Secondly, different types of helping professions were involved in the studies. While all of them worked in institutions providing health care or social care, there could be some differences in the sources and predictors of CS and STS as a result of differing occupations. Future research should address these issues.

7. FUTURE RESEARCH DIRECTIONS

The results of the three studies presented in this chapter highlight the importance of personality traits in explaining the positive and negative effects of professional helping. In particular, the findings point to the significance of emotional well-being, extraversion

and conscientiousness in promoting CS and to the role of emotional well-being and interpersonal behavior in reducing STS among Slovak helping professionals. It is helpful to understand which personality traits professional helpers should have in order to do their work well and to feel high compassion satisfaction and low compassion fatigue as a result of helping. Recruiters can benefit from information about personality traits of the applicants to identify the most suitable candidates for helping professions.

These findings are also helpful for trainers in prevention and intervention programs in order to identify those helping professionals who would benefit the most from prevention and intervention activities. Indeed, the results of the presented studies will be used in the upcoming evidence-based intervention programs for helping professionals in Slovakia. The programs will mainly be focused on working with emotions to promote CS and to reduce STS (e.g. identification of the sources of the positive and negative emotions at work; possibilities of promoting positive experiences at work; relaxation; autogenic training). Activities aimed at positive thinking development (optimistic expectancies) could be helpful as well. The training of professional competencies (communication, conflict management, assertiveness training, time management, coping with work stressors) to improve the interpersonal skills of helping professionals could also help them increase their CS and decrease STS. An important part of future research activities will be testing the effectiveness of these interventions.

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KEY TERMS & DEFINITIONS

Compassion satisfaction: the positive feelings about work as a result of helping; a helper with high levels of compassion satisfaction views his/her work as useful, meaningful and valuable and also feels positively about his/her colleagues (Stamm, 2010).

Compassion fatigue: the negative effects of helping in the cognitive, emotional and behavioral domain (Figley, 2002). Compassion fatigue is a more user-friendly term for secondary traumatic stress disorder (Figley, 2002).

Secondary traumatic stress: the consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other – the stress resulting from helping (or wanting to help) a traumatized or suffering person (Figley, 1995).

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Chapter #6

PERCEIVED STRESS AND BURNOUT IN RELATION TO SELF-CARE ACTIVITIES IN HELPING PROFESSIONALS

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ABSTRACT

The main aim of this study was to explore the level of perceived stress and burnout syndrome among Slovak helping professionals as well as to clarify the relationship between the negative consequences of helping (stress and components of burnout syndrome) and performed activities of self-care. The study included 745 helping professionals in Slovakia in the age range was 20-65 years ($M = 44.04$; $SD = 10.33$ of whom 89% were women. The respondents completed the Slovak adaptation of the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996), Slovak version of the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) and the Performed Self-Care Questionnaire (Lichner, Halachová, & Lovaš, 2018). In general, the results showed a moderate level of perceived stress, slight level of exhaustion, low level of depersonalization and moderate to high level of personal accomplishment in this sample. The results also suggest that Slovak helping professionals perform more psychological than physical self-care activities. In general, the linear regression analyses indicate that performed self-care, especially psychological self-care and self-care at work, are significant predictors of burnout syndrome and perceived stress. The results of this study will contribute to the preparation of preventive programs for Slovak professionals, which is one of the primary objectives of the broader grant project, which the current study is a part of.

Keywords: perceived stress, burnout syndrome, self-care activities, helping professionals.

1. INTRODUCTION

One of the most commonly reported negative consequences involved in the helping profession is burnout syndrome (Lourel & Gueguen, 2007). Those working in professions such as social work, healthcare, nursing, mental health, etc, who are closely involved with their clients/patients are at greater risk of developing burnout syndrome. (Maslach, Schaufeli, & Leiter, 2001; Volpe et al., 2014). The present study is based on one of the most popular approaches to date; Maslach's model of burnout (Maslach & Leiter, 2017). Maslach describes burnout as a three-dimensional construct which consists of emotional exhaustion, depersonalization and a reduced personal level of satisfaction with performance and competence at work. This usually occurs in professionals working with people on a daily basis. The role of helping workers is to take care of others, but to be able to do so, they must keep themselves at a particular level mental and physical well-being (Wisse, Hersh, & Gibson, 2012). Barnett and Cooper, (2009) have highlighted that ethical practice requires helping professionals to monitor their physical and mental state in order to maintain their competence and ability to provide clients with an adequate level of service. Hence performed self-care is considered to be a natural starting point for the prevention and intervention of burnout syndrome or other negative consequences of helping (Jones, 2005).

The present study is mainly focused on the challenges that helping professionals deal with most often: burnout and perceived stress (Barnett & Cooper, 2009). More specifically, the present research deals with the relationship between the negative consequences of helping and performed activities of self-care as well as identifying the most important predictors of perceived stress and burnout syndrome. The findings of the present research are particularly important as a basis for the development of evidence-based prevention and intervention programs for specific groups of helping professionals in Slovakia.

2. BACKGROUND

2.1. Burnout syndrome and perceived stress

The term burnout has been used in scientific literature since the end of the second half of the 20th century to denote the failure at work which is caused by physical and emotional exhaustion (Maslach & Leiter, 2017). However, the original concept of burnout has undergone many changes since its inception. This can be seen in the fact that many different definitions of burnout syndrome exist (Perlman & Hartman, 1982). The present study is based on one of the most popular approaches to date; Maslach's model of burnout (Maslach & Leiter, 2017). Maslach describes burnout as a three-dimensional construct which consists of emotional exhaustion, depersonalization, and a reduced personal level of satisfaction with the performance and competence at work. This usually occurring in the helping profession. Those working in professions such as social work, healthcare, nursing, mental health, who are closely involved with their clients/patients are at greater risk of developing burnout syndrome (Maslach et al., 2001; Volpe et al., 2014).

Burnout was previously conceptualized as the reaction to job stress generated by the various demands and challenges of the helping profession (Barnett & Cooper, 2009; Maslach et al., 1996). Further, Jenkins and Baird (2002) and Köverová and Ráčzová (2017) clarify that burnout is the defensive response to prolonged occupational exposure to demanding interpersonal situations that produce psychological strain. Perceived stress becomes one of the significant factors which is related to the development of burnout syndrome. Cohen et al. (1983) have defined perceived stress as experienced levels of stress, i.e. the degree to which situations in one's (work) life are appraised as stressful. Research has shown that prolonged exposure to high levels of work stress and a high workload are correlated with burnout (Köverová & Ráčzová, 2017; Volpe et al., 2014; Maslach et al., 2001)

Helping professionals are often exposed to the traumatic life experiences of their clients and the various challenging emotions and behaviors that follow (Ting, Jacobson, & Sanders, 2011). The working conditions of social work in Slovakia are characterized by low salary, high number of clientele, time pressure, insufficient working conditions (workspace and equipment) and the stigmatic attitudes towards help-seeking (supported by the media) (Lovašová, 2016). These conditions, together with the complexity of a social worker's profession, create a scenario where the stress perception of these workers is high. This has also been indicated in various studies such as Lesage, Berjot and Deschamps (2015) who examined stress in 501 randomly selected health care workers in France. Moreover, Ting et al. (2011) conducted research on 515 mental health workers with suicidal clients.

2.2. Performed self-care

The role of helping workers is to take care of others, but to be able to do so, they must keep themselves in good mental and physical health (Wisse et al., 2012). Barnett and Cooper, (2009) emphasise that ethical practice requires helping professionals to monitor

their physical and mental state in order to maintain their competence and ability to provide clients with an adequate level of service. Hence performed self-care is considered to be a natural starting point for the prevention and intervention of burnout syndrome or other negative consequences of helping (Jones, 2005).

Performed self-care, as a construct, can be defined as a set of intentional steps related to the care of physical, mental and emotional health (Lovaš & Hricová, 2015). The lack of self-care in relation to burnout syndrome as one of the negative consequences of helping has been developed in the studies of Maltzman (2011) and Moore, Bledsoe, Perry, and Robinson (2011). In their studies, the authors emphasize that the primary concern for self-care is, in particular, to reduce stress which causes emotional exhaustion.

Moreover, the preventive effects of self-care activities on the experience of burnout syndrome have been confirmed in many studies (e.g. Carrol, Gilroy, & Murra, 1999; Barnett & Cooper, 2009). Richards, Campenni and Muse-Burke (2010) found that there is a relationship between burnout and these self-care activities as well as indications of a positive influence on the subjective well-being of employees. According to this study (Richards et al., 2010), self-care activities spanned the physical, psychological, spiritual as well as professional spheres. Barnett and Cooper (2009) has added that self-care acts as a buffer, protects against and minimizes the symptoms related to burnout as well as the other negative consequences of helping. The activities which can decrease one's overload are the ability to set priorities, searching for social support, time management of tasks, reappraisal or self-monitoring. Jones (2005) highlights the traditional means of decreasing the risk of burnout by adhering to a healthy lifestyle and mental hygiene (open conversation about problems and feelings; healthy diet; sufficient level of rest and exercise; avoidance of risk behaviour; using relaxation techniques).

3. OBJECTIVES

Research concerning the relationship between burnout (or other negative consequences of helping) and self-care in Slovakia has been scarce. Therefore, the purpose of the present study is to explore the level of perceived stress and burnout among Slovak professionals. It also aims to clarify the relationship between the components of burnout syndrome and the four areas of performed self-care activities (psychological, work, health and physical, Lichner et al., 2018) and concurrently identify the most important predictors of burnout syndrome.

4. METHOD

4.1. Research sample and procedure

The presented research is part of a national Slovak research project investigating the role of self-care in preventing the negative consequences of helping. The project is focused on helping professionals who work in institutions providing social care in Slovakia (i.e. social workers, psychologists, therapists, educators and health professionals). A total number of 745 professionals participated in the study. Participation was voluntary and anonymous.

From the participants, 88% were female and 11% were male. Due to the disproportionate representation of women in the sample, it was not possible to analyse the differences between genders. This ratio reflects the real representation of women and men in the population of Slovak helping workers. The age of participants ranged from 20 to 65 ($M = 44.07$; $SD = 10.34$). The length of work experience in helping professions ranged from 1 to 44 years ($M = 13.1$; $SD = 10.49$); eight participants did not report the length of their work experience.

4.2. Instruments

The Perceived Stress Scale (PSS-10; Cohen et al., 1983). The Slovak translation of this 10-item measure was used to assess the level of perceived stress among helping professionals. Respondents are asked to indicate the frequency of their feelings and thoughts during the last month on a 5-point scale (1 = never; 5 = very often); e.g. "In the last month, how often have you felt nervous and "stressed"?". A higher score indicates a higher level of perceived stress. The Cronbach alpha estimates of perceived stress in the Slovak adaptation of the instrument was 0.78 (Ráčzová, Hricová, & Lovašová, 2018). In this research, the reliability (Cronbach alpha) of the perceived stress scale was .79.

Maslach Burnout Inventory (MBI-HSS; Maslach et al., 1996), Slovak translation consists of 22 items measuring the level of burnout syndrome, i.e. the level of emotional exhaustion (e.g. "I feel emotionally drained from my work."), depersonalization (e.g. "I don't really care what happens to some recipients.") and reduced personal accomplishment (reverse coded, e.g. "I feel I'm positively influencing other people's lives through my work."). Respondents indicate the frequency of experiencing work-related feelings using a 7-point scale (0 = never; 6 = every day). The internal consistency estimates (Cronbach alpha) for emotional exhaustion, depersonalization and personal accomplishment were 0.90, 0.79 and 0.71, respectively (Maslach et al., 1996). The translation agreement number TA-673 was purchased to create and use the Slovak version of the questionnaire. The English version was created by back-translation. For more information about the results of the validation of the Slovak version of the tool refer to the study by Ráčzová, Adamkovič, Köverová, Hricová, (in preparation).

Performed Self-care Questionnaire (Lichner et al., 2018) was used to measure the frequency of engaging in self-care activities, i.e. activities in the area of self-care that an individual performs intentionally and of his/her own accord. Present research was therefore based on the concept of self-care as a comprehensive implementation of these activities (Moore et al., 2011). The Performed Self-care questionnaire consists of 31 items focusing on the following four areas of self-care: psychological (factor F1, e.g. "I suppress a bad mood."), work (factor F2, e.g.: "I use professional education to cope with my workload"), health (activities performed in the event of health problems, factor F3, e.g. "I avoid situations with risk of disease.") and physical well-being (factor F4, e.g. "I do exercise because of keeping fit"). The items of the questionnaire are answered on a 5-point scale (1 = never; 5 = always). A higher score indicates a higher level of self-care activities in each of the four factors. The questionnaire and factors have good internal consistency (Cronbach's alpha 0.76 - 0.93; Lichner et al., 2018). In the current research, the Cronbach alpha estimates were 0.881 for psychological self-care, 0.734 for work self-care, 0.706 for health self-care and 0.737 for physical self-care.

4.3. Data analysis

The data were analysed using IBM SPSS Statistics 21 software. A linear regression analysis (enter method) was used to test if performed self-care significantly predicted burnout and perceived stress. Multiple linear regression analyses (Enter) were run separately for exhaustion, depersonalization and personal accomplishment as factors of burnout syndrome and for perceived stress. The predictor variables were the four domains of performed self-care (psychological self-care, self-care activities at work, health sustaining activities and physical well-being).

5. RESULTS

The results of the descriptive analysis suggest that, in general, Slovak helping professionals experience a moderate level of perceived stress ($M = 2.58$; $SD = 0.49$) and only low levels of burnout syndrome. A closer look at the individual components of MBI-HSS shows that respondents reported only slight emotional exhaustion ($M = 2.09$; $SD = 1.21$), very low levels of depersonalization ($M = 0.85$; $SD = 0.90$) and a medium level of personal accomplishment ($M = 4.36$; $SD = .95$) (Table 1).

Significant differences were only found in emotional exhaustion as one of the three components of burnout syndrome. In particular, the “beginners” (1 to 3 years) significantly differed from their experienced colleagues in emotional exhaustion while the professionals with longer working experience (10-20 or more years) showed higher levels of exhaustion than the starting professionals. For further information, the length of practice in the helping profession on the same research sample has been performed and published in another study (Köveroá & Ráczová, 2017).

Table 1.
Means, standard deviations and internal consistency (α) of used measures ($n = 745$).

Measure subscales	Mean	SD	Min	Max	Scale range	α
Perceived stress	2.58	0.49	2.21	3.44	1-5	0.790
Emotional exhaustion	2.09	1.21	0.00	5.44	0-6	0.878
Depersonalization	0.85	0.90	0.00	4.60	0-6	0.601
Personal accomplishment	4.36	0.95	1.00	6.00	0-6	0.768
Self-care – psychological	4.22	0.52	1.06	5.00	1-5	0.881
Self-care - work	3.45	0.76	1.00	5.00	1-5	0.734
Self-care – health	3.90	0.64	1.43	5.00	1-5	0.706
Self-care - physical	3.11	0.87	1.00	5.00	1-5	0.737

The mean scale scores in the Performed Self-care questionnaire (Table 1) were high to moderate for all four domains of self-care activities ($M = 4.22$; $SD = 0.52$ for psychological self-care; $M = 3.45$; $SD = 0.76$ for the self-care activities at work; $M = 3.90$; $SD = 0.64$ for the health sustaining activities and $M = 3.11$; $SD = 0.87$ for physical self-care). The comparison of the four mean scale scores indicated that the most used self-care activities among helping professionals were the psychological self-care activities whereas the least used were the physical self-care activities. A detailed view of the individual items throughout the questionnaire shows that the highest score respondents reported were in items No. 17 “I create a good atmosphere in relationships with loved ones” ($M = 4.51$; $SD = 0.703$), item No. 8. “I get along with colleagues so that there is a good atmosphere in the workplace” ($M = 4.49$; $SD = 0.728$), item No. 6. “I create a good atmosphere when in contact with clients” ($M = 4.39$; $SD = 0.750$), item No. 19. “I’m positive in contact with co-workers” ($M = 4.31$; $SD = 0.770$) and item No. 20. “In relation to my colleagues, I respect the expected roles” ($M = 4.30$; $SD = 0.746$). All of these items belong to the Psychological self-care factor.

The results of the multiple linear regression analysis for perceived stress are presented in Table 2. The four predictor variables - psychological self-care, self-care activities at work, health sustaining activities and physical self-care activities - explained 11% of the variance of the criterion variable ($R^2 = 0.111$). The significant negative predictors of

perceived stress were two of the four areas of self-care. A higher level of stress was predicted by a lower frequency of performed psychological self-care ($\beta = -.192$; $p < .01$) and lower level of self-care activities in relation to work ($\beta = -.127$; $p < .01$).

Table 2.

Results of the linear regression analysis for perceived stress (PS) and for three components of burnout syndrome - emotional exhaustion (EX), depersonalization (DE) and personal accomplishment (PA) ($n = 745$).

	Predictors	R ²	B	β	t	p
EX	F1 psychological	0.060	-0.119	-0.051	-1.115	< 0.01
	F2 work		-0.178	-0.112	-2.584	0.010
	F3 health		-0.209	-0.111	-2.656	0.008
	F4 physical		-0.076	-0.055	-1.414	0.158
DE	F1 psychological	0.053	-0.422	-0.246	-5.32	< 0.01
	F2 work		0.111	0.154	0.420	0.675
	F3 health		0.053	0.059	0.157	0.875
	F4 physical		0.144	0.163	0.447	0.655
PA	F1 - psychological	0.200	0.498	0.272	6.410	< 0.01
	F2 - work		0.331	0.263	6.584	0.000
	F3 - health		-0.033	-0.022	-0.571	0.568
	F4 - physical		-0.026	-0.024	-0.657	0.511
PS	F1 - psychological	0.111	-0.182	-0.192	-4.279	<.01
	F2 - work		-0.831	-0.127	-3.039	0.002
	F3 - health		-0.042	-0.055	-1.337	0.182
	F4 - physical		-0.031	-0.054	-1.441	0.150

The results of the linear regression analysis for the first component of burnout syndrome - emotional exhaustion - are also presented in Table 2. The four tested predictor variables only explained approximately 6% of the variance of emotional exhaustion ($R^2 = 0.06$). Nevertheless, we can conclude that a lower level of emotional exhaustion was best explained by a higher frequency of performed self-care activities at work ($\beta = 0.112$; $p < 0.01$). The significant negative predictors of emotional exhaustion were also two areas of self-care: health sustaining activities ($\beta = -0.111$; $p < 0.01$) and psychological self-care ($\beta = -0.051$; $p < 0.01$).

Table 2 also presents the results of the linear regression analysis for depersonalization as the second component of burnout syndrome. The four tested predictor variables explained only 5.4% of the variance of depersonalization ($R^2 = 0.053$). The only significant predictor of depersonalization was psychological self-care. A lower level of depersonalization was explained by a higher frequency of performed psychological self-care activities ($\beta = -0.246$; $p < 0.01$).

The results of the linear regression analysis for the third component of burnout syndrome - personal accomplishment - are also in Table 2. In this case, the four predictor variables explained about 20% of the variance of the criterion variable ($R^2 = 0.200$). The significant positive predictors of personal accomplishment were two of the four areas of self-care. A higher level of personal accomplishment was predicted by a higher frequency of performed psychological self-care ($\beta = 0.272$; $p < 0.01$) and self-care activities related to work ($\beta = 0.263$; $p < 0.01$).

6. DISCUSSION

The main aim of the present research was to determine the level of the negative consequences of helping and their intensity (specifically burnout syndrome and perceived stress) and the extent of performed self-care activities in Slovak helping professionals. A further goal was to examine the relationship between those variables and to identify the most important predictors (among four domains of self-care) of stress and three components of burnout syndrome.

Based on the presented results, it can be concluded that, in general, our findings are positive. Indeed, it can be said that Slovak helping professionals experience only a low level of stress and burnout syndrome (specifically, a slight level of exhaustion, low level of depersonalization and moderate to high level of personal accomplishment). Additionally, with the same sample, Köverová and Ráczová (2017), Tuvešson, Eklund, and Wann-Hansson (2011); Śliwiński et al. (2014) reported that a higher level of exhaustion was seen in professionals with longer work experience. These positive findings point to the favourable situation of Slovak helping professionals and their ability to handle high work demands. The results obtained are different from the trends in this area (Kebza & Šolcová, 2008; Siebert, 2007; Schaufeli, Leiter & Maslach, 2009). There are several different explanations. In this and similar types of research, one of the options are socially desirable answers. On the other hand, it may also be a reflection of a real situation where the helping workers have the ability to perform their work efficiently, as the results did not confirm the assumed high level of burnout.

It was also found that the most used self-care activities among Slovak helping professionals were (in order from the most to least frequent) psychological self-care, health sustaining activities and the self-care activities related to work. In particular, the most used self-care activities were those focused on interpersonal relationships at the workplace (to clients and colleagues) while the least used were the physical self-care activities. This corresponds with the findings of previous research (Lawson & Myers, 2011; Bloomquist, Wood, Friedmeyer-Trainor, & Kim, 2015) that the implementation of activities in the psychological and working area reduces the level of burnout syndrome in helping professionals. At the same time, helping workers consider these activities to be the most useful for the efficiency of their profession (Killian, 2008). In addition, the results of Hricová and Vargová (2014) have shown that Slovak psychologists prefer psychological over physical self-care. One reason is the belief that these activities improve their ability to help others professionally.

The present research has evidence to show that self-care is particularly important for decreasing the level of perceived stress. Within performed self-care, both aspects - psychological and working - seemed to be the most important negative predictors of perceived stress. These findings are consistent with the results of a study by Kovach Clark, Murdock, and Koetting, (2009) who also confirmed the relationship between self-care (in the form of social relationships) and stress. Similarly, Shapiro, Brown and Biegel (2007) found that stress-based training led to a reduction in negative thoughts and to an increase in positive thinking and emotions (as an example of the concrete forms of psychological care and self-care at work.)

The results were also similar in the case of burnout. It turns out that performed self-care is a significant predictor of burnout and the most important protective factors are psychological self-care and self-care activities related to work. It should be said that these predictor variables only explain a small amount of the variance in exhaustion and depersonalization (since their interrelationships were significant but weak). However, they

explain a higher level of variance in personal accomplishment. It is possible to conclude that experiencing a higher level of satisfaction with work performance and competencies is a positive consequence of performing self-care, especially in psychological and working areas of self-care. This is in line with a number of previous studies (e.g. Alkema, Linton, & Davies, 2008; Griner, 2013) in which the preventive effect of self-care in experiencing burnout syndrome has been confirmed. In addition, Richards et al. (2010) have confirmed the relationship between burn-out syndrome and self-care activities. They have suggested that these activities also enhance the professional well-being of the professional. Similar results have also been found in the case of compassion fatigue and compassion satisfaction. By performing self-care activities, it was possible to increase the level of satisfaction and reduce the degree of compassion fatigue in Slovak helping professionals (Köverová, in press). In Slovakia, several researchers in social work have studied issues of helping professions (e.g. Šišanská & Kočišová, 2017) and Lovašová (2016) and have emphasized the importance of self-care in the preparation and work of social workers.

The current results and information are the basis for the preparation of preventive programs for helping professionals in Slovakia which is the goal of the broader project in which the presented research was carried out.

7. FUTURE RESEARCH DIRECTIONS

These findings form the basis for the further preparation of evidence-based prevention and intervention programs for helping professionals in Slovakia. These prevention programs should be aimed at the prevention of burnout and stress. The most effective way to prevent burnout seems to be appears to be the improvement of psychological and work self-care activities. The intervention programs should focus on decreasing the negative effects of helping, and thus improving their professional quality of life, helping skills and competence. Further research is also required to test the effectiveness of the prevention and intervention programs for helping professionals in Slovakia.

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KEY TERMS & DEFINITIONS

Burnout: a psychological syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach et al., 1996).

Depersonalization: a mechanism by which helping professionals feel an emotional distance from their clients and develop negative emotions and attitudes towards them (Maslach et al., 1996).

Emotional exhaustion: depletion of emotional resources where helpers "feel they are no longer able to give of themselves at a psychological level" (Maslach et al., 1996, p. 192).

Perceived stress: experienced levels of stress, i.e. the degree to which situations in one's (work) life are appraised as stressful (Cohen et al., 1983).

Reduced personal accomplishment: a helper's tendency to view work negatively, to experience a decline in feelings of work competence and success and to feel dissatisfied with his/her work achievements (Maslach et al., 1996).

Self-care: a set of consciously and purposefully executed activities which enable an individual to maintain or return to the state of physical and psychological well-being (Lovaš, Hricová, 2015).

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Chapter #7

GENDER PERSPECTIVE ON THE TRAIT EMOTIONAL INTELLIGENCE AS A PREDICTOR OF CAREER INDECISION

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ABSTRACT

Emotional intelligence (EI) contributes to career decision-making. In the paper, the influence of trait EI on career decision-making, specifically on career indecision and career decision-making difficulties, plus gender differences, is investigated in a sample of 156 high-school students ($M_{age}: 17.7 /SD=.40/$; 59% of females) by t-test, correlation and regression analysis. Trait EI was assessed by *Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF; Petrides, 2009)*, career decidedness by *Career Decidedness Scale (CDS; Lounsbury, & Gibson, 2011)* and career decision-making difficulties by *Emotional and Personality Career Difficulties Scale (EPCD, Saka, Gati, & Kelly, 2008)*. Results: 1. no inter-gender differences in the global trait EI, emotional and personality-related aspects of career decision-making difficulties, and career decidedness; 2. a general trend of positive relations between trait EI and career decidedness and negative relations between trait EI and career decision-making difficulties; 3. trait EI as a significant negative predictor of career decision-making difficulties, over and above decidedness in both samples, where trait EI predicted a significant 8% of unique variance in career decision-making difficulties after controlling for decidedness level in females sample and up to 5% in males sample supporting the incremental validity of trait EI, and its potential to predict difficulties in career decision-making.

Keywords: trait emotional intelligence, career indecision, career decidedness, career decision-making difficulties, inter-gender differences.

1. INTRODUCTION

Career decision-making can be a stressful experience, often manifested by decision-making difficulties. It is especially important at the end of the adolescence period when high school students face challenges to make a choice regarding their future studies or a work profession. Career decision-making combined with personality variables is a well-researched empirical area. However, there is a place for further exploration by incorporating the **emotional intelligence** (EI) construct in relation to career indecision constructs. The relationships between EI and career indecision is important to explore, as the resulting information will contribute to both research-based knowledge for vocational psychology and to career guidance practice as well. Another important issue in career decision-making is related to **gender differences** noted in a number of career development constructs such as career choice anxiety or generalized indecisiveness (Puffer, 2011). Within EI research, significant gender distinctions are found in the scores from the various published measures (Bar-On, 2000; Mayer, Caruso, & Salovey, 2000). Specifically, in the area of EI within career decision-making, the study of Puffer (2011) exposed important gender differences in how certain competencies in the Mayer and Salovey's EI model positively associated with particular career constructs for women and other for men.

Career indecision is defined as difficulties encountered by individuals while making career-related decision and refers to all problems and challenges that need to be addressed prior to, during, or after the decision-making process (Saka et al. 2008, p. 403). We can differentiate between temporary, developmental indecision on one side and more pervasive, chronic indecisiveness derived predominantly from personality and emotional factors. Di Fabio, Palazzeschi, Peretz, & Gati, (2013) describe the first construct, indecision, as momentary or short-term issues blocking individuals from decision making. The construct of indecisiveness is described as a more chronic and consistent issue that hinders individuals' abilities to make decisions in various contexts and situations and is considered closer to a trait than a state.

In the meta-analytical study, Martincin and Stead (2015) included both indecision and indecisiveness as their topic of interest as **difficulties in career decision making**. They considered the concept of difficulties in career decision making as "an umbrella term for anyone who is having trouble making a decision, whether this is a transient state of indecision or a pattern of difficulties resulting in indecisiveness" (p.4). Career indecision denotes problems during the career decision-making process, and it has various sources involving also personality and emotional variables (Gati, 2013) being included in definitions of career decision-making difficulties domain or career indecision (Kelly, & Lee, 2002) or in taxonomies of career decision-making difficulties.

Saka et al. (2008) developed a theoretical framework for analyzing **the emotional and personality-related aspects of career-decision-making difficulties**. Based on the existing literature they located variables consistently found to be correlated with career indecision and indecisiveness. They proposed a hierarchical taxonomy with three major clusters of difficulties – pessimistic views, anxiety, and self-concept and identity – that are subdivided into 11 specific categories based on finer distinctions. The first major cluster – *pessimistic views* – refers to negative cognitive biases and perceptions. The second major cluster is defined as *anxiety* referring to the possible effects of anxiety on specific aspects of the decision-making process. The third major cluster is labelled as *self-concept and identity* referring to developmental personality aspects of an individual. Based on the proposed model the authors developed the *Emotional and Personality Career Difficulties Scale (EPCD)* and empirically verified the above-mentioned model (in Slovakia by Sollárová, 2016; 2017) proving no significant inter-gender differences in either the global emotional and personality career decision-making difficulties scores or its three major cluster scores (Saka et al., 2008).

The literature reveals a growing interest in studying individual variables associated with the career decision-making process. Apart from personality traits, the specific role of the career decision-making process is generally recognized and agreed upon among researchers (Martincin, & Stead, 2015), **emotional intelligence (EI)** represents an additional potentially critical variable in the career decision-making process (Di Fabio & Palazzeschi, 2009), yet has been rarely studied. In studying the role of EI in career decision-making difficulties, Mayer-Salovey's ability-based model and Bar On's model as the so-called mixed model linking EI with personality and abilities, have been mostly investigated (Di Fabio, & Palazzeschi, 2009; Puffer, 2011; Dahl, Austin, Wagner, & Lukas, 2008; Pilárik, 2015; Di Fabio, Palazzeschi, & Bar-On, 2012). The studies indicate that EI is inversely associated with decision-making difficulties and that EI also explains a significant percentage of the incremental variance when compared with personality traits in explaining the impact on the career decision-making difficulties involved in Gati's model (Di Fabio, & Palazzeschi, 2009). In another study, Di Fabio et al. (2012) examined the role of personality traits, core self-evaluation, and EI in career decision-making difficulties. They found that EI adds

significant incremental variance compared with personality traits and core self-evaluation in predicting career decision-making difficulties.

Research exploring the relations between EI and career difficulties is limited, especially studies using trait EI models. This is the rationale for examining the Petrides' trait EI model and emotional and personality based difficulties in career-decision-making verification (Sollárová, & Kaliská, 2018). To investigate a role of trait EI as another EI model offers a new research opportunity. **Trait EI**, investigated in this study, is explained by its author, Petrides (2009), as a constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies. The model consists of 15 facets (13 of them forming 4 factors: emotionality, sociability, well-being and self-control and 2 independent facets) forming the global level of trait EI (more detailed characteristics of the factors in Petrides, 2009; Kaliská & Nábělková, 2015). Petrides (2009) also created questionnaires to measure trait EI (*Trait Emotional Intelligence Questionnaire – TEIQue*) for three developmental stages (children, adolescents, and adults) of two forms (short and long form). In Slovakia, the satisfactory psychometric properties of full and short forms of Slovak *TEIQue* versions were established (Nábělková, 2012; Kaliská & Nábělková, 2015; Kaliská, Nábělková, & Salbot, 2015). Studies have not found statistical nor effect size inter-gender differences in global level of trait EI in foreign studies (Petrides, 2009; Williams, Daley, Burnside, & Hammond-Rowley, 2008) or in the Slovak setting (Kaliská et al., 2015). For short forms of *TEIQue*, created from the original full versions, the author recommends to assess only the global level of trait EI.

Few investigations have been conducted on EI in relation to career indecision, specifically analyzing the relationship between trait EI based on Petrides' model and emotional and personality-related aspects of decision-making difficulties based on Saka, Gati, and Kelly's model (2008). Previous studies (Sollárová, & Kaliská, 2018) showed significant positive, though weak, relationships between global trait EI level and career decidedness, however significant negative moderate to strong relationship between global trait EI level and global career decision-making difficulties as well as its three factors (especially factor of self-concept and identity) in the sample of Slovak high school students. Trait EI predicted a significant almost 7% of unique variance in career decision-making difficulties after controlling for decidedness level with remaining significant negative moderate correlation.

In the paper, the influence of trait EI on career decision-making, specifically on career decidedness and emotional and personality-related career decision-making difficulties in respect to inter-gender differences is investigated in a sample of high school students.

2. OBJECTIVE

The aim of this study is focused on investigating gender differences in the studied variables and identifying gender patterns present in the whole sample.

According to previously mentioned research results it is hypothesized that there are no significant gender differences in global trait EI level from *TEIQue-SF* (H1); no gender differences in global *EPCD* score and its three clusters (H2); and referring to career decidedness measured by Lounsbury and Gibson's Career Decidedness Scale (CDS) classified as a momentary/state indecision and to our "career decidedness" homogenous research sample (3rd year of study at high school), no gender differences in CDS scores (H3). Concerning relations between trait EI, career decidedness and career decision-making difficulties we were interested whether relations between global scores from *TEIQue-SF*, CDS and *EPCD* are comparable in both genders and are following the pattern of the whole

sample (RQ1)? We also expected trait EI in both genders to be negative predictor of career decision-making difficulties (as measured by EPCD)(H4) and positive predictor of career decidedness (as measured by CDS)(H5).

3. METHODS

3.1. Research sample

The research sample consisted of 156 high school students (average age: 17.7 /SD=.40; 59% of females) from the central Slovak region. 6 of the students did not fulfill the CDS scale (mortality of 4%). The research sample was obtained by targeted and occasional sampling as a part of professional orientation testing. Either the parental or individual (for 18-year-olds) informed consent were signed voluntarily two weeks before testing.

3.2. Research methods

Trait EI was assessed by the short Slovak version of the *Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF)*, Kaliská et al., 2015) created by Petrides (2009). The instrument consists of 30 items answered by a seven-point Likert scale (1 – completely disagree to 7 – completely agree), a higher rating indicate a higher level of trait EI. Reliability estimates of internal consistency were for the whole sample: $\alpha=.87$; .86 for females; .84 for males.

To assess career decision-making difficulties, participants responded to the Slovak version of the *Emotional and Personality Career Difficulties Scale (EPCD)*, Saka et al., 2008). The scale consists of 53 items, each item representing one of 11 difficulty categories, answered on a 9-point scale (1 – does not describe me to 9 – describes me well). The total score and the sum from the three clusters (*Pessimistic Views; Anxiety; Self-concept and Identity*) were calculated. Higher scores indicate greater career difficulties in that certain area. Cronbach α for the whole group was .95, $\alpha=.97$ for the females and $\alpha=.93$ for males.

To evaluate career decidedness, the *Career Decidedness Scale (CDS)*; Lounsbury, & Gibson, 2011) was used. It is a 5-item one-dimensional scale with the score range from 6 to 30, a higher score indicates a higher decidedness. Cronbach α was .95 for the whole sample and $\alpha=.94$ for the females and $\alpha=.95$ for the males.

All instruments exhibited reliability for internal consistency.

For data analysis, apart from descriptive statistics, the independent-samples t-test analysis was conducted to estimate the gender differences, correlation analyses were run to estimate the relations of trait EI to decidedness and career decision-making difficulties in both genders individually. And finally, a hierarchical two-step regression analysis was conducted with career difficulties as the dependent variable to examine the predictive strength of gender decidedness level and above it global trait EI level to determine the incremental validity of trait EI in both genders.

4. RESULTS

The descriptive indicators for global trait EI assessed by TEIQue-SF questionnaire, for three main clusters and global level of career difficulties assessed by EPCD and the level of decidedness by CDS of our research sample are presented in Table 1.

Table 1.
Descriptive indicators of all variables in a sample of the Slovak adolescents (N=150).

		Min	Max	AM	SD	Skewness	Kurtosis	α
TEIQue-SF	Global Trait EI	2.47	6.63	4.81	.79	-.469	-.048	.872
EPCD	Pessimistic views	2.33	7.33	5.06	.96	-.237	-.155	.945
	Anxiety	1.19	9.00	5.44	1.87	-.399	-.704	
	Self-concept & Identity	1.12	7.41	4.18	1.38	.172	-.497	
	Global Career Difficulties	2.13	7.45	4.99	1.23	-.331	-.520	
CDS	Decidedness	1.00	5.00	2.64	1.13	.446	-.873	.949

Statistical analysis of skewness and kurtosis proves the normal distribution of the analyzed variables therefore the differences were estimated by parametric independent-samples t-test analysis and by effect-size estimates (Table 2). The variable relation estimate was carried out using parametric Pearson correlation analysis (r) enabling to determine the direction and strength of relations between variables (Table 3) followed by two-step regression analysis in Table 4.

Table 2.
Inter-gender differences and descriptive indicators of all variables.

		Female (N=92)				Male (N=58)				t-test	d-index
		Min	Max	AM	SD	Min	Max	AM	SD		
TEIQue-SF	Global Trait EI	2.83	6.63	4.94	.81	2.47	5.97	4.60	.73	2.68**	.44
EPCD	Pessimistic views	2.41	7.33	5.09	.99	2.33	6.50	5.02	.92	.47	.07
	Anxiety	1.19	9.00	5.69	1.89	1.62	8.52	5.05	1.79	2.08*	.35
	Self-concept & Identity	1.12	7.41	4.14	1.49	1.76	6.65	4.25	1.20	.48	.08
	Global Career Difficulties	2.13	7.45	5.08	1.28	2.25	7.04	4.83	1.15	1.22	.21
CDS	Decidedness	1.00	5.00	2.51	1.11	1.00	5.00	2.83	1.14	1.65	.28

* $p < .05$, ** $p < .01$

To investigate possible gender differences, two sample t-test determining a statistically significant difference between the means in two unrelated groups, was computed indicating the females' global trait EI level was significantly higher than the males' level ($t=2.68^{**}$), however by assessing the so-called practical (or clinical) significance of differences, i.e. the Cohen's effect-size indicator as an intrinsic significance of the inter-divisional difference being independent of the sample size, we can state there is only a little effect size difference between genders ($d < 0.50$, in Cohen, 1988). This result supports H1.

The same pattern is evident in the cluster of anxiety in career decision making difficulties in "favor" to females ($t=2.08^*$), though the Cohen's d-index is also small. All the other clusters, as well as the global career difficulties level and the level of decidedness do

not show any gender difference supported by Cohen’s effect size estimates. We can conclude the hypotheses H1 to H3 are confirmed by our research results.

Further analysis was based on Pearson correlation as a measure of the linear correlation between two variables in each gender separately (Table 3).

Table 3.
Correlation analysis of the variables for individual genders.

		Female (N=92)					Male (N=58)				
		2	3	4	5	6	2	3	4	5	6
TEI Que-SF	1 Global Trait EI	-.28**	-.35***	-.66***	-.50***	.28*	-.11	-.31**	-.57***	-.40**	.23
	2 Pessimistic views	1.00	.59***	.47***	.69***	-.46***	1.00	.65***	.51***	.75***	-.53***
EPCD	3 Anxiety		1.00	.71***	.95***	-.83***		1.00	.64***	.95***	-.81***
	4 Self-concept & Identity			1.00	.87***	-.56***			1.00	.83***	-.51***
	5 Global Career Difficulties				1.00	-.78***				1.00	-.76***
CDS	6 Decidedness					1.00					1.00

* $p < .05$, ** $p < .01$, *** $p < .001$

Referring to the correlation analysis it can be stated that global level of trait EI was significantly negatively moderately to strongly correlated to two clusters of anxiety and self-concept and identity and global level of career difficulties for both genders. Weak correlations were found between trait EI and pessimistic views in both genders. Similar results (positive and weak relations) were found between global trait EI level and global decidedness level.

Table 4.
Hierarchical regression analysis for individual genders.

		Career Difficulties					
		Female (N=92)			Male (N=58)		
Step 1		F(1,91)=138.98***, R ² adj. =.603			F(1,57)=76.251***, R ² adj. =.569		
Step 2		F _{change} (2,89)=23.973***, R ² adj. =.683, R ² change =.083			F _{change} (2,55)=7.936***, R ² adj. =.617, R ² change =.053		
		Beta	t	Partial correlations	Beta	t	Partial correlations
Decidedness (Step 1)		-.779	-11.789***	-.779	-.759	8.732***	-.759
Decidedness (Step 2)		-.694	-11.278***	-.767	-.704	-8.356***	-.748
Trait EI (Step 2)		-.301	-4.896***	-.461	-.237	-2.817**	-.355

* $p < .05$, ** $p < .01$, *** $p < .001$

The last aim of the study was to conduct a hierarchical two-step regression analysis to determine if global level of the career difficulties as dependent variable could be predicted by the decidedness level and above it by global trait EI level in each sample group individually (as presented in Table 4).

At step 1, the model was statistically significant and decidedness level predicted 60% of the variance in career difficulties level for females and 57% for males. Then at step 2, trait EI, was entered on its own. It was again found to be a significant negative predictor of career decision-making difficulties, over and above decidedness level in both samples while trait EI predicted a significant 8% of unique variance in career decision-making difficulties after controlling for decidedness level in females sample and up to 5% in males sample. Again in both research samples the partial correlation between trait EI and global level of career difficulties reminded statistically significant negative of moderate strength in female's sample and of weak strength in male's sample. These findings support the hypotheses H4 and H5 and also prove again the incremental validity of trait EI in both genders.

5. DISCUSSION, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The study aims were based on the assessment of career decision-making difficulties, career decidedness, as well as trait EI level of high school students in the phase of their career decision-making before the second career choice. These were investigated by global trait EI assessed by the Petrides' *TEIQue-SF* (2009), career decidedness by Lounsbury and Gibson's *CDS* (2011) and career decision-making difficulties by the *Emotional and Personality Difficulties Scale* of Saka et al. (2008) in two separate research samples of Slovak high school female and male students. The aims were directed at gender differences and the relations between studied variables in respect to gender perspective.

First three hypotheses were aimed at the gender differences in the global trait EI level, emotional and personality-related aspects of career decision-making difficulties, and level of career decidedness. The statistical analysis showed small effect size difference in the variables supporting the hypotheses of no gender differences. The results are compatible with previous gender difference results (Kaliská et al., 2015) on the sample of Slovak high school students and also adults, and with Petrides (2009) and other foreign studies (Williams, et al., 2008). It can be assumed that both genders at the period of late adolescence can perceive, express and regulate their emotions similarly with a certain tendency of possible higher level of trait EI in females to be further verified. Career difficulties were investigated by various researchers indicating no gender difference (Saka, et al., 2008). Both genders experience similar career difficulties with a tendency of feeling more anxiety for females in career decision-making that needs to be empirically supported later on. It was expected that there would be no gender differences in a momentary/state indecision because the homogenous sample as it was is dealing with similar career difficulties. However, these two results emphasize the importance of differentiating career indecision constructs as momentary or state indecision and those that are more pervasive or chronic – might show greater differences between genders and might differ in relations with compared variables.

Correlation analysis done for both genders showed general trends of positive relations between trait EI and career decidedness and negative relations between trait EI and global career decision-making difficulties. As expected, individuals who showed higher global trait EI displayed higher career decidedness level. The result supports our previous findings (Sollárová, 2016; 2017) where the level of emotional and personality-related aspects of career decision-making difficulties was differentiated by the level of undecidedness of high school and university students. The students with higher level of undecidedness (related to their

study area and profession choice) showed higher level of career decision-making difficulties. Also individuals who showed higher global trait EI displayed less career decision-making difficulties, both in overall difficulties and in all three clusters of difficulties as defined in the model by Saka, et al. (2008). The strongest negative correlation was found between global level of trait EI and the third major cluster of difficulties defined as “self-concept and identity” corresponding with trait EI conceptualization as aspects of emotions related personality traits (RQ1). More satisfactory and expected relations were estimated in female’s sample because of the sample size, though we can claim all of the relations were of moderate to stronger strength in this sample. This tendency was also supported by regression analysis run separately for each gender, that indicate that trait EI can be a significant negative predictor of career decision-making difficulties, over and above decidedness level in both samples. Though in female’s sample trait EI predicted a significant 8% of unique variance in career decision-making difficulties after controlling for decidedness level and up to 5% it was in male’s sample. This implies that those, especially girls, involved in career decision-making are likely better able to cope with that process if they possess higher trait EI level. Professionals involved in career counseling would therefore likely benefit from information regarding a client’s trait EI and adjust a career intervention accordingly.

We are aware also of several limitations of our research, e.g., choice of high school students was not equally distributed between genders; the specific research sample does not allow to generalize the results to other subject groups; usage of self-report instruments may be influenced by the desirability effect, and the study design itself. Further explorations into the specific domains of trait EI should be addressed to more clearly identifying which of the trait EI factors from Petrides’ model (well-being, self-control, emotionality, sociability) are most effective in influencing decidedness and especially more pervasive emotional and personality-related aspects of career decision-making difficulties (pessimistic views, anxiety, or self-concept and identity).

6. CONCLUSION

The **original contribution** of the study is in investigating the relations of trait EI and career indecision constructs using the models not studied together yet (i.e. the Petrides’ model of trait EI and the Saka, Gati, Kelly’s model of emotional and personality-related aspects of career decision-making difficulties). The main results support a general pattern of relations between EI and career indecision that our research support using the trait EI model as a model not studied in the relation to more stable variables of career indecision yet. The analysis also supports an idea of developing overall EI as a means to improve career decidedness and decrease difficulties in career decision-making of high school students in the phase before the second career choice. Finally, there are two significant conclusions. First results support the incremental validity of trait EI, and the trait EI can more significantly predict difficulties in career decision-making for females. Even with the sample not balanced regarding gender, these results support the idea of taking into account potential gender differences in both trait EI and career decision-making difficulties variables both in research, and especially in career guidance practice.

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Chapter #8

INDIVIDUAL AND SOCIAL CORRELATES OF SELF-HARM AMONG SLOVAK EARLY ADOLESCENTS

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ABSTRACT

Background: Adolescence is the period of life in which intentions of self-harming thoughts and behaviour are initiated and may escalate. Self-esteem, self-control, satisfaction with life, social support and substance use seem to be important factors related to such behaviour.

Aim: The study explored the relationship between self-harming thoughts/behaviour and self-esteem, self-control, satisfaction with life, alcohol consumption and social support.

Sample and methods: A representative sample of 572 (50.1% male) elementary school pupils (age: $M=12.49$ years, $SD=.59$) was collected within a school-based universal prevention project. Binary logistic regression was used to analyse the data.

Findings: Self-harming thoughts of adolescents were found to be negatively associated with self-control ($p=.048$), self-esteem ($p<.001$) and positively associated with alcohol consumption ($p=.003$). Self-harming behaviour was found to be negatively associated with self-esteem ($p=.002$), supportive relationships at home ($p=.029$) and satisfaction with life ($p=.033$). A positive relationship between alcohol consumption and self-harming actions of adolescents ($p=.014$) was found. Our data did not support the existence of gender differences in these behaviours.

Conclusions: The study has contributed to our understanding of the factors associated with self-harming behaviour among adolescents. This is a finding that can be used for targeting prevention programmes.

Keywords: self-harming behaviour, self-harming thoughts, self-esteem, self-control, social support, alcohol use, satisfaction with life.

1. INTRODUCTION

Self-harming behaviour can be defined as a deliberate and voluntary physical self-injury that is not life-threatening and is without any conscious suicidal intent (Borges, Anthony, & Garrison, 1995; Herpetz, 1995 in Laye-Gindhu & Schonert-Reichl, 2005). The most common motivations underlying self-harm include expressing and reducing negative emotions, distraction from these and the release of anger or tension (Rodham, Hawton, & Evans, 2004). All self-harm constitutes a risk for safety and health and has severe consequences (Kokkevi et al., 2014).

While self-harm has gained a lot of scientific attention, not much research has focused on adolescents (Laye-Gindhu & Schonert-Reichl, 2005). In particular, there have been few studies about young adolescents (younger than 14) and the factors associated with self-harm intentions and behaviour during this particularly vulnerable period of life (Stallard, Spears, Montgomery, Phillips, & Sayal, 2013).

Adolescence is the period of life in which self-harming behaviours are often initiated, when they may become a sustained habit (Simeon & Favazza, 2001) and when they may escalate. Many adversities and difficulties in adolescence are associated with significant changes in the psychological and social development of young girls and boys (Oshio, Kaneko, Nagamine, & Nakaya, 2003). Various problems in adolescence can lead to opposition towards a perceived unsatisfactory family environment, a desire to escape from reality and can result in self-harming behaviour.

A number of factors are associated with self-harm among adolescents (Prinstein et al., 2010). Many studies have demonstrated the importance of substance use including smoking and alcohol abuse in developing self-harming behaviour (Evans, Hawton, & Rodham, 2004). Deliberate self-harm has also been linked to family structure and the quality of relationship and communication with family and peers (Bridge, Goldstein, & Brent, 2006; Evans et al., 2004).

Other risk factors of self-harm behaviour among adolescents include depressive mood, somatic complaints, poor family relationship and poor school performance (Laukkanen, Rissanen, Honkalampi, Kylmä, & Tolmunen, 2009). Parental interest reduces the behavioural and emotional problems of young people (Finkenauer Engels, & Baumeister, 2005). Wills, Mariani, and Filer (1996 in Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006, p. 1085) have stated that “support from parents is the glue that bonds adolescents to mainstream institutions and builds self-control.” Self-esteem and self-control seem to be relevant factors linked to the problem behaviour of early adolescents. Low levels of self-control have been associated with behavioural problems (Finkenauer et al., 2005). Self-harming behaviour of adolescents is a complex and multifactorial phenomenon although there has been no empirical evidence so far that parental interest and support control are relevant protective factors of such behaviour (Wong, Man, & Leung, 2002 in Cruz, Narciso, Munoz, Pereira, & Sampaio, 2013).

Estimates of the prevalence of self-harm among adolescents differ from study to study and from country to country because of different sociocultural conditions, different methodologies and theoretical backgrounds. Approximately 20% of European adolescents have reported self-destructive thoughts and/or behaviours (Cheng et al., 2009; Toro et al., 2009 in Cruz et al. 2013). According to a meta-analysis by Evans, Hawton, Rodman & Deeks (2005), about 13% of adolescents have engaged in deliberate self-harm. Portzky, De Wilde and van Heeringen (2007) reported a 10.4% life time prevalence of self-harm behaviour among Belgian adolescents. This compared to a 4.1% life time prevalence of self-harm behaviour among Dutch adolescents and a 20.1% compared to 9.5% incidence of self-harming thoughts among Belgian and Dutch adolescents respectively. Laye-Gindhu and Schonert-Reichl (2005) reported 42% self-harm ideation and 16% engaging in self-harm behaviour among Canadian adolescents.

Deliberate self-harm in adolescents is more prevalent among girls compared to boys (Fliege, Lee, Grimm, & Klapp, 2009; Laye-Gindhu & Schonert-Reichl, 2005; Portzky et al., 2007; Rodham et al., 2004) in those with substance abuse including alcohol drinking (Fliege et al. 2009; Laukkanen et al., 2009) and in those with low self-esteem (Darche, 1990; Favazza and Conterio, 1989 both in Laye-Gindhu & Schonert-Reichl, 2005; Fliege et al. 2009; Laye-Gindhu & Schonert-Reichl, 2005; Portzky et al., 2007). Self-esteem has been negatively linked to the tendency of harming oneself (Cruz et al., 2013). Laukkanen et al. (2009) reported gender differences among adolescents in self-cutting (girls injured themselves more often than boys) but they stated that the risk of lifetime history of other self-harm was mostly the same in boys as in girls. Other studies have not found a difference in self-harm thoughts and/or behaviour between girls and boys (Garrison et al., 1993 in Laye-Gindhu & Schonert-Reichl, 2005).

2. OBJECTIVES

The study aimed to assess the prevalence of self-harming thoughts and self-harming behaviour among adolescents in Slovakia. It also tested whether this was related to gender, self-esteem, self-control, satisfaction with life, alcohol consumption and social support represented by supportive relationships at home, at school and with friends.

3. METHODS

The study was based on data collected within a universal school-based prevention project. Participation in the study required consent from the school headteacher and the child's parent. The study was approved by the Ethics Committee of P.J. Safarik University in Kosice.

3.1. Sample

The study used a stratified sample design. Elementary schools were randomly selected and 24 of them agreed to participate in the study. Every class of 7th graders at every school was asked to participate in this research. The schools were selected from different cities based on their geographical locations in the east, centre and west of Slovakia with 6 clusters based on population size. The data were collected in September/October 2017.

The research sample includes data from 572 young adolescents at an elementary school in Slovakia. Approximately half the sample (50.1%) was made of boys, the average age was 12.49 years old and the standard deviation was .59 years.

3.2. Measures

The respondents completed the Self-Control Scale, the Self-Esteem Scale, the Resilience and Youth Development scale, the Satisfaction with Life scale and were also asked about alcohol consumption and whether they had ever thought of harming themselves or if they had tried to harm themselves.

The dependent variables, self-harming intentions and behaviour, were dichotomized: 0 = no self-harming intentions/behaviour occurred; 1 = self-harming intentions/behaviour occurred one or more times.

The Self-Control Scale (Finkenauer et al., 2005) consisted of 11 items and respondents could answer on a five-point scale (1 = never, 5 = always). A higher score indicated a higher level of self-control. The Cronbach alpha was 0.574.

The Self-Esteem scale (Rosenberg, 1979) consisted of 10 items. Respondents could answer on a four-point scale. A higher score represented a higher level of self-esteem. The Cronbach alpha was 0.709.

Support from parents, teachers and friends was measured by the Resilience and Youth Development Module (Furlong, Ritchey, & Brennan, 2009). There was a five-point answer scale. A higher score represented a higher level of support. Each domain of social support was represented by three items. The Cronbach alpha of the social support scales were: home – 0.829, school – 0.690 and friends – 0.897.

Respondents were also asked about how satisfied they were with their appearance, their financial situation and the financial situation of their family as well as the relationships with their mother, father and friends. They could answer on a five-point scale (1 = not at all satisfied; 5 = completely satisfied). The summary score of satisfaction with important

domains of life was calculated by adding up all the individual items. The Cronbach alpha was 0.691.

Lastly, the respondents were asked if they had ever drunk alcohol beverages and if so, how often. They answered on a five-point scale (1 = no, never; 5 = regularly, at least once a week).

3.3. Statistical analysis

The differences between the group means were tested using a Student's t test. Since the dependent variables were dichotomized, binary logistic regression was used. We created two models, one for self-harming thoughts and one for behaviour. The models each contained eight dependent variables (gender, self-esteem, self-control, supporting relations at home, at school and with friends, life satisfaction, alcohol consumption). All statistical analyses were performed using IBM SPSS-22.

4. RESULTS

About 39% of the adolescents in the research sample reported self-harming thoughts and about 19% of all respondents reported that they had tried to harm themselves (Figure 1). Importantly, 9% of our research sample (adolescents aged between 12 and 13) have tried to harm themselves more than once. We did not find any statistically significant gender differences in the frequency of self-harming thoughts and behaviour.

Figure 1.
Percentage of reported self-harming thoughts and behaviour among Slovak adolescents.

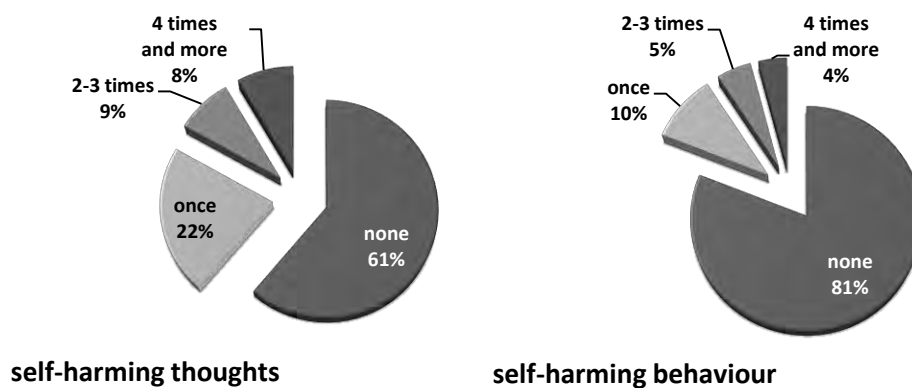


Table 1 displays the basic descriptive data for the independent variables as well as the differences according to gender. With the exception of satisfaction with life, we can see statistically significant gender differences in all independent variables (the assumptions for using parametric statistics were fulfilled). We found a higher level of self-esteem, self-control and alcohol consumption among boys and a higher level of supportive relationships among girls.

Table 1.
Descriptive data and gender differences in independent variables.

Independent variable	mean			range		t	significance
	girls	boys	total	min	max		
Self-esteem	26.63	28.12	27.37	14.00	40.00	4.470	.000
Self-control	34.45	36.29	35.39	15.00	55.00	3.250	.001
SR - home	10.35	9.85	10.10	3.00	12.00	- 2.447	.015
SR - school	8.38	7.95	8.17	3.00	12.00	- 2.029	.043
SR - friends	10.18	8.13	9.17	3.00	12.00	- 8.557	.000
Satisfaction with life	23.82	24.42	24.12	7.00	30.00	1.845	.066
Alcohol consumption	1.62	1.75	1.69	1	5	2.209	.028

Table 2.
Regression model for self-harming thoughts among Slovak adolescents.

Cox & Snell R ² = .171 Nagelkerke R ² = .232	B	Wald	Sig.	Odds Ratio	95% C.I. for Odds Ratio	
					Lower	Upper
Gender	-.142	.285	.611	.970	.863	1.090
Self-esteem	-.200	22.802	<.001	.819	.755	.889
Self-control	-.040	3.918	.048	.961	.923	1.000
SR - home	-.030	.259	.611	.983	.880	1.097
SR - school	-.018	.098	.754	.754	.983	.880
SR- friends	.048	.914	.339	.339	1.049	.951
Life satisfaction	.000	.000	.992	1.000	.925	1.082
Alcohol consumption	.507	8.896	.003	1.661	1.190	2.318
Constant	5.529	22.539	<.001	251.952		

Note: SR - supportive relations

The regression model for self-harming thoughts correctly classified 71.8% of the cases. Depending on the coefficient used, it explained 17.1% to 23.2% of the variance in the dependent variable. There was a statistically significant negative association with self-control ($p = .048$) and self-esteem ($p < .001$) and positive association with alcohol consumption (Table 2).

The regression model for self-harming behaviour correctly classified 82.2% of the cases. Depending on the coefficient used, it explained 14.5% to 23.4% of the variance in the dependent variable. As shown in Table 3, only four independent variables made a statistically significant contribution to the model. Self-harming behaviour was found to be significantly negatively associated to self-esteem ($p=.002$), supportive relationships at home ($p=.029$) and satisfaction with life ($p=.033$). Relationship between alcohol consumption and self-harming behaviour was positive and statistically significant ($p=.014$). There were no statistically significant effects of self-control, supportive relationships at school or supportive relationships with friends (Table 3).

Table 3.
Regression model for self-harming behaviour among Slovak adolescents.

Cox & Snell $R^2 = .145$ Nagelkerke $R^2 = .234$	B	Wald	Sig.	Odds Ratio	95% C.I. for Odds Ratio	
					Lower	Upper
Gender	-.073	.047	.828	.930	.483	1.790
Self-esteem	-.147	9.168	.002	.864	.785	.950
Self-control	-.030	1.438	.230	.970	.924	1.019
SR - home	-.149	4.789	.029	.861	.753	.985
SR - school	.105	2.144	.143	1.111	.965	1.279
SR- friends	-.070	1.406	.236	.932	.830	1.047
Life satisfaction	-.099	4.560	.033	.906	.828	.992
Alcohol consumption	.503	6.074	.014	1.654	1.108	2.468
Constant	6.169	20.188	.000	477.757		

Note: SR - supportive relations

To sum up, our data did not support the existence of a statistically significant association between gender and self-harming thoughts or behaviour.

5. DISCUSSION AND CONCLUSION

The study explored the prevalence and psychosocial correlates of self-harm among early Slovak adolescents. Self-harming thoughts and behaviours among adolescents can be observed as early as grade 7 (between 12-13 years old). This study of Slovak adolescents has revealed that the life-time prevalence of self-harming thoughts was 39% and life-time prevalence of self-harming behavior was 19%. These results are quite high compared to the studies from other countries (Cheng et al., 2009; Toro et al., 2009 in Cruz et al. 2013; Evans et al., 2005; Portzky et al., 2007) although the prevalence of self-harming thoughts was slightly lower than in the study of Canadian adolescents (Laye-Gindhu & Schonert-Reichl, 2005). In contrast to most authors (Fliege et al. 2009; Laye-Gindhu & Schonert-Reichl, 2005; Portzky et al., 2007; Rodham et al., 2004), our study did not confirm any gender differences in self-harm thoughts and behaviours among Slovak adolescents. This result was consistent with Laukkanen et al. (2009) who found gender differences among adolescents only in self

cutting. However, according to these authors the lifetime histories of other self-harm was the same, on average, for both boys and girls.

Self-control and self-esteem seem to be important factors associated with thinking about harming oneself among Slovak adolescents. However, real attempts of harming oneself are also significantly associated with support at home, especially from parents. The probability of self-harming thoughts and self-harming behaviours was lower among adolescents with a higher level of self-control and self-esteem. The same held for adolescents supported by their parents more. Satisfaction with important life domains, especially with social relationships, seems to be a protective factor of self-harming behaviour. The results are consistent with some previous research (Bridge et al., 2006; Cruz et al., 2013; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Evans et al., 2004; Finkenauer et al., 2005; Kelly et al., 2012). The finding that alcohol consumption was associated with both self-harming thoughts and self-harming behaviour corresponds to the findings of Evans et al. (2004).

The sample design, which provided a nationally representative sample, constitutes a major strength of this study. The use of an anonymous self-report questionnaire helped to fight non-response bias which would probably have been higher if other data collection methods had been used. The study is also novel in its focus on younger adolescents.

A limitation of the study lies in the small number of items related to self-harm that were included in the questionnaire. This was the case because the questionnaire was constructed as part of a wider research project. More items related to self-harm would have given us additional in-depth information and would have helped to better assess whether the concept of self-harm was understood similarly across all the respondents. A lower reliability of some scales constitutes another related limitation.

In terms of future research, it would be beneficial to do longitudinal study and combine qualitative and quantitative research methods.

The study has contributed to our understanding of the factors associated with self-harming behaviour among adolescents. It suggests the importance of self-esteem, self-control, life satisfaction and social support in predicting such behaviour among adolescents. This is a finding that can be used for targeting prevention programmes.

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Chapter #9

FACTORS RELATED TO LIFE SATISFACTION, CULTURAL RESILIENCE AND EMIGRATION INTENTIONS AMONG SLOVAK UNIVERSITY STUDENTS

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ABSTRACT

We focused on satisfaction with state's economy (ECONOMY), state of education (EDUCATION), job satisfaction (JOB) and satisfaction with household income (INCOME) as possible factors related to life satisfaction (LS) of young people in Slovakia. Cultural resilience (CR) was also hypothesized to affect emigration intentions (EI). We also considered life satisfaction (LS) as a potential intervening variable of the relationship between CR and EI. The main objective was to explore various factors related to LS. Relationship between CR, LS and EI was also addressed. Two samples were used in the data analysis. Sample 1 was ESS (European Social Survey) sample (young Slovak people <30yr, N=117, M=25.7, SD=2.8) and sample 2 consisted of Slovak university students (N=443, M=22.1, SD=1.72).). Linear regressions were used for the analyses. All factors, i.e. EDUCATION, JOB, ECONOMY and INCOME significantly contributed to LS of young people in Slovakia. CR affects EI directly as well as indirectly through LS, which was found to be a significant mediator of this relationship in sample 2. University students who scored lower in LS had stronger intentions to emigrate.

Keywords: emigration intentions, life satisfaction, cultural resilience, Slovak university students.

1. INTRODUCTION

International migration is considered an important and challenging topic in the process of globalization in the 21st century (Divinský, 2007). Due to its significant impact on almost all aspects of people's lives, it can be seen as either a positive or as a negative phenomenon. It is a positive phenomenon in the case of their future return as the well-educated workforce, but it also can be seen as a negative phenomenon in the case they choose not to return to their home country. In Slovakia, there is an increase in the number of students who aim to move abroad. Káčerová and Horváthová (2014) show that according to the Statistical Office of the Slovak Republic, the educational status of the Slovak emigrants is most frequently at the level of secondary school (53.68%), followed by those with university education (21.55%). Divinský (2007) estimated that about 10 000 students leave Slovakia every year, which is about a third of university graduates. It is mostly for economic reasons. Many of them consider moving abroad as a necessary step for their future career opportunities. The data from the Eurostat survey (Drozd, Frkáňová, & Kubovičová, 2012) conducted in 2010 show that migration to study is the third most frequent reason for moving to another EU country. According to Bermudez (in Mihi-Ramirez & Kumpikaite, 2013), due to the development of many EU programmes as well as the foundation of international institutions and agreements between individual universities, the number of students studying abroad is increasing. Almost

23.5% of university students plan to move abroad for longer than a year or plan to move to another country permanently (Kulanová & Orosová, 2016). According to Káčerová and Horvátová (2014), in Slovakia there is a long-term process of migration to the Czech Republic, USA, Great Britain, Germany, and Austria. In this study, we mainly focused on socioeconomic factors related to life satisfaction of young people in Slovakia because if overall satisfaction with one's life is important for making the decision to emigrate, then it is relevant to ask whether economic and social factors are somehow related to life satisfaction itself or if they are only related to intentions to emigrate.

It has also been found that university students, who planned to go abroad for a longer period of time, reported a lower level of resilience and perceived barriers for emigration (Kulanová & Orosová, 2018). Resilience can be addressed not only as a capacity to cope with difficult situations or as an ability to adapt to changes but also from a cultural perspective. Most children are raised by parents who are surrounded by traditions and customs which shape their world's perspective and which give them a sense of knowing what they see as culturally "belonging to them" and what does not. In Slovakia, traditions still play a big role in the lives of young people so it may be relevant to ask whether there is a relationship between culturally resilient people and their migration behavior. Therefore, it is important to study especially young generation and their subjective life satisfaction because, according to Ivlevs (2015), a higher level of subjective well-being leads to greater work productivity, better physical health and enhanced social skills which are always beneficial in building healthy personal and work relations in daily life. This is in line with Kremský (2015) who also confirms that the study of our young generation, which intends to go abroad or has already left, can be of a great benefit regarding the gained education, language proficiency, acquisition of a more complex worldview, new experiences and contacts which young people can use for the benefit of their country.

2. OBJECTIVE

Firstly, the objective of this study was to explore whether socioeconomic factors such as satisfaction with state's economy, quality of education, job satisfaction and satisfaction with household's income are related to the overall life satisfaction among young people (<30yr) in Slovakia. Secondly, we investigated the relationship between life satisfaction and intentions to emigrate among university students in Slovakia. We also hypothesized that cultural resilience would affect emigration intentions and that this relationship would be mediated by life satisfaction. Therefore, we considered life satisfaction as a potential intervening variable of this relationship.

3. RESEARCH SAMPLE AND PROCEDURE

Two separate samples of data were used. The first sample consisted of 117 young people from Slovakia (51.3% men) who had participated in the European Social Survey (ESS). This cross-national survey is aimed at measuring attitudes and beliefs regarding various issues of diverse populations. We have used the data from the sixth round (2012). The mean age for these participants was 25.7 (SD=2.8). In this ESS sample, the data were collected via face-to-face interviews in all participating countries, including Slovakia. The second sample consisted of 443 university students from Slovakia (M=22.1, SD=1.72) from which 78.1% were women, who participated in the Student Life Cohort Study (SLiCE 2016) which focuses on risk behaviour and emigration/migration intentions of university students. The data for this sample were collected via an online survey.

4. MEASURES

The factors related to life satisfaction in the first ESS sample were measured by the following variables (measures in the first sample):

- Life satisfaction was measured by a single item assessing how were young people satisfied with their life as a whole (from 0 - extremely dissatisfied to 10 - extremely satisfied).
- Satisfaction with state's economy (ECONOMY), satisfaction with quality of education (EDUCATION) and job satisfaction (JOB) were measured by single items assessing how satisfied were young people with each domain (from 0 - extremely dissatisfied to 10 - extremely satisfied). Satisfaction with household's income (INCOME) was also measured by a single variable asking how they felt about household's income nowadays (from 1 - difficult to live on present income to 4 - living comfortably on present income).

Relationship between life satisfaction and emigration intentions in the second sample (SLiCE 2016) was measured by the following variables (measures in the second sample):

- Life satisfaction in the second sample (SLiCE 2016) was measured by The Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) which consists of five items measuring subjective well-being of respondents (from 1 - strongly disagree to 5 - strongly agree). Cronbach's alpha was 0.83. Higher overall score indicates a higher life satisfaction with life.
- Intentions to emigrate were measured by a 5-item scale (Chan-Hoong & Soon, 2011) which required respondents to rate the frequency with which they thought about working or living in another country for the following reasons: (1) overseas education, (2) better job prospects, (3) setting up a business, (4) to work and live in another country for an extended period of time, and (5) emigrating to another country to live there permanently. Each of these five items were scored on a 5-item Likert scale from 1 - never to 5 - all the time. Cronbach's alpha was 0.86. Higher overall score denotes a greater desire to migrate.
- Cultural resilience was measured by a 5-item scale (Ungar, 2008) in which respondents rated the intensity of their relation to cultural traditions and people in their country of origin (in this case Slovakia). Higher score indicates a higher level of cultural resilience (Not at All - A Little Somewhat - Quite - A Bit - A Lot). Cronbach's alpha for this scale was 0.77.

In the first sample, linear regression was used and the analysis was adjusted for gender and state of health services in the country. In the second sample, linear regression analysis was used and was adjusted for gender. Sobel test was also used to confirm the significance of the meditational effect of life satisfaction in the relationship between cultural resilience and emigration intentions.

5. RESULTS

The results from the first sample (ESS) show certain significant gender differences among young people in Slovakia (<30yr). Male's perception of the current quality of education was significantly higher than among females. Women showed significantly higher job satisfaction. Further details can be found in the Table 1.

Table 1.
The descriptive characteristics in the measured variables according to gender in the first sample (ESS).

VARIABLE	MEN	WOMEN	Theoretical range	T-test value
How satisfied with life as a whole	M=6.65 (SD=2.27)	M=7.27 (SD=2.14)	0 - 10	-2.267
Satisfaction with present state of economy	M=3.63 (SD=2.43)	M=3.68 (SD=2.32)	0 - 10	-0.147
State of education in country nowadays	M=5.41 (SD=2.48)	M=5.17 (SD=2.08)	0 - 10	0.852*
Job satisfaction	M=6.1 (SD=2.23)	M=7.3 (SD=1.7)	0 - 10	-3.364*
Satisfaction with household's income	M=2.46 (SD=0.85)	M=2.36 (SD=0.83)	1 - 4	0.949

M – Mean; SD – Standard deviation; *p <0.05

As we can see below, we have not found any significant differences among university students in Slovakia in the second sample (SLiCE). Further details are displayed in the Table 2.

Table 2.
The descriptive characteristics in the measured variables according to gender in the second sample (SLiCE).

VARIABLE	WOMEN	MEN	Theoretical range	T-test value
Emigration intentions	M=12.78 (SD=5.19)	M=13.49 (SD=5.01)	5 - 25	-1,198
Life satisfaction	M=16.25 (SD=4.08)	M=16.06 (SD=4.45)	5 - 25	0.390
Cultural resilience	M=11.65 (SD=1.87)	M=11.58 (SD=1.87)	7 - 15	0.341

M – Mean; SD – Standard deviation

Factors Related to Life Satisfaction, Cultural Resilience and Emigration Intentions among
Slovak University Students

The results in the first ESS sample showed that there were significant associations between life satisfaction and all socioeconomic factors. Our model explained 29.5% of variance in life satisfaction of young people in Slovakia ($p < 0.001$). The linear regression analysis revealed that the factor ECONOMY was positively associated with the overall life satisfaction ($\beta = 0.285$, $p < 0.01$) as well as the factor EDUCATION ($\beta = 0.206$, $p < 0.05$), the factor JOB ($\beta = 0.248$, $p < 0.01$) and the factor INCOME ($\beta = 0.213$, $p < 0.05$). These findings indicate that a higher satisfaction with the state of economy, better quality of education, higher job satisfaction and a higher household income are positively related to life satisfaction. More details can be found in the Table 3.

Table 3.

The results of linear regression analysis for each socioeconomic factor in relation to life satisfaction of young people in Slovakia (adjusted for gender and state of health services).

Socioeconomic factors	β	t	p
Satisfaction with present state of economy	0.285	2.991	0.003
State of education in country nowadays	0.206	2.104	0.038
Job satisfaction	0.248	2.693	0.008
Satisfaction with household's income	0.213	2.351	0.02

Dependent variable- life satisfaction

The results in the second sample (SLiCE) further showed that there was a significant negative association between life satisfaction of university students in Slovakia and their intentions to emigrate ($\beta = -0.225$, $p < 0.001$). Therefore, students who perceived their life as more satisfying reported a lower level of emigration intentions.

Following the finding that life satisfaction negatively affects emigration intentions, we focused our attention on cultural resilience as a possible predictor of intentions to emigrate and life satisfaction. We found that cultural resilience was negatively associated with emigration intentions ($\beta = -0.291$, $p < 0.05$) and positively associated with life satisfaction ($\beta = 0.668$, $p < 0.001$). Further details can be found in the Table 4 and Table 5.

Table 4.

The results of linear regression for cultural resilience in relation to emigration intentions of university students in Slovakia (adjusted for gender).

Factor	β	t	p
Cultural resilience	-0.291	-2.217	0.027

Dependent variable- emigration intentions

Table 5.
The results of linear regression for cultural resilience in relation to life satisfaction of university students in Slovakia (adjusted for gender).

Factor	β	T	p
Cultural resilience	0.668	6.561	<0.001

Dependent variable- life satisfaction

Next, after adding life satisfaction to this model as a potential intervening variable, the direct relationship between cultural resilience and emigration intentions became insignificant ($\beta = -0.154$), as can be seen in Table 6.

Table 6.
The results of linear regression for cultural resilience and life satisfaction in relation to emigration intentions of university students in Slovakia (adjusted for gender).

Factor	β	T	p
Cultural resilience	-0.154	-1.135	0.257
Life satisfaction	-0.205	-3.371	0.001

Dependent variable- emigration intentions

The Sobel test confirmed that life satisfaction had a significant mediational effect in the relationship between cultural resilience and emigration intentions ($z = -2.98$, $p < 0.01$).

6. DISCUSSION

Although the relationship between socioeconomic factors and plans to move abroad has been relatively well examined, we focused on these factors in relation to the overall life satisfaction of young people in Slovakia. We confirmed that satisfaction with state's economy, job satisfaction, satisfaction with household income as well as the quality of education in the country, all significantly contribute to the explanation of life satisfaction. Furthermore, we found that life satisfaction of university students in Slovakia significantly influences their intentions to emigrate from their country of origin. These findings are supported by Otrachshenko and Popova (2014) who used the Eurobarometer data to show that in the Central and Eastern Europe, people less satisfied with their life are more likely to report intentions to migrate – both internationally and domestically. This is also in line with the findings of Mihi-Ramirez and Kumpikaite (2013) who found that economic factors are the most dominant with respect to students' motivation to leave or not to leave as well as to the decision to stay living in a foreign country. Economic factors were also found to be relevant for choosing the country for migration. These results confirm and highlight the importance of developing the economy, education and social services especially for young people in Slovakia. The loss of a well-educated and skilled young generation, also known as the "brain drain", is a serious and current problem we have to face nowadays in Slovakia.

The brain drain is especially characteristic for workforces in developing countries from which people tend to move to more developed or highly industrialized countries (Battistella & Liao, 2013). It is important to mention the indirect form of the “brain drain” by students who leave to study abroad because these students often start their career abroad as well, and do not return to their home country. Therefore, it is necessary to prevent this negative impact on Slovakia in terms of the loss of human capital, workforce, and well-educated young generation.

We also found that intentions to emigrate can be to certain extent explained by cultural resilience both directly and indirectly through life satisfaction, which has a significant mediational effect in this relationship. The findings of Piotrowski and Tong (2010) suggest that people are more willing to stay in their home country or come back if they have significant ties with children, partners and parents from their original household. Traditions are mostly shared within families and communities and this could indicate that strong connections with people and culture reduces people’s desires to move to another country. However, it must be said that these findings are limited to the context of Slovakia.

Limitations: Our study used two different samples, which is the reason why we couldn’t study possible mediational effect of life satisfaction in the relationship between the socioeconomic factors (satisfaction with state’s economy, quality of education, satisfaction with a job, satisfaction with household’s income) and intentions to emigrate to another country. Future research should focus on studying this relationship since life satisfaction was found to be a significant mediator and an intervening variable in the relationship between perception of economic threat and intentions to emigrate (Kalina, Orosová, & Kulanová, 2017). Furthermore, in this study we used only single item measures to explore relatively complex relationships. In the future, it would be helpful to direct our attention to a more complex examination of the relationship between life satisfaction and intentions to emigrate and include additional socioeconomic factors important for students’ efforts to emigrate.

7. CONCLUSION

In this study, we have addressed socioeconomic factors such as satisfaction with household income, job satisfaction and current state of economy as well as the quality of education as important factors related to life satisfaction among young people in Slovakia. We have found that cultural resilience affects emigration intentions of university students in Slovakia directly as well as indirectly through life satisfaction which was found to be a significant mediator of this relationship. We have found that students who want to leave their home country report a lower level of satisfaction with life. These results support the existing research of migration of young people in Slovakia and addresses the main goal to explore and deeply understand this process on its macro and micro level. Like other European countries, Slovakia is also facing globalization and exodus of young and well-educated people to countries with more developed economy and better career opportunities. Many countries, including Slovakia, naturally try to prevent their skilled and educated young people from leaving, so we think it is necessary to understand and support these factors, especially among young people, who are naturally more prone to emigration.

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Chapter #10

AFFECTIVE STYLES AND DIFFICULTIES IN EMOTION REGULATION

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ABSTRACT

Emotion regulation refers to “the process by which people influence which emotions they have, when they have them, and how they experience and express these emotions”. Research studies substantiate that emotion regulation plays a pivotal role in an individual’s mental health and various aspects of daily functioning. Affective style, a closely linked construct, is a typical tendency to use some emotion regulatory strategies over others. The present study explores the relationships among affective styles (concealing, tolerating and adjusting) and specific difficulties in emotion regulation (awareness, quality, goals, impulse, non-acceptance and strategies). Self-report measures on affective style and difficulties in emotion regulation were given to a sample of 196 individuals in the 17-30 age range. Difficulties engaging in goal directed behavior, a lack of access to emotion regulation strategies, and a lack of clarity in emotional experiences emerged as significant predictors of impulse control difficulties. An adjusting affective style was found to significantly predict access to emotion regulation strategies, and a tolerating affective style was negatively correlated with a lack of access to emotion regulation strategies, and a lack of clarity in emotions. The findings of the study have important implications in understanding psychopathology, as well as in planning intervention for vulnerable populations.

Keywords: emotion regulation, affective style, impulse control.

1. INTRODUCTION

1.1. Emotion regulation

Emotion regulation is an area that has garnered tremendous interest among psychological researchers in the last few decades. Emotion regulation refers to “the process by which people influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 5). Several studies substantiate that emotion regulation is linked to a variety of aspects of one’s daily functioning. For instance, a diverse use of emotion regulation strategies has been found to be beneficial to one’s overall life satisfaction and wellbeing (Quoidbach, Berry, Hansenne, & Mikolajczak, 2010). Consequently, it is an essential component contributing to satisfaction in marital relationships (Bloch, Haase & Levenson, 2014). Emotion regulation has been linked to employee stress and health as well as organizational wellbeing (Grandey, 2000). It is an important aspect of social adjustment and prosocial behavior in adults (Eisenberg, Fabes, Guthrie, & Reiser, 2000) as well as in children, where it was found that the way in which children handle their emotions plays a crucial role in their social competence (Denham et.al., 2003). While emotion regulation plays an extremely important role in mental health, emotion dysregulation has been implicated in several forms of psychopathology such as

personality disorders, schizophrenia, major depressive disorder, panic disorder, post-traumatic stress disorder, social anxiety, phobias, eating disorders, as well as autism, ADHD and intermittent explosive disorder in children (Gross & Jazaieri, 2014).

An individual may use various strategies to modify how they experience emotions. These strategies also help to alter the course of emotion in terms of when and how they are expressed. Gross & John (2003) describe two commonly used emotion regulation strategies - cognitive reappraisal and suppression of emotional expression. Cognitive reappraisal is when one alters the way they think about a situation in order to minimize their unpleasant emotions or maximize positive emotional aspects. It is a deliberate process, and often occurs before the distress is fully experienced. For instance, before a big performance, a musician might focus on his skills and the thoroughness of his practice, rather than thinking about possibly being negatively evaluated by his audience. Cognitive appraisal may also occur after a distressing situation, where for instance, an individual who just failed a test would choose to think about it as a learning opportunity rather than put himself down as a failure. On the other hand, suppression of expression is when an emotional response has already occurred while the individual inhibits its expression. For instance, not showing anger after experiencing an incident of injustice, even though one is feeling very angry.

While Gross and John (2003) provided a broad conceptual framework of emotion regulation, Gratz and Roemer (2004) conceptualize emotion regulation as involving specific processes such as the (a) awareness and understanding of emotions, (b) acceptance of emotions, (c) ability to control impulsive behaviors and act in line with desired goals when experiencing negative emotions, and (d) ability to use situationally appropriate emotion regulation strategies in a flexible way, in order to meet individual goals and situational demands. Gratz and Roemer (2004) point out that problems in one or more of these areas would indicate difficulties in emotion regulation.

A comprehensive understanding of these difficulties was provided by Kaufman et al., (2016), who outlined six constructs of difficulties in emotion regulation - (a) *non-acceptance of emotional responses* reflects a tendency toward denial of distress, (b) *difficulties engaging in goal-directed behavior* involves problems focusing on and accomplishing tasks while experiencing negative emotions, (c) *impulse control difficulties* reflects struggles to control behavior when upset, (d) *lack of emotional awareness* involves inattention to emotional responses, (e) *limited access to emotion regulation strategies* assesses beliefs that there is little a person can do to regulate one's emotions effectively while upset, and (f) *lack of emotional clarity* reflects the extent to which individuals experience ambiguity about which emotions they are experiencing.

1.2. Affective style

Emotion regulation is closely linked to 'affective style', a typical tendency each individual displays, to use some emotion regulatory strategies over others. In essence, it is an inter - individual difference variable that refers to sensitivity to emotion, as well as tendencies for regulating emotions. Affective style may also be described as an emotional vulnerability owing to individual differences in one's temperament, personality and vulnerability to psychopathology (Davidson, 1998). Research on the behavioral and neurological underpinnings of emotion reveals that affective style is indeed a trait-like difference in the speed and intensity of emotional and behavioral responses to rewards or threats (Dennis, 2007). Some affective styles are beneficial in regulating the experience and expression of emotions in healthy ways that enhance the attainment of goals, whereas other strategies seem to have counterproductive effects. Based on consistent pointers in the emotion literature, Hofmann & Kashdan (2010) developed a conceptual model for affective

styles, consisting of three factors – concealing, tolerating and adjusting affective styles. Similar to Gross and John's (2003) 'suppression of emotional expression', the *concealing affective style* involves concealing and avoiding emotions when they occur. On the other hand, the *adjusting affective style* involves being able to use emotion related cues or information to balance how one feels, adapt to the context and solve problems effectively. Finally, the *tolerating affective style* reflects an ability to accept and endure emotional upheavals without resisting or suppressing them.

Research studies in this context show that attempts to suppress or conceal emotions increase physiological arousal (Gross, 1998), and rumination over negative emotional events prolongs the duration of angry and depressed affective states (Rusting & Nolen-Hoeksema, 1998). On the other hand, when individuals tend to accept emotional experiences without attempting to change or avoid them, they consequently show higher persistence in challenging situations and lower subjective distress (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

1.3. Emotion regulation and affective style: how they work together

The emotion regulation literature incorporating affective styles is minimal. However, existing research suggests that greater emotional awareness is associated with greater self-reported impulse control. Individual differences in emotional awareness have also been found to predict recovery of positive mood and lessening of ruminative thoughts following a distressing stimulus (Salovey, Mayer, Golman, Turvey, & Palfai, 1995). Research also indicates that there is a strong human tendency to avoid painful emotions. From the experiential perspective, approach and tolerance of emotional experience is necessary, however, optimum emotional processing can only happen when there is an integration of cognition and affect (Greenberg, 2002), where it is ideally explored, reflected on, and made sense of. (Greenberg, 2004). Hofmann, Sawyer, Fang & Asnaani (2012) integrate affective styles with emotional regulation to propose a model of depressive and anxiety disorders. They point out that affective style is a function of both external and internal triggers, including the individual's biological / psychological vulnerabilities. One's affective style largely determines the experience of negative or positive affect. Certain affective styles predispose the individual to experiencing sustained negative affect, which may contribute to psychopathology. Their approach to treatment includes (a) promoting healthy emotion regulation strategies, including becoming more aware of emotional experiences, (b) decreasing negative affect and increasing positive affect by promoting adaptive affective styles, (c) experiencing a whole range of emotions, while preventing a pattern of concealing or avoidance, (d) developing the ability to tolerate distressing emotions, and (e) using emotion as important information in a given situation.

Emotion regulation and affective styles have rarely been studied together, and the present study will throw light on the nature of the relationship between the two, as well as determine whether specific affective styles predispose one to emotion regulation difficulties. Existing research studies examine emotional dysregulation in broad terms in the clinical context, but few focus on the specific types of emotional dysregulation. Exploring these aspects can have important implications in understanding psychopathology, as well as planning intervention. Furthermore, this study will enrich the current understanding of emotion regulation in the Indian context, especially in the light of lack of research in this area.

2. OBJECTIVES OF THE PRESENT STUDY

The present study addresses gaps in the literature by investigating the relationships among affective styles and specific difficulties in emotion regulation. The study aims to –

- Determine the relationships between three affective styles (concealing, tolerating and adjusting) and difficulties in emotion regulation (awareness, clarity, goals, impulse, non-acceptance and strategies).

- Determine whether affective styles can predict difficulties in emotion regulation.

- Determine whether there are significant gender differences in affective styles and difficulties in emotion regulation.

3. METHOD

Two self-report measures – The Affective Style Questionnaire (Hofmann & Kashdan, 2010) and The Difficulties in Emotion Regulation Scale - Short Form (DERS-SF – Kaufman et.al, 2016) were given to a sample of 196 individuals (91 males and 105 females), in the 17-30 age range, with a mean age of 22.64 years (SD = 3.26), in the city of Chennai, South India. A convenience sampling method was followed.

4. RESULTS AND DISCUSSION

4.1. Affective styles

Analyses to identify the correlates of a concealing affective style (Table 1) indicate a negative correlation with a lack of emotional awareness ($r = -.171, p < 0.05$). This suggests that individuals with this particular style are more aware that they are experiencing unpleasant emotions, however prefer to conceal rather than actively work towards processing these emotions.

The tolerating affective style showed significant negative correlations with a lack of clarity in emotions ($r = -.306, p < 0.001$), non-acceptance of emotional responses ($r = -.321, p < 0.01$), and a lack of access to emotion regulation strategies ($r = -.208, p < 0.01$). This suggests that apart from having a higher awareness and acceptance of emotional responses, individuals with this style also are aware of how to regulate these emotions. However, unlike people with an adjusting affective style, this style shows no significant correlations with the ability to engage in goal directed behavior. Linear regression analysis showed that a tolerating affective style significantly predicts clarity of emotional experiences, explaining 9.3% of the variance ($R^2 = 0.093, F(1, 194) = 20, p < 0.001$).

An adjusting affective style showed significant negative correlations with a lack of clarity in emotions ($r = -.252, p < 0.001$), impulse control difficulties ($r = -.315, p < 0.001$), difficulty engaging in goal directed behavior ($r = -.357, p < 0.001$), non-acceptance of emotional responses ($r = -.301, p < 0.01$) and a poor access to emotion regulation strategies ($r = -.516, p < 0.001$). This indicates that individuals who are able to use emotion related information to lend greater balance and adapt to the emotional context not only have greater clarity and acceptance of emotional experiences, but are also able to use emotion regulation strategies with greater ease, engage effectively in goal directed behavior, and have a lower likelihood of having impulse control problems. Further, regression analysis revealed that an adjusting affective style significantly predicts and accounts for 26.6% of the variability in access to emotion regulatory strategies ($R^2 = .266, F = 70.582, (1, 195), p < 0.001$).

Table 1.
Correlations between affective styles and difficulties in emotion regulation.

	Lack of awareness	Lack of clarity	Difficulty in goal directed behavior	Impulse control difficulty	Non-acceptance of emotional responses	Limited access to regulation strategies
Concealing Affective Style	-0.171*	0.11	0.011	0.006	0.064	0.126
Tolerating Affective Style	0.240**	-0.306**	-0.115	-0.117	-0.321**	-0.218**
Adjusting Affective Style	0.097	-0.252**	-0.357**	-0.315**	-0.301**	-0.516**

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

4.2. Difficulties in emotion regulation

The study also attempted to explore the relationships between the various difficulties in emotion regulation, and identify whether problems in emotional experiences such as a lack of awareness or clarity can predict difficulties in the regulatory process itself. Results indicate that most difficulties in emotion regulation are significantly inter-related (Table 2), however, one particular variable – impulse control difficulties – seemed to significantly correlate with most other difficulties in emotion regulation. For instance, positive correlations emerged between impulse control difficulties and a lack of clarity of emotional experiences ($r = .401$, $p < 0.001$), non-acceptance of emotional responses ($r = .472$, $p < 0.001$), lack of access to regulatory strategies ($r = .611$, $p < 0.001$), and difficulty engaging in goal directed behavior ($r = .623$, $p < 0.001$).

Table 2.
Inter-correlations between difficulties in emotion regulation.

	Lack of awareness	Lack of clarity	Difficulty in goal directed behavior	Impulse control difficulty	Non-acceptance of emotional responses	Limited access to regulation strategies
Lack of awareness		-0.301**	0.056	-0.076	-0.048	-0.072
Lack of clarity			0.307**	0.401**	0.538**	0.407**
Difficulty in goal directed behavior				0.623**	0.474**	0.580**
Impulse control difficulty					0.472**	0.611**
Non-acceptance of emotional responses						0.546**
Limited access to regulation strategies						

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

A further step-wise regression analysis (Table 3) showed that difficulty engaging in goal directed behavior, lack of access to regulatory strategies, and a lack of clarity in emotional experiences are significant predictors of impulse control difficulties ($R^2 = 0.50$), with problems engaging in goal directed activity accounting for 38.8% of the variance, problems engaging in goal directed activity and lack of access to regulatory strategies cumulatively accounting for 48.3% of the variance, and problems engaging in goal directed activity, lack of access to regulatory strategies, and lack of clarity in emotional experiences cumulatively accounting for 50.2% of the variance in impulse control difficulties.

Table 3.
Step-wise regression model summary – predictors of impulse control difficulties.

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.623 ^a	.388	.385		2.12811
2	.695 ^b	.483	.478		1.96132
3	.709 ^c	.502	.494		1.92966

Dependent Variable: Impulse control difficulties

a. Predictors: (Constant), Difficulties engaging in goal directed behaviour

b. Predictors: (Constant), Difficulties engaging in goal directed behaviour, Lack of access to regulatory strategies

c. Predictors: (Constant), Difficulties engaging in goal directed behaviour, Lack of access to regulatory strategies, Lack of clarity in emotions

These results have important implications in understanding growing problems in young adults such as unhealthy impulsive eating, the abuse of substances, and self-harm behaviors. Schreiber, Grant, and Odlaug (2012) demonstrated a clear link between emotion regulation and impulsivity in the context of addictions. The study on 194 young adults found that those with greater emotion dysregulation scored significantly higher on self-report measures of impulsivity. Overall, their study suggested that emotion regulation may be an important factor to consider when assessing individuals at a higher risk for developing an addiction. In another unique study, Tice, Bratslavsky, and Baumeister (2001) demonstrated how under everyday circumstances in which moods and emotional states can be changed, emotional distress made people increase their intake of unhealthy snacks. However, this pattern was reversed when people were told that their moods would remain frozen, and not change during the experiment. This simple manipulation eliminated participants' tendency to consume more food as a response to emotional distress. These findings suggest that people typically respond to distress by eating more fattening, unhealthy foods because they expect to feel better after their impulsive eating. Findings of the current study imply that a lack of clarity in emotional experiences, a lack of access to regulatory strategies, as well as difficulties engaging in goal directed behavior could all be contributors to the general understanding of 'emotional distress', which leads people to indulge in impulsive behaviors.

4.3. Gender differences

T-tests to assess gender differences in affective styles (Table 4) revealed that males have significantly better scores on the adjusting affective style ($t = 2.008$, $p < 0.05$). A study by McRae, Ochsner, Mauss, Gabrieli, and Gross (2008) lending support to this finding showed that although, neurally, men and women showed equal responsiveness to emotionally upsetting stimuli, men showed greater down-regulation of negative feelings

than women. A possible explanation offered by the authors is that men are capable of using regulation, especially strategies such as cognitive reappraisal with lesser effort than women, requiring less engagement of the prefrontal structures usually implicated in the strategic process of cognitive and emotional control. Secondly, they point out that women may be indulging in the dual process of up-regulating positive emotion while attempting to downregulate negative emotion to a greater extent than men. In the context of the current study, this suggests that although men may have a more adjusting affective style towards upsetting events and are better at decreasing upsetting emotions, women may be more adept at increasing their positive emotions in an upsetting situation. Also, owing to the male gender role of being more action-oriented, they may also be more likely than women to adjust faster in order to engage in problem-solving in attempts to control or change the situation.

Table 4.
Gender differences in affective styles.

	Sex	N	Mean	Std. Deviation	t
Adjusting affective style	Male	91	24.2747	6.38412	2.0*
	Female	106	22.6132	5.22917	

* Significant at the 0.05 level

In addition, an exploration of gender differences in difficulties in emotion regulation revealed significant differences in a lack of emotional awareness ($t = -2.839$, $p < 0.005$), with women displaying a greater lack of emotional awareness (Table 5). How can this be interpreted, especially in the light of research evidence suggesting that women pay more attention to their feelings? Evidence from three studies will be discussed to throw light on these findings. Firstly, Salovey et.al. (1995) point out that individual differences in emotional awareness predicted recovery of positive mood and lessening of ruminative thoughts. This means that the more one is emotionally unaware, the more they tend to ruminate over their feelings. Secondly, in the context of gender differences, Nolen-Hoeksema (2012) demonstrated that women tend to ruminate, much more than men, while men have a greater tendency to use alcohol to cope with upsetting events. Thirdly, in their study which looked into automatic vs. deliberate regulation of emotions, McRae et.al. (2008), used an adaptation of the emotion regulation implicit attitudes task (ER-IAT) (Mauss, Evers, Wilhelm, & Gross, 2006), to assess the degree to which individuals implicitly evaluate emotion regulation in a positive way. Results revealed that men have more positive implicit attitudes toward emotion regulation than women, meaning that they show greater use of automatic emotion regulation when faced with affective stimuli. Tying these results together, it can be assumed that women have a tendency to ruminate due to comparatively lower emotional awareness, allocating greater cognitive effort to make sense of their feelings, while the process of emotion regulation is less effortful and more automatic in men. Also possibly substantiating these findings is a study by Croyle & Waltz (2002) which examined emotional awareness in couples' relationships indicated that women are more emotionally aware than men in response specifically to couples' situations, but not in response to general situations outside the

relationship. This may imply that emotional awareness in women may be more situationally dependent rather than being a more stable characteristic. In any case, gender differences in emotional awareness will require further exploration, considering that the findings of this study counter much of the prevailing literature.

Table 5.
Gender differences in difficulties in emotion regulation.

	Sex	N	Std.		t
			Mean	Deviation	
Lack of awareness of emotional experiences	Male	91	10.0330	2.95691	-2.839**
	Female	107	11.1402	2.53075	

** Significant at the 0.01 level

Step-wise multiple regression analysis indicated that in men, difficulty engaging in goal directed behaviour and lack of clarity in emotional experiences were significant predictors of impulse control difficulties, explaining 51.2% of the variance (Table 6). Difficulty engaging in goal directed behavior was the biggest contributor, accounting for 44.2% of the variance. In general, men are more likely than women to engage in problem-solving attempts to control or change the situation, and the results suggest that when there is a difficulty in channelizing emotional responses into goal directed behavior, the resulting distress is dealt with impulsively.

Table 6.
Step-wise regression model summary – predictors of impulse control difficulties in men.

Model	R		Adjusted R Square	Std. Error of the Estimate
	Sex = Male	R Square		
1	.665 ^a	.442	.435	2.13067
2	.715 ^b	.512	.501	2.00375

a. Predictors: (Constant), Difficulty engaging in goal directed behaviour

b. Predictors: (Constant), Difficulty engaging in goal directed behaviour, Lack of clarity in emotional experiences

Step-wise multiple regression analysis indicated that in women, a lack of access to emotion regulation strategies, difficulty engaging in goal directed behavior and lack of awareness of emotional experiences were significant predictors of impulse control difficulties, explaining 53% of the variance (Table 7). A lack of access to emotion regulation strategies was the biggest contributor, accounting for 44.7% of the variance. In the light of previous research which points out that in general, women (a) pay more attention to their feelings, and (b) engage in the dual process of up-regulating positive emotions while down-regulating negative emotions, a lack of access to emotion regulation strategies or the belief that nothing can be done to change one's negative emotions, can be very distressing, leading to impulse control issues.

Table 7.
Step-wise regression model summary – predictors of impulse control difficulties in women.

Model	R			Std. Error of the Estimate
	Sex = Female	R Square	Adjusted R Square	
1	.668 ^a	.447	.442	1.94719
2	.714 ^b	.510	.501	1.84077
3	.728 ^c	.530	.516	1.81280

a. Predictors: (Constant), Lack of access to emotion regulation strategies

b. Predictors: (Constant), Lack of access to emotion regulation strategies, Difficulty engaging in goal directed behavior

c. Predictors: (Constant), Lack of access to emotion regulation strategies, Difficulty engaging in goal directed behaviour, Lack of awareness

One's sociocultural background is also likely to play a very important role in these gender differences, which will need to be studied more in-depth. No other significant gender differences were found with regard to affective styles or difficulties in emotion regulation.

5. CONCLUSIONS AND DIRECTIONS FOR FURTHER RESEARCH

The current study demonstrates that individuals who typically adopt an adjusting affective style not only have greater clarity in emotional experiences, but are also likely to use emotion regulation strategies with greater ease, engage effectively in goal directed behavior, and have a lower likelihood of having impulse control problems. Moreover, an adjusting affective style significantly predicts one's access to emotion regulatory strategies. In comparison, those who tend to adopt a tolerating affective style have greater clarity of emotion and are likely to use emotion regulatory strategies effectively.

Difficulty engaging in goal directed behavior, lack of access to regulatory strategies, and a lack of clarity in emotional experiences emerged as significant predictors of impulse control difficulties, accounting for 50% of the variability. This has tremendous implications not just in understanding pathological conditions involving impulse control difficulties such as substance abuse, binge eating and self-harm, but also in understanding sub-clinical tendencies that may be present in the general population, especially in teenagers and young adults who are reporting a growing number of problems related to unhealthy eating, substance use, sexual indiscretions and other high-risk behaviors which may be a result of a lack of impulse control stemming from basic problems in emotion regulation. This finding also implies that interventions focusing on improving emotion regulatory processes in these vulnerable populations can be developed and implemented in psychotherapy, as well as in larger-scale prevention based initiatives with young adults.

It is widely believed that men and women differ in how they regulate their emotions. The current study found that women seem to have significantly more difficulties in awareness of emotions, and men have a significantly greater adjusting affective style as compared to women. Therapeutic implications in this area can focus on exploring strategies

that enable women to achieve greater insight into their emotional experiences in healthier ways rather than indulge in rumination, especially since they prefer to engage in more effortful regulation as compared to men. Furthermore, the current study suggests that impulse control problems are determined by very different variables in men and in women, the biggest contributor in men being difficulties engaging in goal directed behavior. In comparison, women with impulse control issues have a lack of access to emotion regulation strategies. This highlights the need in the therapeutic context, for clinicians to address impulse control issues within the framework of gender. This can translate into gender-specific interventions for impulse-control problems, such as enhancing problem-focused strategies in men, and challenging implicitly held beliefs (such as ‘there is little a person can do to regulate one’s emotions effectively when upset’) in women, while improving their sense of self-efficacy in this area. Empirical studies on gender differences in emotion regulation have been mixed, and further research is required, especially in the cultural context. A majority of research has been carried out in Western individualistic cultures, however, there is a need for research in collectivistic cultures like India, assuming that emotional processing is partly a function of gender roles determined by sociocultural influences.

Given the preliminary nature of this study in Chennai, South India, replication of the results with larger samples with greater geographical representation is necessary to ensure the robustness and generalizability of the findings.

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Section 2
Psychoanalysis and Psychoanalytical
Psychotherapy

Chapter #11

FROM SCREEN TO THERAPEUTIC SETTING: IMAGES OF THERAPY INSIDE AND OUTSIDE THE OFFICE

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ABSTRACT

In the Western world, the influence of American culture in entertainment, film and music is everywhere. Popular interpretations of Freud, expressed in American products like Woody Allen's filmography, *The Silence of the Lambs* or series like *The Sopranos*, abound in American culture. The abundant literature connecting film and psychotherapy suggests a deeply entrenched cultural liaison between the two, powerful enough to influence and shape clients' personal experiences of psychotherapy. Using my double training in psychology and anthropology, I take a visual ethnography approach to the theme of film and psychotherapy. Thus, after conducting a literature review on the theme of film and psychotherapy, I proceed by re-visiting some the classic film examples on psychotherapy portrayal as visual artefacts, i.e., as cues to the cultural representation of psychotherapy. Finally, a dialogue between everyday life clinical vignettes and psychotherapy as cultural/film phenomena is put forward as one recommended path for future thinking and research.

Keywords: film, culture, psychotherapy, representation.

1. INTRODUCTION

No one enters a therapy room in a blank state. Ever since Serge Moscovici's classical study on the diffusion of psychoanalysis in French society in the 1960s (Moscovici), we know of the existence of a genetic link between knowledge produced by psychology and its sociocultural representations. In the face of this link, the likelihood that images of therapy harvested beyond the therapy office influence the choice of pursuing therapy or even how therapy is experienced, is undeniable.

As Jorm (2000) puts it, mental health and mental health-related phenomena are characterized by a profound lack of 'literacy' akin to the wider notion of literacy as ability to read, reason and understand; in the absence of greater literacy, clients are socialized to a media version of psychotherapy and mental health in general long before their first time at the office. Given that film is one of the main media for the popularization of psychology, it is unsurprising that psychologists occupied with mental health literacy and associated issues have written a great deal on the topic of the relation between film and psychotherapy.¹

In this paper, more than focusing on the broader question of how mental health is portrayed in cinema, I want to draw the focus to how therapy and therapists have been the object of cinematic attention. To that purpose, I bring the double gaze of my training in clinical psychology and social anthropology to therapy as a sociocultural meaning system. After a critical review of literature on the matter, I move on to a couple of clinical vignettes stemming from my own practice as a psychotherapist with a view to establishing or suggesting relations between ideas of therapy made popular by cinema and client interactions in everyday clinical work. In so doing, I suggest that the meaning of a film

reference evoked in therapy may act both as a sign of a wider cultural representation of therapy as much as a clue to the nature of the therapeutic relationship at a given point in time.

2. BACKGROUND

The first known classification of psychotherapists on screen stems from Schneider's tripartite late eighties taxonomy (Schneider, 1987). In the author's classification, therapists are divided into three archetypes: (a) Dr. Dippy, (b) Dr. Evil, and (c) Dr. Wonderful, each of them carrying their own set of stereotypical attributes. While several authors dealing with film and psychotherapy try to deconstruct Schneider's taxonomy as a starting point so as to suggest an alternative classification which better reflects the current state of the film/psychotherapy liaison, the opposite stance is taken in this article. Holding to the usefulness of Schneider's taxonomy as an organizing principle, we expand the principle to accommodate a larger set of interrelated data including critical articles and films released after Schneider's seminal piece.

3. METHODS

Taking a visual ethnography stance (Pink, 2001), we use film examples that openly portray psychotherapy as visual artefacts, i.e., as clues to how the film/psychotherapy relation has evolved over time, and what place it occupies at present. Hence, all the examples of the films mentioned in the text were watched, or re-watched by the author, either in their entirety or their most significant excerpts, with a cultural lens in mind. Films were selected according to the prevalence of their reference in academic literature in this area. Furthermore, we consider that representations of psychotherapy on film are not only evocative of the cultural representation of therapy over time, but also a sign of larger transformations in societal and gender roles. In so doing, our analysis contrasts and compares the examples given towards organizing categories found in psychology and cultural anthropology (e.g. gender, kinship, political economy, etc.).

4. RESULTS

Dr. Dippy, based on an American 1906 comedy called *Dr. Dippy's Sanitarium* is the off-the-wall therapist not to be taken seriously. A modern equivalent of this line of representation would be Woody Allen and his never-ending gallery of comical, ineffectual therapists portrayed in film like *Deconstructing Harry* (1997) or the classic *Annie Hall* (1977), by and large, stemming from Allen's known ambivalence towards his personal analysis.

Dr. Evil, or the therapist as a potential or manifest sociopath is another of the archetypes identified by Schneider. Here we find a representation of the therapist intentionally hurting their patients, often for their own narcissistic gratification. An extreme example of the kind is found in Brian de Palma's 1981 *Dressed to Kill*. In this horror film classic, Michael Caine plays a transvestite, psychopathic therapist who murders patients in between sessions. From the 90s onwards and thanks to the late Jonathan Demme, Dr. Evil has come to be embodied by Hannibal Lecter, the cannibalistic psychiatrist based on Robert Harris' novel, brilliantly played on the big screen by Anthony Hopkins.

Despite the evolution in some of these archetypes towards more nuanced and complex characters (Whal, Reiss, & Thompson, 2016), Dr. Evil is far from extinct. Rather, Dr. Evil-type therapists keep resurfacing in television, in highly successful series like HBO's *American Horror Story*, where therapists are either haunted by ghosts (Season 1) or embracing perversion and murderous instincts (Season 2) in ways similar to Michael Caine's *Dressed to Kill* character.

In horror film appearances, the psychotherapist often falls into another sub-archetype called the 'rationalist foil' by Gabbard (Gabbard, 2001: 368). In this narrative device, the representation of the psychotherapist acts as an ultimate barrier of rationality to explain irrational phenomena, before a supernatural explanation is accepted. A classic example is William Friedkin's *The Exorcist*. The 1973 film, based on the homonymous novel by William Peter Blatty, portrays a case of demonic possession of Regan McNeil, a teenage girl played by Linda Blair. Before accepting the help of a priest and the possibility of an exorcism, Regan's mother takes her to all kinds of professionals, including a psychiatrist. By attacking the psychiatrist in the film, Regan partially does away with the possibility of a rational explanation to her pathology and opens the gate to the next level of acceptance of the supernatural. A substantial number of horror films and movies have followed this rhetorical device with the aim of suspending the viewer's disbelief on the supernatural once all the 'rational' possibilities, namely psychotherapy, have been properly exhausted.

Reflecting on Schneider's taxonomy, Orchowski, Spickard and McNamara (2006) ascribe a major trait to each of Schneider's archetypes: Dr. Dippy as the bumbling psychotherapist, Dr. Evil as the villainous psychotherapist and finally Dr. Wonderful as the salvific psychotherapist. In fact, as much as Hollywood has given us narratives of useless or perverse psychotherapists, it has equally given us narratives of therapists enacting deep feelings for their clients, coming out of their professional roles and even breaking boundaries for the sake of a closer human connection with the client ('salvific'). In terms of favorable portrayals of psychotherapists over the years, by and large, the existing literature tends to converge on Judd Hirsch's character in Robert Redford's *Ordinary People* (1980) and on the character played by the late Robin Williams in the 1998 classic film by Gus Von Sant, *Good Will Hunting*. Both movies deal with male therapists trying to help young males give voice to difficult emotions, one focusing on the treatment of a boy who survives his brother in a boating accident and the other on an unknown mathematical genius, a victim of child abuse, who must come to terms with intense feelings of distrust in interpersonal relations. If either film balances out the negative stereotypes of Dr. Dippy and Dr. Evil in favor of clinicians trying their best to helping clients, they also come up with their own set of problems.²

For others, Robin Williams' character in particular is the mirror of another recurring motif in psychotherapeutic representation, i.e., the wounded healer (Orchowski et al, 2006: 509). In fact, *Good Will Hunting* is not just about a story of a genius trying to overcome the narcissistic wounds of foster parenting and child abuse but also of a therapist, played by Williams, whose wife died of cancer. Over the film, we see Williams' character, Dr. Maguire, engaging in gradual self-disclosure about the death of his wife, his own history of abuse by an alcoholic father and ultimately, his own narcissistic wounds. As the film moves on, the therapeutic process linking Dr. Maguire and Matt Damon's character seems to work for both, with Dr. Maguire making some movements suggesting an attempt to overcome his mourning for his wife.

In both movies, *Ordinary People* and *Good Will Hunting*, therapy is also a gendered space, one where men, the gender that is not supposed to openly 'talk emotion', are eventually able to express emotions other than anger, beyond the fear of losing one's manhood.

Other examples of wounded healers come from television, namely in the renowned HBO series *The Sopranos* and *In Treatment*. *The Sopranos*, running from 1999 to 2007, tells the story of Tony Soprano, a New Jersey mob boss played by the late James Gandolfini. The story approaches the inner conflicts of Tony Soprano through interactions with his psychoanalytically-oriented psychiatrist, Dr. Melfi, played by Lorraine Bracco. Over the course of therapy, due in large part to Tony's mob liaisons, all kinds of professional boundaries are broken between Tony and Dr. Melfi.

Dr. Melfi's ambivalence towards treating someone in Tony's line of work is high from the beginning of their relationship and she stays in conflict for most of it. In bringing the camera to Dr. Melfi's sessions with her supervisor, the viewer sees that she herself is busy battling her demons, namely in the form of alcohol addiction. In what seems like a complete hyperbole of the wounded healer, Dr. Melfi is raped in the course of the series. She fantasizes about asking her mob client for help in annihilating the rapist. Eventually, she resists temptation and refocuses the efforts on the client and the process itself, making the healer part of her 'self' triumph over the revengeful one. Not every therapist on screen, afflicted by transference, acts this wisely.

In Treatment is a multi-award-winning HBO American drama based on an Israeli series called *BeTipul*, about the life of a psychotherapist, Dr. Paul Weston, played by the actor Gabriel Byrne. The show focuses on Paul Weston's weekly sessions with clients plus his own therapy sessions with a long term-mentor, Dr. Gina Toll, played by the magnificent Dianne Wiest.

One of its main story lines reports the turbulent therapeutic process between Dr. Paul Weston and one of his patients, Laura Hill, who is in love with Weston and acting out erotic transference in true borderline fashion. This affair is endlessly discussed in Paul Weston's therapy sessions with Gina Toll, where we get to know Paul's troubled history around a suicidal mother and a distant father, which leads him to the caring professions and ultimately to this love for Laura (the borderline patient). Unlike Dr. Melfi in *The Sopranos*, Paul does end up acting out that love, by discontinuing the therapy and looking for Laura outside the office.

Tracing similarities between the two shows, Lucy Huskinson, author and co-editor of *Eavesdropping: the psychotherapist in film and television*, suggests that as much as dealing with popular representations of transference in psychology, *The Sopranos* and *In Treatment* are shows that can teach clinicians something about transference, namely about the relation between transference and unresolved eroticism (Huskinson & Waddel, 2014). Whatever the truth in that assertion, gender-wise, *In Treatment* defies a gender stereotype identified by Glen Gabbard in his seminal work 'Psychiatry and the Cinema' (Gabbard & Gabbard, 1999); the stereotype refers to cinema plots of female therapists who fall in love with their clients, out of personal dissatisfaction in their life outside the office. *The Prince of Tides*, a 1991 film starring and directed by Barbra Streisand, based on Pat Conroy's novel of the same name, is a classic case in point. Yet in *In Treatment*, it is a male therapist who is out there stripping his vulnerability bare, acting foolishly and romantically while falling in love with a client. Thus, an interesting gender twist operates in *In Treatment*, potentially reflecting a wider transformation in gender roles in which men are allowing themselves to be more emotionally vulnerable than before.

Other aspects identified by Gabbard almost twenty years ago are slower to change. Amongst them, it still holds true that Hollywood is fascinated by therapy insofar as it gives us a shortcut to a client's inner feelings and an alternative to narration; for cinematic purposes, the difference between psychotherapists, psychiatrists and psychologists is still lost on screen; to this day, the needs of the cinematic genre far outweigh the accuracy of portrayal of psychotherapy and associated practices; last but not least, psychoanalysis trumps the representation of other therapeutic models on screen (Gabbard & Gabbard, 1999)³.

I contend slightly with the author in the idea that the way psychotherapists are portrayed in cinema is a direct reflection of the way society regards psychotherapy. In fact, taking *In Treatment* as an example, I suggest that psychotherapy on screen may serve to signal wider changes in society, namely the changes in gender roles embodied in Paul Weston's *In Treatment* character.

Other aspects of psychotherapists in film involve their phenotypical and ethnic characteristics. After an analysis of XXI century films portraying therapy, Wahl, Reiss and Thompson (2016) concluded that most therapists on screen are Caucasian, making psychotherapy look like a profession which is exclusive to a given ethnic group.

Side by side with popular images of psychotherapists on screen, there are representations of the process of therapy itself made popular in cinema. Within them, the cathartic cure, a theme also identified by Gabbard (Gabbard & Gabbard, 1999; Gabbard, 2001) stands as the most evident. The cathartic cure generally involves a repressed traumatic memory released in the context of therapy, through waves of great emotion and dramatization. *Ordinary People*, the aforementioned film by Robert Redford, or Barbra Streisand's *The Prince of Tides* are two amongst many examples where repressed memories by clients rise up dramatically in the therapeutic context. Yet what can be the relation between the way such ideas are conveyed on screen and everyday clinical practice?

5. DISCUSSION

As Gabbard puts it: 'A purported compliment that many psychiatrists hear from time to time is: 'You don't act like a psychiatrist'. This comment is usually meant to imply that one behaves in a more or less normal, rational manner. Clearly, the underlying message is that the psychiatrist under consideration does not fit the cinematic stereotype of a neurotic, pompous, jargon-spouting buffoon' (Gabbard, 2001: 368).

Facing the proliferation of cinematic stereotypes of psychotherapists, it is only expected that people entering an office will be vigilant of the therapist and the authenticity of the situation. Ervin Goffman and dramaturgic notions of the person come to mind at this point. Are we, therapist and client, bound by a genuine, authentic relation or are we, therapist and patient, both performing roles towards some fake notion of 'normality' which cinema has exposed as a farce?

Talking of clients in therapy, Gabbard tells the story of a young woman who clearly expressed that as a psychiatrist he should act more like Judd Hirsch's *Ordinary People* character and hug her during the process (Gabbard, 2001: 368). In my own Lisbon-based clinical practice, attending English-speaking and Portuguese-speaking clients of different cultural backgrounds, I encounter various interactions between movie culture and everyday clinical practice.

Sandra, as I will call her, is a mid-fifties ex-client of mine working in the teaching profession, who undertook eight months of therapy. Sandra comes from a deeply abusive working-class background and a time in Portugal where the harshness of growing up

working class fifty years ago is difficult to put into contemporary words. As a child, Sandra carried the responsibility of looking after her various siblings while suffering constant physical and emotional abuse at the hands of her parents and one of her brothers. In the midst of this Dickensian upbringing, growing up and achieving financial autonomy was for Sandra a way of releasing herself from the burden of emotional dependency on a family of abusers. Faced with all kinds of difficult circumstances leading her to seeking therapy for the first time in her life, as the process evolved and Sandra gradually agreed to let me into her life, the old phantom of emotional dependence made its way into our process. 'Is this going to be like a Woody Allen film?' - Sandra asked me, at significant points of the process, as a way of saying: how long are we going to be here for?

As Sandra's understanding of herself and the pre-emptive barriers she holds to any form of emotional dependency increased, the fear that, like a Woody Allen film, we would be stuck in the therapeutic process forever and that her dependence on me would grow to an unbearable point, subsided. Sandra left her therapy more able to love, live and risk emotional co-dependence than before. The termination of therapy after eight months confirmed to her that our time, unlike a Woody Allen scenario, was indeed limited. As Gabbard puts it in different words (Gabbard, 2001) I had not acted like the cultural representation of a film psychotherapist. My authenticity, amongst other factors, was also confirmed by my unmatching of the film stereotype.

Paula, as I will call her, is a female patient in her forties with a multicultural history and background. Paula comes to me for panic attacks, which started soon after she moved to Portugal with her family. Paula is quick to let me know that she is not the kind of patient who will spend most sessions talking about her mother. I am left with the feeling that Paula is trying to communicate that if making her talk about her mother should become my hidden agenda, I may as well devise a different plan altogether. Despite a troublesome relationship with her mother, Paula considers that she has found a way to manage her and that things are as good as they can be at this point. This is clearly not her husband's expectations about Paula's encounters with me. As Paula explains, in a formulation similar to the cathartic cure made popular by cinema, her husband expects me to open some 'bit in her mind where the mother thing will come out as in some kind of movie'. I tell Paula that I am not the kind of therapist who forces clients to talk about their mother if that is not what they wish to do; I also add that different clients have different needs and that you can't be the same therapist to all. This explanation seems to soothe her, in that it deconstructs the preformed cultural image of a therapist that she (and possibly her husband) have learned through exposure to film, while it somehow suggests that it is her expectations, not her husband's, which I am ready to address.

These two vignettes, however brief, illustrate the need for going from anecdotal evidence on the relation between everyday practice and film representation to the need for further research on the matter. As a final hypothesis, I suggest the following: before transference of any kind happening in the therapy office (whatever your persuasion as a therapist and whether or not you believe in 'transference') there are processes of cultural transfer going from film to the office and actively feeding our client's imaginations of what therapy is, or should be like. To consider them mere distortions runs the risk of ignoring the potential of something signaling the 'here and now', be that the 'here and now' of culture or the 'here and now' of the therapeutic process.

6. FUTURE RESEARCH DIRECTIONS

Despite a considerable body of literature on the relation between film and psychotherapy, implications of this relation for everyday clinical practice remain largely unexplored. While plenty of writings on film and psychotherapy are criticized by the inherent subjectivity of the methodological approaches behind them, clinical data on film and psychotherapy is often presented as anecdotal evidence. At a point in history where erudite culture has been replaced by film-orientated popular culture, the role of film and folk representations of therapy and therapists in the clinicians' office is crying for further research. Qualitative interviewing of clinicians and therapists around client's spontaneous film references could be a first stepping stone to going beyond anecdotal evidence.

7. CONCLUSION/DISCUSSION

With cultural transfer comes acknowledgement. With emotional transference comes self-awareness. With both comes a vision of clients as people existing both inside and outside the office, in a frame of sociocultural relations which do not exist apart from the therapeutic relation but rather help to constitute it in its reality and its imagination. As clinicians, it is also our job not to turn a blind eye to such sociocultural ties but to welcome them in the office, much as any other 'distorted' part of the mirrors in which we persistently move. If anything, we should realize the potential in breaking with clients' preformed ideas of therapy and therapists for the sake of building an authentic encounter, something you cannot do except by giving a name and a face to what clients already bring with their own cinematic gaze. Hence, future research on film and psychotherapy should carry on scrutinizing what kind of cultural ideas of therapy and therapists are being formed and passed along general society both with a view to mapping out the wider representations of clinicians and their practices but also with the aim of clarifying clients' expectations before, during and possibly after the therapeutic process.

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Pedro works across several fields binding together human behaviour (psychology) with cultural differences (social anthropology), namely cross-cultural psychotherapy, inter-cultural skills and cross-cultural consumer research. He is a registered clinical psychologist with the Portuguese Order of Psychologists (nº 9440) and a Professor of Cross-Cultural Values and Social Network Research (netnography) at European University and Catolica University (Lisbon, Portugal). A true movie addict, he is often seen going in and coming out of movie theaters.

¹More often than not, side by side with mapping misconceptions of mental health, plenty of the writings on psychotherapy/film reflect an emphasis on the folk representations of therapy and therapists (e.g. Brandell, 2004; Bishoff & Reiter, 1999; Gabbard, 2001; Gabbard & Gabbard, 1999; Gharaibeh, 2004; Huskinson & Waddel, 2014; Young, 2012; Orchowski, Spickard & McNamara, 2006; Pirkis, Francis, & McCallum, 2006; Schneider, 1987; Wahl, Reiss, & Thompson, 2016; Wedding & Niemic, 2014).

²Writing about the role of the psychotherapist as a film consultant, Irene Oestrich, a psychotherapist and film consultant, argues that the hugs shared between Judd Hirsch, Robin Williams and their respective clients are a sign of unprofessionalism and boundary breaking (Oestrich, 2014).

³ When it comes to representations of psychoanalysis on screen, Alfred Hitchcock's 'Spellbound'(1945), featuring a dream sequence with scenarios built by the iconic surrealist painter Salvador Dali, unites the critical consensus as the first, fully-formed cinematic representation of the psychotherapeutic process. I am grateful to Clara Pracana for reminding me of the importance of this classic.

Section 3
Cognitive Experimental Psychology

Chapter #12

THE RELATIONSHIP BETWEEN COLOR PREFERENCE AND REACTION TIME

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ABSTRACT

This study investigated the relationship between preference for color combinations and reaction times for their evaluation among participants aged between 20 and 30 years. In this study, we found that: 1. among color combinations, light tones were generally preferred over vivid, dark tones; the most preferred color combination was Y & G (including yellow-green and green-yellow), whereas the most disliked color combination was R & G (including red-green and green-red). 2. The evaluation of color preference for the more popular light tones had a weak, negative correlation with reaction time, whereas the evaluation of color preference for the disliked dark tones had a positive correlation with reaction time. Thus, preferred colors such as the Y & G combination and the single-color blue were associated with shorter reaction times than disliked colors such as the combination of R & G or the single color yellow. 3. The reaction time for single-colors was generally longer than for the color combinations.

Keywords: preference, color combinations, reaction time.

1. INTRODUCTION

Humans' color preferences are influenced by group-level factors such as trends, cultures, or regions, as well as more individualized characteristics such as gender or personality. Thus, color preferences are not always constant among individuals, and many do not remain constant in their preference for a specific color. According to 'Evaluation for color's impression on the website (Copyright © 2009-2018 <https://iro-color.com>) which conducts questionnaires on color desirability every year in Japan, "cold" colors (blue and green) are popular among monochromes and disliked colors were loose by people. However, we come in contact with many colors in our daily lives, and people often experience varying combinations of multiple colors as well as monochromes, which impress people differently. The semantic differential (SD) method of measuring color preferences present subjects with sets of opposing adjectives to capture their opinions, whereby feelings are expressed between contrasting terms and factor analysis is used to discern individuals' generalized predilections from the resulting adjective combinations. A number of studies have used SD techniques to assess individuals' positive and negative perceptions of color-combinations, and researchers have reported finding a strong correlation between harmony and color combination preferences, whereby predilections are determined based on impressions of "color harmony" (Maki, Ide, & Kato, 2016; Naya, Mori, Tsujimoto, Ikeda, & Namba, 1966; Oyama & Miyata, 2012).

In recent years, researchers have also analyzed color preferences based on more objective indicators such as reaction time and eye movement. Several studies examining reaction times have indicated that an inverse ratio exists between a preference and reaction time, such that people take less time to express their likings than when no preference exists

(Aaker, Bagozzi, Carman, & MacLachlan, 1980; Haaijer, Kamakura, & Wedel, 2000; Klein & Yadav, 1989). Similar results were reported in studies by Dashiell (1937) and Shipley, Coffin, and Hadsell (1945), which demonstrated that reaction times tend to be brief in cases when participants have a strong preference (either positive or negative) for a given color, but also proposed that people generally examine the things they like more closely than other items. Lee, Tang, and Tsai (2005) collected objective color preference data using eye tracking, and the results showed that the number and duration of gazes were noticeably larger when presented with preferred colors. If we assume that reaction time and gaze time are analogous, then we can posit that fixation time will be longer when choosing liked things than those that are disliked or not associated with a preference.

A number of studies investigating relationships between reaction time and preferences among single colors have found a strong negative correlation between preference of single colors and reaction time, such that reaction times were shorter for favorite single colors than for those that were less preferred (Hovancik, 2000). However, to-date, no studies have examined the relationship between people's reaction times and preference ratings for bichrome images or compared such relationships between perceptions of monochromes and bichrome images. As mentioned above, there is a strong correlation between individuals' reaction times and their preference determinations regarding objects, and such determinations appear to be made based on perceptions of the harmony of color combinations. However, this factor is not applicable in the case of monochromes, and it would be useful to compare differences in reaction time between ratings of monochromes and color combinations. It is expected that such comparisons would find differences in reaction times between judgements of monochromes and bichrome images, such that it might be more difficult (and thus take longer time) to determine preferences among the latter.

As mentioned above, there is a strong correlation between individuals' reaction times and their preferences for objects, and such determinations appear likely to be made based on perceptions of the harmony of color combinations. However, this element is not applicable in the case of monochromes, and it would be useful to compare differences in reaction time between ratings for monochrome and color combinations.

Therefore, this study aimed to extend previous studies by clarifying if there is a stronger negative correlation between color preference ratings and reaction time when people evaluate color combinations. Therefore, this study aimed to extend previous studies by clarifying if there is a stronger negative correlation between color preference and reaction time when people evaluate color combinations than when they assess monochromes. A related question for analysis is whether differences in light vs. dark tones impact reaction times and/or preferences, as well as whether the distance between colors might influence the speed and character of such reactions

2. METHOD

2.1. Participants

A total of 21 students from Hokkaido University participated in this study (7 male, 14 female; $M_{age} = 23$, $SD = \pm 4.6$). According to the preliminary survey, none of the participants had any visual or color vision deficiencies, and this was confirmed when respondents took the Ishihara Color Vision prior to the onset of the experiment.

2.2. Stimuli

We selected seven colors from the PCCS (Practical Color Coordinate System developed by the Japan Color Research Institute.): red (R); orange (O); yellow (Y); blue (B); cyan (C); green (G) and medium-gray. Medium-gray was used as a background “plate” filled screen for a total of 12 color combinations comprised of pairings between the first six colors as R-G (red is on the left and green is on the right). Medium-gray was used as a background for a total of 12 color combinations comprised of 11 pairings between the first six colors to form R-G, R-C, R-B, Y-G, Y-C, Y-B, G-R, G-O, G-Y, C-R, C-O, C-Y. Each color in the pairings is listed according to its appearance on the gray plate, such that in some cases, the same color pairs were used in reverse order. Each color-combination was divided into different tone systems ranging from light to vivid to dark (as selected from the PCCS) and according to varying degrees of distance between the color-combinations as shown in Figure 1.

Figure 1.
Examples of color stimuli pairings and spacing.

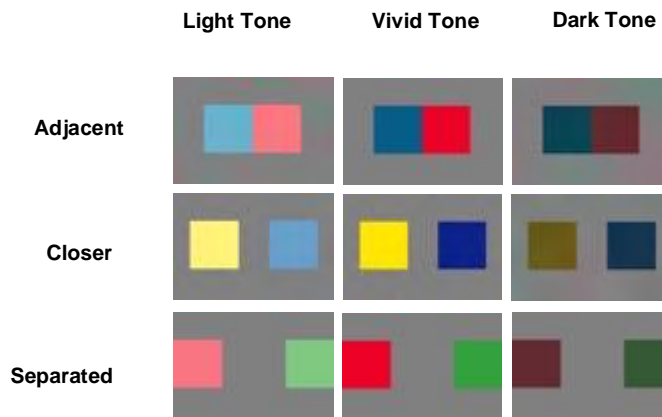


Table 1 shows the RGB 256 gradation of each color stimulus and Yxy chromaticity coordinates (Iis from the independent values of luminance(Y) and chrominance(xy)) measured by the Konika Minolta CS-100A color luminance meter. The three degrees of distance between the color-combinations in Figure 1 were denoted as "adjacent," "closer," and "separated," respectively, such that “adjacent” described no distance, "closer" denoted an interval of 3.5cm (4.56° of visual angle) and "separated" indicated an interval of 7.5cm (9.74° of visual angle) distance. Each monochrome of the color combinations was positioned such that it appeared once on the left side of the plate and once on the right side and the dimensions of the color patches were 5.5×5.5cm. The color stimuli were displayed with a resolution of 82×1200 pixels. All of the data for participants’ reaction times were calculated using Superlab software.

Table 1.
Stimuli on RGB256 & Yxy(CIE).

		R	G	B	x	y	Y(cd/m ²)
Light Tone	RED	250	116	130	0.454	0.315	34.4
	ORANGE	253	180	108	0.439	0.402	54.6
	YELLOW	255	242	123	0.395	0.444	86.2
	GREEN	127	201	126	0.308	0.441	47.8
	CYAN	103	178	202	0.242	0.293	39.0
	BLUE	103	159	202	0.237	0.264	31.9
Vivid Tone	RED	238	0	38	0.620	0.319	18.3
	ORANGE	255	127	0	0.544	0.406	36.4
	YELLOW	255	230	0	0.438	0.490	77.9
	GREEN	51	162	61	0.298	0.529	26.9
	CYAN	5	93	135	0.197	0.227	9.6
	BLUE	15	33	139	0.163	0.092	3.1
Dark Tone	RED	99	42	49	0.450	0.313	4.5
	ORANGE	108	73	25	0.466	0.427	8.0
	YELLOW	105	91	24	0.429	0.465	10.6
	GREEN	52	89	52	0.307	0.445	8.1
	CYAN	14	66	81	0.217	0.275	4.6
	BLUE	22	52	79	0.212	0.228	3.2
Background	Medium-Gray	159	160	160	0.308	0.330	79.5

2.3. Procedure

The participants were seated facing the screen and the experimenter asked them to remain still and maintain the same position. They were seated approximately 44cm away from the screen (1920 × 1080pxl, color temperature 7500K). When each stimulus was presented, the participants had to consider their preferences concerning the color combinations while adhering to the instruction to accurately estimate each stimulus as fast as possible. The assessments of single colors or color combinations were scored on an 11-point Likert scale on which 0 represented the worst, and 10 represented the best. Each participant evaluated each color patch using same method. The reaction time was recorded from the time that the stimulus appeared until the participant pressed the corresponding button to complete their rating.

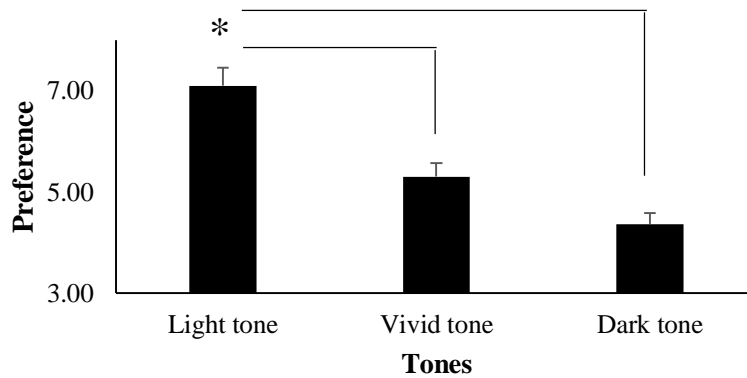
3. RESULTS

3.1. Color preferences

First, to investigate the gender differences in the preference for color combination, the two-factor analysis of variance between participants was used. The results show that there was no significant difference in the interaction between gender and color perceptions; however, the main effect was significantly different at each factor ($F(11, 2328) = 1.44$, $p < .15$; $F(1, 2328) = 6.75$, $p < .05$; $F(11, 2328) = 5.38$, $p < .0001$), and males' ratings were higher than females' ratings for color combinations (Males: $M_{preference} = 5.85$, $SD = \pm 3.0$; Females: $M_{preference} = 5.50$, $SD = \pm 3.1$) as well as for monochromes females (Males: $M_{preference} = 5.81$, $SD = \pm 2.4$; Females: $M_{preference} = 5.08$, $SD = \pm 2.7$). There were no differences in color preferences between participants in this experiment.

Secondly, the three-factor within-subjects analysis of variance was used to analyze preferences concerning color combinations, whereby the three variables were tone, distance, and hue. The results indicated an interaction between tone and color-combinations ($F(22,440) = 5.52, p < .05$), a main effect of tone ($F(2,40) = 9.68, p < .01$), and no main effect of interval distance ($F(22,440) = 0.05, ns$), nor any interaction with interval distance. Light tones were significantly preferred over other tones ($t(1,40) = 4.33, p < .0001$; $t(1,40) = 2.85, p < .05$, see Figure 2), and the preference for combinations of yellow and green (including yellow-green and green-yellow) and yellow and cyan combinations was significantly greater than combinations of red and green or red and cyan ($t(1,220) = 7.01, p < .0001$; $t(1,220) = 3.86, p < .001$; $t(1,220) = 7.95, p < .0001$; $t(1,220) = 7.79, P < .0001$) (see the right vertical axis in Figure 4). Among single colors, there were significant differences between tone preferences, whereby light tones were preferred over dark tones ($F(2,40)=6.67, p < .01$; $t(1,40) = 3.64, P < .005$). There was also a significant difference in the main effect of single color preferences ($F(5,100)=4.99, p < .01$), such that blue, cyan, and green were better liked than yellow, red, and orange (see the right vertical axis in Figure 5).

Figure 2.
Preferences for color combinations in different tone.



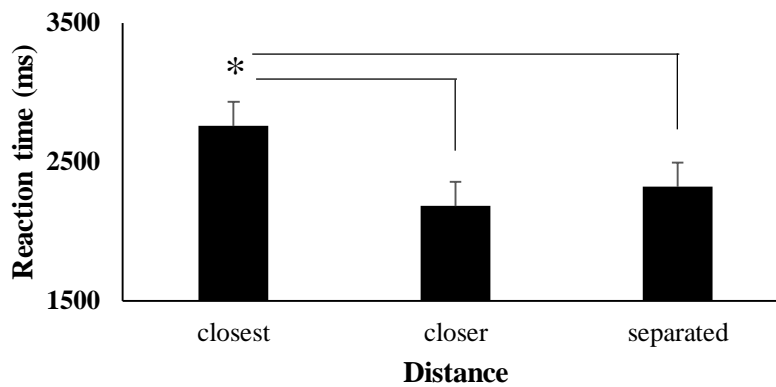
Note. * $p < .05$

3.2. Reaction times

Reaction time was measured from the moment of presentation of each color combination until the participant pressed the button and the numerical value was recorded. Three factors of combinations of tone, interval distance, and color (12) were used to analyze the within-subjects variance, and significant differences were found in the interactions between distance and color combination and in the main effect of distance ($F(22,440) = 2.20, p < .005$; $F(2,40) = 18.76, p < .00001$). According to the simple main effect test of color combinations for each interval, the reaction time for “adjacent” colors was significantly longer for R-G than for any combinations other than G-R and G-O, and the reaction time associated with G-R was significantly longer than those for all of the other combinations. Among the reaction times for “closer” colors, the time to rate R-G was significantly longer than R-B, Y-C, or G-Y, and among the times for “separated” colors, ratings for R-G took significantly longer than all the others. In determining the main effect of the distance between colors, the reaction time for the adjacent colors was longer than those for both the closer- and

separated color ratings ($t(1,40) = 5.87, p < .00001$; $t(1,40) = 4.45, p < .0001$), and no difference was found between the reaction times of the latter two distance categories (see Figure 3). This result provides a mixed answer to the research question of whether the interval of distance between the two components of color combinations would impact reaction times, such that some distance between colors facilitates preference determination more than when they are immediately adjacent; however, the experiment did not identify any "optimal" distance for hastening judgements of bichrome images.

Figure 3.
Reaction times for color ratings based on distance.



3.3. Relationship between color preferences and reaction time

Based on the above results, we understood that participants' color preferences were influenced by tone, whereas their reaction times were affected by the distance between the components of the color combinations. Therefore, to analyze the correlation between preference for color combinations and reaction time, we needed to consider the factors of the tone and interval distance of color combinations independently. The correlation coefficients between the preference evaluation scores and the reaction times are presented in Table 2. We may assume that there are two extremes of positive and negative preference categories respectively associated with light tones ($M_{preference} = 7, SD = \pm 2.5$) and dark tones ($M_{preference} = 4, SD = \pm 3.2$), such that the reaction time is shorter for items in the more liked category with higher evaluation scores, whereas inversely, in the disliked category, higher evaluation scores were correlated with longer reaction times.

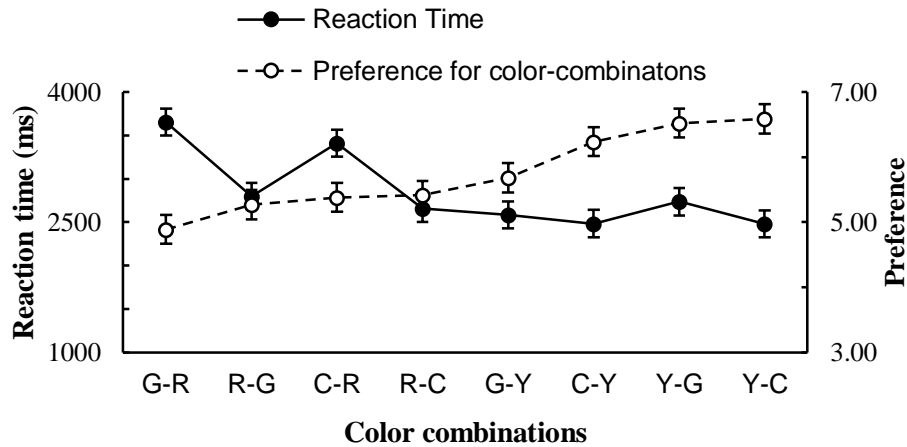
Table 2.
Correlation between preference and reaction time.

		Preference		
		Light tone	Vivid tone	Dark tone
Reaction time	Adjacent	-.10 *	-.04*	.48*
	Closer	-.15*	.10*	.34*
	Separated	-.19*	.07*	.16*

Note: Table 2 shows the correlation coefficient between the preference and reaction time. In the category of light tone, although the coefficient was small, there was still a negative correlation between preference and the reaction time regardless of interval distance. According to the tone become darkish, there was the positive correlation between them.

Additionally, we conducted a more detailed examination of the most liked color combinations such as Y & G, Y & C and most disliked color combinations such as R & G, R & C to re-analyze the relationship between these judgments and reaction time and identify a clear trend. The relatively disliked combinations such as R & G, R & C were associated with longer reaction times than the relatively liked combinations such as Y & G, Y & C ($t(1,220) = 7.01, p < .0001$; $t(1,220) = 3.86, p < .001$; $t(1,220) = 7.95, p < .0001$; $t(1,220) = 7.79, P < .0001$; etc.). It turned out that participants needed more time to judge a combination of undesirable hues. Figure 4 presents a summary of the average reaction time values and the likelihood evaluation for a total of eight combinations of pairs of R & C, R & G, Y & G, Y & C according to their left and right positions. Overall, the reaction times for colors receiving higher preference ratings were relatively short.

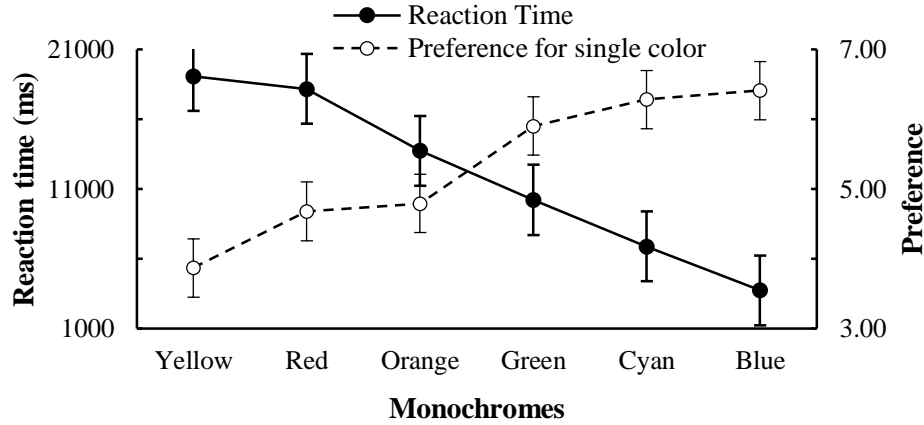
Figure 4.
Correlation results for color combinations.



Note: Figure 4 shows the relationship between preference for color combinations and reaction time. The left vertical axis denotes reaction time, the right vertical axis shows the preference for color combinations, which are arranged in order from least to most liked. Shorter reaction times were correlated with higher preference ratings.

Significant correlations were found between distance between colors and color-combinations, and the main effects of distances and color-combinations on reaction time were found ($F(22,440) = 2.20, p < .01$; $F(2,40) = 18.76, p < .01$; $F(11,220) = 12.41, p < .01$). According to the multiple correlations of the reaction time, the reaction times associated with disliked red-green and red-cyan combinations were longer than more liked color combinations as yellow-cyan or yellow-blue combinations (Figure 4). Moreover, significant negative correlations existed between single-color preferences and reaction time ($r = -0.42, ** p < 0.01$) (Figure 5).

Figure 5.
Correlation results for single colors.



Note: Figure 5 shows the relationship between preference for single colors and reaction time. The left vertical axis denotes reaction time and the right vertical axis represents the preference ratings. Colors are arranged from left to right in order of least to most liked. Shorter reaction times were correlated with higher preference.

4. DISCUSSION

Based on our results concerning the relationship between color preference and reaction time, we understood that participants tended to choose their liked colors more quickly than those they liked least, regardless of whether these be single-colors or color-combinations (see Figures 4 and 5). The correlation coefficient on the Table 2 supported our results. In addition, among colors in the more liked category, a preference for light tones had a small negative correlation with reaction time, whereas the evaluation for color preference in the relatively disliked category of dark tone had a positive correlation with reaction time. Earlier studies of reaction time were primarily conducted in the field of marketing. Aaker et.al (1980) reported that brand preference influenced reaction time such that they were nearly inversely proportional. Pullig, Simmons, and Netemeyer's (2006) study using reaction times to measure the dilution of brand value demonstrated that longer response times imply declining brand value. Although Klein and Yadav (1989) suggested that response time did not directly consider likes and dislikes, they found a positive correlation between the difficulty of decision making and time. Haaijer et.al (2000) posited that shorter reaction times are often more desirable for humans. In a study of the relationship between monochromatic preferences and reaction times, Hovancik (2000) asked participants to choose one of the two monochrome colors and measured their reaction time, finding a strong negative correlation between preference and reaction time. Using an 11-point scale to rate tone- and color preferences is an approach for which the usefulness has been confirmed in both monochromatic research and marketing features such as the color combinations featured in branded products. It is unknown how coloring preference is determined, but preferences have been demonstrated to change based on empirically measurable factors such as region, age, and type of objects what they liked (Palmer, & Schloss, 2010), also may be related to their

personality type, gender, culture. The judgment of likable feelings for color combinations is based on such individual differences. People perceive color combinations differently and sometimes form their impressions over time; thus, if you look at certain color combinations, their favorability will increase somewhat simply through a contact effect. Furthermore, people are frequently exposed to popular color combinations, which might further enhance their positive evaluations. There seem to be some specific color combinations that commonly receive high evaluations among individuals, as reflected in highly rated brands in consumer categories ranging from bags to clothing, the brand was more liked in the color combinations category. As brand preferences are earnestly acquired through experience, our reactions to color combinations might also correspond to an acquired likelihood evaluation.

However, it is notable that reaction times for single-colors were longer than for the color combinations, which indicates that people might decide more rapidly when choosing more complex combination of colors than when rating a single color. In our past experiments, we learned that single-color preferences do not affect judgements of color combinations even when the single color is included in the pairings (Jin & Kawabata, 2015). Moreover, our preference for color combinations appears to mostly depend on their harmony. Additionally, significant correlations were identified between color-pair preferences and color harmony through experimental data ($r = 0.70$, $p < 0.01$). At this point, we may conclude that when people are judging color combinations, At this point, we may conclude that it is the factor of harmony, which is quickly identified and absent in monochromatic contexts, that influences the speed of preference determination when people are judging color combinations, whereas preferences for single colors, might derive more from people's memories or imaginings of past personal experiences, which would extend the reaction time. Whereas preferences for single colors might derive more from people's memories or imaginings of past personal experiences, which would extend the reaction time. We learned that the preference for color closely relates to the evaluation of the harmony feeling of the combination of colors (Jin & Kawabata, 2015; Karen & Stephen, 2011; Naya et al., 1966; Ou & Luo, 2006; Palmer & Schoss, 2011; Szabó, Bodrogi, & Schanda., 2010). Harmony is also a value that has accumulated in individuals through various experiences and daily reinforcement in daily life. and it is likely to be the main constituent element in deciding the likelihood evaluation of coloration. Therefore, in this experiment, participants might have made determinations of simple likes/dislikes based on this harmony of color combinations. In the case of single colors, these presented a harmony with the background color; however on a background with low saturations (such as medium gray), there is less likelihood of any significant incompatibility due to a comprehensive evaluation that summarizes elements other than harmonies, such as a pure evaluation for that particular color obtained from personal experiences of particular items and feelings associated with that color, hence, the reaction time was longer for the reasons mentioned above. Moreover, the individual difference was more remarkable than color combinations. In the case of color combinations, since the evaluation has already determined according to harmony, it appears to be easier to make a judgement, as reflected in the faster reaction times.

In the future, we aim to conduct a more detailed investigation of reaction time and harmony of color combinations and compare them with the reaction time of the preferences of color-combinations or single colors. Moreover, we will aim to clarify whether more attention should be paid to the more harmonious color-combinations. It is necessary to explore the mechanism behind color palatability as determined by humans and related behavior indicators by examining the gaze count, the gaze.

5. CONCLUSION

In short, our results indicated that evaluations of color preference had a small negative correlation with reaction time in the more liked category of light tones, whereas this rating had a positive correlation with reaction time in the disliked category as dark tones. In addition, the reaction time for single-colors was longer than for the color combinations. These results align with previous studies that demonstrated a significant relationship between preference for objects and reaction time.

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Chapter #13

ATTENTIONAL VARIABLES AND BCI PERFORMANCE: COMPARING TWO STRATEGIES

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ABSTRACT

The objective of this chapter is to evaluate task factors and user factors affecting Motor Imagery Brain Computer Interfaces (MI-BCI) performance. Brain computer interface (BCI) technology has been under research for several decades. Nevertheless, its practical applications have been mostly ad hoc solutions for individual users. In order to become an alternative in clinical use BCI performance must be improved. In our experiment fifty subjects performed two different EEG based MI-BCI tasks. The participants controlled a BCI task with an action-action motor imagery strategy versus an action-relaxation strategy. BCI performance and subject attentional traits were evaluated for every user under both experimental conditions. Our results show a better performance when the task was controlled with an action-action strategy versus an action-relaxation strategy. Moreover, in the action-action strategy a constant performance improvement was achieved with short term training. It can be hypothesized that for most subjects it is easier to switch from an action strategy to another action strategy than to switch from an action strategy to a relaxation strategy. Regarding user factors, impulsivity seems to be inversely related to the ability to master the BCI-task. Processing speed and cognitive flexibility can also predict a better performance in MI-BCI based tasks.

Keywords: brain computer interfaces, motor imagery, instructions, attention.

1. INTRODUCTION

Brain Computer Interfaces (BCIs) are non-muscular communication and control systems that a person can use to communicate his/her intention and to act on the environment directly from brain activity measurements (Schalk, Brunner, Gerhardt, Bischof, & Wolpaw, 2008). BCIs consist of sensors that record brain activity and algorithms that process this information in order to use it to interact with the environment (Lotte, 2014). Looking for extensive clinical use we focus on EEG based BCI applications due to its non-invasive character and high temporal resolution.

The potential of BCI as assistive technology systems was the main motor for its development. Patients who can benefit most from this technology are those with limited communication and movement capabilities (Kranzioch, Zich, Schierlholz, & Sterr, 2014). Different user-oriented applications have been developed including communication protocols such as spellers (Placidi, Petracca, Spezialetti, & Iacoviello, 2016), control of robot arms and neuro-prosthesis (Iturrate, Chavarriaga, Montesano, Mínguez, & Millán, 2015), control of motorized wheelchairs (Iturrate, Antelis, Kübler, & Mínguez, 2009) and different home automation systems (Perego, Maggi, Parini, & Andreoni, 2008).

BCI technology has been under research for several decades. Despite its relevant medical potential, existing developments have been limited to ad hoc solutions for individual users. BCI is not yet a common technology in medical or rehabilitation protocols (Mihajlović, Grundlehner, Vullers, & Penders, 2015). Barriers that must be solved before BCI technology can become commercial or standard include customization of BCI applications for each subject, such as the necessity of an individual and recurrent calibration; standardization of protocols and procedures and convenience and comfort in use of registration systems (i.e. EEG electrodes and caps) (Lightbody, Galway, & McCullagh, 2014). It is currently intended to solve problems that prevent the extension from the research lab to medical or recreational extended BCI use (Tangermann, Lotte, & Van Erp, 2012). Success of BCI technology depends on its reliability and accuracy improvement, i.e. to achieve a high percentage in the number of times in which the system executes the intended action.

Motor imagery is one of the most common strategies applied to design BCIs. The motor imagery technique is based on the analysis of the EEG when the subject imagines or performs a movement. The thought or realization of a motor action modifies the characteristics of the EEG signal produced by the sensorimotor areas of the cerebral cortex. *Mu* rhythms and *beta* rhythms are modified not only by the execution of the action but also by its imagined realization. The imagination of motor actions usually involves a variation of the amplitude of the *mu* and *beta* rhythms in the sensory-motor cortex (Wolpaw & McFarland, 2004). These variations in the spectral content of the EEG signal associated with the thought of a given action can be employed by the subject to control a BCI system (Lotte, Congedo, Lécuyer, Lamarche, & Arnaldi, 2007). What motor imaginations allow for a better control remains an open issue.

The study of Brain-Computer-Interfaces (BCI) requires deep knowledge of brain as well as processors' functioning. BCIs are biofeedback systems which transform EEG-waves into actions that can be performed by a machine. The term was coined by Jacques Vidal in 1973 (Vidal, 1973). BCIs may have interesting and possibly successful applications to therapeutic fields. It will be possible, for instance, developing exoskeletons that will allow those who have lost the ability to move their limbs just by using brain activity, as well as performing all sorts of home automation activities, or will facilitate the communication to those with severe speech disorders, among other possible utilities. Promising as it may look like, there are, however, a number of unknown aspects for which no solid explanations have been provided by now. A part of the future success of BCI-based therapeutic approaches relays on our ability to identify which variables affect the ability to interact with a machine by means of the mental activities that we can produce and control in highly variable conditions, as well as which are the conditions in which this ability can be most effectively acquired by learning (Vaadia & Birbaumer, 2009).

These facts have led many authors to investigate variables that affect BCI performance. (Jeunet, N'Kaoua, & Lotte, 2016) grouped the predictors of performance into three categories: (1) users' relationship with technology, (2) attention and (3) spatial abilities.

Concerning users' relationship with technology some authors have found a correlation between MI-BCI performance and variables such as locus of control related to technology (Burde & Blankertz, 2006). Jeunet, N'Kaoua, Subramanian, Hachet, & Lotte (2015) showed a positive correlation of MI-BCI performance with user tension and self-reliance.

Attention and motivation have been shown to positively correlate with MI-BCI performance (Daum, et al., 1993; Grosse-Wentrup, Schölkopf, & Hill, 2011; Grosse-Wentrup & Schölkopf, 2012; Neumann & Birbaumer, 2003; Nijboer, et al., 2008). Hammer, et al., (2012) also showed that attention span influenced MI-BCI control performance. When considering attention, it must be distinguished between the user's

attentional abilities (trait) and attention level during the task (state). The latter can be influenced by parameters such as environmental factors, mood or motivation. Both these aspects of attention have been repeatedly suggested as being predictors of BCI performance (Jeunet et al, 2016).

Spatial abilities seem to play an important role in user BCI performance: Kinesthetic imagination, visual-motor imagination, mental rotation scores or abstractness abilities have been shown to affect user performance in MI-BCI tasks (Vuckovic & Osuagwu, 2013).

Other factors affecting BCI performance include demographic characteristics like gender and age and habits like playing a music instrument, practicing sports or playing video games.

Authors who have studied the problem agree on the need to carry out more research in order to identify variables that predict a good performance in BCI tasks. To go along those lines, we aim to study the strategies used by individuals having shown a high success at BCI tasks, since we have learned from previous studies that there are huge inter-individual differences in the ability to manipulate BCI devices (Jeunet et al, 2015). Some subjects display good performances, even after just a few trials, while others are almost unable to learn how to do it, a phenomenon that has been named 'BCI-illiteracy' and may affect an estimated 15 to 30% of the population aptly manage a BCI (Vidaurre & Blankertz, 2010; Allison & Neuper, 2010). Correctly identifying these skills could be a useful tool to predict 'BCI-literacy'. Additionally, we aim to ascertain which kind of instruction may be more useful in order to facilitate learning to use a BCI-device.

2. OBJECTIVE

The objective of this chapter is to evaluate task variables and user variables affecting Motor Imagery Brain Computer Interfaces (MI-BCI) performance. We wanted to compare BCI performance with different motor imagery tasks. In particular, we compare actions instructions (imagining moving hands or feet) and non-action instructions (imagining quiet hands or feet). Regarding user variables, we evaluate the influence of attentional capabilities on BCI performance.

3. METHODS

3.1. Participants

A total of 50 second-year Psychology students (10 men and 40 women; age=20.18 ± 3.04) at the Universitat de València have participated in this study. None of them had previous experience with BCIs.

All procedures performed involving human participants were in accordance with the ethical standards of the Universitat de València research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

3.2. Instruments

The following instruments and materials were used:

- Initial questionnaire: Designed by ourselves to explore daily activities usually performed by the participants (physical exercise, video games, music training...) that had been hypothetically related to the ability to manage a BCI-device.

- Virtual-Reality Test ‘Aula Nesplora’: Intended to evaluate sustained and selective attention to visual as well as auditory stimuli (Climent, Banterla, & Iriarte, 2011; Díaz-Orueta, et al., 2014). The participants are subjected to a variety of external distractors of both sensorial modalities, which allows an evaluation of their ability to inhibit the effect of distractions. The instrument also evaluates the ability to inhibit internal distractors, which has been considered as particularly relevant for our purposes (Zulueta, Iriarte, Díaz-Orueta, & Climent, 2013).

- CPT II Test: Provides an assessment of the general attentional capacities as well as concentration and alertness (Conners & MHS Staff, 2000). It offers, as well, a score of the participant’s ability to inhibit a response.

- Enobio (8-channels): It is a BCI-device based on the recording of EEG-waves. It uses wireless technology. The dry electrodes make it easier and more comfortable for the participants and have shown similar levels of recording efficacy than the humid ones (Zander, et al., 2011). The signal was acquired through channels F3, F4, C3, Cz, C4, T7, T8 and Pz, according to the international system 10/20, placed on sensory-motor areas in order to apply the BCI paradigm of motor imagery. To implement the system, BCI2000 software was employed because of its contrasted results (Schalk, McFarland, Hinterberger, Birbaumer, & Wolpaw, 2004).

- Cursor task: A cursor task, based on the modulation of Mu and Beta rhythms to control the position of a cursor on the computer screen, was selected to provide directions and feedback to the users (Renard, et al, 2010; Schalk, 2009). The participant’s intentions should affect the cursor position by means of imagining motor actions. In our study, these actions have to follow the instructions received and are aimed to direct the cursor towards a bar that may appear in different parts of the screen. Being able to direct the cursor and to reach the bar is considered a successful attempt. The participant has to control the direction in which the cursor is moving, in order to reach the bar.

3.3. Experimental procedure

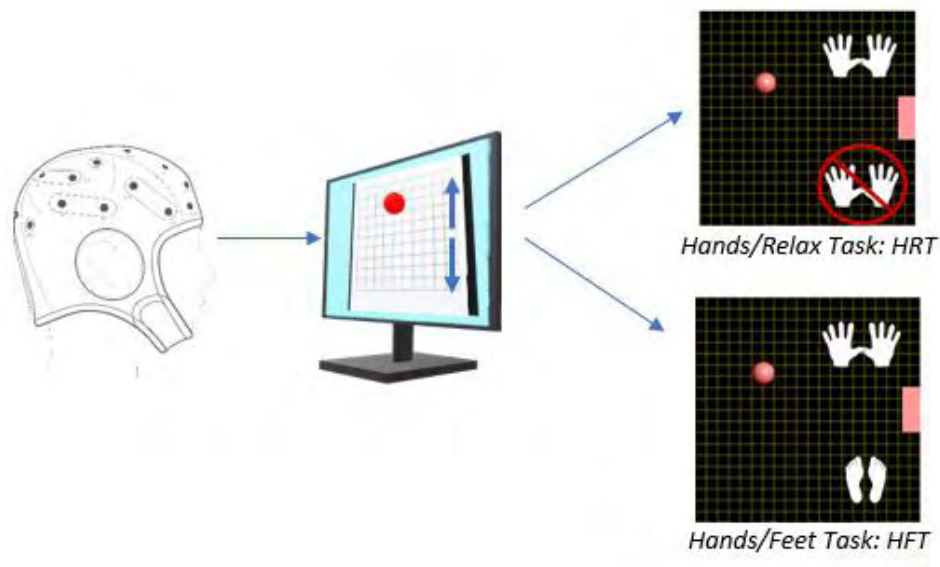
The whole experimental session in each session lasted for approximately 60 minutes and was organized in the following way: 10 minutes for preparation and information, 3 minutes for relaxation, 30 minutes for the MI-BCI tasks, 15 minutes for performing the attentional tests and 3 minutes for finishing.

- Preparation: Participants completed the initial questionnaire. The Enobio helmet was properly placed on their heads following the standard procedure (Wilson, Schalk, Walton, & Williams, 2009). They listened at the instructions while the habituation period was going on.
- Relaxation: Immediately before starting the tests, participants performed a Jacobson’s progressive facial relaxation procedure guided by recorded verbal instructions that lasted for 180 seconds. The role of this relaxation procedure was to induce a relaxed state in the participants. It was conducted because tension has been shown to correlate negatively with motor imagery BCI performance (Jeunet et al, 2016).
- BCI tasks: Each participant performed two cursor tasks that differed in the instructions to control the vertical movement of a cursor moving on the computer screen (Figure 1). Targets appear on the screen and participants were asked to imagine the instructed movements to move the cursor towards the targets. An action-relaxation instruction was compared with an action-action instruction. In the action-relaxation instruction (hands/relax task: HRT) subjects had to purport moving their hands to move the cursor up. If they wanted to move the cursor down, they were instructed to relax. In the action-

action task (hands/feet task: HFT) they had to purport moving their hands to direct the cursor up. If they wanted to move the cursor down, they were instructed to imagine that they were stretching their feet.

- Attentional tests: Subjects performed the virtual-reality test ‘Aula Nesplora’ and, after a five minutes-break, completed the CPT II computerized test.

Figure 1.
BCI cursor tasks.



Each participant performed a total of six tests (three for each type of task) lasting 150 seconds each and divided into 20-second trials. In each trial, the cursor was visible for a maximum 20 seconds during which they could achieve success (the cursor reaching the target) or fail (the cursor not reaching the target). In both cases, a new trial was subsequently initiated.

To analyze the results SPSS software v. 16.0 was used. T-tests for related samples as well as for paired samples, and univariate variance analyses have been performed.

4. RESULTS AND DISCUSSION

We have compared an action-action strategy (HFT) with an action-relaxation strategy (HRT) in the MI-BCI task. Figure 2 shows the individual task success comparing the HRT control strategy and HFT control strategy. In Figure 2 results for all subjects are ordered according to their performance in the HRT. Figure 3 shows the group performance averages in each strategy.

Figure 2.
Individual task performance in HRT vs HFT.

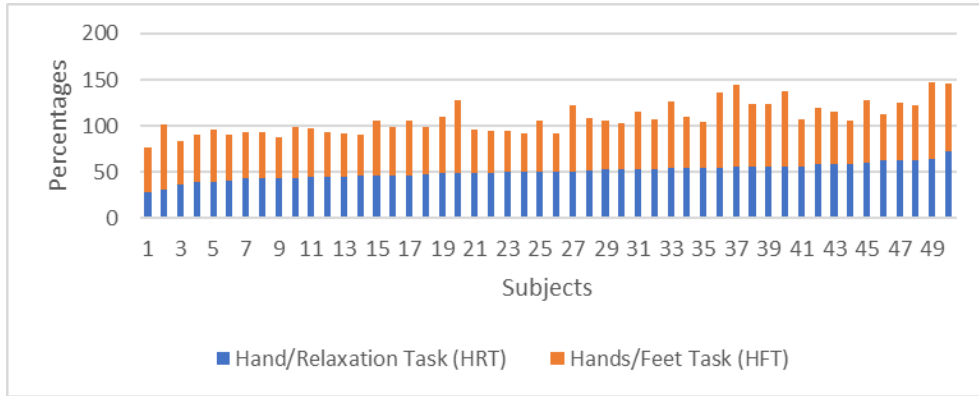
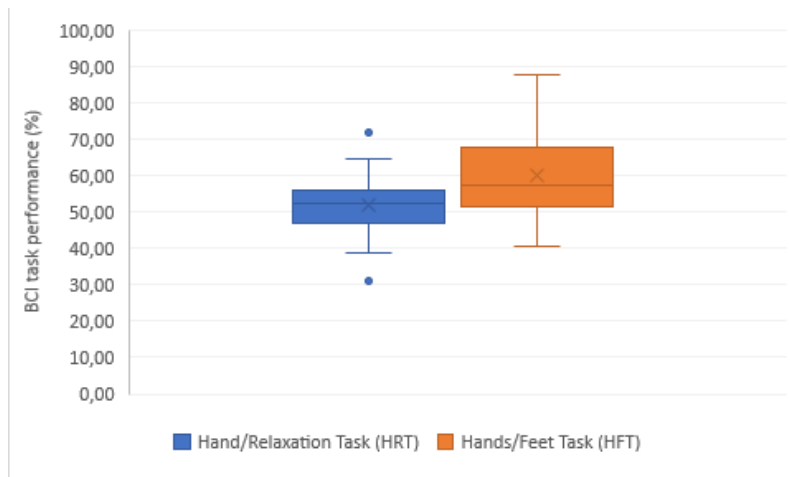


Figure 3.
Task performance average in HRT vs HFT.



As shown in Figures 2 and 3, HFT resulted in a better performance, and 38 out of 50 subjects (76%) achieved better results with this task strategy than with HRT. We found a statistically significant difference between both strategies. Participants achieved significantly less control on HRT trials than on HFT: $t(49) = -4.667, p < 0.001$.

It can be hypothesized that for most subjects it is easier to switch from one action strategy to another (switch from thinking of moving both hands to thinking of moving both feet) than to switch from an action strategy to a relaxation strategy (think about moving both hands vs. think about no movement at all).

Average task performance was low as expected for subjects without previous training in MI-BCI. For the HRT, no learning was observed among the participants, operationalized as an increase in the percentage of successful attempts between the first and the last trial: The

difference between both attempts was not significant. For the HFT, though, an improvement was observed between the first and the third trial ($t=-2.425$; $p=.010$).

Regarding attentional variables, a significant correlation ($r=.654$; $p=.019$) was found between HFT performance and the variable Response-Time in mistakes at the Nesplora test, meaning that those who are quicker at emitting a mistaken response (impulsive style) are worse BCI-performers.

Similar results are found between the Hit Reaction Time Change variable that evaluates response time, from the CPT II-test, and BCI performance ($r=.450$, $p=.046$). Which means that those subjects that reflect more time on the response to target stimuli, that is, respond less impulsively, also perform better in the cursor task.

There is a significant correlation between learning and average Response-Time to the hyperstimulation task of the Nesplora test ($r=.705$; $p=0.014$). For this task, the participant has to respond every time a stimulus is shown or a name is said out loud, except when it is the target-stimulus. This result means that subjects who are quicker at answering during high-concentration tasks and are better at performing inhibition, are the ones who perform better in the BCI tasks.

There is also a significant correlation between Detectability (a CPT II score) and learning of the BCI tasks ($r=.948$; $p=.008$). Detectability assesses the participant's ability to quickly switch the attentional focus. This result can be interpreted in the sense that individuals with a high cognitive flexibility will be more likely to learn to control the BCI task.

There is a significant correlation ($r=.692$; $p=0.051$) between the average Response-Time (Nesplora) when no distractors are present and performance: individuals displaying a more impulsive style and make mistakes because of that will be slower at learning the cursor task.

Finally, we had positive feedback from the participants. The use of dry electrodes and wireless EEG signal transmission made the experimental setup comfortable. Motor imagery is well accepted by users because it provides a sense of agency compared to other paradigms (such as evoked potentials).

5. FUTURE RESEARCH DIRECTIONS

Brain-computer interface technology has a great potential for communication and for the control of assistive systems. This technology could improve the lives of thousands of people with disabilities. It has been observed that the use and control of this type of technology requires some degree of training, which may be longer or shorter depending on the users' psychological and cognitive features and on the BCI characteristics themselves. Our future research focus on identifying user variables and task variables to enhance BCI performance.

6. CONCLUSION

Our results show a better performance in the cursor task with an action-action MI strategy versus an action-relaxation MI strategy. Moreover, a constant performance improvement was achieved with short-term training in the action-action strategy.

We can conclude that:

- Instructions based on Action/Relaxation constitute a worse strategy than Action/Action instructions in order to control a BCI-task.
- As it could be expected, increasing the number of training sessions produces better results.
- Impulsivity is inversely related to the ability to master the BCI-task.
- Processing speed and cognitive flexibility can predict a better performance in MI-BCI based tasks.

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Chapter #14

HOW DO EMERGING ADULT CHILDREN READ THEIR PARENTS' MINDS?

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ABSTRACT

Ames and Mason (2012, for a review) argued we read others' minds based on others' behaviour and our own minds. On the basis of the argument, this study hypothesised that young adult children infer their parents' attitudes towards their spouses based on their parents' emotional expressions and disposition as well as their own attitudes towards their parents. The research was conducted by way of a survey among 335 undergraduates. It required participants to respond to questions about their parents. The hypothesis was tested by analysing 199 answers from participants whose parents were married couples and all lived together. The results indicated children read their parents' attitudes towards their spouses based on their parents' emotional expressions. Moreover, some variations were observed with regard to gender differences between children and parents. While sons did not infer their mothers' minds by their mothers' disposition, daughters did. While children inferred their mothers' minds by projecting their own minds, they did not infer their fathers' minds in the same manner. A future study including an examination of children's perceived similarity with their parents, perspective taking of their parents as well as the self-other overlap between children and parents could be useful.

Keywords: mind reading, family relationships.

1. INTRODUCTION

In Japan, the birth rate is declining and few children are born out of marriage. An increase in the number of unmarried people has been pointed out as one of the causes of the declining birth rate (Cabinet Office, 2018). The marriage rate (per 1,000 population) has been decreasing since 1971, reaching its lowest point at 5.0 in 2016 (Figure 1). With this background, young people's attitudes towards marriage are drawing social attention. On the other hand, it has been verified that youth's marital attitudes relate to their parents' marital quality, both in the U.S.A. (Cunningham & Thornton, 2006; Kapinus, 2005; Willoughby, Carroll, Vitas, & Hill, 2012) and in Japan (Mori & Katsurada, 2017; Saito, 2012; Yamauchi & Ito, 2008).

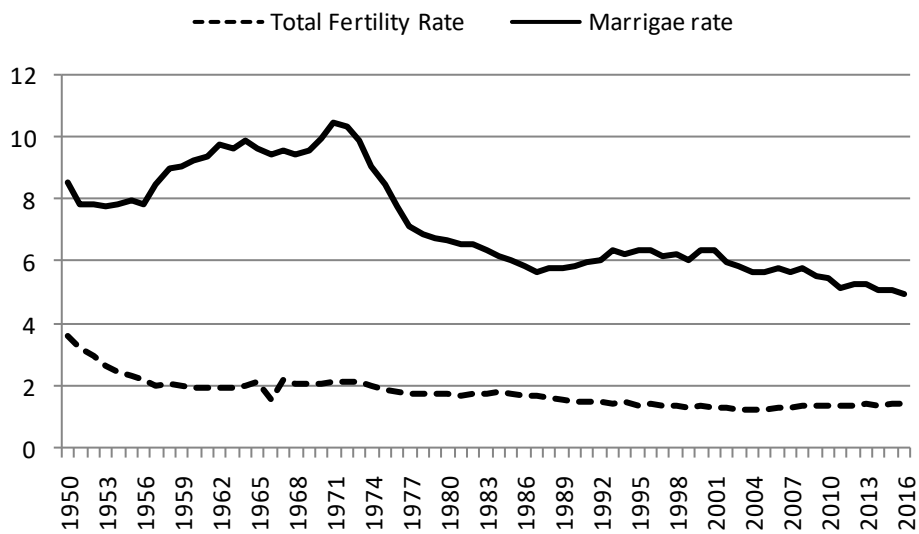
Regarding young adults' attitudes towards divorce, Kapinus (2005) analysed 334 children, who were nineteen years of age or older, using data from the 'Life Course Panel Study' (Booth, Johnson, White & Edwards, 1991). The results indicated that children who felt that their parents should divorce had positive attitudes towards divorce. Cunningham and Thornton (2006) examined 679 mother-child pair data from the 'Intergenerational Panel Study of Parents and Children'. They found that, at age 18, children who reported that their parents' marriages were happy had negative attitudes towards divorce. However, mothers' reports of their own marital quality did not correlate with their children's attitudes towards divorce.

Concerning young children's marital attitudes, Willoughby et al. (2012) analysed 335 college students' and their parents' data from the 'Researching Emerging Adults' Developmental Years'. They indicated that young adults who reported that their parents were happy in their marriages during their childhood tended to consider being married as an important goal. Similar results were obtained from Japanese surveys. Yamauchi and Ito (2008) conducted a survey and examined 213 undergraduates' data. The results showed that the better they assessed their same-sex parents' marital relationships, the more positive their marital attitudes were.

Relating to young people's desire to marry, Saito (2012) conducted a survey and analysed 362 undergraduates' data. The results indicated that youth who perceived that their mothers were satisfied with their marital relationships were likely to want to get married. Mori and Katsurada (2017) also conducted a survey and analysed 266 undergraduates' data. They found that the better young people assessed their parents' marital relationships, the more strongly they wanted to get married.

From these results, it is concluded that young adults' perception of their parents' marital quality influences their marital attitudes. Considering this, how do emerging adult children perceive their parents' marital quality? If this becomes clear, we can find some clues to young people's positive attitudes towards marriage and consequently to raising marriage rates.

Figure 1.
Total fertility rate and marriage rate (Ministry of Health, Labour and Welfare, 2018).



Ames and Mason (2012) define mind perception/ reading as the everyday inferential act of a perceiver ascribing mental states such as intentions, beliefs, desires, and feelings to others. They reviewed previous studies on mind perception and showed that we read others' minds through their behaviour and by projecting ourselves. First, we have the tendency called 'false consensus' (e.g., Ross, Greene, & House, 1977), in which we tend to assume that others share our own views. Therefore, children will read their parents' minds by projecting their own minds. Second, when we read others' behaviour, we are likely to

attribute their behaviour to their stable dispositions. This trend is well known as the 'fundamental attribution error' (e.g. Jones & Harris, 1967). According to this understanding, it is considered that children read their parental marital quality based on their parents' dispositions.

In the meantime, Gray (2008) divided the constructs of interpersonal perception into those within people and those between people. We perceive not only others' personality, thoughts, and feelings which exist within people, but also relationships which exist between people. Previous research on judging relationship quality between others found the 'expressivity halo' effect (Bernieri, Gills, Davis, & Grahe, 1996; Kimura, 2015; Kimura, Daibo, & Yogo, 2010; Kimura, Yogo, & Daibo, 2005). The more abundantly others express their emotions in their interactions, the better we judge the relationship. For example, Bernieri et al. (1996) asked 45 undergraduates to view 50 video clips (50 seconds each) of different interactions involving unacquainted opposite-sex individuals debating, and to judge the relationship quality within each video clip: 'Do they like each other?' 'Are they enjoying what they are doing?'

Indeed, if others express only their positive emotions, their expressivity is linked positively to judgments of relationship quality; however, parents may express not only positive but also negative emotions. When children perceive that their parents express negative emotions towards their spouses, children will judge their parents' marital relationships negatively. Thus, it is predicted that children's perception of their parents' marital quality positively correlates to the parents' expressiveness of positive emotions and negatively correlates to the parents' expressiveness of negative emotions.

In addition, this study distinguishes between fathers' and mothers' marital quality. Some previous studies (Cunningham & Thornton, 2006; Kapinus, 2005; Mori & Katsurada, 2017; Willoughby et al., 2012) integrated both of them as parents' marital quality and Yamauchi and Ito (2008) focused only on same-sex parents' marital quality. On the other hand, Saito (2012) distinguished them and found that children's perception of their mothers' satisfaction with their marital relationships was linked to children's desire to marry, but that of fathers was not. Furthermore, Aloni and Bernieri (2004) investigated the man's love for his romantic partner and the woman's love for her romantic partner separately in investigating judgments of love in couples. As it would be natural to assume that fathers and mothers may have different attitudes towards their spouses, this study also considers fathers' and mothers' attitudes towards their spouses separately. Similarly, this study takes children's sex into consideration in order to confirm whether the way for children to read their parents' minds varies from sons to daughters.

2. OBJECTIVES

Considering these, the present study examines how young adult children infer parents' attitudes towards their spouses. Specifically, the following hypothesis is investigated: children infer their parents' attitudes towards their spouses ('Children's perceptions of their parents' attitudes towards their spouses') based on their parents' emotional expressions ('Children's perceptions of their parents' expressiveness towards their spouses (negative/ positive)') and dispositions ('Children's perceptions of their parents' attitudes towards their children') and their own attitudes towards their parents ('Children's attitudes towards their parents').

3. METHODS

The research was conducted by way of a survey among 335 undergraduates. The participants completed self-report questionnaires on their parents. The hypothesis was tested using the results of the analysis of 199 answers from participants whose parents were married couples and all lived together.

3.1. Variables

Hypothesis was formed on independent variables: 'Children's perceptions of their parents' expressiveness towards their spouses (negative (1)/ positive (2))', 'Children's perceptions of their parents' attitudes towards their children (3)' and 'Children's attitudes towards their parents (4)' and a dependent variable: 'Children's perceptions of their parents' attitudes towards their spouses (5)'.

'Children's perceptions of their parents' expressiveness towards their spouses (negative (1)/ positive (2))' (e.g. negative: 'My mother expresses dissatisfaction with my father's behaviour' and 'My father shows contempt for my mother's actions'/ positive: 'My mother tells my father that he looks nice' and 'My father expresses affection or love for my mother') were assessed by a Japanese version of Self Expressiveness in the Family Questionnaire (SEFQ; Halberstadt, Cassidy, Stifter, Parke & Fox, 1995; Tanaka, 2009). Respondents registered their perceptions on a 6-point scale ranging from 1 (not at all frequently) to 6 (very frequently). After reliability was checked, the scores were averaged on seven items, which ranged from 1 to 6, with higher scores indicating that respondents perceived that their parents expressed more.

'Children's perceptions of their parents' attitudes towards their children (3)' (e.g. 'My mother has affection towards me', 'My father trusts me'), 'Children's attitudes towards their parents (4)' (e.g. 'I have affection towards my father', 'I trust my mother') and 'Children's perceptions of their parents' attitudes towards their spouses (5)' (e.g. 'My mother has affection towards my father', 'My father trusts my mother') were assessed by a Japanese version of the Positive Affect Index (PAI; Bengtson & Schrader, 1982). This measure 'assesses sentiment or positive affect among family members as it is perceived and reported by family members' (Bengtson & Schrader, 1982). Respondents registered their attitudes on a 6-point scale ranging from 1 (does not describe very well) to 6 (does describe very well). After reliability was checked, the scores were averaged on five items, ranging from 1 to 6, with higher scores indicating that respondents perceived more positive attitudes.

4. RESULTS

4.1. Respondents

The mean age of respondents was 18.35 ($SD = 0.48$) years old. Sons comprised 37.17% (= 71) of the analysis target and the daughters were 62.83% (= 120).

4.2. Descriptive statistics

Table 1 shows the reliability, means and standard deviations for each variable.

Table 1.
Descriptive Statistics.

N	Mean (SD)		
	All 191	Sons 71	Daughters 120
(1) Mothers' Expressiveness towards the Fathers Negative ($\alpha=.91$)	2.37(1.11)	2.03(0.95)	2.57(1.16)
(2) Mothers' Expressiveness towards the Fathers Positive ($\alpha=.95$)	2.63(1.09)	2.72(0.96)	2.58(1.17)
(3) Mothers' Attitudes towards their Children ($\alpha=.88$)	3.66(0.86)	3.66(0.75)	3.66(0.92)
(4) Children's Attitudes towards their Fathers ($\alpha=.93$)	3.55(0.95)	3.68(0.81)	3.47(1.01)
(5) Children's Perceptions of their Mothers' Attitudes towards their Fathers ($\alpha=.94$)	3.54(1.05)	3.65(0.89)	3.48(1.14)
(1) Fathers' Expressiveness towards the Mothers Negative ($\alpha=.90$)	2.20(1.10)	1.89(1.05)	2.37(1.10)
(2) Fathers' Expressiveness towards the Mothers Positive ($\alpha=.95$)	2.59(1.16)	2.83(0.92)	2.46(1.26)
(3) Fathers' Attitudes towards their Children ($\alpha=.90$)	3.38(0.95)	3.52(0.83)	3.30(1.01)
(4) Children's Attitudes towards their Mothers ($\alpha=.88$)	3.89(0.82)	3.84(0.72)	3.92(0.87)
(5) Children's Perceptions of their Fathers' Attitudes towards their Mothers ($\alpha=.95$)	3.49(1.12)	3.75(0.82)	3.34(1.24)

4.3. Multiple regression analysis

This study used multiple regression analyses to confirm the hypotheses. Table 2 shows how children read their mothers' attitudes towards their fathers (All: $F(5,185) = 91.18, p < .001$, Sons: $F(4,66) = 24.58, p < .001$, Daughters: $F(4,115) = 91.09, p < .001$). Table 3 shows how children read their fathers' attitudes towards their mothers (All: $F(5,185) = 104.71, p < .001$, Sons: $F(4,66) = 18.93, p < .001$; Daughters: $F(4,115) = 109.83, p < .001$).

Both of these sets of results indicated that children inferred their parents' attitudes towards their spouses based on their parents' emotional expressions and daughters additionally inferred their parents' attitudes based on their parents' dispositions (Table 2 and 3). While sons did not infer their mothers' attitudes based on their mothers' dispositions, daughters did infer their mothers' attitudes based on their mothers' dispositions (Table 2). Both sons and daughters inferred their fathers' attitudes based on their fathers' dispositions (Table 3). While children inferred their mothers' attitudes by projecting their own attitudes (Table 2), they did not infer their fathers' attitudes in the same manner (Table 3).

Table 2.
Mothers' Attitudes towards the Fathers.

Children's Perceptions of their Mothers' Attitudes towards their Fathers			
	β		
	All	Sons	Daughters
N	191	71	120
Sex (0. Sons/ 1. Daughters)	.04		
Mothers' Expressiveness towards the Fathers Negative	-.21***	-.25**	-.18**
Mothers' Expressiveness towards the Fathers Positive	.50***	.41***	.55***
Mothers' Attitudes towards their Children [disposition]	.12**	.05	.14**
Children's Attitudes towards their Fathers [projection]	.30***	.39***	.25***
R ²	.71	.60	.76

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3.
Fathers' Attitudes towards the Mothers.

Children's Perceptions of their Fathers' Attitudes towards their Mothers			
	β		
	All	Sons	Daughters
N	191	71	120
Sex (0. Sons/ 1. Daughters)	-.02		
Fathers' Expressiveness towards the Mothers Negative	-.26***	-.31**	-.22***
Fathers' Expressiveness towards the Mothers Positive	.47***	.33**	.53***
Fathers' Attitudes towards their Children [disposition]	.30***	.35**	.27***
Children's Attitudes towards their Mothers [projection]	.08 [†]	.11	.08
R ²	.74	.53	.79

* $p < .05$, ** $p < .01$, *** $p < .001$

5. DISCUSSION/ FUTURE RESEARCH DIRECTIONS

As predicted, young people regarded their parents' marital relationships as negative based on their parents' negative emotions and as positive based on their parents' positive emotions. In light of the link between young adults' parental marital quality and their marital attitudes (Cunningham & Thornton, 2006; Kapinus, 2005; Mori & Katsurada, 2017; Saito, 2012; Yamauchi & Ito, 2008; Willoughby, et al., 2012), these findings suggest that parents' expressivity in their marital relationships may consequently influence their children's marital attitudes. In addition, it was found that parental marital quality was related to children's attitudes towards their fathers, and fathers' attitudes towards their children. These imply that better father-child relationships may lead to better perception of their parents' marital quality, which can be linked to young adults' marriage attitudes as a consequence.

Moreover, this study showed that sons did not read their mothers' minds based on their mothers' dispositions. This suggests that sons read their mothers' minds according to the situations, which may be because mothers' attitudes towards the fathers were clearly different from their attitudes towards their sons. Although this study could not identify the reason, a triad survey targeting children, fathers and mothers will be helpful. Furthermore,

children did not read their fathers' minds by projecting their own minds. This may be because children do not perceive a similarity between themselves and their fathers nor do they take their fathers' perspectives (Ames, 2004); further, children's self-representations do not overlap with their parents' (Davis, Conklin, Smith & Luce, 1996). This study could not verify the reason, but future studies incorporating such variables will clarify the reason.

However, even if youth desire to marry, realistically, it is difficult to marry without a secure economic base. Matsuda (2011) analysed data from the 'Survey on International Attitude towards Society with Decreasing Birthrate' (Cabinet Office, 2011) and indicated that the marriage and cohabitation experience rate of men with non-regular employment and low income was low in Japan compared to the U.S.A. and France. Therefore, employment countermeasures for young men are also needed to increase the marriage rate.

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Chapter #15

ENHANCING VERBAL REASONING THROUGH CHESS TRAINING

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ABSTRACT

Verbal reasoning is the ability of a person to understand the meaning of verbal information, enabling the individual to further process the verbal information placed before them. This study assessed the outcome of 1-year chess intervention on the verbal reasoning of children. A pretest–posttest with control group design was utilized, with 70 children in the experimental group (mean age 11.05 years; SD 2.49) and 81 children in the control group (mean age 11.10 years; SD 2.37). Children of both genders, studying in two governments and two private schools (grades 3–9), formed the sample. The experimental group received weekly chess training for an hour, while the control group participated in extracurricular activities. Verbal reasoning was measured by Binet–Kamat Test of Intelligence. The chess intervention included Winning Moves Chess Learning Curriculum, video lectures, demonstration board, on-the-board playing, chess workbooks, and studying tactical and end game positions by case studies. Analysis of covariance revealed significant gains in verbal reasoning in the experimental group compared to the control group, indicating a link between chess training and verbal reasoning. Strengthening verbal reasoning skills leads to significant outcome in the child's overall development and academic performance.

Keywords: chess training, cognitive development, schoolchildren, verbal reasoning.

1. INTRODUCTION

Chess is a classic game of strategy that develops various cognitive processes. It is widely believed to increase “mental muscle” (Kitsis, 2006), raise intelligence quotient (IQ), help prevent Alzheimer's, exercise both sides of the brain, increase creativity, and improve memory (Friedland et al., 2001; Margulies, 1991). Many schools all over the world encourage their students to play chess to enhance their academic performance. Playing chess systematically raises students' IQ and exam scores (Dullea, 1982; Ferguson, 2000; Palm, 1990), strengthens math ability besides reading and language skills (Ferguson, 2000; Liptrap, 1998; Margulies, 1991), and improves academic performance (Joseph, Easvaradoss, & Solomon, 2016).

Why does chess have this impact? What cognitive processes are involved in a child when they begin to learn and play chess? Strategy, planning, judgment, calculation, and understanding patterns and techniques are all involved and required of a chess player. It involves the child's thinking processes, right from the ability to perceive clearly the various pieces of chess and possible threats and outcomes of each move; from the ability to play every move in line with the overall picture to the particular structure they want to achieve; from the ability to evaluate precisely the trading of pieces to the ultimate goal of checkmating the King.

1.1. Verbal comprehension and reasoning

Verbal comprehension is the ability to understand spoken language (McDuffie, 2013). One can think about verbal reasoning as spanning a dimension from understanding words to sentences to units of text to multiple texts and finally to whole systems of discourse (Burton, Welsh, Kostin, & van Essen, 2009). The concept of size of units of meaning is especially important in the discussion of expertise, where the ability to deal with complex problems is related to the ability to organize one's background knowledge into larger meaningful chunks. The ability to chunk relieves the constraints of working memory that can prevent one from attending to a complicated problem as a whole. Discussions of expertise also emphasize acquiring an extensive knowledge base.

The ability to gather, examine, and understand information in the form of words and languages is called verbal reasoning. It entails reading, writing, speaking, and listening and forms a vital part of a formal education. Verbal reasoning is one of the four basic cognitive skills that are essential to communicate effectively with people around us, reach conclusions, and make decisions based on the information accessible. Any learning process essentially involves verbal reasoning through word-based concept formation. It encompasses the collective ability of a person to understand the meaning of certain information in whatever forms it is presented, enabling his or her thought processes subsequently to learn the given information. It is the process of gathering information; analyzing, thinking, and evaluating it to form ideas, beliefs, and assumptions; and developing knowledge on the particular subject. While most children develop verbal reasoning right from 3 to 4 years of age, occasionally they fail to do so and require the assistance of professionals to help them attain these skills. Most often, the importance of verbal reasoning skills is undermined on the supposition that tasks like reading, writing, and speaking come naturally to school-going children. However, developing verbal intelligence and reasoning skills plays an important part in a child's overall development. Children begin to answer the basic who, why, what questions right from a tender age and they also question things around them, seeking answers and expanding their knowledge base. Verbal reasoning is an imperative tool for academic learning and to thrive in one's professional life.

2. BACKGROUND

Early research on chess instruction has tended to provide empirical support for the beneficial effects of chess training on performance on cognitive tasks (Christiaen & Verholfstadt, 1978; Frank & D'Hondt, 1979; Horgan, 1987; Smith & Cage, 2000). For example, in an experimental study, Frank and D'Hondt (1979) found that an experimental group of learners receiving chess instruction scored better on both numerical and verbal aptitude tests than did a control group of learners not receiving chess instruction. These findings lend credence to the application of chess instruction to students with cognitive challenges. A review of studies by Meyers (2011) carried out in many locations across the United States and Canada showed that playing chess resulted in increased scores on standardized tests, for both reading and mathematics. One of them was on a large-scale chess program in New York City, which involved more than 100 schools and 3,000 children. Results showed higher classroom grades in both English and mathematics for children involved in chess. The review also included studies in Houston, Texas and Bradford, Pennsylvania and showed that playing chess led to higher scores on the Watson Glaser Critical Thinking Appraisal (Watson & Glaser, 1952) and the Torrance Tests of Creative Thinking (Torrance, 1966).

Thus, chess instruction may be a productive intervention for students at risk for academic failure. Research on chess instruction for students at risk may likely provide both regular and special educators with practical suggestions on how to develop higher order cognitive skills and to improve scholastic achievement levels among learners. Furthermore, Storey (2000) suggested that chess instruction could also benefit children with disabilities, even though only anecdotal evidence is available for the effect of chess play on students with disabilities (Remsen, 1998; Wojcio, 1995).

Unterrainer, Kaller, Halsband, and Rahm (2006) compared the preplanning, accuracy, and movement execution time of chess and nonchess players. Additionally, fluid intelligence, verbal working memory, and visuospatial working memory were also measured. The study included 25 chess players selected from two chess clubs and 25 nonchess players who had no experience at all in playing chess. The results of the study indicated that chess players showcased better planning abilities than nonchess players. However, they required longer movement execution and planning times. There were no differences found between both groups in fluid intelligence, verbal and visuospatial working memories.

Joseph, Easvaradoss, Abraham, and Jain (2018) examined the outcome of 1-year systematic chess training on the verbal reasoning of children. A pretest–posttest with control group design was used, with 70 children in the experimental group (mean age = 11.05 years; SD = 2.49) and 81 children in the control group (mean age = 11.10 years; SD = 2.37). The sample consisted of children studying in two government schools and two private schools (grades 3–9), which included both the genders. The experimental group underwent weekly chess training for an hour, while the control group was involved in other games offered in school such as cricket, football, hockey, etc. Verbal reasoning was measured by Binet–Kamat Test of Intelligence. The chess training intervention included Winning Moves Chess Learning Curriculum (Joseph, 2008), video lectures, demonstration board learning, on-the-board playing and training, chess exercise through workbooks, and studying tactical and end game positions by case studies. The games were also recorded and analyzed by writing score sheets. Analysis of covariance (ANCOVA) revealed significant gains in verbal reasoning in the experimental group compared to the control group. There was also significant improvement in overall intelligence, but no significant interaction effects were seen between intervention and gender and type of school on verbal reasoning. The study establishes a link between chess training and verbal reasoning and indicates that strengthening verbal intelligence and reasoning skills leads to important outcomes in the child’s overall development and academic performance.

EIDAou and El-Shamieh (2015) investigated the effects of chess playing on concentration skills, period of concentration, and language listening skills in students diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). The study consisted of 14 students aged between 11 and 13 years who were selected from two inclusive schools and the participants were trained in chess twice a week. The results of the study indicated that chess playing improves concentration skills, period of concentration, and language listening scores.

3. OBJECTIVE

While a number of studies have established that chess learning clearly improves cognitive functioning and academic performance, its impact on verbal reasoning is yet to be ascertained. It is likely that an increase in verbal reasoning is one of the basic factors

that supports these gains (Joseph et al., 2018). Hence a directional hypothesis was formulated. However, very few studies appear to have focused on the role of chess training in strengthening verbal reasoning.

It is hypothesized that systematic chess training would significantly increase verbal reasoning in children. The objective of the study was to assess the impact of weekly chess training on the verbal reasoning of school-going children.

4. RESEARCH DESIGN

This research study used an experimental design to study the impact of training in chess on the cognitive functioning of children. The Pretest–Posttest Control Group Design was utilized (Edwards, 1985; Kerlinger, 1973). The research design involved two groups of children: an experimental group and a control group. The experimental group consisted of children who participated in the 1-year Chess Training Intervention, while the control group was involved in the extracurricular activities offered by the school such as sports (football, cricket, tennikoit), music, arts and crafts during the same period.

5. METHODOLOGY

5.1. Sample

The sample consisted of 70 children in the experimental group (mean age 11.05 years; SD 2.49) and 81 children in the control group (mean age 11.10 years; SD 2.37). The experimental group consisted of 27 girls and 43 boys and the control group consisted of 29 girls and 52 boys. Four schools were selected, two government schools and two private schools, using convenience sampling. In each school, children were selected by random sampling. The sample that was selected had children falling into two age categories: 6–11 years and 12–16 years.

5.2. Inclusion criteria

The sample was recruited based on the following inclusion criteria:

- Children who are studying in schools
- Both genders
- Age range between 6 and 16 years
- Consent and commitment to a 1-year chess training program

5.3. Selection of sample

The steps followed in selecting the sample are as follows:

1. Schools were identified and permission was obtained. Contracts were signed with the school to carry out the study.
2. The children were randomly selected based on the inclusion criteria.
3. Informed consent was obtained from the parents and the children.
4. Random sampling within each school was used to form the experimental and control groups.
5. The following procedure was used to select students from each category:
 - Name list along with the date of birth of children was collected from the school.
 - Requirement analysis was made for each school.

- According to the number of students available in each category, using the random number selection method, the students were initially identified.
- Consent was taken from the parents of all of the selected students. Some students were dropped as their parents did not give their consent.
- IQ test (Binet–Kamat Intelligence Test) was done for all students. Based on the IQ scores, children with identical IQ scores were paired, taking into consideration gender and age.
- The children were then randomly assigned to two groups having equal mean of the IQ.
- Further, the head of the school assigned the two groups randomly into experimental and control group, by using the Lot system.
- Some of the students who fell into the experimental group opted out stating unwillingness to undergo regular chess training.

5.4. Dropout analysis

The research design envisaged 200 children with 100 students in control and 100 students in experimental groups. To ensure that the final numbers are maintained, 30 more children were selected; 31 students dropped out of the sample due to the following reasons:

- 7 children, who had earlier given consent, and were selected to be in the experimental group, dropped out because they were not interested in learning chess.
- 19 students from the government school left before the second assessment could be done, due to various reasons. One of the major reasons was that their homes were flooded due to a cyclone, and therefore they had to shift to other regions.
- 5 from private schools also left the school before the 2nd assessment was done. This resulted in number variations in different assessments.

6. OPERATIONAL DEFINITION

Chess Intervention: The chess intervention consisted of standardized weekly training sessions that lasted for 1 hour, during school hours, over a period of 1 year. Systematic training was provided following the Chess Training Curriculum.

Verbal Reasoning: The Verbal Reasoning score measures verbal knowledge and understanding obtained from the school and home learning environment and reflects the ability to apply verbal skills to new situations (Kamat, 1967).

7. TOOLS

Verbal reasoning was assessed using the Binet–Kamat Test of Intelligence. The Stanford revision of the test was adapted as the Binet–Kamat Test of Intelligence to suit the Indian children. The present version consists of various verbal and performance tests that can be administered to children and adults from ages 3 to 22 years. Validity of the test shows that when a fourfold table was drawn up and the correlation of the pluses and minuses of each test with mental age as obtained by the whole scale was found, the correlation coefficients of the tests were generally higher than 0.70. Correlations between IQ (as determined by the scale) and the teacher's estimates were found to be nearly 0.50, which is fairly high considering the variability of the teacher's estimates.

8. CHESS INTERVENTION

The chess intervention consisted of standardized weekly training sessions that lasted for 1 hour, during school hours, over a period of 1 year. Clustering technique was used to form the training groups. Chess training was adapted to the level of the child and the speed with which they grasped the concepts. Advanced concepts were taught if the child played well.

8.1. Grouping/Clustering

The children in the experimental group were grouped or clustered, according to their age, class, and playing strength—dynamically throughout the 1-year period. Regular assessments were made to ensure that the children were assigned in the right groups. In each school, there were at least 3–4 groups and equal number of chess trainers. All children were taught chess, beginning from the basics, as per the curriculum.

8.2. Curriculum

The Chess Training curriculum was developed by the research scholar who is a Candidate Master and also India's first FIDE Trainer to be certified by the World Chess Federation. This curriculum was presented and accepted in the London Chess Conference in December 2013, in the presence of many experts and current researchers involved in similar studies across the world. The curriculum for each quarter was as follows.

8.2.1. Chess Training Intervention

Usually the time allotted was 60 minutes per session for chess training. Half the time (about 30 minutes) was used for teaching by one of the following methods:

1. DVD lessons
2. Using Demonstration Board
3. Chess Workbooks
4. Working with Chess Software

The other half of the time was used for on-the-board chess training, playing games with one another, recording the games with score sheet writing, playing tournament games among themselves, solving problems on the board, learning end game techniques on the board, and solving tactical chess problems on the board.

9. IMPLEMENTATION OF THE MAIN STUDY

9.1. Ethical committee

An Ethical Committee comprising the Task Force of the Cognitive Science Research Initiative, Department of Science and Technology, Government of India, approved the cognitive assessments to study the impact of chess training on the Comprehensive Cognitive Development of children. Further, the Doctoral Committee endorsed the various measuring tools to be used for cognitive assessments.

9.2. Selection and contract with schools, and informed consent of students/parents

This study was carried out in the city of Chennai. There are about 1,500 schools in Chennai alone. These schools have different curriculums. Many school authorities were contacted and the content and scope of the study, which is a part of the Department of Science and Technology project, was explained to them. Finally, four schools were selected for this study out of which two were government schools and two were private schools.

Two schools were coeducation schools, out of which one had coeducation till the 5th grade. The other two schools were for boys only. The private schools had Matriculation syllabus and the government schools were following the Samacheer Education System.

A contract was signed with the school to conduct the study primarily to ensure that the school was committed to support the study. In addition to the contract, consent was also taken from the selected students and their parents toward their willingness to participate in the study. Students who had a low IQ (IQ score less than 80) were excluded from the study.

Pre-assessments were carried out by certified psychologists using the Binet–Kamat Intelligence Test. Psychologists were blind as to whether the child belonged to the experimental or the control group. The time taken for each IQ assessments (Binet–Kamat Intelligence Test) ranged from 60 to 90 minutes. Other relevant information was collected using a personal data sheet.

Chess Training Intervention was started and was carried out by professional trainers over a period of 1 year. Each chess session duration was about 1 hour and about 25–30 chess learning sessions were administered for each student of the experimental group, while the students in the control group were actively involved in other activities such as football, cricket, tennikoit, music, arts, and crafts.

Post-assessments were done at the end of 12 months using the same tests.

9.3. Statistical analysis of data

- Independent t-test was used to establish the equivalence of means prior to the chess training and to test the significance of difference between the means following the chess training.
- ANCOVA was used to compare the experimental and control groups on the dependent variables.
- Cohen's *d* was used to assess the effect size.

10. RESULTS

Normality of the distribution was tested using Binet–Kamat Intelligence Test during the pre-assessment. The scores were found to be normally distributed. The analysis was carried out using SPSS to establish the significance of the difference between the experimental and control groups on the verbal reasoning scores following intervention, holding the pre-intervention scores as covariate. The results of the current study are presented, followed by the discussion for each finding.

10.1. Impact of chess intervention on verbal reasoning

*Table 1.
Descriptive statistics of verbal reasoning.*

Variable	Assessment	Experimental Group	Control Group
		(N = 70) Mean(SD)	(N = 81) Mean(SD)
Verbal Reasoning	Pre	2.80 (3.767)	2.59 (3.471)
	Post	5.63 (4.985)	3.68 (3.748)

*Table 2.
ANCOVA between intervention group and control group on verbal reasoning at postintervention.*

Sources of Variance	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1252.293	2	626.147	53.615	0.000
Intercept	658.081	1	658.081	56.35	0.000
Preverbal Reasoning	1109.575	1	1109.575	95.01	0.000
Exp Con	120.591	1	120.591	10.326	0.002**
Error	1728.422	148	11.679		
Total	6152	151			
Corrected Total	2980.715	150			

** p<0.01

Table 2 indicates that there was a significant effect of intervention on verbal reasoning at post-intervention (p<0.01). Table 1 shows that the mean verbal reasoning increased in the experimental group from 2.80 to 5.63 following intervention, compared to the control group which increased from 2.59 to 3.68.

10.2. Analysis of verbal reasoning—Gaussian normal distribution curve

The probability density function (PDF) and the cumulative distribution function (CDF) for pre- and post-experimental (group which is undergoing chess) verbal reasoning are plotted in Figures 1 and 2, respectively. The PDF plot in Figure 2 (left) clearly shows that pre- and post-experimental verbal reasoning distribution curves are separated much better than in Figure 1 (right) and a higher mean is observed for post-experimental verbal reasoning. This indicates a better improvement in those who underwent chess training (experimental group) in the verbal reasoning. However, PDF plot in Figure 1 (right) clearly

shows that pre- and post-verbal reasoning for control group overlaps very close to each other as compared to Figure 1 (left). This indicates that there is not much improvement in verbal reasoning for control group as compared to the experimental group who had undergone chess training. The CDF plot for pre- and post-verbal reasoning for control group is shown in Figure 2.

Figure 1.
PDF plot of pre- and postexperimental (left) and control group (right) for verbal reasoning.

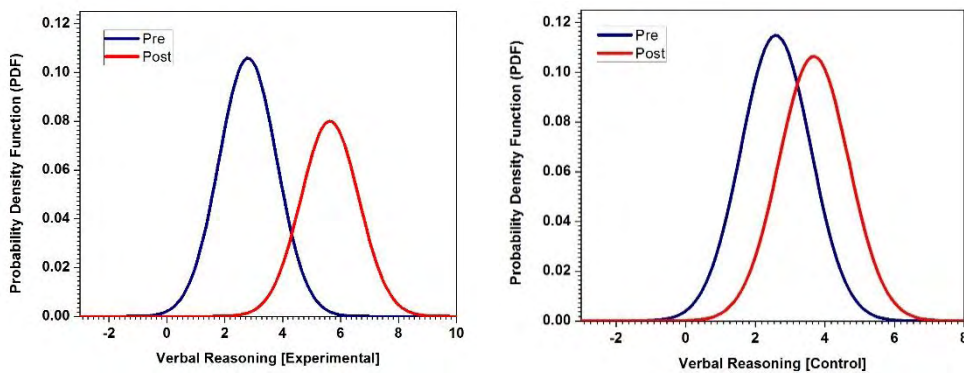
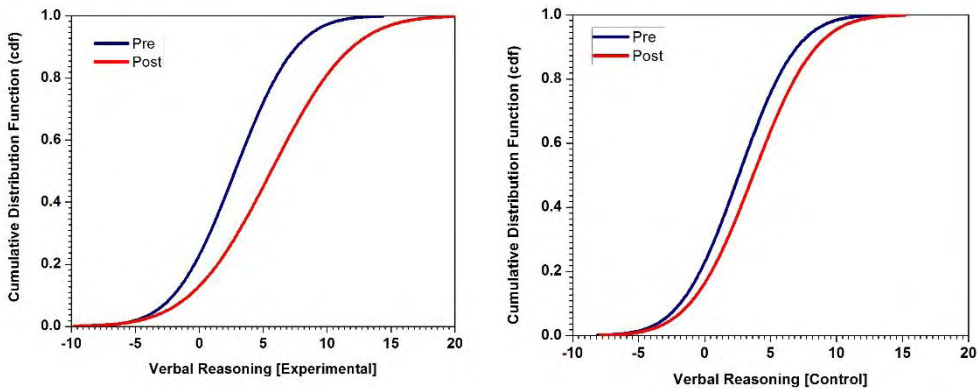


Figure 2.
CDF plot of pre- and post experimental (left) and control group (right) for verbal reasoning.



11. DISCUSSION

Playing chess develops Cognitive skills like focusing, visualizing, thinking ahead, weighing options, analyzing concretely, thinking abstractly, planning, and juggling multiple considerations simultaneously. Over time, it is believed that chess helps develop patience and thoughtfulness. However, what is heartening and surprising is that these cognitive changes that have occurred have translated to quantifiable scores on a psychometric test.

While the impact of chess on cognitive functions and academic performance has been widely researched and clearly established (Ferguson, 2000; Palm, 1990; Smith & Cage, 2000; Trinchero, 2013), its influence in strengthening verbal abilities in general and verbal reasoning in specific remains un-researched to a great extent.

The ANCOVA results in Table 2 reflect significant gains in the verbal reasoning skills of the children in the intervention group compared to the control group. This finding is noteworthy because chess playing has clearly shown a significant increase ($p < 0.05$) in verbal reasoning scores. The tasks on which changes were measured were the Absurdities subtest and the Problem Question subtest. These findings were corroborated in another study by Joseph et al. (2018) who found significant gains in verbal reasoning in the intervention group compared to the control group. They also found a significant improvement in overall intelligence but no significant interaction effects were seen between intervention and gender and type of school on verbal reasoning.

The chess intervention that was carried out had a strong reasoning component where the child thinks through and reasons out the best possible moves given a certain playing position. Further, they were trained to record notations of their games and discuss and analyze their moves from their score sheets. The chess notation is a two-dimensional learning strategy where they record the movement of pieces, noting the columns and the rows. Further, while analyzing a position, a chess player thinks using the notations by verbalizing it subvocally. These activities sharpen their abilities and strengthen their ability to think clearly and logically, resulting in an enhancement of their verbal reasoning ability. These outcomes are likely to occur in chess interventions that actively incorporate a methodology where the child/player transcribes the movement of pieces into a language (chess notations).

The present study establishes a link between chess training and verbal reasoning. This study indicates that strengthening verbal intelligence and reasoning skills leads to important outcomes in the child’s overall development and academic performance. Joseph et al. (2016) in their study measuring academic performance following chess training have reported increases in English and other subjects. The improved English scores could probably reflect a strengthening of the underlying augmented verbal reasoning skills. It is likely that chess training has an impact on not merely verbal reasoning but verbal ability such as language, reading, comprehension, and so on. The children in the Ferguson (1998) study demonstrated an increase in their reading scores.

11.1. Effect size

Table 3.

Cohen’s d—effect sizes of the variable, which were found to have significant gains after chess training intervention.

Variable	N1	N2	μ_1	μ_2	σ_1	σ_2	Cohen’s d	Effect Size
Verbal Reasoning	70	81	5.63	3.68	4.98	3.74	0.44217	Medium

Cohen’s d: Effect sizes showing the difference between the means divided by the pooled standard deviation are given in Table 3. The effect size of the variable, which was found to have significant gains after chess training intervention, was analyzed using Cohen’s d, which is calculated as the difference between the means, divided by the pooled standard deviation. It is found that Verbal Reasoning had medium effect sizes.

11.2. Impact of chess intervention with reference to age on verbal reasoning

Table 4.
ANCOVA between intervention group and age category on verbal reasoning at postintervention.
Tests of Between-Subject Effects.

Dependent Variable: Post-Verbal Reasoning

Age Category	Sources of Variance	Sum of Squares	df	Mean Square	F	Sig.
6–11	Corrected Model	344.519	2	172.259	36.154	0.000
	Intercept	105.675	1	105.675	22.179	0.000
	Pre-Verbal Reasoning	330.516	1	330.516	69.369	0.000
	EXPCON	9.685	1	9.685	2.033	0.158
	Error	328.759	69	4.765		
	Total	1020.000	72			
	Corrected Total	673.278	71			
12–15	Corrected Model	403.503	2	201.752	13.703	0.000
	Intercept	791.704	1	791.704	53.774	0.000
	Pre-Verbal Reasoning	270.896	1	270.896	18.400	0.000
	EXPCON	131.475	1	131.475	8.930	0.004*
	Error	1118.927	76	14.723		
	Total	5132.000	79			
	Corrected Total	1522.430	78			

**p<0.01

As seen in Table 4, subgroup analysis with reference to age showed that the children who underwent chess training from the age group 12–15 years had significant gains in verbal reasoning compared to the control group.

11.3. Impact of chess intervention with reference to gender on verbal reasoning

Table 5.
ANCOVA between intervention group and gender on verbal reasoning at postintervention.

Tests of Between-Subject Effects

Dependent Variable: Post-Verbal Reasoning

Gender	Source	Sum of Squares	df	Mean Square	F	Sig.
Female	Corrected Model	179.117	2	89.559	9.144	0.000
	Intercept	163.780	1	163.780	16.722	0.000
	Pre-Verbal Reasoning	160.065	1	160.065	16.343	0.000
	EXPCON	14.854	1	14.854	1.517	0.224
	Error	519.097	53	9.794		
	Total	1316.000	56			
	Corrected Total	698.214	55			
Male	Corrected Model	985.165	2	492.582	39.212	0.000
	Intercept	538.423	1	538.423	42.861	0.000
	Pre-Verbal Reasoning	837.427	1	837.427	66.663	0.000
	EXPCON	124.761	1	124.761	9.931	0.002**
	Error	1155.719	92	12.562		
	Total	4836.000	95			
	Corrected Total	2140.884	94			

**p<0.01

As seen in Table 5, subgroup analysis with reference to gender showed that the boys improved in verbal reasoning.

There are not many studies to assess the impact of chess training with respect to gender. However, Blanch, Aluja and Cornadó (2015) found that even though there is no significant interaction effect of gender, the gains of the boys and girls in the various cognitive functions differ. They also found that improvement is seen among boys in verbal reasoning, in the intervention group, compared to the control group.

The results of this study corroborate with those of Sigirtmac (2012) who found statistically meaningful differences in all the concepts tested favoring children trained in chess. However, no significant gender differences were found.

It could be inferred from the above that both boys and girls have significant gains from the impact of chess training, irrespective of their gender.

11.4. Impact of chess intervention with reference to type of school on verbal reasoning

Table 6.
ANCOVA between intervention group and type of school on verbal reasoning at postintervention.

Tests of Between-Subject Effects

Dependent Variable: Post-Verbal Reasoning

Type of School	Sources of Variance	Sum of Squares	df	Mean Square	F	Sig.
Government	Corrected Model	205.191	2	102.596	12.924	0.000
	Intercept	299.204	1	299.204	37.691	0.000
	Preverbal Reasoning	126.149	1	126.149	15.891	0.000
	EXPCON	75.222	1	75.222	9.476	0.003**
	Error	468.357	59	7.938		
	Total	1512.000	62			
	Corrected Total	673.548	61			
Private	Corrected Model	987.229	2	493.614	34.409	0.000
	Intercept	383.497	1	383.497	26.733	0.000
	Pre-Verbal Reasoning	929.496	1	929.496	64.793	0.000
	EXPCON	48.214	1	48.214	3.361	0.070
	Error	1233.715	86	14.346		
	Total	4640.000	89			
	Corrected Total	2220.944	88			

**p<0.01

Children studying in government school alone had a significant increase in Verbal Reasoning as seen in Table 6. The children in the private school were predominantly from the middle to higher income groups, with educated parents. On the other hand, the children from the government schools were from lower to middle income groups, with less educated parents. Further, the private schools offered more opportunities like extracurricular activities for the students in school, which was not so in the government schools. This could be a possible factor in the increase in Verbal Reasoning that was seen only in the government schools.

12. IMPLICATIONS

Built in to the chess training methodology used in the present study is a component that strengthens verbal ability and reasoning. Such a curriculum has obvious benefits leading to academic, cognitive, and whole person development of the child. Studies investigating the impact of chess intervention on cognitive functions or academic performance, to a large extent, have used a small sample or a short duration of chess training. The present study makes a commendable contribution as it has examined the impact of 1-year chess training using an experimental design and randomized sample selection. Further, the inclusion of an active control group counters the operation of placebo effect. The sample size of 150 children, while modest, is large enough to substantiate the findings.

13. FUTURE RESEARCH DIRECTIONS

1. This study had a chess intervention frequency of just one session a week. If the frequency is stepped up, one can expect greater cognitive gains.
2. Further research can be carried out on young adults and senior citizens, to understand whether the cognitive gains could be achieved and cognitive decline could be delayed or arrested, respectively.
3. Research can be done on the impact of chess training on sociobehavioral development of children and in certain specific population segments such as dyslexics, those with ADHD, and low academic performers.
4. Additional research can be conducted to study the impact of chess training on academic performance of children and to study if there is any correlation between chess skill and academic performance.

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Section 4
Social Psychology

Chapter #16

MILITANT STRATEGY AND ITS SUBJECTIVE CONSEQUENCES

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ABSTRACT

Using Michel Foucault's archaeological and genealogical tools, we reviewed texts, discourses, and practices developed under the planning and execution of the Russian Revolution. The main aim is to examine how this event has played a crucial role in the current subjectivation process of some protestors and social movement participants in Brazil. The analyzed data emphasize three anchor points in understanding the militant subjectification process: a) Government Democratic Centralism; b) economic Stakhanovism; and c) cultural Zhdanovism. We concluded that it is possible to establish a relationship between Soviet dictatorship practices at the beginning of the twentieth century and the rigid ways of feeling, thinking and acting of many contemporary subjects when they take militant action to change social norms in Brazil.

Keywords: subjectivity, militancy, social movements, Brazil.

1. INTRODUCTION

Since June 2013, crucial changes have occurred in the way Brazilian collective action to contest social norms presents itself. Some distinguishable characteristics of key players from the Protest Cycle started in June 2013 were: a) young actors living in big cities; b) preference for collective decision-making processes; c) independence from political parties, churches, and trade unions; d) primary concerns are local issues and problems of everyday life; e) mobilization of the participants using new communication and information technologies; and f) explicit collaboration with other movements in different cities in the country and also in other countries.

These actors refused to define themselves and their actions using the word “*militante*”; instead, they use the word “*ativismo*” to explain the kind of action they are taking. Most of the analyses of this Cycle underline the influences of anarchist principles and libertarian ideas as a prominent inspiration for these movements. Although some of these ideas and principles have already been present in Brazilian youth movements, they became widespread only after 2013. Alonso and Mische (2017) emphasize that the autonomists' influence has been discernible in protests worldwide since the events in Seattle in 1999 as well as in the Global Justice Movement and the Arab Spring. The authors consider the autonomist influence as being the distinguishable novelty of Brazilian protest movements between 2013 and 2017.

This research started with a narrative literature review aiming to determine the meanings of the words “*militância*” and “*ativismo*” in Brazilian academic journals. After this, it became possible to create and develop the hypothesis that, regarding the Brazilian case, these words are used to describe different methodologies used to gather people in

collective action, and that "*militância*" and "*ativismo*" could be related to socialist and anarchist political traditions, respectively. In this paper, I will discuss the term "*militância*" by examining some events that took place in the Union of Soviet Socialist Republics (USSR). By doing this, I intend to examine how these events still work as anchor points for the rigid ways of feeling, thinking and acting of many contemporary subjects who take militant action to change social norms. It is crucial clarifying that the aspects described may sound typical of ultra left-wing political parties for English readers; they were prevalent not only in political parties but also in a whole range of social movements in Brazil from 1980 to 2013.

2. BACKGROUND

This is a theoretical research which analyzes and interprets results achieved by a range of significant studies about collective action in Brazil from 1980 to 2015 and also examines documents, papers and historical facts from the USSR between 1914 and 1957. Brazilian studies about social movements and collective action were used to characterize the "*militante*". Data from the Soviet Union provided insight into experiences underpinning "*militante*" identity. The framework used to build the analytical model was Brazilian Social Institutional Psychology (BSIP).

Schizoanalysis, an ethic-aesthetic-political paradigm whose aim is to elucidate the fundamental relations between the capitalist system of production, the production of desire and the regimes of power exercises, was proposed by Gilles Deleuze and Felix Guattari. In close connection with the Schizoanalytic framework, BSIP is concerned with the public, shared and collective dimension of subjectivity. Its approach has contributed to the development of analytical tools that challenge the dualism between conceptions of the subject either as a self-centered and fully autonomous being or as one entirely governed and determined by structures such as language, culture, historical processes and social norms.

The field of Brazilian Social Institutional Psychology conceptualizes subjectivity as an unstable arrangement produced by each human being at the time he starts to deal with institutional, biological, cultural and other social determinants. As a result, subjectification processes will be characterized by tension and dispute involving conflictive dispositions, diverse desires, and multiple interests acting on human bodies as vectors in a dynamic field. BSIP employs Michel Foucault's notions of archaeology and genealogy to investigate the historical and path-dependent condition of human subjectivity. Archaeological investigations analyze the unconscious rules involved in the emergence of regulation discourses in human sciences. Genealogical studies examine the necessary relationship between a regime of truth production and a particular technology of power embodied in social practices. "Archaeology proceeds along the truth axis, analyzing discursive conditions of existence. Genealogy travels the power axis, examining culturally true discourses' insertion into institutional and other non-discursive practices" (Mahon, 1992 p. 105).

Brazilian Social Institutional Psychology combines these ideas and concepts to build a framework in which research on subjectivity occurs through the examination of forces, movements, intentions and historical facts, aiming to create a better understanding of how these elements produce specific modes of existence. The main point is making explicit how a range of social forces and intentions produce specific ways of being human and manners of life. In this sense, this chapter scrutinizes the history of the Soviet Union from 1917 to 1957 to look for facts, papers, documents, political decisions, habits, and concerns that could be related to the ways of being of Brazilian "*militantes*".

3. BRAZILIAN "*MILITANTE*"

The word "*militante*" (used to term something or someone, or to qualify something or someone) as well as its derivations "*militância*" (noun) and "*militar*" (verb) are frequent expressions in left-wing Brazilian political parties' discourses, in student movement speeches and even in papers from Brazilian Social Movement scholars. The most common practices in collective action and social movements in Brazil tend to value discipline, submission, the observance of rigid and hierarchic rules, and participants' docility in order to succeed in their strategic goals. Almost all these movements use the word '*militante*' when referring to themselves and their participants. Reviewing and analyzing papers from Sociology of Social Movements and Political Science journals published in Brazil between 1980 and 2015, the words "*militante*" and "*militância*" appear frequently. However, there is not much attention given to conceptualizing them (Sales, Fontes, & Yasui, 2018).

In Brazil, a "*militante*" could be described as someone who is articulate, has strong and clear views, and has the ability to talk others into following their own beliefs. A "*militante*" may also be seen as one who always stays in character and is, at all times, defending the causes of his militancy. This exaggerated image may well be why people generally think of militants as tedious, boring and annoying. Furthermore, militant persons are often portrayed as forceful, and in movies and songs appear as people who would die before denying their own beliefs.

In analyzing the relationship between the identity formation and commitment of militant persons, Naujorks and Silva (2016) conclude that "the militant identity uses the identity match as feedstock and the interpretative frames as the substance which give meaning to militant identity itself" (Naujorks & Silva, 2016, p. 148)*. This identity match includes a collective dimension related to the ideas, principles, and values shared with other militants as well as an individual dimension related to the manners in which these principles and values are used as models and life guides to be followed by the militants. Evaluating the role exercised by this rigid identity match, Rolnik (2014) argues that this rigidness works as a powerful force because it champions the militant in the place of a conscious and aware person who is able to work correctly in the direction of his cause. Another function of the identity match is to recognize those who do not share his beliefs as enemies and as people who need to be combatted or saved. Thoburn (2010) suggests that all this creates a paradox in the way militants perceive themselves, "to the degree that the militant body conceives of itself as having discovered the correct revolutionary principle and establishes its centre of activity on adherence to this principle, it has a tendency to develop hostility to those who fall short of its standard (Thoburn, 2010, p. 134). Montgomery and Bergman (2017) grasp consequences of this paradox when describing "rigid radicalism" as something that "nurtures rigidity, mistrust, and anxiety precisely where we are suppose to feel most alive. It compels us to reach ourselves and others ruthlessly for flaw and inconsistencies. It crushes experimentation and curiosity. It is hostile to difference, complexity, and nuance" (p. 20).

Understanding how some force vectors have shaped subjectivity can be useful to comprehend the reasons militant persons fight as they do. To look over some past ideas can provide a better understating about how certain "tendencies of thought, action and feeling can congeal into patterns" (Montgomery & Bergman, 2017, p. 189). In this work, it is proposed, genealogically, some anchor points in which militant subjectivity is underpinned.

4. THREE ANCHOR POINTS

A historical study carried out by Macedo and Silva (2009) concluded that regarding political militancy in Brazil, the Communist Militant was the perfect embodiment of an ideal militant. The results achieved by Valverde (1986) in a genealogical investigation about these issues not only support this conclusion but also point out the relevance of theories, ideas, and facts from the Soviet Union from 1914 to 1980 as crucial to understanding the construction of militancy and militants.

Expanding socialist ideas, values and principles, and fighting against capitalist social norms, the Union of Soviet Socialist Republics (USSR) exported a theoretical background and a methodology to contest social norms grounded in the ideas of Karl Marx, Vladimir Ilyich Ulyanov (Lenin), and Josef Stalin. The Communist Parties in many countries were used to disseminate and to design tactical aims, contestation repertoires, and fighting tools which have been acquired by nonconformists all over the world. In Brazil, the local Communist Party, created in 1922, was a prominent font of influence until 1990 and has helped to shape the ideal way of fighting for social change. It is crucial to recognize the relevance of Lenin's work in the "systematic building of a Marxist political theory of class struggle" (Anderson, 1976, p. 20), as this theory underpinned "an almost real character (the Marxist-Leninist militant) designed to live in an extraordinary world (the one governed by democratic centralism)" (Figueiredo, 1993, p. 210). To this day, protests and social movements in Brazil are influenced by these ideas.

Here the USSR experience is examined to better understand the militant subjectification process and to discuss significant forces that have continued to influence the ways of thinking, feeling and acting in current Brazilian militancy. The criteria used to determine which forces should be analyzed were: a) the role they had in preserving the Communist Party's governability; b) the influence exercised by them into daily activities in the USSR; and c) the function assumed by them in producing the will for a communist way of life: "ruled, guided, and corrected by the critical thought" (Trotsky, 2007, p. 178). This paper argues that militant subjectivity has its anchor points in: a) government Democratic Centralism; b) economic Stakhanovism; and c) cultural Zhdanovism.

4.1. Democratic centralism

Democratic Centralism is a term used to synthesize two distinct and contradictory wishes: a) unified strategy, tactics and goals and b) the right to disagree about strategy, tactics, and goals. In the report on the Unity Congress of the Russian Social Democratic Labour Party, Lenin (1906) summarized the idea of Democratic Centralism as "freedom of discussion, unity in action". At that point, he claims that the Party's members must "seek the widest possible discussion of the decisions of the Congress" (Lenin, 1906, Section VIII, ¶12). However, at the same time, he was already worried about the inherent risks of the freedom to discuss when he states that: "in the united Party this ideological struggle must not split the organizations, must not hinder the unity of action of the proletariat" (Lenin, 1906, Section VIII, ¶11). In the period following the February Revolution of 1917, as the Bolsheviks became a broader revolutionary mass party, spaces to express disagreement were disappearing. Worried about the risks of too much divergence, during the X Congress of the Party in 1921, Lenin outlined the resolution which banned factions in the Party.

Through analyzing texts such as "The Russian Social-Democratic Party and its Immediate Tasks" (Stalin, 1901) and "What is to be done?" (Lenin, 1902), Sève (1999) explains that Democratic Centralism was the solution to the problem of the organization of the peasant masses. Democratic Centralism was produced once the Party leaders realized the "radical incompatibility between the proletarian revolution as a strategic goal and spontaneity as an organizational methodology" (Sève, 1999, p. 63). Whether it came in a democratic or an autocratic form, this strategy aimed to mobilize the Russian population, win State-power in order to establish the proletarian dictatorship and, then, make communism possible. The proletarian masses must be governed with rigor because unity and homogeneity are critical conditions to achieving victory. It should also be noted that this kind of governability is also a war strategy used to fight the capitalist system, and during a war, there is no room for dissident soldiers.

In a text written in April of 1918, in which he lists the immediate tasks of the Soviet government, Lenin summarizes his ideas about how to act in order to make communism possible: "unquestioning subordination to a single will is absolutely necessary for the success of processes organized on the pattern of large-scale machine industry" (Lenin, 1918, Section VII, ¶12). Figueiredo (1993) considers the issues regarding will a crucial point related to militant subjectivity. "The common ground between distinct militancies is a concern about the will. De-alienating the will and/or raising the will? Commanding the will and/or interpreting it?" (Figueiredo, 1993, p. 211).

Once the space for dissension was constricted, and the supremacy of will was taken as a core condition for the Revolution, the primary subjective goal of Democratic Centralism was to produce homogeneity in subjectivity. The ideal revolutionary army was built of subjects that were fully aware of labor-work contradictions, free from any bourgeois cultural influence and educated in Scientific Socialist principles. Freethinkers, workers' coalitions not subordinated to the Communist Party and any individual needs were framed by Party leaders as manifestations of enemy power, as traps rooted in capitalistic norms or remaining vestiges from the bourgeois culture which must be eliminated. These traps were depicted as barriers to the time when each and every individual would receive what they want according to their needs.

Diverse Communist parties around the world followed similar principles and developed their own version of Democratic Centralism. Although each was shaped in close connection with local circumstances, all were influenced by the iron discipline that took form in the USSR. Analyzing the effect of this on the French Communist Party, Sève (1999) argues that this influence was responsible for the Party having ignored "emergent causes, from feminist to ecology and also new aspirations and desires as self-management and sexual liberation" (Sève, 1999, p. 75).

The Brazilian Communist Party and other political parties grounded in Marxist ideas not only were key actors in social movements fighting against the military dictatorship occurred during the second half of the twentieth century, but also inspired movements whose aims were to promote a welfare state in Brazil. Someone familiar with Brazilian militants can recognize the presence of iron discipline in the rigidity of their opinions and in the difficulty most militants feel when dealing with criticisms of their practices. The influence can also be noticed in the pyramidal organizational arrangements and centralized decision process routines that characterize Brazilian left-wing parties and unions. Democratic Centralism is still a significant model for understanding why they keep fighting in the way they do.

4.2. Economic Stakhanovism

Before October 1917, Russia's wealth was primarily based on agricultural goods. Moving this into a robust industrial economy and significantly improving the economy to create an environment favorable to full human development was another essential condition to establish a Communist system. At that time, in modern industrial cities in the capitalist world, Frederick Winslow Taylor's ideas about managing work scientifically were being spread. Moved by an urgency to make the USSR great again, and combating the deleterious consequences of wars, hunger and cold, Lenin, Stalin, and the Party Central Committee created a form of red Taylorism: Stakhanovism.

Stakhanovism was a movement that aimed to enhance work and workers' productivity. Although the movement supposedly had been developed among workers, it was quickly recognized, improved and spread by the Central Committee. The principles shared with Taylor's scientific management were: constant vigilance; scientific logic, rationality and efficiency in the labor organization; the standardization of labor routines; awarding the best workers; and making financial payments proportional to the items produced. This system was first implemented in the coal industry. Once it had been adopted as a central tool for the New Economic Politic, it was disseminated to the transport sector and implemented in agricultural activities. Despite Lenin's critical views of Taylorism expressed in "The Taylor System—Man's Enslavement by the Machine" (Lenin, 1914), some members of the Soviet intelligentsia perceived Stakhanovism as their best option to transform the USSR into a prominent industrial nation.

Stating that it was necessary to increase the production of industrial goods, Trotsky endorsed not only making labor a compulsory service for every Soviet citizen but also organizing labor activities in a way akin to the military. Augustin (2015) argues that the problem was how to use unskilled workers to enlarge industrial businesses, and create more industrial goods in a short period. Therefore "it may be convenient to use a management work model in which the unskilled workers only had to follow strict rules and to execute low-status duties" (Augustin, 2015, p. 8). Dividing labor activities into small and menial jobs according to the most advanced principles of scientific rationality to enhance productivity is one of the core methods used in industrial capitalism. Taylorism and Stakhanovism aimed to organize work while avoiding as much as possible any space for laborers' decisions or interference, and not even the rhythm of the work was under worker control. The jobs were repetitious, boring and alienating. However, members of the Soviet Central Committee did not see any contradiction in using these principles, as the State controlled the industrial activities, and the profits would be used to create collective goods.

In his speech at the First All-Union Conference of Stakhanovites on 17 November 1935, Stalin states loud and clear the relevance of Stakhanovism for proceeding into Communist society.

The significance of the Stakhanov movement lies in the fact that it is a movement which is smashing the old technical standards, because they are inadequate, which in a number of cases is surpassing the productivity of labour of the foremost capitalist countries, and is thus creating the practical possibility of further consolidating Socialism in our country, the possibility of converting our country into the most prosperous of all countries (Stalin, 1935, Section 1 VII, ¶12).

Ruled by Stakhanovite principles: a) trade unions became part of the State administrative apparatus; b) labor started to be organized according to a precise topography; c) work and workers began to be continuously supervised and meticulously inspected; and d) work activities were now ruled by the most advanced bourgeois science. As it may be evident by now, due to the importance placed on increasing productivity, labor activities in the USSR were managed as a rigorous disciplinary power exercise (Foucault, 2005).

Aleksei Gastev, creator and director of the Central Institute of Labour, supported the idea of using an orthodox form of Taylorism not only in labor activities but also in other spheres of human life. Gastev “suggests that these principles and ideas should be used to construct social norms and Public policies covering all fields of human life, as studies, leisure and even the most essential and basic activities” (Miguel, 2006, p. 3). Beyond material goods, Stakhanovism’s principles were also used to attempt to produce the Soviet worker as a compliant, subservient and engaged citizen able to give his best efforts to bring Communism into reality. Democratic Centralism and Stakhanovism share methodologies, tactical goals, and procedures. They were set up as part of a strict disciplinary regime whose ultimate purpose was to produce a very peculiar psychology in the proletariat.

This psychology reveals a new working-class collectivism which is manifested not only in relations between persons but in the relations of whole groups of people with whole groups of mechanisms. Such a collectivism can be called mechanized collectivism. The manifestations of this mechanized collectivism are so foreign to personality, so anonymous, that the movement of these collective complexes is similar to the movement of things, in which there is no longer any individual face but only regular, uniform steps and faces devoid of expression, of a soul, of lyricism, of emotion, measured not by a shout or a smile but by a pressure gauge or a speed gauge (Bailes, 1977, p. 378).

“*Militante*” subjectivity was built in direct relation to this disciplinary regime that intended to exterminate any singular or personal characteristics in the peasants. The fact that the same principles were used to govern the State and to manage industries makes clear the intention of producing the revolutionary man as a perfect citizen-militant-worker-soldier able to fight for the continuity and expansion of the Revolution. This goal becomes even more explicit when one notes the Soviet guidelines for the cultural field.

4.3. Cultural Zhdanovism

In 1905, while writing about the Party's literature, Lenin classified this literature as a powerful tool to be used in the fight against bourgeois habits and traditions. "Literature must become part of the common cause of the proletariat, 'a cog and a screw' of one single great Social-Democratic mechanism set in motion by the entire politically-conscious vanguard of the entire working class" (Lenin, 1905, ¶23). According to Lenin's ideas, literature must be developed as part of the Party's work.

The task delegated to Soviet art was to eradicate every single vestige or influence of bourgeois culture over proletarian culture. Andrei Alexandrovich Zhdanov's model conceived all forms of art as educational and pedagogical tools which should be used to

spread the Party's ideas and to produce the revolutionary conscience. He reinforced Stalin's idea that artists are engineers of the human soul and, in a speech made in 1934, he summarized the premises and principles of socialist realism:

We say that socialist realism is the basic method of Soviet belles lettres and literary criticism, and this presupposes that revolutionary romanticism should enter into literary creation as a component part, for the whole life of our Party, the whole life of the working class and its struggle consist in a combination of the most stern and sober practical work with a supreme spirit of heroic deeds and magnificent future prospects (Zhdanov, 1934, ¶31).

Socialist realism's role was to inspire men and women to fight for a communist future. The speech stresses the magnitude of the achievements of the Communist Party's leadership and the moral values and beliefs every citizen should pursue. Under this guidance, any individual, sentimental or poetic expression in literature was valued as petty bourgeois, and again, as an obstacle to revolutionary success.

The colors, shapes and topics which were deemed as necessary to build artistic expressions were: aesthetically simple, linear with naturalistic colors and showing a harmonious relationship between the elements of a whole and topics demonstrating the importance and magnitude of the achievements already made by the Revolution. There was no full adherence to these guidelines, and the ones who refused to follow it were accused of being insensitive to Soviet needs and were prosecuted for betraying the Revolution (Miguel, 2006).

In the field of visual arts, these guidelines resulted in large panels and poster boards praising Stalin's accomplishments. These productions were created using images from Soviet daily activities and painted using pleasant colors, eliciting identification, pride, and hope in the viewers. Most of these productions look like advertisements and their artistic value is questionable.

5. FUTURE RESEARCH DIRECTIONS

This research provided theoretical facts and a general framework which allows one to understand central ideas underpinning the rigidity in the manners of think, feel and act of Militants in Brazil. Once the guidelines provided by USSR were followed by Communist Parties in different countries, it may be a fruitful field for future investigations to analyze how these guidelines were used and reorganized in distinct scenarios.

6. CONCLUSIONS

This research, proceeding archaeologically and genealogically aimed to explore and examine meanings, values, procedures, and beliefs that connect the USSR experience with current practices in left-wing social movements and collective action in Brazil. Many of the criticisms made by Brazilian "*ativistas*" to traditional "*militantes*" are concerned with excess or rigidity in organizational procedures, the lack of space for divergent opinions, the use of organizational systems that are akin to military forces, the preference for hierarchical organizational arrangements and the power and importance attributed to movement leaders.

The results of this historical investigation improve our understanding of the roots of some preferences for disciplinary, militarized, unified and centralized organizational procedures that characterize the way most people in trade unions, academic students' directories, and other left-wing social organizations in Brazil usually behave. If one considers the fact that most Brazilian left-wing political parties and social movements have been deeply influenced by Brazilian Communist Party moral values, it is possible to point out similarities to events that took place in the USSR in the construction and development of some subjective characteristics of Brazilian militants.

Understanding subjectivity as something shaped by historical facts, cultural traditions and strictly related to a regime of power, the paper argued that Brazilian "*militantes*" keep reproducing values, principles and beliefs that were fundamentals of the USSR experience and, by doing this, they are still being disciplined, ruled and shaped in ways similar to how people in the USSR were. The historical analyses made about the USSR experience highlight the excessive rigidity of the government and the utopia of full control of the soviet population as decisive points to understand the reasons that made the communism regime fail. Once Democratic Centralism, Stakhanovism and Zhdanovism were vital tools in the maintenance of the Stalinist regime, it is essential that nowadays "*militantes*" be aware of it.

There is no intention of providing the last word about this theme; in fact, the authors look forward for more studies concerned with these issues, and believe that "if our approach to the theme is not enough to catch all the complexity involved in it, the merit of this point of view is to allow an extensive understanding which can be used as a starting point for distinct analyses" (Figueiredo, 1995, p. 41).

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Chapter #17

STUDENTS' EMIGRATION INTENTIONS AND EMIGRATION PLANS IN THE CONTEXT OF THE MIGRATION BELIEF MODEL

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ABSTRACT

Background: The Migration Belief Model (MBM) assumes that emigration intentions and emigration plans are determined by perceived economic threat, perceived emigration benefits, perceived emigration barriers and emigration self-efficacy.

Objective: To examine the relationships between factors of the MBM and emigration intentions and plans separately. In addition, to explore the relationship between emigration intentions and emigration plans.

Methods: Data were collected online at 17 universities in Slovakia (n=489, 76.5% women, M=22.8, SD=3). Emigration intentions, emigration plans and factors of the MBM were identified. A linear regression and a multinomial logistic regression were used.

Findings: 24% of students planned to emigrate long-term. The factors of the MBM explained about 33.6% of variance in emigration intentions and 32.9% in emigration plans. Those who reported higher level of emigration intentions or plan a long-term stay abroad were more likely to report a higher level of perceived economic threat, perceived emigration benefits and emigration self-efficacy and a lower level of perceived emigration barriers than those with lower level of emigration intentions or without a plan to leave. Emigration intentions explained about 52% of variance in emigration plans.

Conclusion: The findings have supported the relevance of the MBM in the study of emigration intentions and plans.

Keywords: emigration intentions, emigration plans, migration belief model, modified health belief model, barriers and benefits of emigration, self-efficacy.

1. INTRODUCTION

The migration of highly educated people, students or graduates is called the 'brain drain'. Slovakia, as well as many other EU countries, faces an outflow of educated and qualified people abroad after graduating or even before finishing university. Káčerová and Horváthová (Statistical Office of the Slovak Republic, 2014) state that Slovak emigrants are most often those with secondary school education (53.68%) followed by those with university education (21.55%). According to newer sources which have looked at nearly 500 university students from the whole country, approximately 23% of students plan to leave Slovakia after finishing their degree for more than one year or permanently (Orosová & Gajdošová, 2017). Thus, this exodus of young skilled people from Slovakia is becoming more and more urgent and the research of factors that are related to students' emigration intentions can be useful.

Migration is not a matter of a single act but rather a process with several distinguishable phases (e.g. Tabor & Milfont, 2011; Kley, 2009; Krieger, 2004). Krieger (2004) considers the decision to emigrate as a stage process including several levels of commitment to emigration. The first level before intentions can be described as a general inclination towards emigration which can be expressed as a favorable attitude to emigration. This stage is followed by the stage of intention itself which is characterized by more frequent considerations of emigration. Finally, a firm intention, i.e. emigration plan is formed which shows signs of a specific plan to emigrate (i.e. one knows where to leave or for how long). In this study, both emigration intentions and emigration plans are considered. Our additional aim was to explore whether the amount of considering emigration can explain emigration planning.

According to Massey et al. (1993), the complexity of the migration phenomenon requires a sophisticated approach which is willing to integrate different perspectives and views. In contrast to migration theories, health theories including the Health Belief Model (HBM) predominantly concentrate on the psycho-social factors that affect behavior such as knowledge, beliefs, intentions and personality traits. In order to find an effective way of influencing migration, it is worth examining the possible use of belief and intention concepts in health behavior research to see if the findings from health research can be transferred to migration research (Groenewold, Bruijn & Bilsborrow, 2006, 2012).

The HBM assumes that what people believe about a condition or behavior targeted at changing this condition determines what they will do about it. The original HBM has been revised to six factors predicting the probability that an individual implements a certain health behavioral strategy (Groenewold et al., 2006). The first two factors, namely perceived susceptibility (an individual's beliefs about the likelihood of meeting a health disorder) and perceived seriousness (an individual's beliefs about the seriousness of meeting that health disorder) represent the perceived threat of a situation. The factors of perceived benefits and perceived barriers represent outcome expectations from the behavior directed at reducing the perceived threat (e.g. the prevention action). The concept of cues to action relates to events or experiences that stimulate an individual's direct need to perform this behavior. However, its role has been less sufficiently examined, mainly due to complications with its operationalization. The last and newest factor to be added to the HBM is self-efficacy, which was directly adapted from Bandura's social cognitive theory (Rosenstock 1988 as cited in Groenewold et al., 2006).

Groenewold et al. (2006, 2012) tried to adapt and verify the applicability of the HBM in the study of emigration intentions. They generalized the key concepts of HBM and transposed them into the 'modified HBM' with the following factors: the perceived threat to financial living conditions (state X) and emigration as a behavioral action directed at reducing this perceived threat and at improving living conditions (action Y), beliefs about the usefulness of emigration for decreasing this threat (perceived emigration benefits), the obstacles to emigration (perceived emigration barriers) and the confidence in one's ability to effectively perform the emigration behavior (emigration self-efficacy).

As the 'modified HBM' has been taken from health research but does not directly address health-related behavior in its modified version, this modified HBM is labelled as the Migration Belief Model (MBM) in this study in order to differentiate it from the basic HBM. To sum up, it is possible to compare the original HBM and the MBM. In the MBM, the first two factors of the HBM (perceived susceptibility and perceived severity) are presented in a single factor of perceived economic threat (instead of perceived threat to health). The perceived benefits of health-related behavior are replaced by the perceived emigration benefits, the perceived barriers to health-related behavior are replaced by

perceived emigration barriers, cues to action relates to cues encouraging emigration instead of cues encouraging health-related behavior and emigration self-efficacy relates to one's confidence about the ability of successfully emigrating instead of the ability of successfully performing a health-related behavior. The main aim of this study is to examine the relationships between the four main factors of the MBM, i.e. between *beliefs* in the MBM and emigration intentions and emigration plans separately, while omitting cues to action factor as a factor referring to external stimuli of emigration.

2. OBJECTIVES

The objectives of this study were to examine the relationships between four beliefs of the MBM (perceived economic threat, perceived emigration benefits, perceived emigration barriers and emigration self-efficacy) and emigration intentions and emigration plans among Slovak university students separately. The additional aim of this study was to explore whether emigration intentions, i.e. the amount of considering emigration contribute to explaining emigration planning.

3. METHODS

3.1. Sample and procedure

All universities in Slovakia were invited to join the research project and 51% of them answered the official call for participation. Students were asked formally (by their university websites, information systems or official Facebook pages) or informally (by official Facebook page 'Slice Study 2016' created for the purpose of research promotion in unofficial Facebook student pages and groups) to fill in an online questionnaire, voluntarily and anonymously.

A total of 1091 students reacted to the invitation. The whole questionnaire was self-completed by 489 of them (a response rate of 44.8%). This value is in line with the commonly achieved value of the respond rate for online research, which is on average 33% (compared with 56% for paper research) (Nulty, 2008). 374 (76.5%) respondents of the sample were women; mean age of the students was 22.8 (SD=2.97), 22.6 (SD=2.84) for women and 23.4 (SD=3.28) for men. All grades and study levels were represented in the sample: 50.7% of students were in the first (bachelor level) of study, 38.9% of students were in the second (master) grade of study and 5.3% of the sample were PhD students. All regions of the Slovakia were represented in the sample as well.

3.2. Measures

- Emigration intentions as a continuous variable were identified. EI were measured by five-items Intention to Emigrate scale (Leong & Soon, 2011) which concerns individuals' considerations about living abroad. Each item required respondents to rate the frequency with which they thought of working or living in another country on a 5-item scale from 1 (never) to 5 (all the time). Higher scores denote a higher intention to emigrate (C α of .9).
- Emigration plans were identified as a categorical variable, identified by the question specifying the circumstances of the leaving: „Are you planning to leave Slovakia after completing university?“ with possible answers: No, I am not planning to leave (1); I don't know, I have not thought about it (2); I don't know,

I have not decided yet (3); Yes, I am planning to leave for a period up to 6 months (4); Yes, I am planning to leave for a period from 6 to 12 months (5); Yes, I am planning to leave for a period longer than a year (6); Yes, I am planning to leave for a period longer than 5 years (7); Yes, I am planning to leave permanently (8). In order to simplify the initial results for our planned analysis, respondents were classified into 4 categories based on responses: a) those who do not plan to leave Slovakia (they answered with 1); b) undecided (they answered with 2 or 3); c) planning a short-term stay (they answered with 4 or 5) and d) planning a long-term stay (they answered with 6, 7 or 8).

- Perceived economic threat was defined by students' perception of the economic situation and life perspective in Slovakia. Students were asked: „How do you feel about the development of Slovakia's economy over the next 10 years in the context of your professional career and perspective of starting your own family?“ (1-very optimistic, 4-very pessimistic). A higher score indicates a higher level of perceived economic threat.
- Perceived benefits were measured by students' evaluations of the importance of six factors possibly attracting them to emigrate (1-not important at all; 5-very important), e.g. an opportunity to master the foreign language, an opportunity to gain a prestigious education abroad or an opportunity to have a better career abroad. A higher overall score indicates a higher level of perception of emigration benefits (C α of .8).
- Perceived barriers: were measured by the students' evaluations of the importance of six factors possibly repelling them from emigration (1-not important at all; 5-very important), e.g. strong relationships and commitments in Slovakia, expected difficulties with finding a job abroad, expected difficulties with learning a language. A higher overall score indicates a higher level of perception of emigration barriers (C α of .8).
- Emigration self-efficacy was measured by three items. The students were asked if they agree with the statements such as: “If I wanted I could easily emigrate; I believe I would be able to handle the leaving” (1-strongly disagree; 5-strongly agree). A higher overall score indicates a higher confidence about students' ability to successfully emigrate (C α of .8).

3.3. Statistical analyses

A linear regression with enter method and a multinomial regression analyses were applied. The reference category for multinomial regression was a group of students planning a long-term emigration from Slovakia (for more than one year or permanently).

4. RESULTS

4.1. Preliminary results

Regarding the concrete emigration plans, the highest number of students are those who had not decided yet (about 42%). Overall, about 36% of students plan to leave Slovakia for some time (short or long term). There is also a comparable proportion of students who do not plan to leave Slovakia (about 23%) and students planning a long-term emigration from Slovakia (about 24%). There are no significant differences between men and women in planning emigration. The emigration plans among Slovak university students with respect to gender can be seen in Table 1.

Likewise, there is no significant difference between men and women in emigration intentions. However, women perceive both the barriers and benefits of emigration as more important and are less confident about their ability to emigrate compared to men. The descriptive characteristics in the measured continuous variables are presented in Table 2.

Table 1.
Emigration plans among Slovak university students.

Emigration plan (number of response)	Among sample (n=489)	Among women (n=374)	Among men (n=115)
Not planning to leave (1)	110 (22.5%)	90 (24.1%)	20 (17.4%)
Undecided (2, 3)	203 (41.5%)	158 (42.2%)	45 (39.1%)
Planning short-term stay abroad (4, 5)	60 (12.3%)	47 (12.6%)	13 (11.3%)
Planning long-term stay abroad (6, 7, 8)	116 (23.7%)	79 (21.1%)	37 (32.2%)

Table 2.
Descriptive characteristics of the sample in the continuous variables.

VARIABLE	Theoretical range / Sample range	MEAN (Standard deviation)			T-test value
		Among sample (n=489)	Among men (n=115)	Among women (n=374)	
Emigration intentions	5 – 25 / 5- 25	12.95 (5.14)	13.53 (5)	12.77 (5.17)	-1.384
Perceived economic threat	1 – 4 / 1 – 4	2.76 (.67)	2.71 (.82)	2.78 (.61)	.782
Perceived emig. benefits	6 – 30 / 15 – 30	24.43 (3.14)	23.76 (3.58)	24.63 (2.97)	2.39**
Perceived emig. barriers	6 – 30 / 6 – 30	20.14 (4.78)	18.97 (4.63)	20.49 (4.77)	3.01**
Emigration self- efficacy	3 – 15 / 3 – 15	11.66 (2.63)	12.53 (2.21)	11.39 (2.69)	- 4.59***

***p ≤ 0.001, **p ≤ 0.01, *p ≤ 0.05

4.2. Relationships between MBM factors and emigration intentions

A linear-regression analysis with enter method was applied in order to identify the overall contribution of the MBM factors in the explanation of emigration intentions and to explore the relationships between MBM factors and emigration intentions (continuous variable). The final model adjusted for gender with four MBM factors was significant and explained 33.6% of the variance in emigration intentions among university students. In this final model, higher level of emigration intentions was positively related to higher level of perceived economic threat, of perceived emigration benefits and of emigration self-efficacy. Furthermore, higher level of emigration intentions were associated with a lower level of perceived emigration barriers. The final model with regression coefficients is presented in Table 3.

Table 3.
Linear-regression model, relationships between MBM factors and emigration intentions.

FACTOR	B	S.E.	95% C.I.for B		β	Sig.
			Lower	Upper		
Gender	.086	.462	-.822	.995	.007	.852
Perceived economic threat	1.328	.288	.762	1.893	.173	.000
Perceived emigration benefits	.367	.063	.244	.491	.225	.000
Perceived emigration barriers	-.209	.044	-.295	-.124	-.194	.000
Emigration self-efficacy	.667	.081	.508	.826	.341	.000

Linear model: Adjusted R^2 =.336; F =50.445 (df=5, p <.000)

4.3. Relationships between MBM factors and emigration plans with the respect of preferred length of the stay abroad

A multinomial-regression analysis was applied in order to identify the overall contribution of the MBM factors in the explanation of emigration plans and to explore the relationships between MBM factors and the emigration plans (categorical variable). The regression model adjusted for gender with the MBM factors explained 30.4% (Cox&Snell) – 32.9% (Nagelkerke) of the variance in emigration plans. The relationships of the MBM factors and emigration plans regarding the preferred length of stay can be seen in Table 4.

Table 4.
MBM factors related to emigration plans among Slovak university students.

Group compared to the reference group [∞]	Factor	OR	95% CI	
			Lower bound	Upper bound
Not planning to leave at all	Perceived ec. threat	.456**	.285	.730
	Perceived em. benefits	.864**	.780	.957
	Perceived em. barriers	1.208***	1.121	1.301
	Emigration self-efficacy	.632***	.541	.738
Undecided	Perceived ec. threat	.515**	.349	.759
	Perceived em. benefits	.936	.857	1.022
	Perceived em. barriers	1.137***	1.069	1.208
	Emigration self-efficacy	.677***	.588	.779
Planning short-term departure (for less than 1 year)	Perceived ec. threat	.510**	.312	.834
	Perceived em. benefits	.984	.879	1.100
	Perceived em. barriers	1.180***	1.093	1.274
	Emigration self-efficacy	.955	.796	1.145

[∞]Group of students planning long-term leaving (for more than 1 year); OR – odds ratio, probability of chances; 95% CI – confidence interval (lower and upper bound); *** p ≤ 0.001, ** p ≤ 0.01, * p ≤ 0.05

The model showed that those who plan a long-term stay abroad:

- 1) are more likely to report a higher level of perceived economic threat, perceived benefits of emigration and emigration self-efficacy and a lower level of perceived barriers to emigration when compared to those who don't plan to emigrate;
- 2) are more likely to report a higher level of perceived economic threat and a lower level of perceived barriers to emigration than the group of undecided;
- 3) are more likely to report a higher level of perceived economic threat and lower level of perceived barriers when compared to those who plan a short-term stay.

4.4. Relationships between emigration intentions and emigration plans

Furthermore, using simple multinomial regression adjusted for gender it was also found that emigration intention, i.e. the amount of considering emigration explains about 47.9% (Cox & Snell) – 51.7% (Nagelkerke) of variance in emigration plans. Those, who plan a long-term stay abroad are more likely to report higher level of emigration intentions (i.e. emigration consideration) than those, who are not planning to leave, than those who are undecided about leaving and than those who are planning to leave short-term. It can be said, that emigration intentions (i.e. emigration consideration) are relatively good as the predictors of emigration planning itself. The details of this analysis can be seen in Table 5.

Table 5.
Relationships between emigration intentions and emigration plans.

Group compared to the reference group [∞]	Factor	OR	95% CI	
			Lower bound	Upper bound
Not planning to leave at all	Emigration intention (considerations)	.459***	.403	.523
Undecided	Emigration intention (considerations)	.716***	.666	.769
Planning short-term departure (for less than 1 year)	Emigration intention (considerations)	.810***	.747	.878

[∞]Group of students planning long-term leaving (for more than 1 year); OR – odds ratio, probability of chances; 95% CI – confidence interval (lower and upper bound); ***p ≤ 0.001, **p ≤ 0.01, *p ≤ 0.05

5. FUTURE RESEARCH DIRECTIONS

Since the MBM is still a relatively new adaptation of the HBM in the study of emigration, there are other possible ways that the model could be transformed and which factor indicators could be chosen. A further exploration of the relationships between and among the factors and their relationships with emigration intentions and behavior can bring new findings and explain the potential inconsistencies in previous outcomes regarding students' emigration. A better understanding of the processes accompanying emigration decision-making demands a longitudinal design in future research with moderation and mediation analyses (Orosová, Benka, Hricová, & Kulanová, 2018). This design would be appropriate to find out how well the MBM can predict the actual emigration from Slovakia and whether it can provide some evidence about the predictive power of emigration intentions.

Although this paper deals with the examination of factors related to emigration intentions and plans of students, the findings of this research and follow-up analyzes can also be transferred to other related areas of migration. The model does not neglect the economic and social factors that are also relevant for other types of migration such as migration from war-torn countries or from countries suffering from poverty.

6. DISCUSSION AND CONCLUSION

It was found that all four beliefs in the MBM are significantly related to emigration intentions and emigration plans separately. It was found that those intending to emigrate and intending a long-term stay abroad perceive the economic situation in Slovakia more pessimistically, evaluate the benefits of emigration as more important and barriers of emigration as less important and are more confident about their ability to successfully emigrate. The MBM explains a relatively similar amount of variance in both emigration intentions and emigration plans.

The results of this study about the contribution of the MBM in emigration intentions supported previous findings by Groenewold et al., (2006, 2012) who have found that the MBM with four beliefs included explained between 29% (Turkey) and 56% (Morocco) of the variance in emigration intentions. Specifically, it was found that higher perceived economic threat is related to higher emigration intentions. Many studies have confirmed the importance of economic factors pulling students to migrate to more prosperous countries or pushing them out of their country due to unsatisfactory economic conditions (e.g. Mihi-Ramirez & Kumpikaite, 2013; Sheikh, Naqvi, Sheikh, Naqvi & Bandukda, 2012; Gouda et al. 2015; Santric-Milicevic, Terzic-Supic, Matejic, Vasic & Ricketts, 2014). Champion & Skinner (2008) have suggested that even if a person perceives threat, whether this perception leads to behavior will be affected by the person's beliefs regarding the benefits of the action for reducing this threat. Thus, individuals who perceive a threat to their living conditions are not immediately expected to take action unless they believe that a certain action would be beneficial in decreasing this threat. In other words, that the expected benefits of taking action would outweigh the barriers to action in which case they are more likely to take action they believe will reduce this threat (Champion & Skinner, 2008). In this study the significance of emigration benefits and barriers was supported in the explanation of both the emigration intentions and emigration plans as well. It has also been found that those with higher level of emigration intentions are more confident about their ability to successfully emigrate. Regarding emigration self-efficacy, its significance has been confirmed in various phases of the migration process and in the phase of the formation of intentions as well (Hoppe & Fujishiro, 2015, Aldwin, Oark, Jeong, & Nath, 2014).

The results of this study also indicate that emigration intentions as an amount of emigration consideration can be a precursor to concrete emigration planning and later to emigration itself and support Krieger's (2004) stage process of emigration. These findings offer several implications. Given the fact that about one third of Slovak students are considering some kind of emigration, it is important to recognize which factors, beliefs, motives or individual characteristics may contribute to emigration decision-making. Studies of emigration intentions and migration potential can provide valuable information about the motivations and characteristics of potential migrants and worthwhile data about their situation prior to migration (e.g. Kley, 2009; Van Dalen & Henkens, 2008, 2013). It is better to motivate students according to their interests or what they reflect to be important for them (Tumusiime, 2004). The findings support the contribution of the MBM in the explanation of students' emigration intentions and plans. This model can be further applied in the study of students' emigration taking into account other potentially contributing psychological factors or can be transferred to other relevant contexts of migration.

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ADDITIONAL READING

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KEY TERMS & DEFINITIONS

Emigration intention: an act of volition which constructs the future implementation of social behavior in other social and cultural reality. The construct is identified as an amount of emigration considering.

Emigration plan: a firm emigration intentions showing signs of a specific plan to emigrate (i.e. one knows where to leave or for how long).

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Chapter #18

EFFECTIVENESS OF THE UNIVERSAL DRUG PREVENTION PROGRAM: TEACHERS' ENGAGEMENT, LIFETIME ALCOHOL USE, NORMATIVE BELIEFS AND SELF-CONTROL AMONG EARLY SLOVAK ADOLESCENTS

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ABSTRACT

This study addressed the effectiveness of the Unplugged prevention program which was tested in Slovakia at 60 primary schools. The aim was to explore the differences in psychological factors as well as in alcohol use measured at different time points; before T1, n=1295, 52.3% girls, age=11.52, SD=0.61 and 12 months after the implementation of the program T2, n=872. The data were analysed by using mixed ANOVAs with 3 groups differing in the level of teachers' engagement (control group CG, an experimental group EGLE with low teacher engagement and an experimental group with high engagement EGHE – teachers provided more than 6 feedback reports after all 12 sessions) and the dependent variables (alcohol use, normative beliefs, self-control) measured before and after program implementation (T1 & T2). It has shown an increase in alcohol use and normative beliefs regarding the drinking of friends over time regardless of the level of teachers' engagement. A long-term effect of teachers' engagement was found in relation to self-control. The level of self-control in the group with highly engaged teachers did not significantly change over time while it was found to decrease in the other groups.

Keywords: lifetime alcohol use, normative beliefs of friends, self-control, universal drug prevention program.

1. INTRODUCTION

Alcohol is usually the first legal drug with which many pupils tend to experiment. Surveys conducted among schoolchildren have generally reported that alcohol use increases among 11-14 year olds and the initiation age for using legal drugs during the last 20 years has remained constant at about 10 - 11 years old. The attempts to push it to an older age have not been successful. This is significant because it is well-known that early experimentation with alcohol is related to a more frequent abuse of alcohol later in life (Jordan & Andersen, 2017).

Intrapersonal factors such as normative beliefs and self-control are considered to be related to alcohol use and often constitute an integral part of preventive programs. These factors are often addressed in prevention programs in the form of correcting normative beliefs and strengthening self-control.

In the period of adolescence, one of the most significant factors affecting behaviour is the influence of friends. Alcohol use is often initiated and the consumption increased as the result of inflated descriptive normative beliefs – the perception of the prevalence of alcohol

use among friends (French & Cooke, 2012, Stone, Becker, Hubert, & Catalano, 2012). There is substantial evidence for the positive relationship between normative beliefs and alcohol use (Jones & Robinson, 2017). A higher level of normative beliefs has been shown to be associated with an earlier initiation of alcohol use and a higher frequency of alcohol use (McAlaney & McMahon, 2007, Brutovská, Berinšterová, Orosová, & Jurystová, 2014). Normative beliefs regarding the behaviour of friends may have a direct as well as an indirect (mediator, moderator) influence on the behaviour of an individual. It has been found that normative beliefs regarding the number of friends who drink was significantly and directly associated with alcohol use (Brutovská, Orosova, Kalina, & Šebeňa, 2015).

Furthermore, self-control defined as an ability, cognitive process, will-power or a trait which helps to inhibit inappropriate behavioural tendencies by hindering their execution, is also considered as a traditional internal protective factor in relation to alcohol use (Bačíková-Šlešková, Janovská, & Orosová, 2017). A relationship between alcohol use and lower self-control in early adolescence has been found in many studies (Franken et al., 2016, Stautz, Zupan, Fied, & Marteau, 2018). The strengthening and support of self-control during early adolescence is crucial according to numerous authors (Stautz et al., 2018, Guillén, Roth, Alfaro & Fernández, 2015). Despite the fact that self-control decreases with age and becomes more complex, it is one of the main protective factors of alcohol use during adolescence. For example, an enduring positive effect of self-control during the period of seven years in relation to alcohol use from early to late adolescence was found by Griffin, Scheier, Acevedo, Grenard, & Botvin (2012).

Therefore, it is important to monitor the trends in alcohol use in the population of early adolescents as well as identifying the factors related to alcohol use or those which postpone the initiation of drinking. The role of the preventive programs is to reduce alcohol use or to postpone the initiation of substance use (Sanchez et al., 2018).

In Slovakia, one of the few existing and systematically implemented prevention programs with well-documented effectiveness is the prevention program Unplugged. Unplugged is a universal school-based prevention program for young adolescents aged 12-14 years old. This program has been developed within the European project EU-DAP (European Drug Use Prevention) which connects several European countries with the common goal of creating a prevention program which meets the criteria of prevention implementation standards and at the same time corresponds with the European cultural environment (Gabrhelík et al., 2012). Unplugged (Berinšterová, Orosová, & Miovský, 2015) is based on a social influence approach which an educational component which is based on the model KAB (knowledge, attitude, behaviour).

2. DESIGN

A longitudinal study.

3. OBJECTIVES

This study explored the differences in selected intrapersonal factors of pupils (normative beliefs regarding the drinking of friends, self-control) and their risk behaviour (lifetime alcohol use) over time, starting immediately before the preventive program implementation (T1) and 12 months after the completion of the program (T2) in groups of pupils divided according to the level of teachers' engagement.

4. METHODS

4.1. Participants and recruitment

The data were collected as part of an evaluation study of the school-based prevention program Unplugged. In this program, 60 primary schools from Slovakia (30 assigned to the experimental and 30 to the control group) participated, one 6th grade class from each school. The data collection in the experimental and control groups were carried out immediately before the implementation of the Unplugged program and the post-test measurements were carried out 3 months, 12 months and 18 months after the program implementation. This study presents the findings regarding the effectiveness 12 months after the program implementation. The program Unplugged itself consists of 12 sessions comprising three components (information and attitudes, interpersonal skills, intrapersonal skills <http://www.eudap.net/>). Prior to the implementation of the project, a three-day training of teachers who were to implement the program took place. The amount of feedback after completing the prevention was used as an indicator of teachers' engagement which represented program fidelity, quality of the program implementation (Hansen, 2014, Jurystová, Orosová, & Gabrhelík, 2017). The connection between teachers' engagement and the effectiveness of prevention programs has previously been reported (Gabrhelík et al., 2012).

4.2. Sample

In total, 1295 pupils participated at the baseline (prior to program implementation) of the Unplugged program (APVV-0253-11, APVV-15-0662, KEGA 016, UPJŠ-4/2017) and 872 pupils participated at T2, 12 months after the implementation of the program. A representative sample of sixth grade classes from 60 primary schools was selected using a stratified random selection procedure. The participation of pupils was granted by parental consent. The study was approved by the Ethics committee of Pavol Jozef Šafárik University in Košice. Participation in the study was anonymous and an identification code was used to pair respondents within the separate waves. Due to some errors in the identification codes (and thus inability to make pairs) as well as the absence due to sickness of some respondents during the follow up, the total research sample for the present study comprised of 872 adolescents (baseline mean age 11.52, SD 0.61, 52.3% girls).

4.3. Methods

Lifetime drinking was measured by the question: How many times (if at all) have you drunk an alcoholic beverage in your life? Respondents had the following answer options: 1: 0x, 2: 1-2x, 3: 3-5x, 4: 6-9x, 5: 10-19x, 6: 20-39x, 7: 40x or more (ESPAD 2012).

Normative beliefs regarding the drinking of friends was measured by the question: How many of your friends, based on your estimation, drink alcoholic beverages (beer, wine, hard alcohol)? The answer options were: 1- no one, 2- a few, 3 - many, 4- most, 5- all (ESPAD 2012).

Self-control was measured by an 11-item Self-control scale (Finkenauer, Engels, & Baumeister, 2005) with the possible answers 1- not like me at all to 5 – very much like me. A higher score means higher self-control. Cronbach's alpha of the scale at T1 was 0.733 and at T2 0.815.

4.4. Statistical analyses

The pupils were divided according to the experimental design: 1. CG-control group, 2. EGLE - experimental group of pupils of those teachers who provided fewer than 6 feedbacks, 3. EGHE - group consisted of pupils whose teachers provided feedback of more than 6 reports after the 12 sessions of the program.

We used 3 mixed between - within subject ANOVAs with one factor - 3 groups and repeated measure of dependent variables at T1 and T2 (alcohol use, normative beliefs, self-control).

5. RESULTS

The number of pupils in the control group was 50.7%. The number of pupils in classes with low teacher engagement was 12.4% and high teacher engagement was 36.9%. The means of the measured variables at T1 and at T2 are shown in Table 1.

Table 1.
Descriptive statistics of the measured variables at T1 and at T2 in groups according to teachers' engagement.

	CG			EGLE			EGHE		
	N	M	SD	N	M	SD	N	M	SD
Drinking T1	437	1.62	1.20	119	1.83	1.51	301	1.8	1.31
Drinking T2	437	2.23	1.68	119	2.31	1.72	301	2.40	1.68
Norms T1	431	1.38	0.68	116	1.35	0.74	297	1.46	0.73
Norms T2	431	1.80	0.99	116	1.58	0.75	297	1.69	0.86
Self-control T1	278	38.53	5.96	86	39.48	6.21	181	37.46	6.25
Self-control T2	278	37.17	6.01	86	36.40	6.45	181	37.15	6.31

Note: CG - Control group, EGLE - experimental group with lower engagement, EGHE - experimental group with high engagement, T1 - before the implementation, T2 - 12 months after the implementation

The first mixed between-within subject analysis of variance was conducted to assess the impact of teachers' engagement on participants' scores in alcohol consumption across the two time periods (T1 - before the implementation and T2 - 12 months after the implementation). There was no significant interaction between group and time, Wilks Lambda=.99, $F=0.286$, $p=.75$, partial eta squared=.001. There was a main effect for time, Wilks Lambda=.92, $F=76.04$, $p=.0005$, with a moderate effect size (partial eta squared=.082). All groups showed a significant increase in alcohol use across the time periods T1, T2 (CG: $p<.0005$; EGLE: $p<.0005$, EGHE: $p<.0005$). The main effect comparing groups was not significant $F= 2.084$, $p=.13$, partial eta squared=.005.

The second mixed between-within subject analysis of variance assessed the impact of teachers' engagement on participants' scores on the normative beliefs regarding the drinking of friends across the two time periods T1 and T2. There was a significant interaction between group and time, Wilks Lambda=.990, $F=4.167$, $p=.016$, partial eta

squared=.010. There was a main effect for time, Wilks Lambda= 937, $F=56.885$, $p<.0005$ with a moderate effect size (partial eta squared=.063). All groups significantly differed in normative beliefs across the time periods T1, T2, CG: $p<.0005$; EGLE: $p=.001$, EGHE: $p<.0005$). The main effect comparing groups was not significant $F=1.745$, $p=.175$, partial eta squared=.004.

The third mixed between-within subject analysis of variance assessed the impact of teachers' engagement on participants' scores in self-control across two time periods T1 and T2. There was a significant interaction between group and time, Wilks Lambda=.986, $F=3.98$, $p=.019$, with a small effect size (partial eta squared=.014). There was a main effect for time, Wilks Lambda=.966, $F=19.180$, $p<.0005$, partial eta squared=.034. According to the analysis of simple effects conducted to compare the groups individually, significant differences in self-control at T1 and T2 in CG: $p=.001$ and in EGLE: $p=.001$ were found but not in EGHE: $p=.612$. The main effect comparing groups was not significant $F=76.849$, $p=.455$, partial eta squared=.003. However, significant differences were found in the self-control at T1 between CG and EGLE as well as at T1 between CG and EGHE.

It is possible to confirm the main effect in alcohol use as well as the normative beliefs regarding alcohol use of friends in T1 a T2 regardless of the level of teachers' engagement. In the case of self-control, the protective effect of teachers' engagement has been shown. In the group of teachers with the highest level of engagement, there was no significant decrease across the time periods in self-control, while in the control group and in the group with low engagement teachers a significant decrease was found.

6. DISCUSSION AND CONCLUSION

There are two representative surveys among schoolchildren which are regularly carried out in Slovakia, the TAD (Tobacco-Alcohol-Drugs) since 1994 and the European School Survey Project on Alcohol and Other Drugs (ESPAD) since 1995 every four years. Based on these surveys, young adolescents in Slovakia start drinking alcohol at the age of 10 and the efforts to move it to an older age have not been successful. The research shows that early primary prevention is necessary at the age 8-10 years when approximately half of pupils do not have experience with alcohol. While the use of other illegal drugs and smoking has been in decline as well as the initiation age, with regard to alcohol Slovakia belongs to one of the countries with high risky behaviour (Nociar, 2014, 2015). In the Unplugged program, alcohol use was reported by 38.8% of pupils at T1, the mean age at T1 was 11.52 years. At T2, a year later, the percentage of pupils who had tried alcohol increased to 53.6%. The use of alcohol in our research increased regardless of the level of teachers' engagement. This finding is in line with the trend of increasing alcohol use during adolescence (Nociar, 2015, ESPAD, 2016, 2017).

A positive relationship between normative beliefs and alcohol use has been confirmed by several studies (Brutovská et al., 2014, Jones & Robinson, 2017). Normative beliefs regarding the drinking of friends may have a direct influence on the behaviour of pupils. Therefore, the correction of normative beliefs regarding the behaviour of friends is an integral part of preventive programs. This study has confirmed a statistically significant increase in normative beliefs regarding alcohol use by friends. All groups significantly differed in normative beliefs across time periods. This finding is in line with the existing findings on normative beliefs (Guillén et al., 2015).

Despite the fact that self-control tends to decrease with age, an enduring positive effect of self-control in relation to risk behaviour of adolescents and particularly their alcohol use has been found in a number of studies (Stautz et al., 2018, Griffin et al., 2012, Bačíková-Šlešková et al., 2017). In this study, a significant decrease in self-control was found between T1 and T2 in the control group and in the group with low teacher engagement. However, in the group with highly engaged teachers a decrease in self-control was not observed.

Overall, this study has confirmed the trends in risk behaviour among young adolescents. In particular, it has shown increasing levels of alcohol use and normative beliefs regarding the drinking of friends and a decrease self-control was observed at T1 when compared with T2. This is in line with other research studies (Stautz et al., 2018; Guillén et al., 2015). The long-term effect of teachers' engagement as one of the indicators of fidelity, quality of implementation of preventive programs was found in relation to the intrapersonal factor of self-control.

Furthermore, the significance of monitoring teachers' engagement of preventive programs was shown to have a protective effect, especially in the case of self-control. The development of preventive programs should not only be based on the monitoring of the effectiveness of these programs but also on monitoring the quality of the implementation by addressing teachers' engagement.

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Chapter #19

RICH EXPERIENCES IN NATURAL ENVIRONMENT IN CHILDHOOD CULTIVATE ATTACHMENT TO COMMUNITY

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ABSTRACT

Japan shares the problem of urbanization. As governments provide inadequate public services to their citizens, mutual support among residents is necessary. This study aims to examine whether childhood experiences in the natural environment cultivate attachment to community when one becomes an adult. In 2014, an internet survey was conducted among residents of Kobe City and its suburbs. The sample size was 1,017, aged 18 to 90 years. Items input in the analyses were experiences with natural environment during childhood, importance of natural environment during childhood, and attachment to their community. Respondents were divided into four groups by gender and whether living in suburban or urban area. Multiple group structural equation modeling was conducted. The scores of the richness of natural environment of residents in suburban were higher than those of their counterparts in urban area. People who had lived in a rich natural environment in their childhood believed that natural experiences are important; those who held such beliefs correlated positively with attachment to community. This study suggests that living in a rich natural environment and having experiences in nature during childhood cultivate attachment to community when one becomes an adult. This finding implies that providing rich experiences in nature to children is important to cultivate attachment to community.

Keywords: childhood experiences in the natural environment, attachment to community, urban residents.

1. INTRODUCTION

As a civilized society, Japan faces the problem of urbanization, which is population concentration in metropolitan cities. Large cities in Japan often provide convenient places for old people. They provide a variety of facilities including hospitals, senior residences, department stores, theatres, and museums. At the same time, the public transportation systems are well developed in large cities. Old people can access these facilities through trains or buses. Local governments usually issue a special pass for the elderly, which enable them to utilize such facilities at discounted prices. In addition, the degree of ease of access is fairly high in large cities. These characteristics of large cities attract the elderly, and the aging population in cities is thus increasing.

2. BACKGROUND

When people get older, they need some support to live by themselves at their homes. However, the rate of households only comprising the elderly is increasing. They cannot expect daily support from their children living separately. At the same time, as local

governments provide inadequate public services to their citizens, mutual support among residents is necessary. The bonds among urban residents, however, have been weakening. An international comparative survey between Japan, the US, Germany, and Sweden shows that the ratio of the Japanese elderly who do not have someone to rely on is the highest among the four countries (Cabinet office, Government of Japan, 2015). Especially for the single households of the Japanese elderly, the ratio of those having infrequent interactions with others was the highest, though and the single household rate is the lowest in Japan among the four countries. It is obvious that the promotion of the networks and sense of community among urban residents is necessary.

An appropriate measure for evaluating the attachment to their community is the sense of community (McMillan & Chavis, 1986). The definition of the sense of community is: 'Sense of community is a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members needs will be met through their commitment to be together' (McMillan & Chavis, 1986, p.9). They propose four elements of sense of community: membership, influence, integration and fulfilment of needs, and shared emotional connection. The Sense of Community Index II (Chavis, Hogge, McMillan, & Wandersman, 1986) consists of 24 items; however, its construct of four elements is not stable, especially for the Japanese (Sugawara et al., 2009). Sugawara et al. (2009), proposed three sub concepts: attachment to community, member connectedness, and sense of presence, with 11 items from the original Sense of Community Index. *Attachment to community* has four items: 'I think this community is a good place for me to live', 'I feel at home in this community', 'It is very important to me to live in this community', and 'I expect to live in this community for a long time'. *Member connectedness* has four items: 'People in this community share the same values', 'My neighbours and I want the same thing from this community', 'If there is a problem in this community, people who live here get it solved', and 'People in this community generally get along with one another'. *Sense of own presence* in the community has three items: 'I can recognize most of the people who live in my community', 'Most of my neighbours know me', and 'I have influence over what this community is like'.

Rubinstein and Parmelee (1992) proposed that attachment to a place, that is, to a geographic location, emotionally binds the elderly to the reflections of their past experiences. Katagiri and Sugawara (2010) demonstrated, using random sampling data of Japanese elderly people, that past residence in the community was correlated with higher scores in this Japanese version of Sense of Community Index. The old persons who had ever lived in the community showed higher scores on sense of community than who had never done so. Especially, the resident experience in their childhood was most the influential. This suggested that the past experience might influence people's sense of community. Among the available research on leisure activity, some findings have revealed a positive relationship between place attachment and past experiences (e.g. Song, Graefe, Kim, & Park, 2018). However, little research has been carried out using evidential data on people's sense of community considering their past experiences.

Factors related to the sense of community were explored intensively (Brown, Brown, & Perkins, 2004; Lewicka, 2011; Raymond, Brown, & Weber, 2010). Among these studies, we focused on those involving the natural environment. Suzuki and Fujii (2008) revealed that the contact level to regional environment and nature environment was positively correlated with place attachment.

Considering the importance of the past experience and contact with natural environment, it can be supposed that the rich experience in nature in their childhood should be correlated to the sense of community.

3. OBJECTIVES

The objective of this study was to examine 1) whether childhood experiences in the natural environment cultivate attachment to the community in adulthood, 2) the difference between urban and suburban residents, and 3) the difference between male and female residents.

4. METHOD

In 2014, an internet survey was conducted among residents of Kobe City and its suburbs. The number of the participants was allocated proportional to the ratio of composition of local population among the monitors of the internet research company.

Kobe City is located near Osaka, a metropolitan city. The Rokko Mountain separates Kobe City into north and south, the latter being more urban than the former. Kobe city (except for Kita-ku), Ashiya-shi, Nishinomiya-shi (except for Yamaguchi-cho, Najio-cho, and Namase-cho), and Amagasaki-shi were categorized into south (urban) area. Miki-shi, Kita-ku in Kobe-shi, Yamaguchi-cho, Najio-cho, and Namase-cho in Nishinomiya-shi were categorized into north (suburban) area.

The sample size was 1,017 (south = 879, north = 213; men = 499, women = 593), with ages ranging from 18 to 90 years.

Items included in the analyses were 1) richness of nature during childhood (natural environment), 2) the existence of a person who loved nature (interpersonal environment), 3) experiences with natural environment during childhood (past experiences in natural settings), 4) importance of natural environment during childhood, and 5) attachment to the community.

1) Respondents rated the richness of nature during childhood on a scale from '1: hardly rich in natural environment' to '4: very rich in natural environment'.

2) Respondents were asked if they had a person who loved nature (1) or not (0).

3) The experience with natural environment was assessed using three questions: 'Did you play in natural settings?', 'Did you have experiences of capturing an animal or a plant, collecting it, or breeding or cultivating it?', and 'Did you visit relatives or acquaintance in rural areas?' Respondents answered on a scale from 1 'never' to 4 'often'. The reliability of the three items was .717.

4) Respondents rated the importance of natural environment on a scale from 1 'not at all' to 4 'very important'.

5) Out of three sub-concepts of sense of community, we used *Attachment to community* as it was the most similar to the concept of *place attachment* cited in literature. *Attachment to community* was assessed using four questions: 'I think this community is a good place for me to live', 'I feel at home in this community', 'It is very important to me to live in this community', and 'I expect to live in this community for a long time'. The reliability of the four items was .898.

Education, marital status, and years of residence were also included as control variables. Education had seven response options including '1: junior high school', '2: high school', '3: vocational school', '4: college', '5: university', '6: graduate school (master)', and '7: graduate school (doctor)'. Marital status was a dummy variable with categories of '1: married' and '0: not married'. Years of residence was assessed as the duration for which they were living in that area.

Respondents were divided into four groups by gender and residential areas of north (suburban) or south (urban). Multiple group structural equation modeling was conducted.

5. RESULTS

Descriptive statistics of demographic characteristics are shown in Table 1.

Table 1.
Characteristics of respondents.

		<i>N</i>	<i>%</i>
Sex	Male	499	45.7
	Female	593	54.3
Working status	Yes	718	66.7
	No	358	33.3
Income (in million)	Less than 2	466	42.9
	2-3.99	226	20.8
	4-5.99	175	16.1
	6-7.99	104	9.6
	8-9.99	56	5.2
	More than 10	59	5.4
Education	Junior high school	12	1.1
	High school	207	19
	Vocational school	101	9.2
	College	146	13.4
	University	526	48.2
	Graduate school (master)	82	7.5
	Graduate school (doctor)	17	1.6
Living alone	No	913	83.6
	Yes	179	16.4
Marital status	Married	716	65.6
	Not married	376	34.5
Own house	Yes	735	67.3
	No	357	29.6
Living area	South (urban)	879	80.5
	North (suburban)	213	19.5
Age group (in years)	20's	142	13
	30's	249	22.8
	40's	324	29.7
	50's	243	22.3
	60's	134	12.3
Years of residence	Range 0-65, Mean 13.25, <i>SD</i> 12.1		

Descriptive statistics of target variables are shown in Table 2.

Table 2.
Descriptive statistics of target variables: Comparisons between four groups (gender X area).

		Male		Female	
		Urban	Suburban	Urban	Suburban
1. Natural environment (1 - 4)	<i>Mean</i>	2.71	2.87	2.60	2.91
	<i>SD</i>	0.89	0.86	0.97	0.96
2. Interpersonal environment (0-7)	<i>Mean</i>	1.50	1.62	1.60	1.69
	<i>SD</i>	1.50	1.60	1.52	1.53
3. Experiences with animals or plants (1 - 4)	<i>Mean</i>	3.21	3.25	3.06	3.06
	<i>SD</i>	0.94	0.95	0.95	0.88
4. Experiences of playing in the nature (1 - 4)	<i>Mean</i>	3.50	3.57	3.31	3.39
	<i>SD</i>	0.81	0.71	0.78	0.76
5. Visiting relatives in rural areas (1 - 4)	<i>Mean</i>	3.22	3.28	3.15	3.09
	<i>SD</i>	1.05	0.91	0.97	1.00
6. Evaluation of natural experience during childhood (1 - 4)	<i>Mean</i>	3.40	3.40	3.42	3.46
	<i>SD</i>	0.69	0.74	0.62	0.62
7. Attachment to community (4 - 16)	<i>Mean</i>	11.98	11.30	12.10	11.69
	<i>SD</i>	2.49	2.07	2.39	2.22

To examine the differences among the four groups, we conducted an ANOVA (Table 3).

We observed a significant main effect of geographic area ($F(1, 1088) = 9.9, p < 0.01$) on *richness of natural environment during their childhood*, which was higher among residents in suburban areas than it was among residents of urban areas. We observed a main effect of gender on *experiences of playing in nature*. Male residents reported more experiences of playing in nature during childhood than female residents ($F(1, 1088) = 8.47, p < 0.01$). Finally, urban residents showed a significantly higher score of *attachment to community* ($F(1, 1088) = 12.21, p < 0.001$).

Table 3.
Results of ANOVA.

		Male (n=499)		Female (n=593)	
		Urban	Suburban	Urban	Suburban
Richness of natural environment during childhood	<i>Mean</i>	2.72	2.87	2.60	2.91
	<i>SD</i>	0.89	0.86	0.97	0.96
Experiences of playing in nature	<i>Mean</i>	3.50	3.57	3.32	3.39
	<i>SD</i>	0.81	0.71	0.78	0.76
Attachment to community	<i>Mean</i>	12.09	11.30	12.17	11.69
	<i>SD</i>	2.51	0.71	2.41	0.76

Next, we separately calculated the correlations between target variables by gender (Tables 4 and 5). We found similar results expect when it comes to correlations between *attachment to community* and other variables. All of the correlations were weak but significant among males, but only two of the correlations (*attachment to community* with *interpersonal environment* and *evaluation of natural experiences during childhood*) were significant among females.

Table 4.
Correlations among the target variables (male).

	1	2	3	4	5	6
1. Natural environment						
2. Interpersonal environment	.283***					
3. Experiences with animals or plants	.298***	.365***				
4. Experiences of playing in nature	.391***	.369***	.666***			
5. Visiting relatives in rural areas	.320***	.315***	.403***	.581***		
6. Evaluation of natural experiences during childhood	.365***	.356***	.451***	.561***	.372***	
7. Attachment to community	.220***	.171***	.241***	.296***	.184***	.377***

Note. *** $p < .001$

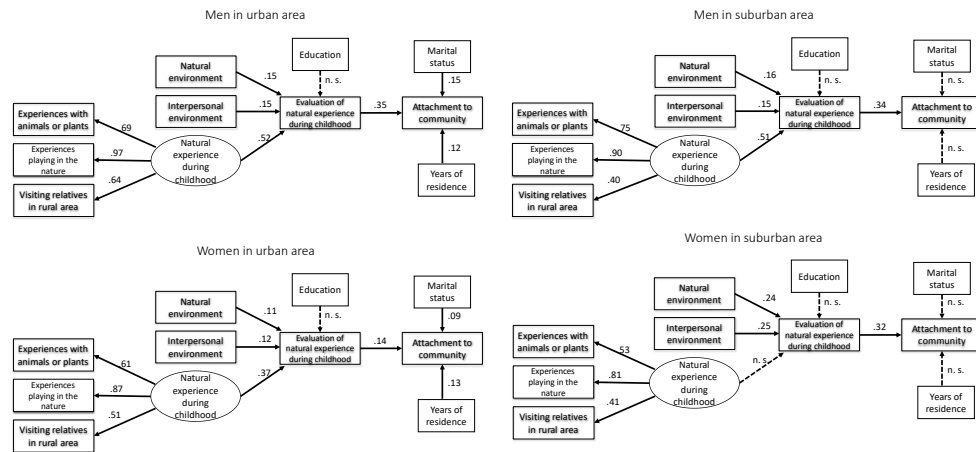
Table 5.
Correlations among the target variables (female).

	1	2	3	4	5	6
1. Natural environment						
2. Interpersonal environment	.289***					
3. Experiences with animals or plants	.181***	.425***				
4. Experiences of playing in nature	.397***	.365***	.516***			
5. Visiting relatives in rural areas	.281***	.260***	.268***	.430***		
6. Evaluation of natural experiences during childhood	.281***	.293***	.309***	.356***	.229***	
7. Attachment to community	-.026	.089*	.012	.029	.009	.173***

Note. * $p < .05$, *** $p < .001$

Finally, multiple group structural equation modeling was conducted among the four groups. Though the model fit did not reach a satisfactory level, we chose this model as it showed the lowest score of RMSEA (.059) (Figure 1).

Figure 1.
Results of multiple group structural equation modeling.



Note: Solid lines represent significant relationships. Dotted lines represent non-significant relationships.

We observed similar structures in the four groups, however, with some differences as well. Generally, we observed that rich natural environment, interpersonal environment, and natural experiences during childhood related positively to the importance of natural experiences during childhood, as also to attachment to community in adulthood.

Natural experiences in childhood were not related to the importance of natural experiences during childhood among women in suburban areas. The relationship between the importance of natural experiences during childhood and attachment to community was the weakest among female urban residents. Marital status and years of residence were related to attachment to community among urban residents, though we could not find these relations among suburban residents.

6. CONCLUSION/DISCUSSION

This study suggests that living in a rich natural environment and having experiences in nature during childhood cultivate attachment to community when one becomes an adult. It also suggests that living in a rich natural environment is an important experience in childhood, as proposed by Rubinstein and Parmelee (1992). Simultaneously, this study indicates that attachment to the community is related to not only the current situation but also childhood experiences in natural environment. It implies that the sense of community (McMillan & Chavis, 1986) is cultivated in people from childhood. The results showed that people who grew up in a rich natural environment were interested in their environment as adults, but those who were surrounded by a poor natural environment in childhood tended to lose interest in their environment as adults.

However, the strength of the relationships was different according to the residential region (in urban or suburban areas) and by gender. It was suggested that attachment to community was related to previous childhood experiences more strongly among male than among female residents. One reason for this is that the duration of residence for males was higher than that for females. A second possible reason may be that the female residents are

currently more involved in their neighbourhoods, as women usually spend more time at home than men do. Husbands, on the other hand, stay away from the home for long stretches of time because of work. They may not cultivate an attachment to the community that they are living in as adults. This may result in the strong relationship between past experience and attachment to community for male participants.

Among suburban residents, marital status and years of residence were not related to attachment to community. This can be interpreted to mean that suburban residents are living in richer natural environments than urban residents, which leads to a stronger relationship between attachment to community and the natural environment and past abundant experiences in nature.

The rich natural environment in urban areas is disappearing nowadays. Naturally, the children living in urban cities cannot have ample experiences of playing in the natural setting. It is expected to further decline the sense of community among urban residents in the future. Moreover, the population inflow into urban cities will not stop.

7. FUTURE RESEARCH DIRECTIONS

This finding implies that providing rich experiences in nature to children is important to cultivate attachment to community. When the areas do not have naturally rich environments, it is better to take children to a natural setting and provide enough opportunities to be familiar with the natural environment, and enable them to understand the importance of nature. At the same time, urban city plans should attempt to ensure that cities are equipped with natural places.

As this study was cross-sectional and conducted through an internet survey, future research using random sampling with a longitudinal approach is needed.

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Chapter #20

PARENT-CHILD PROCESSES AND HEALTH RISK BEHAVIOUR AMONG YOUNG SLOVAK ADOLESCENTS: THE MEDIATING ROLE OF SELF-ESTEEM AND SELF-CONTROL

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ABSTRACT

Lower levels of self-esteem (SE) and self-control (SC) have frequently been associated with a full range of health risk behaviours such as alcohol use or smoking. However, much less scientific attention has been paid to the role of parental processes (PP) as possible mediators. A cross-sectional representative dataset from primary schools was used (N=572, M=12.49 years, SD=0.65, 51.1 % boys). Four types of PP (child disclosure, parental solicitation, parental knowledge and parental monitoring) were measured. With respect to risk behaviours, respondents were asked about the frequency of smoking, alcohol use and being drunk during their lifetime. By combining all three variables, a single – behavioural risk index variable was created. Regression models and mediation analyses were used for data analysis in SPSS 21. The adolescents scored low in the behaviour risk index with no gender differences. The results showed negative associations between SC and risk behaviour for both boys and girls and negative associations between SE and risk behaviour for girls only. The analysis has confirmed only a mediation effect of child disclosure and parental monitoring on the relationship between self-esteem, self-control and risk behaviour. The quality of parent-child processes may explain the role of self-esteem and self-control among adolescents and thus protect adolescents from risk behaviour.

Keywords: young adolescents, risk behaviour, parent-child processes, self-esteem, self-control.

1. INTRODUCTION

The period of adolescence is a transitional period of growth and development between childhood and adulthood during which several patterns of adult behaviour begin to be established. In particular, risk-related behaviour such as extensive smoking, alcohol or other drug use could develop into serious physical, mental and social issues. From the perspective of prevention or intervention, there are several protective factors which may buffer against health risk taking behaviours. On the one hand, there are intrinsic - personality factors (self-esteem, self-control, extroversion etc.) and on the other hand, the external factors (family, peers, community or culture). However, little is known about the interaction between personality factors such as self-esteem or self-control and family factors such as parental behaviour.

1.1. Health risk behaviour in the context of personality factors

Smoking is one of the most frequently used substances and has a harmful impact on health in general. Tobacco use among adolescents may lead to health issues such as low lung function and capacity, asthmatic problems, coughing or wheezing and shortness of breath as

well as reduced general physical fitness. Moreover, smoking may also contribute to a higher susceptibility to and severity of respiratory illness (Currie et al., 2008). Despite many anti-smoking campaigns and the increased cost of cigarettes, the rates of active smoking adolescents in the Slovak Republic have increased, especially among adolescent girls. The initiation and progression of smoking in adolescence are considered to be predictive of later involvement with substance use and other harmful consequences (Tucker, Ellickson, Orlando, Martino, & Klein, 2005).

Similarly, alcohol consumption in general is considered to be a main health risk factor for diseases (Rehm et al., 2003). It is partially responsible for every fourth and fifth death among Slovak males and females respectively of productive age (Rosicova et al., 2011). A strong association has been also found between excessive drinking and a set of other health endangering behaviours such as smoking, risk sexual behaviour (Kalina et al., 2009), violent behaviour (Mason et al., 2010), eating disorders and obesity (Breslow & Smothers, 2005) and depressive disorders (Pedrelli, Shapero, Archibald, & Dale, 2016). A high use of alcohol in adolescence is significantly associated with alcohol problems in adulthood such as alcohol dependence and physical and mental health issues in later life (Jefferis, Power, & Manor, 2005). The more intensive the use of alcohol in adolescence is, the greater the chance that other multiple substance use will occur later. Alcohol and cigarette use are characterized as gateway drugs, as they often lead to more serious substance abuse (Perkins & Borden, 2003). Despite the many negative consequences of alcohol consumption, such risk behaviours mainly prevail due to their positive effect on socialization and sensation seeking needs as a manifestation of developmentally appropriate experimentation (Hurrelmann & Richter, 2006).

A lot of previous studies have explored the role of self-esteem in association with health risk behaviour, either as a health protecting or health-endangering characteristic. Additionally, self-esteem has been found to be connected with the initiation and continuation of smoking and cannabis use (Kokkevi, Richardson, Florescu, Kuzman, & Stergar, 2007; Wild, Flisher, Bhana & Lombard, 2004). However, the position of self-esteem regarding drinking among adolescents is not clear. On one hand, it has been found that positive self-esteem may work as a buffer against health risk behaviour by facilitating better psychological adjustment (Schweitzer, Seth-Smith, & Callan, 1992). On the other hand, there have been some inconsistent results from research which has shown that low alcohol consumers as well as high alcohol consumers report higher levels of self-esteem (Freeman & Newland, 2002). Positive and high self-esteem can be interpreted as a key factor for mental health as well as a protective factor in the field of health and social behaviour. In contrast, the development of mental disorders and social problems such as depression, anxiety, delinquency and high-risk behaviours have been linked to negative self-esteem (Mann, Hosman, Schaalma, & de Vries, 2004). The Social Cognitive Theory (Bandura, 1986) and the Theory of Planned Behaviour (Ajzen, 1987) propose that problem behaviours, including both smoking and alcohol use, are affected by dynamic and mutual interactions with personality characteristics (such as self-esteem) and environmental factors (such as social expectations). However, self-esteem should not only be seen as a single factor but also in the framework of a multidimensional theory, given its connection with other factors as well (Kalina et al., 2011). Positive self-esteem could be seen as a basic part of mental health and also as a protective factor in the field of health behaviour.

Another personality factor which has broadly attracted scientific attention is self-control. Self-control is often interpreted as the personal capacity to override and inhibit socially unacceptable and undesirable impulses and to alter and regulate behaviour, thoughts, and emotions (Tangney, Baumeister, & Boone, 2004). It is proposed that self-control is a

personal ability and symbolically may operate like a muscle, such that increased strength affords the individual more opportunities to achieve the desired outcomes. However, some studies have found that higher rates of self-control did not protect individuals from risk or antisocial behaviour. This can be explained by the assumption that over-control (very high self-control) could decrease spontaneity, creativity, and enjoyment of life and thus could be linked with emotional issues such as depression and low self-esteem.

1.2. Health risk behaviour in the context of family factors

The prevailing conditions in the family environment are very important factors for adolescent development. Indeed, key values, attitudes and patterns of behaviour are formed here. Despite the growing influence of peers, family remains an important factor which can shape the behaviour and lifestyle of youths. There are a number of reasons as to how family environment can be crucial with regards to the development of health risk behaviour in adolescence. Firstly, in many situations the first contact with alcohol is at family gatherings where alcohol is frequently served (Settortobulte, Bruun-Jensen, & Hurrelmann, 2001). Secondly, the continuity in alcohol consumption and increased excessive drinking is dependent on the types of family-based factors (Kuntsche & Kuending, 2006). Various family related factors which might be protective or risky for health endangering behaviour have been identified in studies, such as the structure of the family or the characteristics of family processes. Many studies (e.g. Fisher, Williams Miles, Austin, Camargo, & Colditz, 2007) have found that living with one parent only or where one of the parents is not active in parenting processes increases the risk of adolescent cigarette and alcohol use.

Adequate parent-child communication has been found to be a protective factor (Currie et al., 2008). A high quality of interactions within a family indicates higher social support from parents and family connectedness (Laursen, 1995). In contrast, a low quality of parent-child communication was found to be associated with a higher risk of youth substance use (Currie et al., 2008). During adolescence, parent - child communication is quite specific as children speak less with their own parents about themselves and communication tends to be more difficult (Barnes & Olson, 1985). The perception of communication by adolescents is far different to the perception of their parents (Rosnati, Iafrate, & Scabini, 2007). Typically, communication in this period is easier with mothers than with fathers for and girls (Rosnati et al., 2007) as girls more than boys felt unable to talk to their father about problems, whereas boys and girls felt equally comfortable talking to their mother about problems (Ackard, Neumark-Sztainer, Story, & Perry, 2006). Regarding these findings, it has been proposed that communication with fathers and with mothers may play distinct roles in health risk behaviour among adolescents (Luk, Farhat, Iannotti, & Simons-Morton, 2010).

One of the most typical parental behaviours in the family environment is parental monitoring. This is the activity through which the parents facilitate the adjustment of adolescents, by providing them with necessary supervision and guidance (Smetana & Daddis, 2002). It is also seen as the level of parental knowledge of their child's whereabouts, activities and friends (Jacobson & Crockett, 2000). If adolescents are exposed to risk factors (risk peer groups, going out with unknown friends, etc.), parental control may serve as a protective factor (Nash, McQueen, & Bray, 2005). The effectiveness of parental monitoring is more dependent on mutual communication between parents and adolescents than dependent on direct observation (Clark, Kirisci, Mezzich, & Chung, 2008).

Therefore, with regard to the previous literature, the aim of this study is to explore the role of parental processes and its interactions with personality factors in the context of health risk behaviour among adolescents.

2. METHODS

2.1. Sample

Participants were recruited from the national project VEGA which focused on parental processes in the context of health risk behaviour of adolescents. This analysis is based on data from 572 (51.1% males; mean age = 12.49; SD = 0.65) students from 12 primary schools in Slovakia. The schools and classes were selected randomly in each region. School headteachers were asked for participation. After their approval and the approval of parents, data were collected by a team of trained researchers and research assistants during the fall of 2017. Respondents filled in a questionnaire on a voluntary and anonymous basis without the presence of the teacher during two regular 45-minute lessons. The overall response rate was 93.0%. Non-response was primarily due to illness or other type of absence. The procedure and the content of data collection was approved by the ethics committee of P. J. Safarik University.

2.2. Measures

Self-esteem was assessed by the Rosenberg Self-esteem scale RSES (Rosenberg, 1965). The 10 items of the RSES assess a person's overall evaluation of his/her worthiness as a human being. Responses range on a 4-point scale from 1 (strongly disagree) to 4 (strongly agree). The global self-esteem factor can then be calculated, with the sum score ranging from 10 to 40. A higher score indicates higher self-esteem. Cronbach's alpha for global self-esteem was 0.76.

In order to assess self-control, a Slovak translation of the short version of the original Self-control scale developed by Tangney et al. (2004) was used. The short version consisted of 11 items. "*I am lazy, I have a hard time breaking bad habits, I wish I had more self-discipline*" are examples of items in the Self-control scale. Response categories ranged from 1-Not at all to 5-Very much. A higher score indicated a higher level of self-control. The Cronbach alpha was 0.731.

Regarding parental processes, we were guided by the approach of Stattin and Kerr (2000). Respondents were asked regarding four types of parenting processes.

(1) Child disclosure (5 items): a process of spontaneous disclosure of children (without parental asking) to parents about their own life. E.g. *Do you usually say how school was when you get home (how you did in different exams, your relationships with teachers?)*

(2) Parental solicitation (5 items): a process of active parental gathering of information regarding their children. E.g. *How often do your parents talk with your friends when they come to your home (ask what they do or what they think and feel about different things)?*

(3) Parental knowledge (7 items): information level of parents about children's free time activities. E.g. *Do your parents: know what you do during your free time? Know who you have as friends during your free time?*

(4) Parental monitoring (5 items): a parental process of setting up the rules regarding children's behaviour. E.g. *Do your parents always require that you tell them where you are at night, who you are with, and what you do together?* Respondents were asked how they perceived the parenting processes from parents using a 5-point scale (1-almost never; 2-rarely; 3-sometimes; 4-often; 5-very often). A higher score indicated a higher level of parental processes. Cronbach's alpha for parental processes varied from 0.51 to 0.61.

Regarding alcohol use, students were asked: (1) if they had used alcohol during the last 30 days (yes/no); (2) if they had ever been drunk (yes/no). Regarding cigarette use, students were asked: if they had smoked cigarettes during the last 30 days (yes/no). All questions were

using two-point scale as risky type of behaviour was indicated by two points and non-risky by 1 point. By combining all three variables, a single – behavioural risk index variable was created where a higher score indicated a higher level of risk behaviour.

2.3. Statistical analyses

Firstly, we selected only those respondents who answered the question regarding all types of risk behaviours. After that, we dichotomized three outcome variables (see Method section). Finally, we performed multiple regression analyses by using a PROCESS procedure in SPSS (Hayes, 2012) to examine whether the relationship between the independent variables (self-esteem and self-control) and dependent variable (risk behaviour index) is mediated through parental processes (mediator). In total, four independent models (one for each type of parental process) were tested. The models were adjusted for gender.

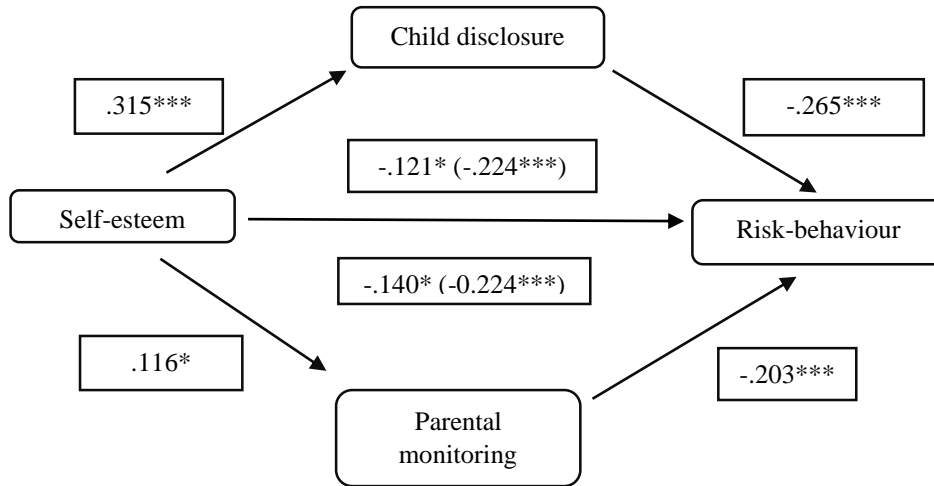
3. RESULTS

In general, the adolescents in the sample scored low in the behaviour risk index with no gender differences. Only about 4% of adolescents reported smoking in the last 30 days. Regarding alcohol use in the last 30 days, 20% of adolescents reported such behaviour. The regression analyses showed a negative relationship between self-esteem and risk behaviour ($B = -.224$; $t = -3.66$, $p = .001$) as those adolescents with higher self-esteem scored low regarding risk behaviour but only among girls. Similarly, a negative relationship between self-control and risk behaviour was found for boys ($-.180$; -2.915 ; $p = .004$) and girls ($-.151$; -2.369 ; $p = .019$). Regarding parental processes, only the parental monitoring ($-.125$; -2.563 ; $p = .011$) and the child disclosure ($-.177$; -3.629 ; $p = .000$) were negatively associated with the index of risk behaviour. For that reason, only these two parental processes were further analysed as mediators.

The analyses among girls (Figure 1) showed that child disclosure and parental monitoring partially mediated the role of self-esteem on risk behaviour as the effect of self-esteem decreased after adding disclosure ($B = -.121^*/.224^{***}$) and monitoring into the model ($B = -.140^*/.224^{***}$). No mediation models were tested for boys as there was no significant association between self-esteem and risk behaviour in the boys' sample.

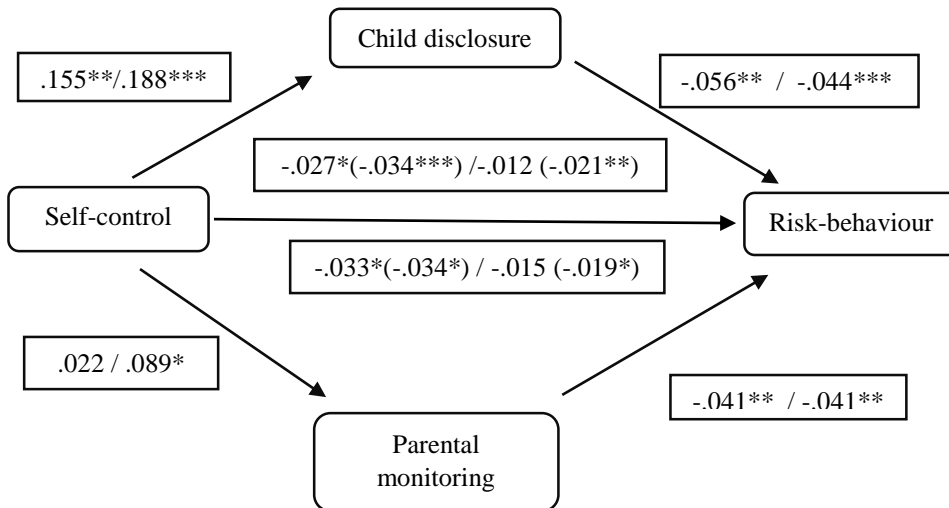
The results regarding self-control and risk behaviour among the boys showed that this association was not mediated by parental monitoring ($B = -.033^*/-.034^{**}$) although it was partially mediated by child disclosure ($B = -.027^*/.034^{***}$). However, a full mediation effect of child disclosure was confirmed among girls as the role of self-control on risk behaviour was no longer significant after adding disclosure ($B = -.012/.021^{**}$). Similarly, the strong mediation effect of child disclosure was confirmed among girls as the role of self-control on risk behaviour was no longer significant after adding parental monitoring (Figure 2).

Figure 1.
Mediation model predicting relationship among self-esteem, child disclosure, parental monitoring and risk behaviour for girls only.



* $p < .05$ ** $p < .01$ *** $p < .001$

Figure 2.
Mediation model predicting relationship among self-control, child disclosure, parental monitoring and risk behaviour for boys and girls.



* $p < .05$ ** $p < .01$ *** $p < .001$

4. FUTURE RESEARCH DIRECTIONS

This study shows that smoking and alcohol use in particular are a major concern in the field of health promotion. Regarding a HBSC report study (Inchley et al., 2018), there has been a reduction of smoking and alcohol use across EU countries although the levels of consumption remain dangerously high and this continues to be a major public health concern. The prevalence of high-level consumption among young adolescents reveals the importance of efficient primary prevention from an early age. Prevention and later intervention programs should be focused on the specific individual as well as on the social and environmental influences. We propose that the best place to deliver these programs is the school environment, as after family it is the most important place for adolescents.

In this environment, it would be essential to decrease feelings of negative self-esteem by providing such activities which support the establishment of self-worth and at the same time keep adolescents from risk behaviour. Training focused on social skills such as assertiveness could, for instance, help adolescents to cope with real situations when a group of friends offers a cigarette or alcohol. This may yield further appropriate social skills to deal with the upcoming pressure of peers and the social environment regarding alcohol use, smoking or other forms of risk behaviour. Furthermore, the role of self-control in the context of health risk behaviour deserves greater scientific attention as peers may influence levels of self-control. Examining the link among negative and positive peer pressure for adolescents' behaviour and levels of self-control could reveal an important path in risk taking trajectories. Previous research has shown that peers may foster values that are associated with high levels of self-control, including hard work and academic achievement (Santrock, 2001). Moreover, additional research is needed to draw firm conclusions regarding the influence of parental processes in adolescents' self-control. Finally, further research is needed to examine the genetic factors in self-control as genetic aspects on personality are well-documented (e.g., Bouchard & Loehlin, 2001) and will probably be active in self-control as well.

5. CONCLUSION/DISCUSSION

The aim of this study is to explore the role of parental processes and its interactions with personality factors in the context of health risk behaviour among adolescents. Both explored personality factors (self-esteem and self-control) were found to be negatively associated with the index of risk behaviour. However, these associations were partially or fully mediated by two parental processes (child disclosure and parental monitoring). However, these mediations differed according to gender.

Regarding self-esteem, this study supports the previous finding that self-esteem may play an essential role in the context of risk-taking behaviour especially for girls. The feeling of self-worth for girls seems to be very important for adolescent girls as the associations between self-esteem and risk behaviour in this study were very strong and remained significant even after adding the parental process variables into the model. Similar effects were found regarding self-control as the model was significant for girls and boys too. Moreover, both child-disclosure and parental monitoring fully mediated the self-control – risk behaviour relationship among girls. However, only partial mediation was found regarding child-disclosure among boys. It must be said that parental control and child disclosure are significantly different types of parental processes. In particular, child disclosure is more child active behaviour than parental. Therefore, we may assume that both significant parental processes can be associated with other variables such as parental

closeness, warmth...etc. –processes which create a family environment where parents can gather information from children and children are willing to share such information by spontaneous disclosure.

To conclude, these findings support that adaptive parenting behaviour where children are able to disclose their own feelings and parental monitoring may help in building children's capacities to inhibit anti-social and health risk taking behaviour.

6. STUDY LIMITATIONS

However, our study also has some limitations. The main one is its cross-sectional design, which can limit our understanding of the relevant pathways. A longitudinal study design, especially looking at different types of health risk behaviour, may provide deeper insight into this issue. In addition, we did not obtain information from other family members such as parents, friends or school environment. These sources could increase the understanding of some inconsistencies in the field of parental processes and risk behaviour research. Finally, our results are strongly dependent on the assumption of what participants say is what they did. Therefore, self-reported alcohol use, smoking or other types of behaviour data may be vulnerable to various types of information biases, like memory effects and social desirability bias. However, some studies showed no type of data collection mode-dependent differences (Hines, Douglas, & Mahmood, 2010). Therefore, existing research suggests that the mode of data collection may have some degree of impact on participants' responses, but the results are not specific enough to isolate which mode is best suited for which situation (McCallum & Peterson, 2012).

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Parent-Child Processes and Health Risk Behaviour among Young Slovak Adolescents: The Mediating
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Chapter #21

ATTITUDE OF STUDENTS OF UNIVERSITIES AND COLLEGES TO THE DEMOGRAPHIC POLICY OF THE RUSSIAN

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ABSTRACT

Population and its reproduction is necessary attribute of the existence of the state. The process of depopulation generates economic problems, leading to a decrease in the state's geopolitical status. The purpose of this study was to study the attitude of student youth towards demographic policy in modern Russia. The study involved students of universities and colleges of St. Petersburg (N=109+97=206, 68% females; aged about 20 years). Attitudes of students to the demographic policy of the Russian Federation and were assessed by author's multi factorial questionnaires (Deyneka, 2013). Attitude to children as a condition for the reproduction of the population studied using method of ranking associations. The validity and reliability of the methods used were tested. The results showed a generally favorable, but somewhat contradictory attitude to demographic policy and the state. Students believe that measures to stimulate the state fertility are not enough. At the same time, the idea of peoples saving as a national idea of modern Russia received serious support among students. The attitude to the family and children turned out to be more traditional than relying on postmodern values. The material factor plays an important role in the students' plans for their future self-realization as parents.

Keywords: attitudes to demographic policy, attitudes to children, attitudes to parenthood, students of universities and colleges, Russia.

1. INTRODUCTION

Demographic policy is the part of the country's strategic policy. It could be defined as a system of measures aimed at increasing or decreasing the population growth rate. The vector of restrictive politics dominates the global demographic policy. So, the works of the Club of Rome focused on the correction of the world's population in connection with the environmental consequences of production and consumption, as well as the growing scarcity of resources. (Club of Rome is an international non-governmental organization, whose activities are aimed at stimulating the study of global problems. The organization was founded by Italian industrialist Aurelio Peccei (who became its first President) and Director General for science of the OECD Alexander King with the participation of David Rockefeller in April 1968).

It is difficult not to agree that against the background of scientific and technological progress the general tendency of an imbalance between the growing needs of people and limited resources are progressing. For example, according to specialists' forecasts, energy consumption from 2007 to 2035 will increase by 49% (International Energy Outlook, 2010). However, the "concept of superfluous people" is not acceptable in psychology and is dangerous in politics.

Despite the significant decline in the birth rate on the planet in recent decades (Frejka & Gietel-Basten, 2016; The end of high fertility is near, 2017), the ideology of the Club of Rome is dominated by neo-Malthusian views. The authors of the report devoted to the anniversary of the club continue to insist on the need to minimize the birth rate on the planet and note that the Club of Rome thanks the countries that have made a rapid reduction in the reproduction of the population (von Weizsaecker & Wijkman, 2018). Nevertheless, it is impossible to talk about a single population policy of an abstract universal human society. Russia is not threatened with overpopulation, it is threatened with depopulation. Moreover, in Russia and the European Union there are common problems associated with the trend of declining fertility and the preservation of the ethnos, and in modern Europe the tendency of the aging of the nation is aggravated by migration problems.

Demographic globalization poses the greatest danger for Russia, as "the country and for the Russian ethnos. It could disappear and dissolve in a huge mass of growth in other countries" (Kononova & Yuriev, 2006, p.72). Stressing the contradiction of the demographic processes going on in the world and in Russia, the authors called the situation in which the country was deprived of its main resource - human - by demographic default.

The Australian scientist P. MacDonald emphasizes that from the macroeconomic point of view, an extremely low birth rate in the future will lead to an acute shortage of labor, especially young skilled workers, against the backdrop of an aging population. He believes that the low birth rate is associated with two waves of social change, which over the past 40 years have had a strong influence on the behavior concerning marriage. The rapid growth of social liberalism was in 60-70 years ("reflexive modernization") and fast and sharp transition to deregulation (the "new capitalism") was in the 80-90 years of the last century (McDonald, 2006).

Against the backdrop of the demographic crisis, A.I. Solzhenitsyn, disillusioned with the humanitarian results of the reforms of the 1990s, proposed to build the idea of saving the Russian people as a national idea. "The saving of the people" - both in its very strength and in its physical and moral health - is the highest of all our state tasks. ... All measures to raise the national standard of living - in everyday, food, medical, educational and moral relations - are the essence of the action to save the people. To this goal, the entire atmosphere of life in the country must be set up "(see: Tretyakov, 2006).

In the process of its historical development, the society has developed a unique mechanism for the reproduction of the population - the institution of the family. The well-known Russian demographer, sociologist and economist L.L. Rybakovsky defines the purpose of demographic policy as the creation of prerequisites for increasing the birth rate and the gradual transition from reproductive behavior of families focused on 1-2 children to the type of the average number of children (2.6) and to the comprehensive strengthening of the family as a form of the most rational life of the individual (Rybakovsky, 2003).

In his Address to the Federal Assembly, the President of the Russian Federation stated that due to active support of the family, motherhood, childhood, negative demographic trends were able to reverse. However, in the coming decade, especially in connection with the economic need for the able-bodied population, it is necessary to ensure a steady natural growth in the population of Russia (Presidential Address to the Federal Assembly, 2018).

At the same time, some researchers declare that pro-natalist policy did not change significantly both the intentions of Russians and their implementation (e.g. Zakharov, 2016). This politics aimed at increasing the birth rate the main measures of which are financial. The formation of public opinion in favor of increasing the birth rate is an equally important measure. In this regard, it is necessary to study the attitudes and values of citizens of reproductive age as well as the motivation of parenthood.

The Objective of this empirical study was to identify features of the student attitudes towards demographic policy in modern Russia, taking into account their motivation of parenthood.

2. METHOD

Interdisciplinary, comparative and correlation approach formed the methodological basis for the study.

The empirical research objectives:

- 1) to reveal the components and characteristics of students' attitudes toward the demographic policy in Russia;
- 2) to carry out a comparative analysis of the attitude towards the demographic policy among students of universities and colleges;
- 3) to investigate the relationship between attitudes toward demographic policy and attitudes toward the Russian State;
- 4) to explore the relationship between attitudes toward children as an existential value, and attitudes towards demographic policy.

Interdisciplinary, comparative and correlation approach formed the methodological basis for the study.

2.1. Instruments

For the implementation of the objectives the special questionnaire "Attitudes to demographic policy" (ADP) was developed according to our algorithm (Deyneka, 2013). It contains 45 statements, with which the degree of agreement / disagreement on the 7-point Likert scale (where "7" means "totally agree", and "1" - "absolutely disagree") should be expressed. The ADP questionnaire was tested for constructive validity by factor analysis. The data obtained made it possible to verify the design validity of the questionnaire by analyzing the main components. Reliability of the questionnaire was tested by homogeneity using Spearman-Brown formula and was $K = 0.643$.

The second method was the "Citizen questionnaire" (eg: Deyneka & Dauksha, 2014). It reflects the aspects of economic and political patriotism, economic optimism, solidarity, time perspective, and assessing the most pressing problems of society.

The third method was aimed at studying the attitude to children and the hidden motivation of parenthood. It was developed by me as a semi-projective method of ranking 15 associations with the concept of "children", which should be arranged in descending order of importance for the subject (according to the instruction, the first place belongs to the most important association). The list of associations includes expectations related to children and fears of expended efforts (financial and psychological) as well as emotional experiences and the results of rational pragmatic decisions. During developing the method, we considered the results of generalizations by other researchers, in particular the classification of motives of the parenting (Petrovskaya & Spivakovskaya, 1983; Spivakovskaya, 1999), types of families in which children have different value for parents (Achildieva, 1990), motives for parenthood (Rabin & Greene, 1968).

2.2. Participants

A total amount of 206 students of St.-Petersburg took part in the research attitudes toward the demographic policy of the Russian Federation. 109 respondents were students of universities, 97 respondents were students of colleges. Among the surveyed were 32% male and 68% female. The average age of the respondents was 20 years old.

3. RESULTS AND DISCUSSION

As the study using the "Questionnaire of attitudes to demographic policy" showed, students do not have a clear idea of how to evaluate modern demographic policy in the country, approvingly or not ($M = 4.06$; $\sigma = 1.72$). They also have little idea how to improve it ($M = 4.07$; $\sigma = 1.85$). The average indices of optimism regarding the improvement of the demographic situation in Russia in the next decade have been obtained ($M = 4.07$; $\sigma = 1.85$). Students believe that measures to stimulate the state fertility are still insufficient ($M = 4.94$; $\sigma = 1.61$). At the same time, the degree of agreement with the fact that the policy of peoples saving in our country should be introduced into the national idea rank turned out to be higher than the middle of the scale ($M = 4.87$; $\sigma = 1.67$) and is backed by a high degree of unanimity in the assessment.

The attitude to the family and children in the context of the demographic policy turned out to be more traditional not based on postmodern values. According to R. Inglehart, the pole of traditional values includes religiosity, a respectful attitude towards the family, the motherland, as well as a loyal attitude towards official authority. Emancipatory, postmodern values provide for the primacy of individual freedom over the discipline of the collective, diversity over the conformity of the group norm and the independence of citizens from state power (Inglehart & Welzel, 2005). Students believe that the family is "sacred", the greatest value in the modern world ($M = 5.90$; $\sigma = 1.67$), and it plays a decisive role in the development of the personality ($M = 6.23$; $\sigma = 1.26$). They share the view that the education of children should be based on traditions and culture ($M = 5.18$, $\sigma = 1.74$), and the introduction of some Western values (free love, free-child style or life for oneself) does not contribute to an increase in population ($M = 5.16$, $\sigma = 1.89$). Students value communication with grandparents and believe that it is necessary for the child's harmonious development ($M = 5.89$; $\sigma = 1.57$). Respondents respect and sympathize with large families, although few of them see themselves as the creator of such families in the future.

The results thus confirm the opinion of P. McDonald, who argues that, no matter how attractive new alternatives seem, the values associated with family life have not been completely swept away by the growing waves of reflexive materialism and new capitalism (McDonald, 2006). Family values are very tenacious and resilient.

At the same time, the material factor plays a very big role in the respondents' self-realization plans as parents, in particular, the need to "get on their feet", before starting their children. The majority of students consider that it is necessary to become financially independent ($M = 5.58$, $\sigma = 1.72$), take place as a professional ($M = 5.24$, $\sigma = 1.91$) and have their own housing ($M = 5.12$; $\sigma = 2.05$) before having children. The majority of respondents connect the number of children in the family with the material factor ($M = 4.91$, $\sigma = 1.89$). The general tendency for the Russian and European countries to delay the birth of children in connection with the plans for self-realization and the material factor from the standpoint of the general demographic situation is not harmless. According to McDonald, the delay in the realization of the reproductive function of each individual means a very low birth rate in society as a whole (McDonald, 2006). Accusing the governments that they played a key role

in creating the conditions that led to the emergence of low birth rates in our country and European countries, the author is convinced that it is the authorities that must take the initiative to ensure that the youth have a greater sense of stability and confidence in the future.

Table 1.
Intergroup comparisons of the attitudes towards demographic policy among students of universities and colleges.

Statement	students of colleges		students of universities		P
	M	σ	M	σ	
I am confident that the demographic situation in Russia will improve in the next 10 years	3.88	1.59	1.53	1.54	0.004**
The state must provide everyone with free education	6.85	1.32	5.67	1.74	0.002**
Demographic policy in our country should be introduced into the rank of the national idea	4.63	1.62	5.29	1.69	0.006**
The state should not push women to the birth of several children	5.40	1.87	4.91	2.00	0.037*
I am sure that the time for taking care of the child must be included in the work experience (seniority)	5.11	2.12	4.40	2.22	0.030*
Every young man (girl) should have an idea of contraception	6.71	0.92	6.41	1.28	0.028*

A comparative analysis of data in the groups of university and college students showed both the general characteristics of the attitude to demographic policy and statistically significant differences (Table 1). The ideological aspect of the problem was more affected by university students who had higher agreement ($p < 0.01$) with the fact that people's saving in our country should be introduced into the national idea.

The students of colleges showed higher optimism for the improvement of the demographic situation in Russia in the next decade ($p < 0.01$). Among them there are also more those who are interested in free education and inclusion into labor length of time of the care of the child ($p < 0.01$). Students in colleges, somewhat more than university students, are focused on "planning" the family (the groups are similar in age). They are more likely to share the view that the government should not push for the birth of several children, and that young people should be aware of contraception.

According to the one of the positions on the principles of demographic policy, fertility is a citizen's personal matter, and governments should as much as possible, avoid interference (van de Kaa, 2002). At the same time, the situation of very low fertility contributes to the support of another scientific position, according to which it is important to focus on the perceived interests of the country as a whole, regardless of the desires of couples, and to stimulate attitudes that will lead to an "acceptable" level of fertility (Toulemon, 2011). This position is justified for countries (or continents) in which the avoidance of demographic responsibility in people of childbearing age threatens society.

Comparison of the data of the ADP questionnaire in groups of university students and colleges showed that the level of education did not affect the fertility of students. University students have shown a more mature position than students of colleges in relation to demographic policy. Approving the human capital savings as a national idea and allowing forms of indirect coercion - for example, in the USSR there was a tax on childlessness, which was abolished after the collapse of the country, and now it exists in the form of smaller deductions of personal income tax from citizens with children.

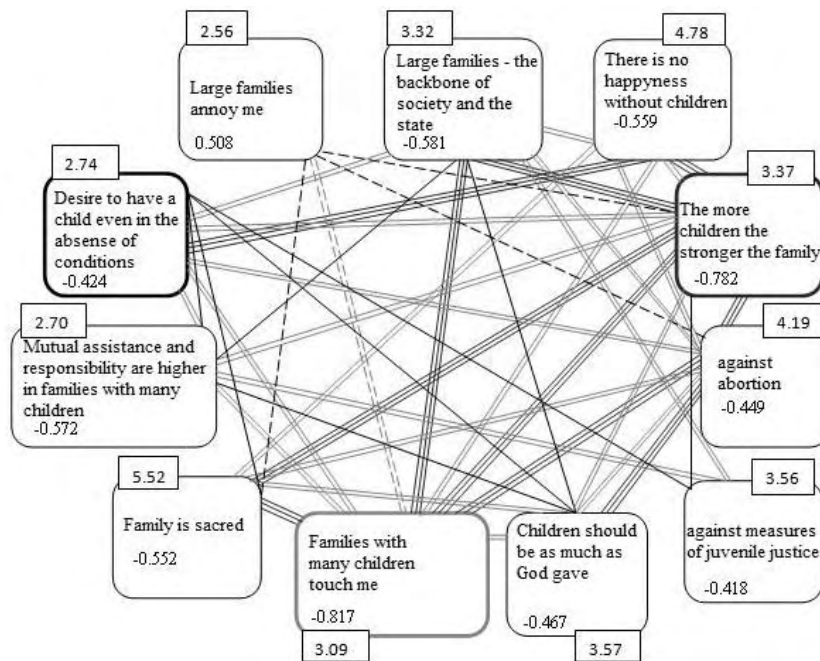
Table 2.
Intergroup comparisons of the attitudes towards demographic policy among male and female

Statements	Female (N=138)		Male (N=68)		P
	M	σ	M	σ	
Demographic policy in our country should be introduced into the rank of the national idea	6.85	1.32	5.67	1.74	0.037**
I have ideas on how to improve the demographic situation in Russia	3.76	1.76	4.62	1.83	0.002**
Regardless of my financial situation, I would prefer to stay in my cultural environment.	4.04	1.59	3.48	2.04	0.039*
Every young man (girl) should have an idea of contraception	6.80	0.66	6.22	1.44	0.000***

The results of gender comparative analysis (Table 2) showed a more active position of male in the field of demographic policy because they have ideas about how to improve the demographic situation in Russia. It turned out that young women showed more traditionalism than young men, as well as a demand for a system of measures to preserve human capital. Female tend to be more cautious about family planning.

The results of the exploratory factor analysis of the “Questionnaire of attitudes to demographic policy” data made it possible to distinguish six factors. The first two factors are illustrated in the figures below.

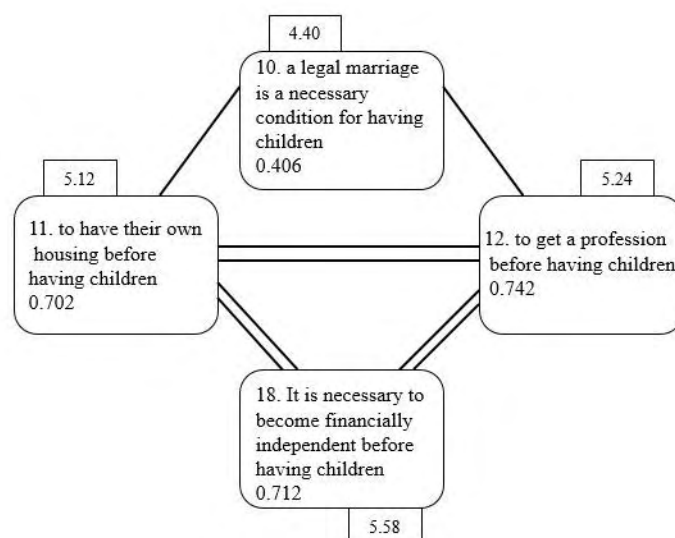
Figure 1.
The factor of family values and cultural traditions.



Note: Factor loads listed next to a brief formulation of the factor characteristic; in small rectangles, the mean values of the degree of agreement with the statements of the questionnaire are given; correlation links between the characteristics of the factor are denoted by single lines at $p \leq 0.05$, double lines at $p \leq 0.01$, triple lines at $p \leq 0.001$. The dashed lines indicate negative correlations between the signs of the factor

The most significant factor was "the factor of family values and cultural traditions" (Figure 1). It included degrees of agreement with all statements concerning the family as a value for a particular person and society, attitudes toward large families and their role in society, the value of a child's life.

Figure 2.
The factor of conditions for the birth of children in young families.



The next second factor (Figure 2) called "the factor of conditions for the birth of children in young families," was formed by reflecting conditions that contribute to the decision of the birth of a child (material independence, self-realization in the profession, housing and registration of legal marriage). If you pay attention to the average indicators for those statements, the consent with which formed the second factor, it is clear that in the minds of respondents the absence of a legal marriage is the lesser obstacle to meeting the need to have children than material problems. This result is consistent with the result of a sociological survey (Smirnov, 2010), which did not show much difference in the availability of the need for children in women with different marital status.

The third factor, called "the factor of pragmatic orientations in family planning", highlights the material side of motherhood and fatherhood, connects the increase in the family exclusively with the maternal capital, and the number of children in the family - with the family income.

The fourth factor called "the factor of responsibility for the upbringing of children." It reflects the responsibility of the State to ensure favorable conditions for the birth and upbringing of children, as well as the responsibility of society to support the image of large families, a positive attitude towards them as a unit of society, mutual assistance and responsibility of citizens.

Two other factors called “the factor of the preservation of human capital as a national idea” and “the factor of state’s responsibility area”. They demonstrate the requirements to the state in connection with the provision of a normal standard of living and the quality of human capital.

The results of the "Citizen's questionnaire" showed respondents do not reflect the policy in Russia as enabling long-term planning. They demonstrated high optimism connected with the country's development in the global world, high civic pride but they showed low economic optimism. According to students, the main problems in Russia are corruption, strong stratification and the possible increase in retirement age (consequences of the demographic crisis).

The results of the correlation analysis of the “Questionnaire of attitudes to demographic policy” and the “Citizens' Questionnaire” data have shown the higher the citizen's pride, the higher the family's value and demographic responsibility, as well as the understanding of the demographic problem and its importance for the country, both economically and geopolitically, strategically.

The results of the semi-projective test "Ranking of associations with the concept of "children" are reflected in Table 3.

*Table 3.
Descriptive statistics of the ranking test (associations with the concept of "children.").*

Associations with the concept of "children"	Rank	M	σ
procreation	1	3.81	3.61
meaning of life	2	4.10	4.33
the sense of responsibility	3	5.07	2.83
the joy of being	4	5.10	3.74
the help in old age	5	7.02	3.71
the way to strengthen marriage	7	8.29	3.68
self-realization	6	8.11	3.64
interesting leisure	8	8.54	3.34
material costs	12/13	10.03	3.29
long-term capital	12/13	10.03	3.91
creativity	9	8.66	3.12
respect from other people	11	9.14	3.43
salvation from loneliness	10	8.91	3.42
an obstacle in career	14	11.10	3.64
infringement of freedom	15	11.73	4.07

Associations of students with the concept of "Children" embody in the first place the unconditional value of life (procreation, the joy of being, the meaning of life), and at the same time a sense of responsibility. To a lesser extent, children are represented in the mind as a way of realizing pragmatic social goals (the way to strengthen marriage, interesting leisure, creativity, respect from other people, salvation from loneliness) and are associated with the costs (material costs and obstacles in self-fulfillment). Thus, a favorable picture obtained.

Table 4.
Factor matrix of the data of the ranking test of associations with the concept of "children".

№	Factor weights	The name and signs of the factor	Factor loads		Signs of the factor
1	14.4	Positives and negatives of Maternity and Paternity			
		joy of being	-0.520		
		procreation	-0.486		
		meaning of life	-0.484		
				0.729	infringement of freedom
				0.675	an obstacle in career
				0.655	material costs
2	10.4	Romantic / pragmatic attitudes towards children			
		creativity	0.662		
		interesting leisure	0.509		
		the joy of being	0.458		
				-0.691	way to strengthen marriage
				-0.424	procreation
3	9.2	Time factor			
		self-realization	0.759		
				-0.662	the help in old age
				-0.601	salvation from loneliness
4	6.3	Social assessments of parenthood			
		meaning of life	0.456		
		the sense of responsibility	0.405		
				-0.761	respect from other people

The factor matrix of the ranking test contains 4 factors (Table 4): "Positives and negatives of Maternity and Paternity", "Romantic / pragmatic attitudes towards children", "Time factor" and "Social assessments of parenthood."

Factors clearly show the contrast between different motives and attitudes in relation to the value of children in the picture of the subject's world. Thus, the first factor divides young people on the basis of their choice into those who primarily see the existential positives of parenthood, and those who are fixed on restrictions in freedom, self-realization and material encumbrances. The second factor shows the contrast between creative, emotional attitude to parenting and pragmatic one, connected with the need to strengthen marriage through children. The third factor contrasts self-realization with the help of children, on the one hand, and the expectation of help in old age, salvation from loneliness, on the other hand. In the fourth factor, the internal meaning-life motivators of parenthood (meaning of life, sense of responsibility) and external, evaluative, associated with conformal social attitudes and norms (respect from the surrounding people) are opposed.

The semi-projective test "Ranking of associations with the concept of "children" developed by us is consistent with other classifications of parenting motives. So, Spivakovskaya (1999) divided all the motives of parenthood and education into three groups: implementing value attitude to the child, social and instrumental. The motive realizing the need in the sense of life is the most important motive of parenthood. The social motives of parenthood include the motive of duty and the motive of social self-assertion (prestige). The

third group combines the instrumental motives of parenthood, in this case, the child is a means of realization of other needs of parents.

The correlation analysis of the data of the basic ADP questionnaire and the ranking test of associations with the concept of "children" confirmed that the orientation toward traditional values promotes the formation of reproductive responsibility. The correlation analysis also showed that students with high pragmatic attitude towards children presented more claims to the government ($p < 0.01$) and its demographic policy.

4. FUTURE RESEARCH DIRECTIONS

Despite the fact that most students have demonstrated traditional values of attitude to family and children, the process of education and training of young people requires taking into account the demographic consequences of manifestations of cultural trauma in Russia (Zhuravlev & Yurevich, 2009) as well as psychomanipulations through video production (Gostev, 2017) which are able to form a negative image of mother, parenthood and large families.

We plan to develop a special development program for students taking into account the specifics of the motivation of parenthood in the future. We consider the subsequent implementation of such a development program in the context of demographic policy in Russia as a perspective of our research.

5. CONCLUSION

The study showed the existence of socio-psychological prerequisites for adequate reproductive behavior among students. In general, the students showed adherence to the traditions and values of the culture of their country. In particular, they believe that the family should engage in the upbringing of children relying on traditional values and culture. In addition, students are confident that communication with grandparents is useful for the harmonious development of children. The majority of respondents showed a rejection of a lifestyle, alien to family values (free love, free-child style).

In general, students of universities and colleges see in children the happiness and meaning of life which generates the desire to have a child under any circumstances. Showing the understanding that large families are the backbone of society and the state, students, nevertheless, do not want in the majority, to create such families.

The results of the correlation and factor analysis showed that problems in the field of health care, education and social protection are identified as obstacles to the policy of peoples saving. Most of the respondents are oriented to a delay in meeting their reproductive needs to meet their career ambitions and achieve material prosperity. Thus, the government's choice of a pro-natalist demographic policy, in which financial measures are the main stimulus for increasing the birth rate, is justified. At the same time, it is important to increase the value of the family, children in the minds of citizens, which will increase the reproduction of the population.

The study reflected the social request of young people in connection with their right to reproduction, which largely met the response in the recent extension of the maternity capital program and the provision of other long-term measures for the demographic development of the Russian Federation.

Comparison of the results of the study in groups of students at higher and secondary special educational institutions showed that, in relation to demographic policy, university students showed a more mature position than the students of colleges, more in favor of

national saving as a national idea and allowing various forms of mediated birth control. Personal fertility attitudes and plans were similar in both groups of young people.

The study has a number of limitations. The main one is related to the existing disadvantages along with the advantages of the method of multifactor questionnaires (Deyneka, 2013). Such questionnaires do not give the researcher a single indicator of the studied reality in accordance with the key, as is the case in psychological tests. Here the researchers are dealing with structures in the mass consciousness, which can be changed under the influence of the socio-economic situation. At the same time, multivariate questionnaires do a good job of studying the dynamics of mass consciousness. Another limitation is that the study was performed only on Russian students.

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Chapter #22

VALUE COMPONENTS OF LATENT POLITICAL EXTREMISM: RESULTS OF FACTOR ANALYSIS

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ABSTRACT

The purpose of this study was empirical testing of correlation between the "weak signals" of propensity to extremism and characteristics of the system of value orientations of the students. The exploratory research involved 126 students of mathematical specialties of universities of St. Petersburg and Minsk. It established that an uncritical attitude toward extremism is more characteristic to the young people with a low significance of family values and high entertainment value (hedonistic orientation). In addition, we solved the problem of construct validity of the base questionnaire using confirmatory factor analysis and structural equation modeling. The factorial matrix of the questionnaire "Psychological preconditions of extremism" includes "the factor of normative and value prerequisites for extremism", "radicalism in relation to the country's leadership and its information policy" and "factor of uncertainty / confidence in themselves and their future." The model has shown that male students are more prone to extremism statements and manifestation of extremist attitude than female students are.

Keywords: value orientation, attitudes toward extremism, college students, confirmatory factor analysis, structural equation modeling.

1. INTRODUCTION

Worldwide, there has been increasing political extremism in the youth environment. *Political extremism* - it is an activity that involves the interaction of opposition groups and individuals, aimed at the seizure and retention of political power or destabilization, with the use of illegal means and methods, including illegitimate extremely radical ideology and violent methods and tools (Goetz, 2011). According to The Convention of the Shanghai cooperation organization, extremism is an act aimed at seizing or maintaining power through the use of violence or forcible change of the constitutional regime of the state, as well as a violent invasion of public security, including the organization of illegal armed groups for the above purposes (Convention., 2016, art. 1). The SCO Convention considers manifestations of extremism as a serious breeding ground for terrorism.

Youth extremism could lead to destabilization of countries and regions. Young people should be considered not only as a part of human capital, which embodies the potential of development of society, but also as a conditional social group of probable risk to national security. Students are the most active and often radical part of modern society. Student youth is considered by the scientists as a group of "rapid accumulation and realization of negative potential of protest" (Voronov, 2014). When dissatisfied with reforms, students could be included in destructive protests and even in the extremist organizations (Olesich, 2009).

Political extremism can appear not only on the activity-behavioral level, but also at a deeper culture- and- values "pre-activity" level, expressed in the form of attitudes, moods, ideas, points of view, beliefs and orientations. Scientists call such manifestations "latent" extremism (Vekhov, 2011; Schneider, 2014). As pointed out by I.V. Vekhov, latent or non-actualized extremism forms the basis of social tension, has a negative impact on the socialization of young people (Vekhov, 2011).

According to G. Le Bon [4], the society is experiencing real revolutions and upheavals if the value orientations and beliefs of the people are involved in the revolutionary process. Values are transforming the structure of consciousness of the masses. Deformation of the values and the meanings of life are the first of the determining factors of destructive and illegal behavior of young people. On the contrary, the value factor can act as a kind of filter that limits negative actions. Not surprisingly, S. Moscovici urged scientists to pay attention to the value aspects of social perceptions (Moscovici, 1993).

In a recent study that examined students from four countries of the Eurasian Union (654 people), the value aspects of social perception and attitudes were included in the diagnostic tools for studying the psychological prerequisites of extremism and radicalization among young people (Deyneka, 2015). The study allowed us to obtain empirical evidence that psychological markers (or "weak signals") of propensity for extremism were, on the one hand, a low value of human life and, on the other hand, a high value of material goods and false social value of national superiority. On the contrary, it turned out, that an important prerequisite for the rejection of political extremism was such political value as patriotism (positive attitude towards the native land and a favorable image of the home state).

The present study was the next step in the search for value correlates of latent extremism.

The empirical research tasks were:

- 1) to study attitudes to extremists and extremist organizations;
- 2) to compare the manifestations of latent political extremism in the groups of respondents from Russia and Belarus;
- 3) to test the construct validity of the latent extremism and radicalism questionnaire using confirmatory factor analysis;
- 4) to find the correlates of latent extremism and radicalism of students with a system of value orientations, measured by the classic M. Rokeach instrument.

2. METHOD

The study was based on V.M. Myasishchev's theory of relations (Myasishchev, 1995) and on S. Moscovici's theory of social perceptions (Moscovici, 1993). Both authors considered the personality and its interrelations with the outside world. At the same time, individual experience plays a decisive role in the development of human activities and relations. Awareness and individual selectivity characterize relations or attitudes (according to Myasishchev) and social representations (according to Moscovici). Therefore, questionnaires are an appropriate way to study them.

As a main method, the questionnaire "*Psychological preconditions of extremism*" (Deyneka, 2015) was used. The questionnaire contains 35 affirmations to express the degree of consent (disagreement) on the 7-point Likert scale (where "7" means "totally agree" and "1" – "completely disagree"). The loyalty to the political system and the leadership of the country; attitude towards extremism in the media; attitude towards extremism on ethnic or religious grounds; respect for the rules and the law; manifestations of aggression; manifestations of destructiveness can be measured by this questionnaire.

In addition, express method for determining attitudes to extremists and extremist organizations was used. For this study, two fragments devoted to the image of the modern extremist and the image of extremist organizations were taken from the questionnaire developed by the Center for political and psychological research commissioned by the Committee on science and the higher school of Administration of St. Petersburg (see: Deyneka, 2015). The respondents had to express the degree of agreement (disagreement) with the characteristics of extremists and extremist organizations, which were cited to answer the questions "How would you describe extremists?" and "How do you feel about extremist organizations?" using a 7-point scale.

The value system studied with the help of a test of the ranking of values by M. Rokeach in the adaptation of A. Gostautas, A. A. Semenov and V. A. Yadov (see: Yadov, 2013).

The exploratory study involved 126 students of mathematical specialties from the universities of Minsk (68 pers.) and St. Petersburg (58 pers.). The total sample consisted of 42% female students and 58% male students; the average age of the respondents was 20.8 years old, (groups balanced by age, but it was not possible to do the same for gender).

3. RESULTS

3.1. The attitudes to extremists and extremist organizations

The results of measuring attitudes towards extremists and extremist organizations showed mostly negative attitude towards extremism. Table 1 provides descriptive statistics on the measurement of attitudes towards extremists and extremist organizations. The assessment of extremists as courageous, sincere and fighting for justice is low. Respondents rate political extremists more as criminals who know what they are doing, as mercenaries who are working off someone's money and as adventurers who think about their own benefit and fame. At the same time, the greatest degree of agreement was caused by the characteristic of extremists as misguided people, mad men. Thus, students understand that it is possible to convince young people of political extremism, or believe that psychopathology is the cause of extremism.

Table 1.
Estimates of the extremists and extremist organizations in the total sample.

How would you describe the extremists?	M	σ
Courageous, sincere people who are fighting for justice	2,39	1,64
Criminals who understand what they are doing	4,42	1,88
Mistaken people, mad men	4,51	1,68
Adventurers thinking of their own benefit and glory	3,89	1,78
Desperate people driven by circumstances	3,70	1,82
Mercenaries, whose owners stay unknown	4,49	1,94
How do you treat extremist organizations?	M	σ
I fully support them, I'd join them myself	1,51	1,06
In some ways, I even support them, but would never become their member	2,46	1,77
I consider their slogans and methods not acceptable for me	5,18	1,94
I think they should be fought with by any means	4,70	1,78
I do not care	3,09	2,11

Students do not support the activities and methods of extremist organizations and for the most part believe that it is necessary to deal with them in any way.

3.2. Analysis of the basic questionnaire data "Psychological prerequisites of extremism"

The analysis of the data of the basic questionnaire "psychological preconditions of extremism" also showed a generally favorable picture of social representations of students about extremism as a negative socio-political phenomenon. At the same time, statistically significant differences between the data in the groups of Russian and Belarusian students were revealed.

Comparative analysis of the questionnaire data (Table 2) showed a more pronounced "request" for absolute freedom of speech among the Belarus students than among the Russian ones (at $p < 0,001$), while demonstrating a smaller degree of awareness of "color revolutions" threats (at $p < 0,01$). They have also shown greater readiness for political activity and covert aggression.

Table 2.

Statistically reliable differences in the manifestations of susceptibility to political extremism in the groups of respondents from Russia and Belarus.

№	Statement	Russia		Belarus		p
		M	σ	M	σ	
5.	I believe that freedom of speech should not be limited absolutely.	3,90	2,00	5,03	1,44	,001***
9.	Any ideas should be freely spread in the media, even if they seem terrorist or extremist to someone.	2,33	1,39	3,28	1,55	,000***
12.	I am ready to take part in any political activities and events.	3,25	1,77	2,32	1,51	,002**
15.	I enjoy watching various fights and carnage.	2,00	1,48	3,09	1,81	,000***
17.	I absolutely disagree with the actions of our government and believe that they are leading to the decline and destruction of the country	3,21	1,30	4,16	1,60	,001***
26.	I am not a supporter of compliance with laws, rules and regulations.	2,07	1,24	3,24	1,63	,000**
30.	National superiority should be proved at any cost.	2,09	1,38	2,70	1,60	,014**
35.	There is no threat of coups, revolutions and / or the "colored revolutions" for the country	3,58	1,48	4,39	1,82	,009**

Note: ** - at $p < 0,01$; *** - at $p < 0,001$

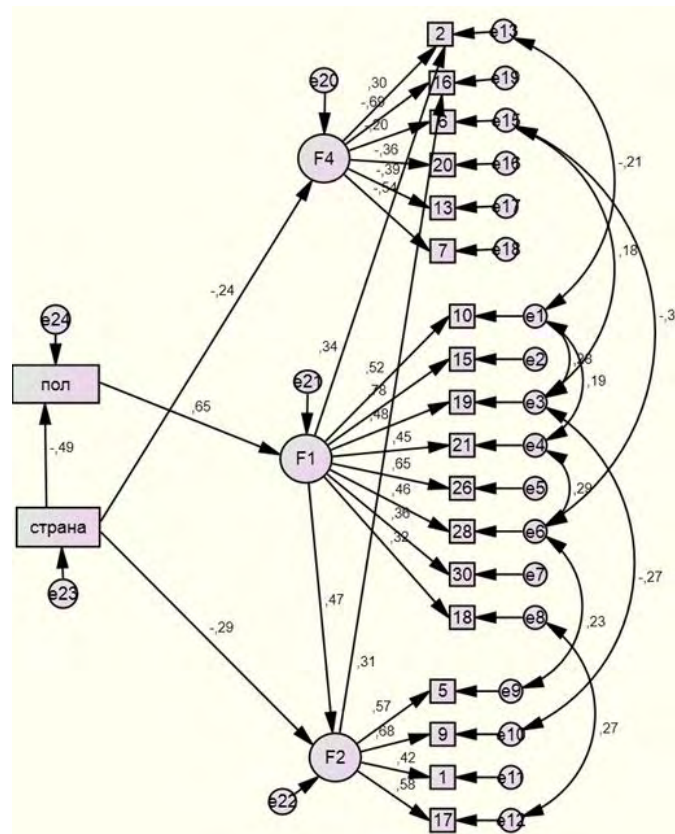
The groups compared were similar in age but different in gender. In the sample of Belarusian students were more men. Due to the differences between groups of students, the question arose as to which factor of cultural and political (country) or gender led to these differences? To solve this problem, the confirmatory factor analysis and modeling of structural equations were carried out.

3.3. Results of confirmatory factor analysis of data of the questionnaire

The data of the questionnaire on latent extremism have been subject not only to explorative, but also to confirmatory factor analysis. It showed that only three factors (F1, F2, F4) were significantly correlated with the variable "country" in the 5-factor model of exploratory factor analysis, so the remaining of two factors (F3 and F5) have been excluded. Figure 1 may serve an illustration of both the results of a factor analysis and the final structural equation modeling. First, let us focus on the interpretation of the three factors of the model.

Figure 1.

The basic model of the influence of variables "country" and "gender" on the factors predisposing to extremism or extremist statements. Indicators of the model's suitability: $CMIN = 173,086$; $df = 156$; $p = ,166$; $CMIN / DF = 1,110$; $CFI = ,881$; $RMSEA = 0,30$.



Factor **F1**, which we call the "factor of normative value prerequisites for extremism" includes such phenomena as: 1) aggression and its channeling; 2) low law-abidance, especially for the satisfaction of material interests; 3) value deformation of radicalist type. To decipher the content of factor F1, below are a few statements of the questionnaire with their numbers.

The allegations related to aggression:

№15 (I enjoy watching different fights and carnage);

№10 (I could use force in response to an insult or humiliation);

№19 (I do not condemn aggression as a response to the aggression of others).

The allegations related to low law-abidance or unlawful conduct:

№26 (I am not a supporter of compliance with laws, rules and regulations);

№21 (For good money I am willing to do a job that is not legal);

№28 (For the sake of earnings I would agree to do something that might blight my country (smuggling, disclosing classified information, etc.)).

Statements, indicating value deformation:

№30 (national superiority should be proved at any cost);

№18 (Human life is not the most important value in this world).

Factor the **F2**, called by us the "**radicalism factor in relation to the information policy and the government of the country**" most of all load the statements:

№9 (Any ideas should be freely spread in the mass media, even if they seem terrorist or extremist to someone); №5 (I believe that freedom of speech should not be limited by absolutely anything);

№17 (I absolutely disagree with the actions of our government and believe that they are leading the country to decline and destruction);

№1 (I believe that the ends always justify the means).

Factor **F4** or the "**factor of confidence /doubt in oneself and in the future**" most of all load the statements: №16 (I have clear plans for 5 years ahead); №7 (I feel my country needs me);

№13 (effort, in my opinion, is the main factor of good earnings);

№20 (I'm not afraid I'll be jobless after graduation);

№6 to a lesser extent (It's important to maintain cultural traditions in society) and

№2 with an opposite sign (I never take part in socially useful activities).

Symptoms of all three factors, revealing "faint signals" of propensity to extremism or extremist statements, were significantly higher expressed in students from Belarus, which may be due to the fact that in the Minsk pilot sample there were more young men, than in the sample from St. Petersburg.

Therefore, using SEM (structural equation modeling) the following hypotheses were tested:

1) The gender of the respondents affects the degree of intensity of F1, F2 and F4;

2) Differences between students from Belarus and Russia appear in the degree of intensity of F1, F2 and F4;

3) The gender of the subjects and the variable "country" both have an influence on the intensity of the F1, F2 and F4 values.

The empirical model check of the effect of variables "country" and "gender" on those tested for latent extremism showed that the original model requires adjustment, as part of the directional bonds was not statistically significant, and the ratio of χ^2 / df is statistically significant. In the basic model, after adjustments, directional bonds were included, from the variable "country" to F2 ($\beta = -0.29$, $p = 0.007$) and F4 ($\beta = -0.24$, $p = 0.087$), as well as the indirect impact of the variable "country" to variable F1 (country-> gender: $\beta = -0.49$, $p < 0.001$; gender-> F1: $\beta = 0.65$, $p < 0.001$). Figure 1 shows the final model.

It confirmed that the gender of the respondents influences on the degree of intensity of F1 (aggression and its channeling, low law-abidance, especially for the satisfaction of material interests, deformation of values towards radicalism). Young men are more prone to extremist statements than girls are. Indirect gender impact of the variable "country" on the

first factor revealed. The Belarusian sample contained more young men, which led to more marked tendency to extremist statements of students from Belarus. Social and cultural differences of latent extremism manifested in the expression of signs of the radicalism factor in relation to the country's leadership and its information policy among students of mathematical specialties from Belarus.

3.4. Results of correlation analysis between latent extremism and value orientations

Correlation analysis of data study showed, that among those students that maximize the value of freedom, there were fewer people, who define extremists as criminals, and among those who value family above all there were less people, defining extremists as misguided individuals. The older the participants were, the more they rejected for themselves the slogans and methods of extremist organizations, considering them not acceptable.

The results of the study on the interrelationship of the system of values and "weak signals" of propensity to extremism allowed revealing two cores of terminal value orientations system of opposing modalities to extremism, that have been expressed most prominently in students from Belarus.

From the standpoint of prevention of extremism, the focus on happy family life proved to be quite positive. Students whose ideals or the meaning of life (five priority terminal values) contain such value as a "happy family life", rejected violence ($p < 0, 01$), aggression, revenge ($p < 0,001$) and unnecessary risk for the sake of new experiences ($p < 0.01$). They also expressed less desire to view scenes of slaughter and fights ($p < 0, 05$).

From the standpoint of prevention of extremism, the focus on "entertainment" proved negative. Hedonistic orientation was a certain marker of predisposition to radical settings. Its priority is highly significantly correlated with disregard to social regulators as the laws and norms ($p < 0.01$) and low law-abidance, as well as radical attitudes in ethnic relations ($p < 0.01$), with a low value of human life ($p < 0.05$) and possibility of violence and aggressive revenge ($p < 0, 05$).

Instrumental values also showed easily interpreted bonds with the 'weak signals' of propensity to extremism. The value of "strong will" showed a positive bond with manifestations of law-abidance, ethical principles of patriotism and identification with the country (disagreement even for big money to blight the country), as well as a negative perception of undue risk for the sake of new experiences. The value of "courage in defending one's views" turned out to be associated with a more critical attitude toward the political system, the value of freedom of speech and willingness to show aggression in response to the aggression of others.

4. DISCUSSION

Researchers identify different groups of factors and prerequisites of political extremism that due to the complexity and diversity of this phenomenon (Koomen & Pligt, 2016; Raizberg & Lysenko, 2015; Schneider, 2014; Voronov, 2014; Yurchevsky, 2012). There are geopolitical and cultural-historical, socio-economic and psychological factors of political extremism. In this regard, some authors express "serious doubts about trying to identify clear profiles of a potential extremist that could help anticipate violent individuals and groups" (Ilardi, 2013). Koomen and van der Pligt write: "our understanding has increased, but this does not mean that we can offer an adequate diagnostic tool to predict *who* will turn to violence and *when* or that we can identify a fixed number of antecedents affecting an

individual decision to opt for violence or a fixed number of stages that people go through when they decide to turn to political violence” (Koomen & Pligt, 2016, p. 259).

Sharing the view that the phenomenon of political extremism is complex and poly-factorial, nevertheless, it is possible to diagnose the prerequisites of extremism, in particular the value components of latent extremism.

As a result of this study, the problem of construct validity of the base questionnaire for the study of latent extremism was decided using confirmatory factor analysis and structural equation modeling. Three factors of latent extremism obtained.

The factor of normative and values prerequisites to political extremism has shown interrelations of psycho-physiological, behavioral and cultural-values levels. He included such phenomena as 1) aggression and its replacement; 2) low law-abiding, especially for the sake of satisfaction of material interest; 3) value deformations of radicalism (low value of human life and hypertrophied national superiority). The content of the first factor of latent extremism echoes the opinion of other authors. Koomen & Pligt (2016) emphasize the role of ethnic stereotypes and prejudices in political violence. In his article, Kruglanski & Fishman (2009) examine in detail the cultural prerequisites for reducing the value of life and increasing the value of death. L.N. Aksenovskaya considers extremism as a counterculture, as a mechanism of destruction of culture as a whole and "a kind of cultural and social suicide" (Aksenovskaya, 2006, p.11).

The factor of radicalism towards the country's leadership and its information policy contains important political and psychological markers of latent extremism. In particular, it is a manifestation of categorical. Extremists demonstrate a strong desire to achieve their goals, following the principle of "ends justify means" (Gurr, 1970). As the important traits of extremism and radicalism scientists see the desire to deny and to be categorical (Schneider, 2014); the tendency to dichotomous, "black and white" thinking (Kruglanski & Fishman, 2006; Victoroff, 2005). Failure to exercise any control over information also indicates a person's lack of maturity. This position prevents awareness of threats to information security for the nation (and the individual) and the dangerous consequences of information wars.

The factor of diffidence and uncertainty about the future (lack of confidence, lack of commitment, potential uselessness and pessimism concerning professional self-realization, inadequate notion of the "input-output" balance) create prerequisites for youth extremism. Encumbered by social infantilism, they contribute to the strengthening of irrational behavior (Deyneka, 2013).

Analysis of new data related to extremists and extremist organizations confirmed the result previously obtained in the student groups (Deyneka, 2015) negative in general attitudes towards extremism. At the same time, there were differences in the manifestations of latent extremism measured by the questionnaire among students from Russia and Belarus. The differences are due to both gender and cultural environment. In the communitarian societies, the market competition contradictions alleviated by the experience and values of life in a collective (Kramnik, 2003). The role of community values in the prevention of illegal behavior confirmed in the group of Belarus students. It turned out that to be engaged in not entirely legitimate work for money are more willing those, whose value orientation "the happiness of others" is far in the periphery of the system of values. The more important for Belarusian students was the value of "high requirements to life", the less they showed the conditions of law-abiding behavior ($p < 0,01$) and less susceptible to psychological violence in society. The instrumental value of "responsibility", on the contrary, was significantly positively correlated with the manifestations of ethical principles of the citizen.

5. CONCLUSIONS

The results of measuring attitudes towards extremists and extremist organizations showed mostly negative attitude towards extremism. At the same time, most of the students consider extremists as not only criminals and mercenaries, but also as madmen, which contradicts the data of scientists.

The results of a comparative analysis of latent political extremism among students from Russia and Belarus showed that Belarusian students have more pronounced desire for absolute freedom of speech and less awareness of the threats of "color revolutions", as well as more readiness for political actions and hidden aggression. Differences were caused not only by the political and cultural environment, but mainly by gender.

Using confirmatory factor analysis and structural modeling method, we were able to create a shorter version of the questionnaire, eliminating the variable "country" and "gender", which allows to use the questionnaire "Psychological preconditions of extremism" among the Russian-speaking students of post-Soviet countries, taking into account gender differences.

The deformation of the system of values enhances the susceptibility to extremist activity. A noncritical attitude toward extremism is more characteristic of young people with a low significance of family value and high entertainment value, combined with high demands.

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Section 5
Legal Psychology

Chapter #23

BRAZILIAN ADOLESCENT OFFENDERS’ CHARACTERISTICS AND THE CONTEXTS OF INSTITUTIONS FOR YOUNG OFFENDERS **A Literature Review**

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ABSTRACT

The goals of this chapter were to identify the main social and demographic characteristics of adolescent offenders and the contexts of detention institutions for these youth in Brazil. For that, we conducted a literature review of articles published between 1990 and 2017 in Brazilian Psychology journals. A total of 27 articles were analyzed: 12 addressed adolescent offenders’ social and demographic characteristics and 15 the contexts of institutions for young offenders. Results indicated that young offenders were predominantly male, poor, marginalized, from minority racial groups (e.g., black), and with low level of education. Moreover, most of the detention settings were highly marked by coercion and punishment, far from what is recommended by national and international agreements and laws (e.g., the United Nations Convention on the Rights of the Child). Thus, the harshness of Brazilian juvenile justice affects mostly the poorest and marginalized social groups, perpetuating prejudices rooted in the society. Adolescent offenders are stigmatized as violent and dangerous and, therefore, excluded from the society; they often remain excluded after leaving detention institutions. We call attention to the need to develop policies promoting citizenship, establishing supporting networks for adolescents and families, also guaranteeing access to health, education, culture, and leisure.

Keywords: juvenile delinquency, adolescent offender, institutions for young offenders.

1. INTRODUCTION

Violence is one of the most serious social problems in Brazil. Adolescents and youth (aged between 15 and 29) constitute not only most of the victims but are also the majority of crime perpetrators, with this situation being aggravated over the last years. For instance, between 2005 and 2015, there was a 17.2% increase in the homicide rate of people aged 15 to 29, most of them were from black racial groups (Instituto de Pesquisa Econômica Aplicada [IPEA], 2017). Government data from 2017 showed that around 24,600 adolescents were in custody of the Brazilian juvenile justice, of which nearly 17,000 were detained in youth detention centers. Research analyzing the motivation of youth’s involvement in criminal offenses suggested as contributing factors the deprivation of material resources, a search for a sense of belonging, and a pursuit for social prestige in the communities where they live (Coscioni, Marques, Rosa, & Koller, 2018).

1.1. Child and adolescent: Legal framework in Brazil

Brazilian laws and regulations establish that the family, the society, and the State must guarantee children's and adolescents' rights as an absolute priority (Article n. 227, of the 1988 Brazilian Constitution [Constituição da República Federativa do Brasil de 1988]). The Child and Adolescent Statute ([Estatuto da Criança e do Adolescente], Law n. 8.069, 1990) — also known as ECRIAD — was instituted in 1990 to further regulate and enforce the integral protection of all children (from 0 to 12 years old) and adolescents (aged 12 to 18), seeking to protect them from any type of violence and negligence. When children suffer any violation of their rights or even when they are the perpetrator of a crime, the ECRIAD states that s/he should partake in protective measures. Among the protective measures contributing to preserve family ties are: (a) the provision of guidance, support, and monitoring of youth; (b) the compulsory enrollment and attendance to official elementary schools; (c) the inclusion in a community or official program aiming to help families, children, and adolescents; and (d) the availability of medical, psychological, and/or psychiatric treatment. Some of these protective measures, however, demand the children removal from their homes and, in extreme cases, a search for a new family.

Hence, adolescents who have committed criminal offenses should be guaranteed the protection of their rights as stated by laws and regulations, such as the ECRIAD. They should participate in socio-educational measures that aim at their adaptation to social norms and values. These measures are imputed by judges working in juvenile courts and include actions from damage repair to admission to socio-educational detention centers. This last measure should be applied for no longer than three years; however, it has become more and more frequent. This has generated a large contingent of “incarcerated” youth and aggravated the social exclusion situation in which young offenders find themselves. Some of these youth's greatest losses due to this system include deficits in learning, lag in school, and postponement of their professional formation. For this reason, youth's detention, especially those in closed systems, has been one of the biggest concerns for those who advocate for the rights of Brazilian children and adolescents.

In 2012, a law regulating the juvenile justice actions in Brazil was enacted; this regulation also instituted the National Socio-Educational Service System ([Sistema Nacional de Atendimento Socioeducativo], Law n. 12.594, 2012) – SINASE. The SINASE sought to standardize the services for young offenders, which until then were carried out without any systematization across the Brazilian territory. In accordance to the SINASE's Act, the goals of the juvenile court sentences are: (a) to hold adolescents accountable for the harmful consequences of the criminal offense; (b) to foster adolescents' social integration and to guarantee their individual and social rights; and (c) to disapprove criminal offenses. Moreover, the juvenile justice system must emphasize the pedagogical aspect of the sentences. Thus, the detention institutions for young offenders must guarantee the access to opportunities that help them overcoming social exclusion, as well as provide them access to participation in society's positive values formation.

Even though Brazilian laws are supposed to guarantee a dignified service capable of reestablishing youth's social interactions, the reality is that most adolescent offenders are detained in socio-educational institutions far away from urban centers, with precarious infrastructures, and receiving a hostile treatment by socio-educational agents. During their detention period, youth's education, professionalization, family interactions, leisure, sport activities, and health care are jeopardized (Coscioni, Costa, Rosa, & Koller, 2017). In addition, there are several elements that can be considered either as risk or protective factors to adolescents' involvement in misconducts, including the experiences they have in school (Silva & Bazon, 2014; 2015), the characteristics of the socio-educational measures

(Coscioni et al., 2017), drug use (Schneider, Mello, Limberger & Andreatta; 2016), the law determining the age in which youth are held responsible for crime as an adult (Vaz & Moreira, 2015), the quality of their family relations (Nunes, Andrade & Moraes, 2013; Castro & Teodoro, 2014), among other risk factors to wrongdoings (Gallo & Williams, 2005). Given the importance of these issues, this chapter aimed to identify young offenders' main sociodemographic characteristics and the contexts of Brazilian detention institutions for young offenders through a literature review of papers published in Psychology journals between 1990 (the beginning of the ECRIAD) and 2017.

2. METHODS

Two researchers conducted simultaneous and independent searches of relevant papers through the Regional Portal of the Virtual Health Library (VHL), one of the most important databases in the field of young offenders in Latin America. The most common keywords in the Brazilian scientific literature on juvenile offenders were used in the online searches, such as "adolescents in conflict with the law," "adolescent offenders," and "adolescent perpetrators of infractions." The following criteria to select studies were used: (a) papers published between 1990 and 2017, (b) with full content available online, (c) with a focus on adolescent offenders' characteristics or (d) on the contexts of detention institutions for young offenders in Brazil, and (e) published in Psychology journals. Papers that focused on non-adolescent offenders, repeated titles, and in formats other than articles (e.g., thesis, dissertations, book chapters, and reports) were excluded.

Initially, each researcher read the abstracts to identify whether the articles found should be included in the research corpus. Then, they re-read the selected articles a second time to identify the main topics of each paper. Lastly, the researchers read the chosen articles once more meticulously and entered the data in a standardized worksheet. Disagreements were discussed until a consensus was reached between researchers. The results were analyzed using the technique of thematic analysis (Bardin, 2011; Braun & Clarke, 2006).

3. RESULTS AND DISCUSSIONS

A total of 258 papers were initially found, from which 110 were repeated, and, therefore, excluded. This resulted in a total of 148 potentially relevant articles, all of which published in the period of interest. From those, 21 were excluded because they were not published in Psychology Journals, 10 because they were not related to adolescent offenders, and 10 because they did not have full versions available online. Of the 107 remaining articles, we analyzed the abstracts to define the categories in which they would fit. From that, 27 articles that fitted the two main topics of the present literature review were selected and analyzed: 12 of them focused on Brazilian adolescent offenders' characteristics and 15 on the contexts of detention centers for young offenders.

3.1. Characteristics of adolescent offenders in legal custody

Out of the 12 articles addressing the characteristics of adolescent offenders, no article was published before 2002, five were published between 2002 and 2010 (Ciarallo & Almeida, 2009; Endo, 2009; Espíndula et al., 2006; Njaine & Minayo, 2002; Priuli & Moraes, 2007), and seven between 2010 and 2017 (Cairus & Conceição, 2010; Cavalcante & Campos, 2016; Chaves & Rabinovich, 2010; Nardi, Jahn, & Dell'Aglio, 2014; Nascimento, Howat-Rodrigues, Rosa, & Pompeu, 2012; Vicentin, Gramkow,

& Rosa, 2010; Zappe & Ramos, 2010). Regarding the research designs of those articles, eight used qualitative methods and four quantitative methods. Also, studies on this topic were conducted across all regions of Brazil, except the North. Six studies were carried out in the Southeast, two in the Northeast, two in the Midwest, and another two in the South. Overall, the articles addressed aspects related to the stereotypes and social representations of adolescent offenders from different perspectives, such as the media, judges, public prosecutors, and undergraduate students. In addition, they sought to identify the sociodemographic profile of adolescent offenders based on the records from youth detention centers.

A common topic stressed by the articles was the role taken by the media, especially newspapers, in spreading negative stereotypes of adolescent offenders (Cavalcante & Campos, 2016; Espíndula et al., 2006; Njaine & Minayo, 2002). Journalistic texts usually conveyed the idea that these youths are aggressive, dangerous, and uncontrollable by their very nature, with little or no considerations of aspects related to youth's social context. This perception was shared by judges, prosecutors, undergraduate students majoring in Law, and judicial officials. They usually ascribed responsibility for committing the offenses to adolescents' personal characteristics (or personality) and their relatives' socioeconomic conditions, typically disregarding the contexts and circumstances in which the offenses occurred (Ciarallo & Almeida, 2009; Nascimento et al., 2012). Accordingly, the notion of dangerousness has been widely perpetuated, by both the media and by the more conservative social segments as an argument for the hardening of criminal laws in an attempt to justify punitive practices against adolescent offenders (Endo, 2009; Vicentin, Gramkow, & Rosa, 2010). However, considering the particularities of a person in development, the ECRIAD determines that the criminal accountability of adolescents should have an eminently pedagogical characteristic, aiming at adolescents' social reintegration.

In addition, social representations of young offenders seem to be influenced by their socioeconomic and personal characteristics, such as their social class and race. For instance, a research conducted with undergraduate students in Psychology and Law majors compared what were their punishment suggestions in cases of infractions committed by either a lower-social-class or an upper-social-class adolescent (Nascimento et al., 2012). The results indicated differences in the perceptions about adolescent offenders according to their social class, in which the suggestions of punishments for lower-social-class adolescents were severer when compared to the ones for upper-social-class adolescents. Considering that social representations work as a guide for individual and collective behaviors, these representations generate specific perceptions, attitudes, and behaviors toward adolescent offenders. Moreover, differences in social perceptions based on social class lead to selective public safety strategies regarding the types of adolescents who are brought into the justice system. In general, these are youth who have certain personal and social characteristics (skin color, social class, place of residence, etc.), different from those youths considered from dominant social groups (Nascimento et al., 2012). These findings provided evidence of a social construction of marginalized identities based on a typical profile of adolescent offender, which contributes to perpetuate prejudices rooted in the society, present since the old criminal laws of the nineteenth century (Cairus & Conceição, 2010; Endo, 2009).

The sociodemographic profile of youth in detention institutions confirms these stereotypes — The majority of them were males, from minority racial groups (e.g., blacks), poor, residents of marginalized areas, and with a low level of education (Nardi, Jahn, & Dell'Aglio, 2014; Priuli & Moraes, 2007; Zappe & Ramos, 2010). The fact that more

than 90% of adolescent offenders are male draw attention to cultural aspects that influence aggressive and violent behaviors among boys. Also, as suggested by Nardi and colleagues (2014), racism, both in the forms of prejudice and discrimination, is a very complex problem and it is manifested in the exacerbated number of black adolescents detained in centers for young offenders (even in Brazilian regions where most of the population is white). As stated in the 2014 SINASE's annual report, black and brown adolescents were the majority of youth in socio-educational centers throughout the country (National Human Rights Department [Ministério dos Direitos Humanos], 2017). Also, on the side of the victims of violence, data indicated that more than 70% of people murdered in Brazil were black or brown young males. Moreover, from 2005 to 2015, the homicide rate of blacks increased significantly, while that of non-blacks decreased almost by the same proportion (IPEA, 2017; Waiselfisz, 2016).

Furthermore, poor young people living in marginalized neighborhoods were more likely to be subjected to hostile approaches by the police and to receive harsher punishments by the justice system (Ciarallo & Almeida, 2009; Nascimento et al., 2012). Finally, studies showed that the vast majority of adolescent offenders in custody had a gap between age and school grade or had dropped out of school, suggesting that there is a serious failure from the part of the families, society, and the State to guarantee basic rights, such as education, for these young people (Nardi et al., 2014; Priuli & Moraes, 2007; Zappe & Ramos, 2010).

3.2. The contexts of detention institutions for young offenders

A total of 15 articles addressing the contexts of detention institutions for young offenders were found (Costa & Alípio, 2010; Coutinho, Estevam, Araújo & Araújo, 2011; Estevam, Coutinho, & Araújo, 2009; Francischini & Campos, 2005; Iriart & Bastos, 2007; Morais & Malfitano, 2014; Moreira, Guerra, Oliveira, Souza, & Soares, 2015; Porta, Sehn, & Siqueira, 2015; Rosário, 2010; Scisleski, Bruno, Galeano, Santos, & Silva, 2015; Scisleski, Galeano, Silva, & Santos, 2014; Souza & Costa, 2012a; Souza & Costa, 2012b; Souza & Costa, 2013; Souza & Venancio, 2011). Regarding the research design, 13 articles used qualitative methods and two quantitative methods. Furthermore, these studies were conducted in four regions of Brazil, with no study from states situated in the North of the country. Five of these studies were conducted in the Midwest, four in the Southeast, three in the Northeast, and one in the South. Again, in most of these studies the participants were males, which is probably related to the higher incidence of adolescent boys in socio-educational detention centers. Only one article included family members as research participants. Considering that the family can play an important role in adolescents' social insertion, this role should be further explored in future research.

Souza and Costa's (2012, 2013) studies showed that both the family and the adolescent offenders did not believe in the effectiveness of the open and semi-open socio-educational measures; this was so because they did not perceive a great deal of investment in educational activities capable of contributing for the formation of their children. However, most family members believed that the socio-educational measure could foster changes in their children by keeping them away from bad influences; they also believed that the loss of freedom could contribute to self-reflections about youth's previous way of life (Souza & Costa, 2013). In contrast, from youth's perspective, the loss of freedom provoked negative feelings but not reflections on the infraction committed.

Taken together, these articles evidenced the challenges in implementing the child integral protection doctrine, even after almost three decades since the ECRID was instituted. The predominance of punitive strategies, instead of pedagogical ones, was

discussed in all the articles analyzed here. These studies also pointed to detention as the preferred resource to deal with adolescent offenders instead of community services, probation, or unrestrictive freedom correctional measures, even when the offense was not serious and mainly if the offender was black.

Adolescent offenders also reported a coercive and punitive context (Coutinho et al., 2011; Francischini & Campos, 2005; Moreira et al., 2015). Custody, whether in detention, probation, or unrestrictive freedom correctional measures, was not treated as an action aimed at youth's resocialization but mainly as a means of punishment (Estevam et al., 2009; Scisleski et al., 2014; Scisleski et al., 2015). This logic can be considered as a violation to what is recommended by international and national conventions and regulations, such as the UN Convention on the Rights of the Child (CRC), the UN Standard Minimum Rules for the Administration of Juvenile Justice (Beijing Rules), the ECRIAD, and the SINASE. Moreover, the professionals working in detention centers for young offenders usually did not believe that juvenile court sentences and their interventions could be effective in promoting a new positioning of the adolescent toward life (Morais & Malfitano, 2014; Souza & Venancio, 2011).

Likewise, community service has shown to have a controversial sentence meaning given that it is used as punishment for juvenile offenders when in fact it should be a pedagogical and reparatory measure (Costa & Alípio, 2010). According to the SINASE's law, community service must be a pedagogical activity capable of stimulating the discovery of new skills and knowledge to promote positive outcomes on adolescents' development, giving them a new opportunity in life and preventing recidivism. Furthermore, this type of judicial sentence should aim at building a new identity and perception about work, for instance, as a new possibility of social insertion.

Consequently, correctional measures and the youth justice system in Brazil are serving mainly to isolate adolescent offenders from the society, by depriving their freedom and by denying them the access to their fundamental rights, which should be ensured by the system. As a result, we have a public policy that does not achieve effective impacts for neither the society nor adolescents, to which they often return without being able to have the possibilities for a new social insertion, frequently ending up in the same life conditions that led them to their previous correctional measures.

4. CONCLUSION

The literature review and discussions here have shown that much of what the Brazilian laws and international agreements (e.g., CRC and Beijing Rules) advocate for remains in the paper, without having practical application. In general, adolescent offenders are stigmatized as violent and dangerous and, therefore, are removed from social interactions. Not only the Brazilian juvenile justice system excludes those adolescents during their custody or detention, but also it often remains excluding them after they leave the detention centers. This situation is even more critical regarding adolescents from poor social classes, residents of marginalized neighborhoods, and from black racial groups, given that there is a tendency of the Brazilian juvenile justice system to punish them in a severer way when compared to youth from other ethnic and social groups.

As a way to overcome this situation, we call attention to the urgent need to develop policies that promote citizenship, establish networks of support for these adolescents and their families, and guarantee access to health, education, culture, and leisure, as well as the necessity to implement a public security policy. Finally, it is important to note that although the present literature review discussed and pointed out to important issues on the topic of

juvenile delinquency, there are some limitations that should be addressed in future research. For instance, even though the database used in this chapter is a very comprehensive source, other databases were not consulted, which may have excluded important papers on the topic, as well as thesis and dissertations, which were not included in the analyses of this chapter either. Thus, we consider important the development of new and comprehensive investigations on the subject studied in this literature review.

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KEY TERMS & DEFINITIONS

Criminal offence: conducts committed by a child or adolescent equivalent to a crime or misdemeanour.

Socio-educational measures: corrective measures that should be applied to adolescents who have committed a criminal offence, as established by the Article 112 of the Child and Adolescent Statute. There are six types of socio-educational measures: (a) warning, (b) obligation to repair the damage, (c) community service, (d) assisted freedom, (e) semi-opened measures, and (f) detention. They must be compatible with the adolescent's biopsychosocial and developmental circumstances and proportionate to the offense committed. Although they are judicial sanctions, their nature must be predominantly pedagogical.

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Chapter #24

CRIMINAL BEHAVIOUR OF A JUVENILE OFFENDER AS A VICTIM OF DOMESTIC VIOLENCE

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ABSTRACT

The article presents the results of the research of the criminal behaviour of adolescents underwent domestic violence, who committed crimes against family tyrants and other persons. The analysis of the criminal acts includes studying procedural documents of the criminal cases. The comparative analysis of the behaviour of the juvenile offenders, who committed a crime against the family tyrant, and of those who abused third persons has been carried out. In all the cases the criminal offenses have been committed in a manner similar to the one that had been used by the abusers against the adolescents, but the crimes against the family tyrant are characterized by more pronounced aggressiveness and cruelty. In the crimes against third persons the criminal acts are less aggressive.

The analysis of the communicative relations between the criminal and the victim has showed that in most of the cases there was a hostile relationship between the family tyrant and the juvenile offender. In the moment prior to committing the crime the adolescents provoked development of a bitter conflict. In the cases of committing a crime against third persons the offence arouses unexpectedly for a victim, without any communicative interaction between the victim and the abuser.

Keywords: criminal behaviour, domestic violence, juvenile offender.

1. INTRODUCTION

Currently, the problem of domestic abuse is of crucial importance for Russia as well as for many other countries. Thus, Armetta (1999) provides provided statistical data demonstrating that in Australia 54% of all murders are committed in the family and in 90% of those crimes the victims are women and children. Every day from 32 to 40 thousand women and children in Europe spend the night in special institutions because of the fear of possible violence in their families.

Criminological analysis of delinquency in Russia shows the evidences of the outrunning growth of violent crimes and that domestic violence occupies a considerable proportion in their structure (Kudryavtsev & Eminov, 2010). The victims of the latter are often underage members of a family (Bagmet, Bychkov, & Sazhaev, 2017; Kholopova, 2010; Kochenov, 2010; Straus, Gelles & Steinmatz, 1980). Studying the problem of the violence against children Dodge, Bates, and Pettit (1990) have concluded that the experience of the physical violence in early childhood leads to development of corresponding chronic aggressive models of behaviour. According to the criminologist Schneider (2014), 64% of the victims of crimes in their childhood and youth become criminals in adult age when those who did not have this trauma only in 22 % of cases.

The problem of connection between the crimes of juveniles and the violence against them as a criminogenic factor as well as the problem of the victimity of a family tyrant and the future criminal behaviour of his underage victim does not receive enough attention in

the scientific literature. Essentially, there are no studies concerning the connection of the violence in the family against underage persons with the forms of their unlawful conduct and of direct or indirect impact of the intrafamilial violence on the development of personality of a criminal, including the mechanism of influence of domestic violence on the character of behaviour of juveniles and making their decision to commit a crime.

The actuality of studying the problem of domestic violence is justified not only by the growth of disorganization of familial relations, but also by the fact that the obtained results can be applied in the prevention of juvenile crimes.

2. OBJECTIVES

The objective of the research is studying the connections between the forms of domestic violence against underage children with forms of the future illegal behaviour of the juveniles, the victims of domestic abuse.

The authors of the research have suggested the following hypotheses:

- (1) The fraction of juvenile offenders, the victims of domestic abuse, who committed violent crimes in the total number of violent offenders is much bigger than the fraction of juvenile offenders, the victims of domestic abuse, guilty of lucrative crimes among the other lucrative offenders;
- (2) There is a similarity of objective characteristics of violent crimes committed by juveniles, the victims of domestic violence, and objective characteristics of the acts of domestic abuse itself.
- (3) In cases when the victim of a violent crime committed by a juvenile offender is not the abuser but a third person despite seeming a wanton attack the motive of the crime is self-affirmation.

As Revin (1996) mentions, the obligatory characteristic of the violent crimes in the sphere of the family is the existence of a functional familial communication between the offender and the victim, which is causally relevant with committing the crime. In accordance with that, the member of the family of the juvenile is considered as a member of a small group based on marriage, cohabitation, blood or other relationship, where the members of the small group are in condition of functional familial communication with the juvenile.

Considering the above-mentioned, the violent crimes committed towards the children, adolescents and young men in the familial sphere should be considered as criminal actions characterized by physical, mental or sexual violence against the victim, making an attempt at life, health and sexual immunity of the underage persons, being in the state of functional familial communication with a tortfeaser of physical or moral damage.

3. METHODS

The empirical basis of the research consists of materials of 300 criminal cases of male juvenile offenders including 56 criminal files on the violent crimes of adolescents who had earlier become victims of domestic violence. According to the specially designed questionnaire a detailed analysis of criminal cases concerning crimes specified by the Article 105, 107, Part 1, Article 108, 111, 112, 113, Part 1, Article 114, 115, 116, 117, 119 of the Criminal Code of the Russian Federation.

The materials were collected in the court archives in Irkutsk and Moscow regions.

Analysis of the criminal files of the given category (including experts' conclusions)

was conducted according to the specially created technology allowing uniting personality features into the following blocks: bio-psychological features (age, physical and psychological development, hereditary load), characteristics of socialization (family social status, style of upbringing and role behaviour, psycho-traumatic situations, forms of socialization, manifestation of social maladjustment), personal traits (features of character, behavioral strategies, intensity of some forms of addictive behaviour, motivational components in communication, achievements in studying and professional interests, domestic habits, hobbies).

4. RESULTS

To fulfil the research objectives and to check the hypothesis, the analysis of the personalities of the juvenile offenders, victims of domestic abuse, has been carried out.

According to the results of studying the criminal cases of violent crimes of juvenile offenders, the victims of domestic violence, the following data have been obtained:

- 90% of the adolescents have been undergone the physical violence, 88% - the psychological one and 72% - both types of violence. 4% of the criminals survived intrafamilial sexual assault.
- Psychological abuse is of two types: verbal and non-verbal.
- Verbal abuse includes various verbal threats, insults, humiliation etc. The example of non-verbal assault is the situation when the abuser swings a knife in front of the victim, puts a gun to his chest etc.
- In most cases the persons abusing underage victims use both types of psychological abuse.

As the analysis of the criminal cases shows, the proportion of the lucrative criminals who underwent the family abuse was only about 4.3% among all the lucrative criminals. For the underage “violent” criminals this index is 5 times higher and the proportion is 21.3% among all the violent criminals.

As the result of the research we have defined differences between the violent attacks of juvenile offenders against family tyrants who abused them physically and against third persons (Table 1). Thus, in the situations when the family abuser is a victim of the juvenile offender one third of the acts of violence are performed the same way as having been used against him (mainly beating by kicking and punching). In those cases, when the adolescent was beaten with sticks and other heavy objects, in inversion he uses thrust, cutting and hacking weapon against his abuser. In other words, the juvenile offenders are crueller against the family tyrants. When committing crimes against third persons (abusers not belonging to the family) the situation is opposite: similarity can be observed in 75% of the cases (beating by kicking and punching) and only in 25% of the cases there was a difference.

Table 1.
Acts of violence of juvenile offenders against family tyrants and abusers not belonging to the family.

Similarity of the attack method	A victim is a family abuser	A third person is a victim
The attacking method is similar to those applied to an adolescent	34% (mostly beating by kicking and punching)	66% (mostly beating by kicking and punching)
The attack method is different from those applied to an adolescent	76% - when an underage person was beaten with sticks or other heavy weapons, due to inversion he used thrust, cutting or hacking weapons to attack an abuser	24% of juvenile offenders were less aggressive against other abusers

In general, the analysis of the criminal cases shows that 78% of juvenile offenders, the victims of domestic violence, systematically take alcohol drinks (with a frequency from 2-5 times per month). 13% of them have medically confirmed diagnosis of alcoholism.

Speaking of their moral and emotional spheres, we should mention that most of these adolescents have such features as rudeness, aggressiveness, exasperation, and lack of shame.

Sixteen percent of the criminals have relatively positive personality orientation and 8% of them reveal ambivalent tendencies: such features as hastiness, aggressiveness, cruelty against schoolmates combines with kindness and sensitivity towards their mothers also being abused by their fathers or step-fathers, with social activeness and with need of friendship and care.

Thirty-eight percent of juvenile offenders, the victims of domestic violence, provoke a conflict by their negative behaviour in those cases when such conflict arises between the adolescent and the future victim. That demonstrates the depth of their moral and juridical deformation.

The research results allow describing such phenomenon as Role Inversion (when within one conflict interaction future juvenile offender, a victim of a family abuse, and a family abuser change their roles)

Table 2.
Presence of the role inversion “abuser-victim”.

Crime	Role inversion – “criminal – victim” existed	Role inversion – “criminal – victim” did not exist
Murder and heavy bodily injury	56% of crimes	44% of crimes
Light and medium bodily injury and beating	12% of crimes	88% of crimes

The leading motives of the crimes committed by the underage victims of domestic violence are:

1. Self-defence and defence of brothers/sisters/mothers – in cases of acts of violence against the family tyrant – in all cases;
2. Self-affirmation – in those cases when third persons (not the abusers) are the victims of the juvenile offender. In 69% cases self-affirmation is the leading motive although at first sight the crime seems having no motive at all.

In 2% of crimes a specific motive of “imitation of father” is found out, when an adolescent beats his schoolmates to be “like his father”.

In the process of criminal cases studying it has been established that 62% juvenile offenders and their victims had been having relatively long-lasting relationship (blood relationship, neighbouring, co-education) and 28% (almost one third of the subjects) are family tyrants having abused the adolescents. It is obvious that between the juvenile offender and the family abuser – the future victim of the adolescent, hostile relations existed which were the source of the future violent act of the underage person.

In other 34% cases the relations between the adolescent and his victim can be characterized as friendly (4%) or indifferent (30%).

If in case of murder and a heavy bodily assault hostile relations were established in 63% of the crimes then in case of beating and medium/light bodily assault they can be found in 12% cases. This fact leads us to conclude that in cases of murder and a heavy bodily assault committed by a juvenile offender, a victim of domestic violence, the hostility against the future victim was intensive and, probably, dominated in the system of their relationship.

The conflicts in cases of murder and a heavy bodily assault can be divided in two groups:

- 1) Long-term conflicts: they arise among the family members having a hostile relationship because of insults and beatings committed by family abusers – future victims, having terrorised other family members including future juvenile offenders.
- 2) Short-term conflicts arising among adolescents, victims of domestic violence and their acquaintances (not the family abusers), being indifferent to each other, in a course of drinking alcohol together when the quarrel or scuffle began. In those cases, the victim of the juvenile offender either provoked the violent act or facilitated it by immoral or unlawful actions.

For juvenile offenders, victims of domestic violence is typical causing medium or light bodily harm (and beatings) to strangers. Often a crime is committed by the victim of domestic violence together with other persons without saying a word to the victim. The motive of such crimes is self-affirmation of the adolescents, victims of domestic violence.

The victims in this situation belong to two almost equal groups:

- 1) Underage males;
- 2) Males in the age of 55-65 years.

In those crimes, such features of adolescents as easy coming under somebody's influence, hostility, biases, caused by ungrounded generalization of their own abnormal relations with abusers – members of their families and transferring those relations on other persons by the juvenile offenders can be seen. As it has been mentioned the victims of such crimes are either underage or senior persons. The choice of the former can be

explained by the fact that they suppose not to be able to put up resistance; the latter's – by the association of the future victim with the father-abuser.

The victims of murders and severe bodily damage can be characterized, as a rule, by the victimogenic deformation of personality. Thus, most of those victims offended by adolescents experienced domestic violence misused alcohol, did not work, preferring living on social benefit, were of low cultural level of household and leisure, had a low social status, were hot-tempered, rude, cruel, aggressive and that could be seen in constant quarrels, conflicts and scuffles.

The victims of medium and light bodily harm or of beating can be characterized by age victimity, lowered capability to resistance along with a high excitability, abnormal reactions on imaginary hurting their pride, unhealthy self-affirmation in adult age.

When studying the criminal cases of the juvenile offenders, victims of domestic violence, it has been found that they had been suffered of abuse during a long time. The violence against 14-15-year future criminals lasted for several months. It reported that 87% of 16-17-year adolescents had been objects of such violence for 3-5 years. Thus, it can be concluded that in early stages of domestic violence they possessed age victimity; I.e. before committing the crime, most adolescents had been the victims of family tyrants when their age victimity could be seen.

It is this kind of victimity that causes the crime against their abusers: either real or seeming impossibility to get rid of suffering on legal grounds makes those adolescents to take the law in their hands.

Most juvenile offenders can be characterized by proneness to conflicts, aggressiveness against schoolmates and strangers, taking alcohol from the age of 11-12 years, neglectful attitude towards other people, and that indicates the antisocial orientation of their personality. In other authors' works (Rybalskaya, 1998), it is also mentioned that when committing violent crimes, the antisocial orientation of the personality practically coincides with pronouncedly demonstrated victimogenic deformation of the criminal's personality. Thus, hastiness, rudeness, aggressiveness in combination with alcohol misuse, low culture of everyday life and leisure, identifying the antisocial orientation, indicate the victimogenic predisposition to the infringements of a violent character.

Two kinds of situations can be marked out when both sides of the conflict possess a victimogenic deformation of personality:

(1) When a conflict arises between an adolescent, a victim of domestic abuse, and persons, familiar to him; either one or the other has moral-psychological characteristics which increase the probability to become a crime victim (alcohol misuse, low culture of everyday life and leisure). The conflict in such situation arises during a joint drinking of alcohol and in some cases, is provoked by the antisocial action of the adolescent, the victim of domestic abuse, whose social-psychological characteristics of personality (misuse of alcohol, inadequate hastiness, aggressiveness) are the result of his negative socialization in the family. The provocation of the conflict is carried out in the ways similar his "familial" experience (insults, humiliation etc.). As it has been established, those adolescents could have been exposed to the criminal infringement from their future victims, but they had been faster in recognizing the situation as a conflict one, and that had provided them with the initiative in the choice of conflict interaction (the choice of which once again had been conditioned by their early socialization).

(2) The victims of the juvenile offenders were the domestic abusers, if the conflict was developed by role inversion. When, during the same conflict, the future juvenile offender, the victim of domestic abuse, and the family abuser change their roles both have the similar characteristics: aggressiveness, low culture of everyday life, misuse of alcohol,

rudeness and hastiness. Those characteristics expose in the mutual insults, beatings, humiliation of each other's dignity. Those actions when either family tyrant or adolescent are the abuser and the victim in the same conflict are conditioned by the victimogenic deformation of the personality of the family tyrant and the victim of domestic abuse, equally as the antisocial orientation of each of them.

Regarding the issue of the role inversion, it should be mentioned that an early arisen difference is applicable to murders and heavy bodily injury on one hand, and a medium and light bodily injury and beatings, on the other. Thus, if in the first case the role inversion "abuser-victim" is found out in 56% of crimes and in all those cases the family tyrant has been turned into the victim, then in the second case only 12% of family tyrants have become the victims of the violence, inflicted by the adolescents.

The data of our research have confirmed the hypothesis concerning the similarity of the acts of domestic violence and the violent crimes committed by the juvenile offenders, the victims of domestic abuse. As a result of comparing the mentioned criminal acts the differences of the violent infringements against family tyrants and third parties have been marked out. Thus, in the situations when the victim of the juvenile offender was the family tyrant, one third of the crimes were committed the way similar to those applied to the adolescent himself (mainly beating by punching and kicking). In those cases, when the adolescent had been beaten with sticks and other heavy objects in inversion he used thrust, cutting and hacking weapon against his abuser. In other words, the juvenile offenders were crueller against the family tyrants.

When committed infringements against third persons (not the family abusers) the opposite picture can be seen. The similarity in the way of committing a criminal action can be seen in $\frac{3}{4}$ of cases (beating by punching and kicking) and only in a quarter of cases the difference can be seen.

5. CONCLUSION

While studying criminological-victimological characteristic of a juvenile offender, a victim of domestic violence the following conclusions have been obtained:

1. The criminological characteristic of a juvenile offender, a victim of domestic violence alongside with other typical features of a juvenile offender possesses a complex of specific features: retardation in educational level, defined by the number of finished school years; the bigger part of unemployed and not learning anywhere persons (twice higher than the corresponding index for all juvenile offenders) combined with differences of other indexes concerning the type of activity; every fourth victim of domestic violence is from a one-parent family (every second or third among other juvenile offenders), but at the same time in a half of those families the second parent is a step-father but not their own father; in all the families with domestic abuse the relations can be described as hostile or indifferent (in every third family in case of other offenders); the percentage of persons with psychopathic features in 2-2.5 times bigger comparing with this index in the control group.

2. The hypothesis stating that in case of committing violent acts against strangers (not the abusers) the motive of juvenile offenders, victims of domestic violence are self-affirmation receives its justification.

3. The major part of the victims of domestic violence can be characterized by age victimity and in elder age the victimogenic personality deformation can be seen.

4. The hypothesis of similarity of acts of domestic violence and violent crimes of the juvenile offenders in the ways of committing those crimes against strangers has been also confirmed.

The research has been an attempt to consider some aspects of the problem of interconnection of domestic violence against underage persons with certain types and forms of their criminal behaviour and influence of family abuse on the development of personality of a juvenile criminal.

As a result of the research, some elements of the mechanism of influence of domestic violence on the character of behaviour of the adolescents and making their decision to commit a crime are more clearly understood.

The following hypothesis of the first stage of research has been confirmed: (a) that violence against adolescents effect negatively on the development of their personality and leads to a higher probability of committing the crimes of similar aetiology; (b) concerning the similarity of the acts of domestic violence and violent crimes of the victims of family abuse in methods (in case of crimes against strangers but not the abusers).

Thus, it has been established that violence against adolescents has a pernicious effect upon their personality development and leads to a higher probability of committing crimes of similar aetiology by them. The similarity of methods committing the crimes and acts of domestic violence in case of crimes against not the abusers themselves but against third persons has been found.

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Section 6
Educational Psychology

Chapter #25

EFFECTIVENESS OF THE PROGRAM UNPLUGGED ON DESCRIPTIVE NORMATIVE BELIEFS WITH RESPECT TO DOSAGE AS A PART OF FIDELITY MEASUREMENT

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ABSTRACT

Objective: The main aim of the study is to examine the shorter-term and the longer-term effectiveness of the school-based drug prevention program Unplugged on alcohol and drunkenness descriptive normative beliefs as well as the moderation effect of gender. The aim of the study is also to highlight the importance of measuring the implementation fidelity.

Method: In the school year 2013/2014, the program Unplugged was implemented in Slovak primary schools. The study was a cluster randomized controlled trial with data collection conducted immediately before the program implementation (T1), immediately after the program implementation (T2) as well as 12 months later (T3). The schools were randomly assigned to an experimental (N=641) and a control group (N=654). The experimental group was exposed to the drug prevention program consisting of 12 lessons. **Results:** The results confirmed that the Unplugged program works differently for boys and girls in a longer-term. The girls in the experimental group had a lower level of descriptive normative beliefs regarding the number of friends who use alcohol and who get drunk compared to boys. Also, the results show that completing the whole preventive program is important for assessing its effectiveness.

Keywords: schoolchildren, drug prevention program, fidelity, normative beliefs.

1. INTRODUCTION

Adolescence is a crucial period for using addictive substances which may continue to adulthood. Therefore, schools provide a natural and suitable environment for prevention and, in fact, most preventive activities are implemented in school facilities. Social learning theories suggest that teens often face a considerable level of pressure from various sources such as from their peers, parents and also from the mass media which may be very influential (Tobler et al., 2000; Wynn, Schulenberg, Maggs, & Zucker, 2000). These factors affect their behavior in both the positive as well as the negative direction (Botvin, 2004; Botvin & Griffin, 2007). Complex strategies which are used in prevention address this complex issue and focus on the social impact and this way can be highly effective (Giannotta, Vigna-Taglianti, Galanti, Scatigna, & Faggiano, 2014). The social influence approach in addition to increasing adolescent's awareness of social influences also includes normative education (Dhawan & Mandal, 2017). Current prevention programs such as Unplugged (Faggiano et al., 2010) include modules aimed at correcting the perception of drug use among peers and adults because adolescents usually overestimate the prevalence of smoking, drinking and use of other drugs (Botvin & Griffin, 2007). Consequently, these inaccurate descriptive normative beliefs are considered to be the strongest predictors of

substance abuse. Furthermore, there is a significant association between normative beliefs and risky behavior which has been confirmed in many studies (Dempsey et al., 2016; Padon, Rimal, Jernigan, Siegel & DeJong., 2016; Perkins, 2002; Schwinn, Schinke, Hopkins & Tom, 2016). Descriptive normative beliefs are characterized as the perception of what many people do. In the case of drug use, descriptive normative beliefs are related to the perceived quantity and frequency of peers' drug use (Cialdini, Kallgren, & Reno, 1990). A change in descriptive normative beliefs can be achieved by educating young people about the actual prevalence of substance use among their peers (Botvin & Griffin, 2007). The existing research further shows that preventive programs can reduce the use of addictive substances if they include the correction of normative beliefs (Walters, & Neighbors 2005).

Although, primary prevention in school environment is generally considered to be one of the most appropriate prevention strategies, Faggiano, Richardson, Bohrn, Galanti & EU-Dap Study Group (2007) point out that empirical evidence has generally shown weak effectiveness of school prevention programs. It has been found that only those programs that support the development of social skills and use the model of complex social impact are likely to be effective. Finding an effective intervention to prevent drug use is only the first step towards improving health and preventing risk behaviors. It is further necessary to transfer this effective intervention into the conditions of the real environment which requires the monitoring the fidelity during the implementation process (Durlak & DuPre, 2008). A low implementation fidelity of preventive programs may be the main reason why programs that meet all effectiveness criteria and work well in controlled studies fail when implemented in real life conditions (Elliot & Mihalic, 2004).

Fidelity represents the loyalty with which interventions are implemented. It generally reflects the quality of an implementation process and adherence to its principles (James Bell Associates, 2009). According to Dane and Schneider (1989), fidelity consists of five key dimensions: adherence, exposure (dosage), quality of program delivery, participant responsiveness and program differentiation. While all dimensions of fidelity are equally important, we will pay attention specifically to the dimension of exposure. The quality of this dimension is partly reflected in the number of lessons completed, their duration and intensity which may provide important information about the program's fidelity. It is also advisable to obtain feedback directly from the target group to assess the number of hours of exposure (Dusenbury, Brannigan, Falco & Hansen, 2003). Botvin, Baker, Dusenbury, Botvin & Diaz (1995) noted that pupils who underwent the whole intervention reported a lower use of addictive substances compared to those who underwent only a part of it.

To sum up, research on effectiveness of preventive programs should include an assessment of the implementation process, providing a clear quantification of fidelity with which the intervention was implemented (Carroll et al., 2007). Therefore, the present study which addressed the effectiveness of drug use in the prevention program Unplugged and focuses on descriptive normative beliefs pays specific attention to the extent of the exposure of schoolchildren to the intervention.

2. OBJECTIVE

The main aim of our research was to examine the shorter-term and longer-term effect of the school-based drug use prevention program Unplugged on descriptive normative beliefs as well as the moderation effect of gender in these relationships among schoolchildren in Slovakia. The exploration focused on descriptive normative beliefs (DNB) regarding the number of friends who use alcohol and who get drunk at least once a week.

The aim of the study was also to emphasize the importance of measuring the program's fidelity. The attention was focused on the effectiveness of the program Unplugged with respect to normative beliefs among schoolchildren in terms of the number of the lessons of the preventive program they had attended.

3. DESIGN

This study has an experimental design and is based on the evaluation of the effectiveness of the preventive program Unplugged. The Unplugged program was designed by a group of experts who aimed to develop a program suitable for the European school environment (Faggiano et al., 2007). Based on the fact that the Unplugged program is a comprehensive European program which combines effective preventive methods and has been proved to be effective in reducing drug use (Gabrhelík et al., 2012; Jurystová, Gabrhelík & Miovský 2009; Faggiano et al., 2008), we have decided to implement it in Slovakia as well. The verification of the Unplugged program's effectiveness in Slovakia started in the school year 2013/2015 during which it was implemented on weekly basis. The program was carried out by teachers, psychologists, or special educators who underwent a three-day training course. The data were obtained prior to the program implementation (T1), immediately after its implementation (T2) as well as 12 months post implementation (T3).

The Unplugged program is a part of the project EU-DAP "*The European Drug Addiction Prevention Trial*". The universal drug prevention program Unplugged is designed for schoolchildren aged 12 to 14. The Unplugged program is based on the Comprehensive social influence model focusing on the development of specific skills to manage social impact and deconstruct normative beliefs (Kreeft et al., 2009). The next principle used in the program is the Knowledge-attitude-behavior model which is focused on providing information about drugs and their consequences. A combination of these two principles has an impact on the use of addictive substances (alcohol, tobacco and illicit drugs). The goal of the program is to reduce the number of adolescents who start using addictive substances and to delay the first contact with drugs as well as to delay the transition from experimentation to regular use (Charvát, Jurystová & Gabrhelík, 2012). Its essence lies in the combination of these prevention methods which focus on the development of personal and social skills as well as the perception of social norms. Another important objective of the program is the development of interpersonal and intrapersonal skills and in the correction of normative beliefs. The main emphasis is put on normative beliefs about the use and acceptance of addictive substances (Mioviský et al., 2012). The curriculum consists of 12 lectures within the framework of the teaching process.

4. RESEARCH SAMPLE

The program involved 1295 participating schoolchildren (M=11.52; 46.8% boys) from sixty Slovak primary schools. These schools were selected to provide the most representative sample based on the geographical location (27 schools from Western, 15 schools from Central and 18 schools from Eastern Slovakia) and different cities with 6 clusters based on the population size regardless of whether they were private or public schools (Berinšterová, 2015). The participation of schools in this research was voluntary. The schools which have agreed with participation in the study were randomly assigned to an experimental (N=641) or a control group (N=654). The schoolchildren in the

experimental group were exposed to 12 lessons of the program Unplugged. The program was delivered via lectures by teachers or psychologists who underwent a 3-day training course. However, some schoolchildren did not attend all intervention sessions. Based on the amount of lessons they had attended, schoolchildren were divided into two groups: a group which attended less or equal to 10 lessons (EG1; n=112) and more than 10 (EG2; n=329). Two hundred schoolchildren did not indicate the number of attended lessons.

5. METHODS

The data collection was carried out based after the informed consent of the legal representatives of the schoolchildren had been obtained and was carried out via anonymous questionnaires administered in the class.

Descriptive normative beliefs regarding the number of friends who use alcohol and who get drunk at least once a week were measured by single item measures from the questionnaire of the international study ESPAD (Hibell et al., 2011). The wording of the selected items was as follows: *How many of your friends would you estimate drink alcoholic beverages? How many of your friends would you estimate get drunk at least once a week?* The items were rated on a 5-point scale (1 = none, 5 = all). The variables were dichotomized by using the visual binning method for the purposes of binary logistic regression.

Participation in the program Unplugged was monitored through two categories: an experimental group (with intervention) and a control group (without intervention) and through the number of attended lessons (described in the Research sample part).

The Kruskal-Wallis test was used to examine the differences in descriptive normative beliefs between groups differing in the number of attended lessons. In addition, follow-up Mann-Whitney U tests were used to examine differences in normative beliefs between each group. A Bonferroni adjustment to the alpha level was applied with the alpha level being set to .016 for each comparison.

Binary logistic regression was used to examine the effectiveness of the program Unplugged on descriptive normative beliefs with respect to the descriptive normative beliefs before the program implementation (T1). A moderation effect of gender was also explored. A significance level of $p < .05$ was adopted for the analysis.

6. RESULTS

Table 1 presents differences in normative beliefs regarding the number of friends who use alcohol and who get drunk at least once a week between groups differing to the number of attended lessons in T2 (in a shorter term) and T3 (in a longer term).

Table 1.
Descriptive normative beliefs among schoolchildren differing in the number of attended lessons.

Alcohol use	T2			T3		
	N	Median	χ^2	N	Median	χ^2
EG1	111	1.00	3,579	76	2.00	12,306*
EG2	316	1.00		233	1.00	
CG	494	1.00		439	2.00	
Drunkness						
EG1	111	1.00	2,431	76	1.00	12,802*
EG2	318	1.00		234	1.00	
CG	491	1.00		438	1.00	

T2: Immediately after the program implementation; T3: 12 months after the program implementation;
EG1: Experimental group - attended less or equal to 10 lessons; EG2: Experimental group - attended more than 10 lessons; CG: Control group; $p < 0.05^*$

The Kruskal-Wallis test confirmed a significant difference in normative beliefs between three groups in T3. To identify group differences the follow-up Mann-Whitney U-Test with application of Bonferroni adjustment to the alpha values ($0.05/3=0.016$) was used. It means that the significance level of $p < 0.016$ was used to assess the statistical significance. The schoolchildren who attended more than 10 lessons (EG2) scored significantly lower in normative beliefs regarding the number of friends who use alcohol when compared the control group (CG), $U=44332.5$, $z=-3.132$, $p < 0.016$, $r=0.12$ and also scored significantly lower in normative beliefs regarding the number of friends who get drunk in comparison to the control group, $U=46085.5$, $z=-2.822$, $p < 0.016$, $r=0.11$. EG2 also had lower normative beliefs regarding the number of friends who use alcohol when compared with the schoolchildren who attended less or equal to 10 lessons (EG1), $U=7177.5$, $z=-2.766$, $p < 0.016$, $r=0.16$. The schoolchildren in EG1 scored significantly lower in comparison to the control group but only in normative beliefs regarding the number of friends who get drunk, $U=14192.5$, $z=-2.644$, $p < 0.016$, $r=0.12$.

Table 2 presents the results of the binary logistic regressions concerning the shorter and longer-term effect of the Unplugged in descriptive normative beliefs regarding alcohol use and drunkenness.

Table 2 is divided into two parts. The first part presents models of logistic regression where participation in the Unplugged was monitored through two categories - experimental and control (reference) group. The results revealed that there was no significant main effect of either the program Unplugged or gender at T2 (shorter-term) and T3 (longer-term) for descriptive normative beliefs regarding the number of friends who use alcohol and who get drunk at least once a week. The moderation effect of gender at T2 was not confirmed. However, a significant moderation effect of gender was found at T3. The girls in the experimental group had a lower level of descriptive normative beliefs regarding the number of friends who use alcohol in comparison with the boys. The whole regression model explained 10.1% of the variance and correctly classified 85.2% of the cases.

Similar results also showed that girls in the experimental group had a lower level of descriptive normative beliefs of friends who get drunk at least once a week in comparison with the boys. The regression model explained 11.3% of the variance and correctly classified 77.0% of cases.

The second part of Table 2 presents models of logistic regressions where participation in Unplugged was monitored through three categories - experimental group which attended less or equal to 10 lessons (EG1); experimental group which attended more than 10 lessons (EG2); and a control (reference) group.

Table 2.
The binary logistic regression models of descriptive normative beliefs regarding the number of friends who use alcohol and who get drunk at least once a week.

	Alcohol use			R ²	Drunkness			R ²
	OR	95% C.I			OR	95% C.I		
T2								
DNB T1	6.973** *	5.173	9.399	23.3%	8.562** *	5.581	13.138	17.1%
Unplugged	1.022	0.768	1.361		0.969	0.664	1.415	
Gender	0.968	0.738	1.317		0.726	0.497	1.061	
T3								
DNB T1	3.178** *	2.144	4.712	10.1%	4.299** *	2.694	6.860	11.3%
Unplugged	1.166	0.677	2.007		0.750	0.461	1.219	
Gender	0.939	0.555	1.588		0.995	0.643	1.541	
Unplugged*Gender	0.347*	0.154	0.780		0.428*	0.214	0.859	
T2								
DNB T1	0.141** *	0.103	0.192	23.6%	8.251** *	5.328	12.776	17.3%
EG1	1.130	0.706	1.810		0.876	0.462	1.660	
EG2	1.104	7.99	1.525		1.239	0.822	1.868	
Gender	0.952	0.704	1.287		1.390	0.947	2.042	
T3								
DNB T1	0.313** *	0.204	0.480	10.6%	5.017** *	3.034	8.297	12.6%
EG1	1.311	0.699	2.456		0.242*	0.081	0.720	
EG2	0.420**	0.243	0.725		0.368**	0.206	0.659	
Gender	1.433	0.935	2.195		0.998	0.643	1.549	
EG1*Gender	-	-	-		1.545	0.339	7.050	
EG2*Gender	-	-	-		2.506*	1.096	5.732	

T2: Immediately after the program implementation; T3: 12 months after the program implementation; DNB T1: Descriptive normative beliefs before the program implementation; OR: odds ratio; CI: confidence interval; EG1: Experimental group which attended less or equal to 10 lessons; EG2: Experimental group which attended more than 10 lessons; Reference group = control group; p<0.001***, p<0.01**, p<0.05*

There was no shorter-term effect of the program on either the normative beliefs about alcohol or the normative beliefs about the drunkenness in terms of the number of lessons the pupils had attended. Furthermore, the main or moderating effect of the gender was not confirmed.

However, the longer-term effectiveness of the program Unplugged was confirmed. In the case of normative beliefs about alcohol, it was shown that pupils who attended less than 10 lessons had lower normative beliefs than the control group. The whole regression model explained 10.6% of the variance and correctly classified 85.5% of the cases. The main or moderating effect of the gender was not confirmed. In the case of normative beliefs about drunkenness, it was shown that both experimental groups had lower normative beliefs compared to the control group. Like in the previous case, the main effect of gender was not confirmed. However, the moderation effect of gender was found. The girls in the experimental group who had attended more than 10 lessons had lower normative beliefs than boys in this group. The whole model explained 12.6% of the variance and correctly classified 77.2% of the cases.

7. DISCUSSION AND CONCLUSION

At the first glance, based on the results of this study, it may seem that the Unplugged program is not effective from a shorter or longer-term perspective in correcting normative beliefs about alcohol use and drunkenness. This proved to be true when we compared the experimental and control groups when no attention was paid to the fidelity- quality of the implementation. However, when we assessed the effectiveness of the preventive program in terms of fidelity it turned out that the program had a longer-term effect. This result is consistent with other studies that indicate that the effectiveness of the preventive program has only been demonstrated after taking into account the quality of the implementation (Bast, Annette, Ersboll & Due 2018; Turhan, Onrust, Ten Klooster & Pieterse, 2017). We have especially focused on the number of lessons that students had attended and used it as an indicator of program's fidelity. The results have shown that schoolchildren who attended the whole intervention had a lower level of normative beliefs (regarding the number of friends who use alcohol and who get drunk) in comparison with control group and also had lower level of normative beliefs (regarding the number of friends who use alcohol) in comparison with the schoolchildren who had not attended all the lessons 12 months after the program implementation. The results also show that the number of attended lessons is a significant predictor of normative beliefs in long-term. Based on our findings it could be stated that completing the whole preventive program is important for its effectiveness (Bloomquist et al., 2013), but some studies suggest that the impact of the number of attended lessons on the effectiveness of the program is not unambiguous (Espada, González, Orgilés, Lloret & Guillén-Riquelme, 2015; Cuijpers, 2002).

The results also show a significant interaction effect between gender and participation in the program Unplugged. The girls in the experimental group had lower descriptive normative beliefs regarding the number of friends who use alcohol and who get drunk at least once a week in comparison to the boys. It means that the Unplugged program influences the descriptive normative beliefs of girls more than boys. Our conclusion is consistent with previous research (Gabrhelík et al., 2012; Vigna-Taglianti et al., 2009) confirming the gender differences in the effectiveness of the Unplugged.

Monitoring and evaluating the implementation quality of preventive programs is absolutely necessary in evaluating its effectiveness. Sufficient fidelity of the implementation is essential for accurate interpretation of the results in any intervention. The

credibility of the program affects not only the primary behavioural outcomes such as substance abuse (Bast et al., 2018) but also the attitudes and beliefs (Pettigrew et al., 2015). Understanding how program's fidelity supports its effectiveness can be decisive in improving interventions (Dusenbury, Brannigan, Falco & Hansen, 2003).

There are some limitations to this study that should be mentioned. Multiple item indicators would have been more suitable. The limit of research lies in the use of single-item measures to measure normative beliefs in this age group. Another limit is the use of the visual-binning method for the dichotomization of the dependent variable. In the future research, it is important to take into account other indicators of fidelity because the exposure to a program indicated by the number of attended lessons (Ennett et al., 2011) may be an insufficient indicator of the implementation fidelity and additional variables should be considered. Therefore, in the next verification of the effectiveness of the preventive program, it is necessary to include methods for the detection of other fidelity components such as the quality of implementation of the individual lessons of the program, the fulfilment of the objectives of the program, the involvement of the lecturers and their characteristics or the approach of the target group towards the program which also greatly affects the quality implementation.

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ADDITIONAL READING

European drug addiction prevention trial: <https://www.eudap.net/>

KEY TERMS & DEFINITIONS

Unplugged: European universal drug prevention program

Fidelity: quality of implementation

Normative beliefs: perceived behavioural expectations. Three groups of normative beliefs: descriptive, injunctive and personal norms.

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Chapter #26

THE PREDICTORS OF SMOKING STATUS AMONG SLOVAK SCHOOL CHILDREN

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ABSTRACT

The aims of this study were to explore (i) the incidence of risk factors associated with the change of the current smoking status from a non-smoker to a smoker among Slovak schoolchildren, (ii) the effect of the European school-based social influence intervention program *Unplugged* on the change in smoking status among schoolchildren using follow-up testing, (iii) the direct and indirect effects of parental knowledge change regarding children's behavior on the change of the current smoking status through the change in normative beliefs, as well as through the change in availability of cigarettes when an 18 month period was considered. The most powerful predictors of change in smoking status were a higher level of normative beliefs and availability of cigarettes. The effect of the *Unplugged* intervention on the change in pupils' smoking status was not found. The indirect effect of the decrease in parental knowledge on the change in smoking status through the increase in normative beliefs, as well as through the increase in the availability of cigarettes was found when the period between T1 and T2 was considered.

Keywords: smoking, normative beliefs, availability of cigarettes, parental knowledge, intervention program "Unplugged".

1. INTRODUCTION

Schoolchildren's smoking and the investigation of the risk and the protective factors of schoolchildren's smoking is an important matter and a challenge for public health (Cousson-Gélie et al., 2018) and prevention science. Slovakia is one of the European countries with the highest lifetime prevalence rates of smoking and a country with high smoking rates during the last 30 days for girls (The ESPAD group, 2016). There is a clear need for the implementation of evidence-based prevention programs among Slovak schoolchildren.

One of the current prevention programs, *Unplugged*, is a school-based social influence intervention program and should be the prevention project with the best evidence of effectiveness in European studies according to the results of a systematic review of school-based alcohol and other drug prevention programs (Agabio et al., 2015). *Unplugged* addresses personal and social skills, knowledge and normative beliefs. Its effectiveness has been evaluated through a randomized trial involving 7,079 pupils from seven European countries and *Unplugged* was found to be effective in reducing smoking (Vigna-Taglianti et al., 2014).

This study aims to use follow-up testing to explore the effectiveness of the Slovak adaptation of the *Unplugged* intervention program which mainly focuses on the change in smoking status. It explores the incidence of risk factors associated with the change of the

current smoking status from a non-smoker to a smoker among Slovak schoolchildren during an 18-month time period.

Our previous study (Orosova et al., 2015) focused on the investigation of the short-term effect of Unplugged, three months after program implementation, and on the incidence of risk factors associated with the increase in the number of smokers among Slovak schoolchildren. It confirmed, that smoking was more common among boys, particularly among those with a higher level of normative beliefs, with a higher availability of cigarettes, and among those with a lower level of parental knowledge at the pre-test. Interestingly, normative beliefs were found to be the single variable which explained the increase in the number of smokers at the post-test (three months after the *Unplugged* had been implemented). This means that repeated measurements have demonstrated a significant increase in the number of smokers during a short period of time and emphasized the crucial role of normative beliefs in schoolchildren's smoking status (Orosova et al., 2015). Surprisingly, other explored variables such as risk perception concerning smoking, mother's/father's smoking or perceived parental approval were not found to be related to the increase in the number of smokers among Slovak schoolchildren (Orosova et al., 2015). Based on the results of this previous investigation, this study explored a longer period of time effect of the Unplugged program (18 months after the Unplugged program implementation) and contributions of normative beliefs, availability of cigarettes, parental knowledge, as well as intrapersonal skills which Unplugged addressed (self-control, novelty seeking) on the change in smoking status among schoolchildren.

Normative beliefs represent a central construct in a number of theories in social psychology (Thrul, Lipperman-Kreda, Grube, & Friend, 2014). Descriptive and injunctive norms contribute to the understanding and the prediction of smoking (Mead, Rimal, Ferrence, & Cohen, 2014). This study focused on descriptive norms which can be defined in terms of the perceived prevalence of a particular behavior, the perceptions of the extent to which significant others engage in this behavior such as the perception of an adult's or peer's smoking prevalence (Lochbuehler, Schuck, Otten, Ringlever, & Hiemstra, 2016, Thrul et al., 2014, Mead et al., 2014). The correction of the misperception of the extent to which significant others engage in risky behavior is an important protective component of any prevention program based on social norms (Chung & Rimal, 2016). It has been found that a community-based approach may contribute to improving the understanding of smoking behavior among adolescents (De Vries, 1995). Furthermore, the correction of normative beliefs may be beneficial, especially among schoolchildren who have not yet tried smoking prior to the prevention program implementation (Bavarian, Duncan, Lewis, Miao & Washburn, 2015). The investigation of the descriptive normative beliefs as predictors of the change of the current smoking status from a non-smoker to a smoker during an 18-month period was one of the main aims of this study.

It is well-known that smoking among schoolchildren is associated with various factors and availability of cigarettes is one of the most important environmental factors (Khodayari et al., 2018). The accessibility of cigarettes is also important among adolescents in maintaining their social norm for smoking (Bigwanto, Mongkolcharti, Peltzer, & Laosec, 2017).

Previous studies have further provided evidence for the essential role of parents in socialization, the importance of house rules, specific psychosocial familial determinants, parental control, parental monitoring/supervision as protective factors against the onset of smoking among schoolchildren (Wellman et al., 2016, Zaborskis, & Sirvyte, 2015, Hiemstra et al., 2014, De Leeuw, Scholte, Sargent, Vermulst, & Engels, 2010). A link between general and smoking-specific parenting practices has been suggested as an important research topic

of smoking prevention (Den Exter Blokland, Hale, Meeus, & Engels, 2006). A review of research regarding the reasons for children's smoking (Williams, Knight, & Wills, 2015) has confirmed the importance of low parental monitoring and ineffective parenting as risk factors of adolescents' smoking.

Finally, associations between factors such as self-control, social self-control as well as novelty seeking and a higher likelihood of initiation smoking has been reported in previous studies (Stautz, Zupan, Field, & Marteau, 2017, Sussman et al., 2016, Pokhrel, Sussman, & Stacy, 2014).

Therefore, a further aim of this study was the investigation of these variables as predictors of the change in smoking status among Slovak schoolchildren using follow-up testing.

2. OBJECTIVES

The aims of this study were to explore (i) the incidence of risk factors associated with the change of the current smoking status from a non-smoker to a smoker among Slovak schoolchildren, (ii) the effect of the European school-based social influence intervention program *Unplugged* on the change in smoking status among schoolchildren using follow-up testing, (iii) the direct and indirect effects of the change in parental knowledge on the change of the current smoking status through the change in normative beliefs, as well as through the change in availability of cigarettes during an 18 month time period.

3. METHODS

3.1. Sample and study design

The study was carried out as a cluster randomized controlled trial with data collection conducted immediately before program implementation (T1) and at 18 months after program implementation (T2). The program involved 1295 participating schoolchildren (mean age of 11.52 years; 46.8% boys). The sampling used a list of primary schools in Slovakia in 2011, retrieved from the Institute of Information and Prognosis of Education (total 2,202 schools). Sixty elementary schools participated in the study, 30 schools were allocated to the experimental group (n=641) and 30 served as the control group (n=654). In each school, a single class of six graders was involved in this research. Randomization was done by using a web application created for the purposes of this research. Schools were selected from different cities based their geographical location in Eastern, Central and Western Slovakia with 6 clusters based on the population size. The official criteria defining towns and villages were used according to the Statistical Office of the Slovak Republic. The experimental group was exposed to the program *Unplugged*. The school-based prevention program *Unplugged* targets students 12–14 years of age and aims to address both experimental and regular use of alcohol as well as the use of tobacco and illicit drugs. This program consists of 12 lessons which were carried out once a week during the school year 2013/2014 (September – December) in this study. The program was delivered via lectures by teachers or psychologists who underwent a 3-day training course during which they trained for the program implementation in each lesson using class management techniques, Teacher's handbook and Student's workbook. The trainers of the training course were trained by the European developers, the master trainers of the EU-DAP Intervention Planning group.

3.2. Method

The measures included in the present study were:

Cigarette smoking. The schoolchildren who reported smoking on at least one occasion during the past 30 days were identified as smokers at every follow-up.

The availability of cigarettes was measured by the question “How difficult do you think it would be for you to get cigarettes if you wanted?” The item was assessed on a 6-point scale and for the data analyses this was recorded from 1 – Impossible to 5 – Very easy (the answer “Don’t know was excluded from analyses in the present study).

Descriptive normative beliefs, the perceived norm for peer cigarette smoking was measured by the question „According to your estimation, how many of your friends smoke cigarettes?” This item was assessed on a 5-point scale from 1 – Nobody to 5 – Everybody.

Parental knowledge regarding children’s behavior was measured by the question “Do your parents know where you spend Saturday nights“. The item was assessed on a 4-point scale from 1-Always know to 4 – Usually don’t know.

To assess self-control, a Slovak translation of the short version of the original Self-control scale developed by Tangney, Baumeister, and Boone (2004) was used (Finkenauer, Engels, & Baumeister, 2005). The short version consisted of 11 items (Cronbach alpha=0.73). “*I am lazy, I have a hard time breaking bad habits, I wish I had more self-discipline*“ is an example item of the Self-control scale. Response categories ranged from 1-Not at all to 5-Very much.

A Slovak translation of the Novelty seeking factor of The Adolescent Resilience Scale was used (Oshio, Kaneko, Nagamine, & Nakaya, 2003). The Novelty seeking factor consisted of 7 items (Cronbach Alpha= 0.70). „*I seek new challenges*“ is an example item of The Novelty seeking factor. Respondents were asked to choose their rating on a scale using the anchors of 1-Definitely yes to 5-Definitely no.

3.3. Statistical analyses

In addition to descriptive measures, logistic regression models and a Sobel test were used for the data analyses.

4. RESULTS

At the baseline (T1) 2.4% of pupils were reported to be smokers (Table 1). When both waves were considered (T1-T2) 90.4% of respondents remained as non-smokers, 7.8% became smokers, 1.1% stopped smoking and 0.8% were smokers throughout (Table 1). The descriptive characteristics in the measured continuous variables are presented in Table 2. A higher level of availability of cigarettes, normative beliefs, and novelty seeking was found at a follow-up test (at 18 months after the baseline). A lower level of parental knowledge regarding children’s behavior and self-control was found at the follow-up.

Table 1.
Smoking status among Slovak schoolchildren.

The baseline test (T1)		smokers	non-smokers		
N		28	1157		
Percent		2.40%	97.6%		
The baseline test (T1 vs. The follow- up test (T2)		became smokers	smokers	non-smokers	ex-smokers
N		59	6	685	8
Percent		7.80%	0.80%	90.40%	1.0%

Table 2.
Descriptive characteristics of the sample in the continuous variables.

	Mean	SD
Availability of cigarettes		
T1	1.74	1.26
T2	2.96	1.64
Normative beliefs		
T1	1.51	0.79
T2	1.98	0.99
Parental knowledge		
T1	1.41	0.80
T2	1.50	0.88
Self-control		
T1	38.25	6.26
T2	37.04	6.51
Novelty seeking		
T1	24.26	3.81
T2	23.62	3.68

Notes: The baseline test (T1), The follow- up test (T2)

Table 3.
The predictors of change in smoking status among Slovak schoolchildren.

	Sig.	Exp(B)	95% C.I.for EXP(B)	
T1			Lower	Upper
Unplugged	0.558	0.541	0.070	4.213
Gender	0.607	1.557	0.288	8.423
Availability T1	0.003	2.405	1.346	4.298
Normative beliefs T1	0.003	3.293	1.494	7.259
Parental knowledge T1	0.455	1.351	0.613	2.978
Self-control T1	0.230	1.075	0.955	1.210
Novelty seeking T1	0.029	0.736	0.559	0.970
R ²		0.47		
	Sig.	Exp(B)	95% C.I.for EXP(B)	
T1-T2			Lower	Upper
Unplugged	0.405	1.594	0.532	4.770
Gender	0.469	0.665	0.220	2.007
Availability T2	0.006	2.866	1.344	6.112
Normative beliefs T2	<0.001	2.739	1.565	4.792
Parental knowledge T2	0.068	1.549	0.968	2.478
Self-control T2	0.063	0.911	0.826	1.005
Novelty seeking T2	0.135	0.868	0.721	1.045
R ²		0.53		

Notes: before the program implementation (T1), at 18 months after the program implementation (T2)

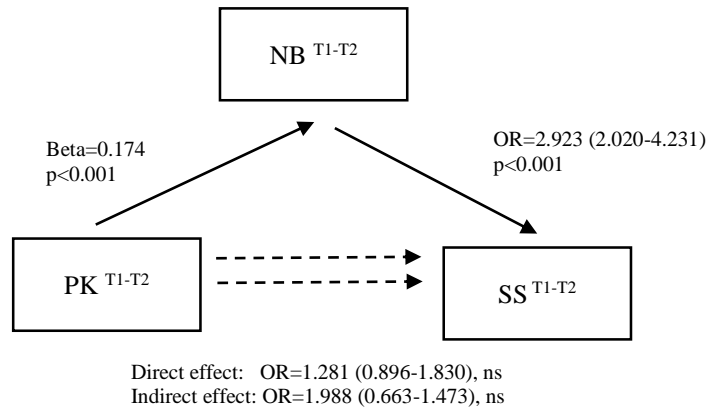
The significant predictors of smoking at the baseline (T1) were a higher level of normative beliefs, an availability of cigarettes, and novelty seeking (Table 3).

The significant predictors of the change in smoking status from being a non-smoker (T1) to becoming a smoker (T2) were a higher level of normative beliefs and the availability of cigarettes (Table 3).

The effect of the *Unplugged* intervention on the change in pupils' smoking status was not found (Table 3).

Finally, we used regression models and a Sobel test to assess the direct and indirect effects of parental knowledge change on the change of the current smoking status through the change in normative beliefs, as well as through the change in availability of cigarettes when the explored time period between T1 and T2 was considered (Figure 1 and 2).

Figure 1.
Diagram of the indirect effect of parental knowledge change (PK^{T1-T2}) on the change of smoking status (SS^{T1-T2}) through the change in normative belief (NB^{T1-T2}).

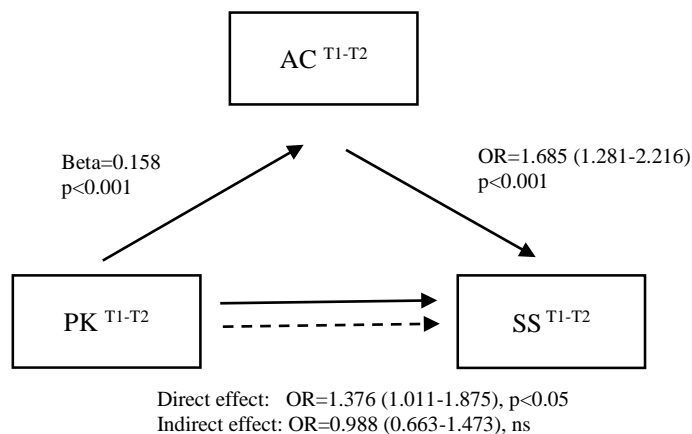


Notes: before the program implementation (T1), at 18 months after the program implementation (T2). All paths are adjusted for the change of availability of cigarettes (AC^{T1-T2}), but not displayed for the parsimony of the figure.

The only indirect effect ($Z=3.486$, $p<0.05$) of the decrease in parental knowledge on the change in smoking status (from being a non-smoker to becoming a smoker) through the increase in normative beliefs was found when the period between T1 and T2 was considered (Figure 1).

The direct and indirect effects ($Z=2.604$, $p<0.05$) of the decrease in parental knowledge on the change in smoking status through the increase in availability cigarettes was found when the period between T1 and T2 was considered (Figure 2).

Figure 2.
Diagram of the indirect effect of parental knowledge change (PK^{T1-T2}) on the change of smoking status (SS^{T1-T2}) through the change in availability of cigarettes (AC^{T1-T2}).



Notes: before the program implementation (T1), at 18 months after the program implementation (T2). All paths are adjusted for the change of normative belief (NB^{T1-T2}), but not displayed for the parsimony of the figure.

5. DISCUSSION AND CONCLUSION

The results of this study are consistent with previous findings which have suggested that the smoking of others, more than any other characteristic in the environment, has a significant effect on individuals' formation of norms and consequently manifests in behavior (Mead et al., 2014). The impact of media, peers, parents, and other important others via observational modeling and norm formation can improve the understanding of smoking behavior (Cousson-Gélie et al., 2018, Mead et al., 2014). This study has found that the most powerful predictors of the change in smoking status are higher levels of normative beliefs and the availability of cigarettes when an 18-month period was explored. These results are consistent with previous findings which have revealed the importance of tobacco advertising, perceived peer and family smoking status as well as highlighting the relevance of using the social norms approach to changing schoolchildren's perception of tobacco usage and engaging parents in intervention programs (Mbongwe, Tapera, Phaladze, Lord, & Zetola, 2017, Sheikh, Vadera, Ravey, Lovatt, & Kelly, 2017).

To sum up, the results of this study have confirmed the indirect effect of the decrease in parental knowledge regarding children's behavior on the change in smoking status (from being a non-smoker to becoming a smoker) through the increase in descriptive normative beliefs. Secondly, the study has provided evidence for the direct and indirect effects of the decrease in parental knowledge on the change in smoking status through the increase in availability of cigarettes. Parental knowledge in this study was measured by the question "Do your parents know where you spend Saturday nights?" and this means that the decrease in parental knowledge regarding the place where the child spends his/her free time with a potentially higher level of risky behavior incidence is related to an increase in descriptive normative beliefs and availability of cigarettes. These results extend the findings of previous studies. The association between parental knowledge about the smoking of their child and

his or her friends and the reduced likelihood of smoking initiation was confirmed (Den Exter Blokland et al., 2006). It was found „...that parental smoking-specific communication is associated with adolescent smoking directly but also indirectly by influencing the friends will associate with.“ (De Leeuw, Scholte, Harakeh, van Leeuwe, & Engels, 2008, p. 1229).

The importance of parental knowledge regarding a child's behavior and the importance of descriptive normative beliefs in relation to the perceived norms for peer cigarette smoking and availability of cigarettes has also been supported by the findings based on focus group discussions (Sheer & Mao, 2018). The results from group discussion research indicate a high prevalence of smoking initiation among peers under peer normative pressure (Sheer & Mao, 2018). The quality of parent - child communication, constructive and respectful parent - child communication about smoking, positive parenting, parental knowledge regarding child's behavior and her or his life among peers, friends, schoolmates supports a reduction in cigarette initiation and encourages cigarette refusal (Sheer & Mao, 2018, Talip, Kifli, Murang, & Naing, 2016, De Leeuw, Scholte, Vermulst, & Engels, 2010). A constructive and respectful parent - child communication can be considered as one of the important sources of parental knowledge.

This study highlights the importance of normative education not only among schoolchildren but also among parents. In particular, the ability of parents to be flexible, creative, and careful about proactively supporting the development of appropriate norms and beliefs about smoking behavior of their own child and child's peer group has a preventive and protective power.

However, the effect of the *Unplugged* intervention which focuses on the development of interpersonal and intrapersonal skills and correction of false normative beliefs and attitudes (Thomas & Perera, 2006 in Miovsky et al., 2012, p. 213) on the change in Slovak pupils' smoking status was not found in this study.

To conclude, the presented findings generally support the results of our previous study (Orosova et al., 2015) which did not confirm the short-term effect of the *Unplugged* program on Slovak schoolchildren's smoking. Teachers' perception of the importance of the *Unplugged* intervention as well as the implementation fidelity (Jurystova, Orosova, & Gabrhelik, 2017, Wang et al., 2015) may constitute a certain limitation of this investigation which should be considered. In order to improve this shortcoming, it is important that *Unplugged* is implemented with appropriate fidelity measures (Jurystova et al., 2017) which may improve the understanding of health-related behavior among schoolchildren (Middlestadt, Macy, & Geshnizjani, 2014).

The findings show that it is important to examine the effectiveness of the program which would be supplemented with other supportive prevention activities. Furthermore, more attention should be paid to the implementation fidelity when examining the effectiveness of the program.

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Chapter #27

PERSONALITY TRAITS AND LOCUS OF CONTROL AS PREDICTORS OF STUDENTS' SELF-EFFICACY

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ABSTRACT

The research problem was to determine whether the students' self-efficacy can be predicted based on their personality traits and locus of control. The sample consisted of 200 high school students (100 females), aged 18-19. Personality traits were defined in accordance with the Big Five plus Two model (Smederevac, Mitrović, & Čolović, 2010) supposing the existence of seven broad personality dispositions: extraversion, neuroticism, openness to experience, conscientiousness, aggressiveness, positive valence, negative valence. The LOC scale (Bezinović, 1990) was used to determine whether a person believes that he/she is responsible for his/her behavior and actions or that is due to external circumstances. Self-efficacy (social, academic, and emotional) was measured by the questionnaire SEQ-C (Muris, 2001). The data were processed by the multiple regression analysis procedures, firstly including personality traits as predictors and secondly adding locus of control in the model. Extraversion and locus of control were shown as significant predictors of social self-efficacy of students. Conscientiousness, negative valence, openness and locus of control were predictors of students' academic self-efficacy. Emotional self-efficacy of students could be predicted by positive valence and aggressiveness. The results showed that personality characteristics, especially traits, were better predictors of social and academic self-efficacy than of emotional one.

Keywords: self-efficacy, personality traits, locus of control, students, regression analysis.

1. INTRODUCTION

Generally speaking, self-efficacy refers to the ability to achieve desired results. The meaning of this notion is determined by the words that are at its core: English *self* + Latin *efficax* i.e. effective, from *efficere* that means to accomplish, from *facere* to do (Colman, 2006). The concept became widely known in the 1980s and 1990s, largely through the influence of psychologist Albert Bandura and his social-cognitive theory of behavioral change (Bandura, 1977; 1997). Self-efficacy also refers to the person's confidence in his/her own capabilities of organizing and executing the actions needed to achieve a specific outcome (Larsen & Buss, 2002). The actual abilities, although necessary, are not sufficient precondition to perform certain action or to execute a specific task. For a successful functioning, it is necessary to have a belief that the existing abilities can be used effectively. Bandura emphasized that it is important to distinguish the real abilities of a person from what he/she believed and thought about his/her abilities and possibilities. It was the reason to introduce a distinction between notions of someone's real efficacy and perceived self-efficacy that includes beliefs about one's ability or competence to bring about interested results.

According to Bandura's theory, self-efficacy is considered as the crucial mechanism of behavioral change. It produces cognitive event that initiate behavior intended to achieve certain goal. On the other hand, this cognitive event is influenced by experience of mastery

arising from previous effective performance. Also, the sources of self-efficacy beliefs are vicarious experiences, verbal persuasion and emotional states. It should be kept in mind that there is an interaction between personal (cognitive) factors, individual's behavior and environmental conditions (Bandura, 1997). Individual's beliefs in his own efficacy determine how environmental conditions will be perceived and evaluated. Depending on this perception, certain activities and amount of effort will be initiated. Bandura proved that people tend to avoid activities that exceed their capabilities, while they undertake actions that they believe are consistent with their own capabilities. Such tendencies could be obtained in teachers as well. For example, there are research findings (Jaggernauth & Jameson-Charles, 2016) showing that lower self-efficacy in primary school math teachers correlates with higher avoidance of dealing with mathematics.

Bandura (1999) emphasizes the importance of self-efficacy as a mediator of a cognitive activity. People who have a strong sense of self-efficacy attribute their failure to an insufficient investment of effort and are more inclined to invest even greater efforts in overcoming difficulties. They are manifesting a higher cognitive ingeniousness, flexible strategy and efficiency in handling the external environment. People who have a doubt in their own effectiveness in confronting difficulties (because their perfectionism or past failures) reduce the invested effort and give up easily. They visualize a failure scenario that influences the behavior leading to poor outcomes.

Self-efficacy has firstly been understood as a generalized construct. Having in mind the complex structure of self-efficacy and its relation to individual's perception of his/her own efficacy in different domains of functioning or different tasks fulfilling, recent conceptions hold that concept as multidimensional. Some authors (Bandura, 1997; Muris, 2001) consider it to be a multifaceted concept including a differentiated set of self-beliefs linked to variety of personal functioning domains. The practical consequence was that the researchers in this field started making instruments for assessing self-efficacy in certain domains (Bandura, 2006; Muris, 2001; Skaalvik & Skaalvik, 2007; Smith & Betz, 2002). Although self-efficacy is differentiated, specific efficacy beliefs may co-vary because successful performance in different domains is partly managed by higher-order self-regulatory skills.

2. SELF-EFFICACY AND RELATED PSYCHOLOGICAL CONSTRUCTS IN EDUCATIONAL SETTINGS

In this part of the study, some factors related to the effectiveness and experience of self-efficacy in the educational context will be mentioned. Given the complexity of the self-efficacy construct and its implications for behavior, as mentioned above, different directions of study are possible. This will not be a systematic overview of recent studies in the field. The intention is to make a brief overview of some research findings reported during the last decade.

It is important to point out several key assumptions about self-efficacy. Firstly, self-efficacy is considered to be a multi-dimensional construct, and that is why it was decided to examine a few domains of self-efficacy instead of dealing with generalized self-efficacy. Also, previous studies showed that dimensions of self-efficacy are associated with some inner and stable characteristics of a person, which have potential to govern his/her behavior (Djigić, Stojiljković, & Dosković, 2014; Stojiljković & Todorović, 2017). Considering all above mentioned, it is clear that self-efficacy could be based both on personality traits and real abilities.

According to Bandura, for a successful functioning, it is necessary that a person has a belief that he/she can use his/her existing abilities (and dispositions) effectively. In relation to that, it is worthy to emphasize that individual's self-concept, self-esteem and other constructs describing the way person is seeing oneself, play an important role in explaining overall behavior. This is especially true in the academic context and in explaining the connection between the image of oneself, experiencing one's own efficiency and real academic achievement (Gigić, Zlatanović, Stojiljković, & Đigić, 2016; Hamacek, 1995; Zlatković, 2007).

As Bandura reported, people who doubt their own effectiveness in confronting difficulties give up easily and thus may become some kind of 'looser'. That could lead to learned hopelessness. It is why is important to study the role of factors such as optimism and pessimism, and their relationship with self-efficacy and academic achievement (Gigić et al., 2016).

Another construct included in this research is the locus of control that refers to the extent to which people believe they can control the events in their lives, and what factors they attribute to the success or failure of any significant activity (Havelka, 1992). Kirkpatrick, Stant, Downes and Gaither (2008) define it as a dimensional construct representing the degree to which individuals perceive reinforcing events in their lives to be the result of their own actions or fate.

Locus of control can be internal or external. In psychology it is described as part of the attribution theories, and it includes a dimension that relates to where is the factor that controls the outcome of an event (Havelka, 1992). According to these theories, the cause of success/failure can be internal, in the person and his/her dispositions, or external, in the situation and circumstances, or maybe to something that is totally out of person's control, such as fate or destiny. Individuals with internal locus of control believe that the outcomes of their actions are result of their own abilities and efforts. They believe that hard work leads to positive outcomes and thus to efficacy. Rotter (1975) considers they have high motivation for achievement and low outer directedness. On the other hand, externally oriented persons consider their outcomes to be beyond their control and attribute them to the external circumstances. They blame others rather than themselves for any negative outcome. Also, locus of control could be considered to be one of functional mechanisms that define the style of cognitive control, which represents one component of individual's cognitive style (Nosal, 2010).

3. RESEARCH PROBLEM AND OBJECTIVES OF THE STUDY

Having in mind the core characteristics of self-efficacy, it could be expected that some stable characteristics of the personality are related to it, and previous findings also suggested their inter-relatedness. The intention was to apply the seven-factor model of personality developed in Serbia, as well as to examine the role of locus of control that has a profound influence on people's behavior.

Generally, this study was aimed to investigate the relationship between personality traits, locus of control and self-efficacy of the students. The research was designed as a correlational study. Precisely, the research problem was to determine whether certain domains of students' self-efficacy can be predicted based on their personality traits and locus of control. So the research questions were posed and the main objectives were to determine:

a) Whether particular domains of students' self-efficacy correlate with their personality traits and locus of control;

- b) Whether certain personality traits are statistically significant predictors of social, academic and emotional aspects of students' self-efficacy;
- c) Whether the locus of control (internal - external) is statistically significant predictor of social, academic and emotional aspects of students' self-efficacy;
- d) What students' characteristics are the best predictors of certain domains of their self-efficacy?

3.1. Method

3.1.1. Participants

The sample is consisted of 200 four-grade high school students, aged 18-19 years (100 males and 100 females). One hundred students attended grammar school (science and socio-linguistic module, 50+50 respectively), and the others attended vocational public schools (technical and medicine, 50+50 respectively) in Serbia. Participants live primarily with both parents in complete families; their place of residence is mainly town (77.5%).

3.2. Variables and instruments

Personality traits are considered to be time-stable inner dispositions of a person that are able to initiate and direct person's thinking, emotions and behavior. The most widely accepted theoretical model, based on the psycho-lexical approach, stands out five broad universal dimensions of personality.

In this study personality traits were defined in accordance with the Big Five plus Two model developed in Serbia (Smederevac, Mitrović, & Čolović, 2010). Authors considered that personality can be described by seven general dispositions, and five of them are similar to the widely known Five-factor model (Digman, 1990; John & Srivastava, 1999). Smederevac et al. (2010) identified the following seven personality dimensions: 1) *Neuroticism* (N) which refers to the negative affect, such as sadness, depression and anxiety; 2) *Extraversion* (E) that refers to sociability and cordiality, and to positive affect too; 3) *Openness to experience* (O) which refers to intellectual curiosity, open-mindedness and novelty seeking; 4) *Aggressiveness* (A) which indicates person's feelings of anger, "difficult character", obstinacy and uncompromising attitude; 5) *Conscientiousness* (C) that refers to person's tendency to be self-disciplined, persistent, showing strong sense of responsibility to commitments; 6) *Positive valence* (PV) which refers to positive self-evaluation, feeling of superiority and narcissistic tendencies; and 7) *Negative valence* (NV) that indicates a person's negative self-image and also the inclination to manipulate others. Positive and negative valence are defined as self-evaluative dimensions and their content is similar to the concept of self-esteem.

Smederevac et al. (2010) developed two versions of five-point Likert type questionnaire to measure these personality traits. For our research purposes its short version, consisted of 70 items, was used. Reliability of the instrument was good: Cronbach Alpha coefficients ranged from .79 to .88 for the subscales.

Locus of control is a construct that refers to the extent to which people believe they can control the events in their lives, and what factors they attribute to the success or failure of any significant activity (Havelka, 1992). Kirkpatrick et al. (2008) define it as a dimensional construct representing the degree to which individuals perceive reinforcing events in their lives to be the result of their own actions or fate, destiny and outer circumstances.

The LOC scale (Bezinović, 1990) was used to assess the degree of externalization in the attribution of control. Externality means that one sees its own behavior as influenced by events that are completely beyond its control, such as luck, coincidence, fate and authority.

The scale consists of 10 items and the respondent should report on five-point Likert scale the extent to which he/she agrees or disagrees with a particular statement (1=completely incorrect; 5=completely true). The score varies from a minimum of 10 to a maximum of 50, and results higher than 30 indicate external locus of control. The Alpha coefficient of reliability was $\alpha = .83$.

Self-efficacy is the concept from Bandura's social-cognitive theory of personality and behavioral change (Bandura, 1997; 1999). It refers to person's belief that he can successfully carry out the actions needed to achieve certain goals. This is a multifaceted concept including a differentiated set of self-beliefs linked to variety of personal functioning domains. In this study self-efficacy refers to students' ability to control their emotions and to behave appropriately in social interactions and in the school.

The Self-efficacy Questionnaire SEQ-C - version for children and youths, translated into Serbian (Muris, 2001) - measures three forms of self-efficacy: a) social - the belief that person is able to relate with peers in an assertive manner, b) academic - the person's belief about competence to learn and meet the expectations of the school, c) emotional - the belief that the person is able to cope adequately with negative emotions. The questionnaire is composed of 24 items that are distributed into the three scales that measure: social (*I can easily make friends with others*), academic (*It's easy for me to concentrate on learning even when there are other interesting things around me*) and emotional self-efficacy (*I can easily control my feelings*), consisting of 9, 8 and 7 items respectively. Respondents were asked to estimate their level of agreement with each of the statements on a 5-points Likert scale (1= not at all, 5 = totally agree). Cronbach Alpha coefficients were .74, .80 and .67 for social, academic and emotional self-efficacy scale respectively.

3.3. Procedure and data analysis

The research was conducted in several public high schools in south-east of Serbia. The questionnaires were administered in groups during regular classes. Testing was anonymous and it took about 40 minutes. Participants were informed that data will be used for research purposes and their participation was completely voluntary.

The data collected were processed by the Statistical package for social sciences SPSS, version 20. The following statistical analysis was performed: descriptive statistics such as means and standard deviations for each variable, Pearson coefficients of correlation to determine the degree of relationship between personality traits, locus of control and self-efficacy. In order to gain main research objectives, data were processed by multiple regression analysis procedures, firstly including personality traits and, secondly, adding locus of control as predictors of three aspects of self-efficacy taken as criteria. The reliability of instruments was assessed by Cronbach Alpha coefficients.

4. RESULTS

4.1. Relations of self-efficacy with personality traits and locus of control in the high school students' sample

The first analysis was conducted with the aim to establish whether examined aspects of the self-efficacy correlate with personality traits and locus of control that are supposed to be their predictors (Table 1).

Table 1.
Correlations of self-efficacy with personality traits and locus of control.

Variables	Social self-efficacy	Academic self-efficacy	Emotional self-efficacy
Extraversion	.54**	.17*	.19**
Neuroticism	-.22**	-.23**	-.19**
Openness to experience	.18**	.35**	.25**
Aggressiveness	.09	.01	-.04
Conscientiousness	.15*	.42**	.14
Positive valence	.18**	.24**	.36**
Negative valence	-.04	-.23**	.13
Locus of control	-.23**	-.34**	-.08

N=200; *p<.05; **p <.01

In general, analysis showed that self-efficacy correlates with examined personality characteristics and that obtained correlation coefficients were in accordance with the expectations based on understanding the nature of constructs. The most consistent correlations were found between academic self-efficacy and all measured personality features, except aggressiveness which did not correlate with any domain of the self-efficacy. When it comes to emotional self-efficacy, the smallest number of significant correlations were found. Considering values of obtained correlations, it could be noticed that the highest particular correlations were found between social self-efficacy and extraversion, as well as between academic self-efficacy and conscientiousness. Concerning the relation between locus of control and domains of self-efficacy, the highest (but still moderate) correlation was with academic self-efficacy, than with social, while emotional self-efficacy was not significantly connected with locus of control.

4.2. Predictors of the social self-efficacy in the high school students sample

Two regression analyses were done and models proved to be statistically significant. In both cases, extraversion was shown as the best predictor of social self-efficacy ($\beta = .550$, $p = .000$, $\beta = .562$, $p = .000$) and locus of control was also statistically significant predictor ($\beta = -.188$, $p = .004$), what can be seen in Table 1. The first regression model has shown that 30.5% of the variance in the students' social self-efficacy can be predicted based on their personality traits, more precisely, only on the basis of their extraversion ($R = .55$, $R^2 = .305$, $p = .000$). The second regression model (Table 2), in comparison to the first one, can explain only a small proportion of variance more in students' social self-efficacy ($R = .58$, $R^2 = .334$, $p = .000$). Extroverts tend to be sociable, active and talkative, they prefer group activities, can be assertive in communication with others, so that relationship can be easily grasped.

Table 2.
Personality traits and locus of control as predictors of students' social self-efficacy.

Predictors	β	p	Model summary
Extraversion	.562	.000	
Neuroticism	-.016	.823	R = .578
Openness to experience	-.094	.232	R² = .334
Aggressiveness	.048	.501	p = .000
Conscientiousness	.065	.373	N = 200
Positive valence	-.065	.458	
Negative valence	.065	.391	
Locus of control	-.188	.004	

4.3. Predictors of the academic self-efficacy in the high school students sample

The first regression model, including personality traits, proved to be statistically significant ($R=.510$, $R^2=.262$, $p=.000$). Conscientiousness, openness and negative valence contributed to the prediction of students' academic self-efficacy (β was .25, .21 and -.24, $p=.000$). Positive correlation between conscientiousness and openness to experience, at the one hand, and academic self-efficacy, at the other hand, can easily be explained. It's also known that negative self-evaluation and lack of self-confidence may have negative effects on school performance. These findings were in accordance with empirical evidence in the field in Serbian samples (Djigić, Stojilković, & Marković, 2016; Gigić et al., 2016; Zlatković, 2007).

Table 3.

Personality traits and locus of control as predictors of students' academic self-efficacy.

Predictors	β	p	Model summary
Extraversion	-.064	.373	
Neuroticism	-.037	.613	R = .559
Openness to experience	.147	.068	R² = .312
Aggressiveness	.121	.096	p = .000
Conscientiousness	.283	.000	N = 200
Positive valence	.061	.497	
Negative valence	-.188	.016	
Locus of control	-.246	.000	

In the second regression model (Table 3), conscientiousness ($\beta = .283$, $p = .000$), negative valence ($\beta = -.188$, $p = .016$) and locus of control ($\beta = -.246$, $p = .000$) proved as predictors of students' academic self-efficacy, while openness remained no longer, what is a little bit surprising, but could indicate some sort of interaction. Proportion of the explained variance of academic self-efficacy was slightly higher ($R=.559$, $R^2=.312$, $p=.000$) than in the first model. Knowing that high score on LOC scale pointed to the person's tendency to externalization, negative partial correlation showed that internal locus of control contributed to higher academic self-efficacy. That is in line with previous findings, summarized in the following: internal attributions are associated with higher academic self-efficacy, and thus the greater achievements (Živčić-Bećirević, Juretić, & Miljević, 2009). On the other hand, externally oriented individuals consider their outcomes beyond their control and attribute them to the external circumstances; so they blame others rather than themselves for any negative outcome (Kirkpatrick et al, 2008; Onyekuru & Ibegbunam, 2014; Poropat, 2009; Šabanović, Tiosavljević, & Novalić, 2016; Šarčević & Vasić, 2014; Zlatković, 2007).

4.4. Predictors of the emotional self-efficacy in the high school students sample

When it comes to the emotional self-efficacy of students, both regression models showed the same. This domain of self-efficacy could be explained by two of seven personality traits, positive valence ($\beta = .321$, $p = .001$) and aggressiveness ($\beta = -.199$, $p = .013$) while locus of control wasn't found to be its significant predictor (Table 4). In addition, proportion of the explained variance of emotional domain of efficacy was lower than predictive power of regression models concerning social and academic self-efficacy of students ($R=.420$, $R^2=.176$, $p = .000$). Positive self-evaluation and low aggressiveness can contribute to the person's competence to govern his/her emotions and specially to manage with negative emotions and states such as sadness, anger, feeling of inferiority and so on.

Table 4.
Personality traits and locus of control as predictors of students' emotional self-efficacy.

Predictors	β	p	Model summary
Extraversion	.072	.359	
Neuroticism	-.048	.550	R = .420
Openness to experience	.046	.600	R² = .176
Aggressiveness	-.199	.013	p = .000
Conscientiousness	-.030	.714	N = 200
Positive valence	.321	.001	
Negative valence	.142	.094	
Locus of control	-.036	.619	

5. CONCLUSION / DISCUSSION

It's well-known that many capable people do not try to actualize their potentials because they do not believe in their competences, i.e. because of their low perceived self-efficacy. In such a case supporting people's believes in their own abilities could make them more efficient in dealing with different tasks. This is why it is important to study self-efficacy and related psychological constructs. Such deeper knowledge about the nature of self-efficacy is needed as the basis for designing and delivering appropriate support to students, as well as to people in any working environment.

This study was aimed to investigate the relationship between personality traits, locus of control and student's self-efficacy and obtained results suggested a few conclusions. In general, these constructs were inter-connected but the intensity and direction of correlation varied.

When it comes to the relations between personality traits and self-efficacy, main conclusions will be presented for each particular domain of self-efficacy.

The most of personality traits are significant correlates of social self-efficacy, except aggressiveness and negative valence. The highest correlation was obtained with extraversion which is simultaneously the only personality trait proved to be significant particular predictor of social self-efficacy explaining (together with low contribution of the internal locus of control) 33.4% of variance. The other correlates of social self-efficacy among the personality traits were not found to be significant predictors. The finding that extraversion is the most powerful predictor of social self-efficacy could be seen in line with previous research results obtained on the teachers' sample, although data were collected using different instruments (Djigić et al., 2014). This finding could be interpreted as well having in mind the nature and content of extraversion as personality trait, which mostly refers to individual's interpersonal relations.

Academic self-efficacy correlates with almost all personality traits. Even though personality traits are significant correlates, only conscientiousness and negative valence are proved as particular predictors of this domain. Together with internal locus of control, they could explain significant amount of variance in academic self-efficacy. The relation between conscientiousness and academic self-efficacy deserve particular attention because both this personality trait and academic self-efficacy are proved as the important factors of academic performance. Moreover, according to recent findings in the field, academic self-efficacy mediates the effects of conscientiousness as personal disposition on school achievement (Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011). Also, relevant framework

for understanding these results may be found in the meta-analytic study on effects of personality features on academic performance (Poropat, 2009).

Concerning emotional self-efficacy, obtained results show that four among seven personality traits are its significant correlates: positive valence, openness to experience, extraversion and neuroticism. Surprisingly, regression models pointed out positive valence and aggressiveness as significant predictors explaining 17.6% of variance in emotional self-efficacy that is considerable lower amount comparing to other two domains of self-efficacy. Such results seem to be not quite consistent and clear and need further exploration.

Locus of control proved to be important predictor of both academic and social domain of self-efficacy in students' sample, which is in line with previous findings (Onyekuru & Ibegunam, 2014; Šabanović et al., 2016; Živčić-Bećirević et al., 2009). Precisely, internal locus of control can contribute to individual's better functioning, which is the basis for building stronger self-confidence and higher self-efficacy. At the other hand, externality did not correlate with emotional self-efficacy, i.e. with the person's ability to govern his/her negative feelings and intensive emotional states. Students who have internal attribution and positive expectations will invest more efforts and achieve better results. On the other hand, those who attribute success to external factors will be more prone to express intensive anxiety and avoid task, and therefore will have lower achievement. The finding that locus of control is the predictor of academic self-efficacy could be understood bearing in mind dynamic character of locus of control as a component of cognitive style which regulates behavior in learning situation (Nosal, 2010).

Having in mind all domains of self-efficacy and the results of all tested regression models, it could be concluded that extraversion and conscientiousness are the two most powerful predictors of self-efficacy in our students' sample. Among all variables included into regression models, neuroticism and openness did not show significant contribution to the prediction of any aspect of self-efficacy. That is not in line to our expectation based on the research findings in the field (Chamorro-Premuzic & Furnham, 2003; Poropat, 2009). Precisely, it could be expected that these personal dispositions would be significant predictors at least in academic and emotional domain of self-efficacy. The meaning of these constructs suggests that high neuroticism should have negative influence on one's academic performance and would be a source of emotional instability, while openness should have positive effect on functioning in academic context. According to above mentioned results, both self-evaluative personality dimensions are proved as predictors of perceived self-efficacy in students. These results could be set in line with previous research findings which showed that positive self-concept (similar to positive valence) was the best predictor of emotional self-efficacy while negative self-image (similar to negative valence) could interfere with person's functionality in the academic context (Zlatković, 2007). Locus of control (internal) contributed to prediction of self-efficacy both in academic and social domains, but its contribution is still lower in comparison with mentioned personality traits. Also it is important to emphasize that social and academic domains of self-efficacy could be better explained by tested predicting models (including personality traits and locus of control) than emotional self-efficacy. Perhaps this can be attributed to the age of students from the research sample and to difficulties they encountered when building their own personal identity.

6. FUTURE RESEARCH DIRECTIONS

The main finding of this research is the fact that self-efficacy can be predicted good enough based on the personality traits as a stable dispositional characteristics of a person. The inclusion of the locus of control, seen as a way of explaining the source of one's own behavior, contributed slightly to this prediction of self-efficacy.

Having in mind that the proportion of explained amount of variance in particular domains of self-efficacy is about one third or less, it could be concluded that there are still many factors which may be important in this way. So, future research is necessary in order to reach more complete understanding of this complex phenomenon. Further studies should focus on a greater number of possible correlates of the self-efficacy, such as: abilities (cognitive abilities, cognitive and learning styles, emotional and social intelligence); motivation (motivation for achievement, personal and academic aspirations, self-regulation and self-determination); personal features and mechanisms (self-concept, optimism and pessimism, perfectionism, procrastination, coping strategies); real success or failure experience; family, working and broader social context. Also, it could be useful to conduct research on different samples and using other instruments.

Taking self-efficacy as the crucial mechanism of behavioral change, on the basis of additional research it should be possible to get practical implications aimed to improve the quality of personal, professional and everyday life.

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