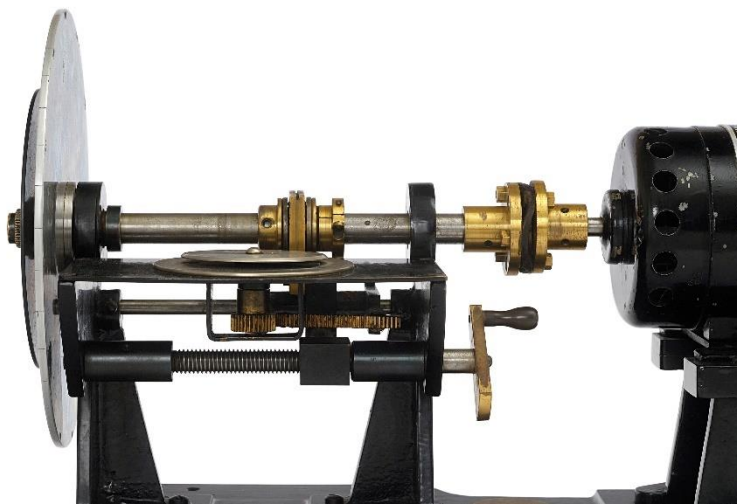# XXVI SCIENTIFIC CONFERENCE

EMPIRICAL STUDIES IN PSYCHOLOGY

15 – 18TH OCTOBER, 2020.
FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE
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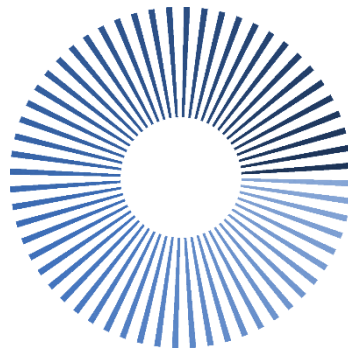
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BELGRADE, 2020

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KEYNOTE LECTURES

ARE HAPPY TEAMS AND WORK UNITS MORE PRODUCTIVE THAN UNHAPPY ONES? EMPIRICAL EVIDENCE, UNRESOLVED QUESTIONS AND IMPLICATIONS FOR PRACTICE

José M. Peiró

University of Valencia, Spain

Given the relevance of teams and work units in organizations, in my address, I will analyse the state of the art of the relationship between work units' well-being and its relationship with their performance. To do this, I will consider existing research on different collective well-being constructs and collective performance. Research on 'happy-productive work units' (HPWU) has paid attention to different constructs of well-being (hedonic: team satisfaction, group affect; and eudaimonic: team engagement) and diverse operationalisations of performance (self-rated team performance, leader-rated team performance, customers' satisfaction, and objective indicators). The theoretical frameworks to explain the HPWU relationship are attitude – behaviour models, broaden–and–build theory, and the job demands-resources model. These models have inspired research and a number of studies and provide empirical evidence about this issue. In fact, the relevant information is available on a variety of antecedents, mediating and moderating variables. However, a number of issues require more attention. For instance, the complex and dynamic relationships of well-being and performance of work units, or the fact that in some occasions these relationships are non-significant. Thus, it is important to identify existing gaps and challenges across the studies on HPWU and to formulate some relevant questions for future research and discuss their implications for professional practise aiming to improve well-being and performance of work units.

ACHIEVEMENT MOTIVATION AND AVOIDANCE BEHAVIORS IN SCHOOL: DEVELOPMENTAL AND EDUCATIONAL ASPECTS

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Theoretical perspectives and empirical evidence in the field of achievement motivation attempt to describe and explain why students wish (or do not wish) to learn, acquire knowledge and skills and succeed in academic settings. However, students sometimes may wish to learn and achieve but avoid purposefully engaging in the learning process or move away from activities that produce knowledge and skills. These avoidance behaviors constitute maladaptive learning behaviors and reflect student motivation to avoid some perceived threat in the learning context such as failure and the fear of appearing academically incompetent to teachers, parents, peers and maybe to one's own self. This keynote will focus on achievement motivation in different age groups and on avoidance behaviors in the school context such as avoidance of academic help seeking and academic self-handicapping. Based on the international literature and the speaker's own research, different aspects of achievement motivation will be discussed in relation to cognitive, emotional and behavioral patterns of learning, and associations with avoidance behaviors will be pointed out. Protective and risk factors in the contexts of the school and the family will also be discussed in order to identify the multiple pathways that support student achievement motivation and facilitate engagement in school, reduce avoidance behaviors and purposeful maladaptive behaviors, and generally contribute to the development of positive learning environments.

SYMPOSIA

HOW CHILDREN VIEW THEMSELVES AND THE WORLD? CHALLENGES OF PSYCHOLOGICAL MEASUREMENT IN NON-ADULTS

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When we study a large number of various phenomena, we could ask when and how they develop, how they change with age, whether they are the same in children and adults? When we try to investigate those phenomena in children, we face several issues. First of all, the question is whether we could talk about the same phenomenon or function in children as in adults, do we study the same thing? Or at what age can a specific aspect be meaningfully studied? And what are the age-specific characteristics of the studied phenomenon? This will be the overarching question of the papers presented in this symposium, from the angles of cognitive, social, and personality psychology. Even if a single feature is the same, the relation between different functions in children can be different than in adults, as we will see in the first paper of this symposium. Further, if we use the same methodology to research, how can we know how children understand and interpret the whole situation, the experimental design, or words in the questionnaire items? Concept development in children shows that children could use the same terms as adults, but with a different sense, as pseudo-concepts. That means that our items will have a different meaning for them, so we will not assess what we aimed for. Social relations change with age, so is the case with the relationship between children as subjects and the investigator, which may be different from the relationship between an adult and the experimenter. The same is true of the relationship of children of different ages to the experimental procedure. For example, post-Piaget researchers show that children interpret the experimenter's intentions and what is expected of them and that their responses reflect those aspects rather than their cognitive characteristics. However, as we can see in the second paper of this symposium, it is possible to modify or develop a procedure that will be suitable for very young children. In the third presentation, the authors will discuss some methodological issues in measuring ingroup favoritism in cooperation among children and adolescents. Finally, if we use the same instruments to study children and adults, we have to be certain that we have structural invariability. This enables a quantitative comparison of the results obtained in samples of different ages. We will discuss several conceptual and methodological issues when researching individual differences in children singled-out by papers in this symposium.

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INDIVIDUAL DIFFERENCES IN THE DEVELOPMENT OF TIME-BASED VISUAL ATTENTION FOR OBJECTS IN MOTION

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In time-based visual attention, visual search is facilitated if half of old, distracting objects are displayed before newly arriving objects, i.e., the preview benefit (Watson & Humphreys, 1997). This effect is obtained in adults for both static objects and objects in motion (Watson & Humphreys, 1997, 1998). It is currently unknown whether children display time-based visual attention with moving items and if this ties in with broader cognitive development, such as the development of executive functions. In a mixed design, 96 participants (24 per age group) aged 6, 8, 12 years and adults (mean age = 19.20, SD = 2.21) completed three visual search tasks: preview search, full-element, and half-element baselines with stimuli in motion. Individual differences in preview efficiency were also examined in relation to executive functions (switching, inhibition, switching and inhibition combined) measured via Shape School Extended (Espy, 1997; Ellefson, Blagrove & Espy, in prep.) and short-term verbal and spatial memory tasks from the Working Memory Test Battery for Children (Pickering & Gathercole, 2001). The results showed that on average, all age groups prioritized newly arriving items in motion, all Fs > 5.06, all ps < .05 and showed no differences in preview search efficiency, $F(3,88) = 1.49$, $p = .221$. However, an inspection of individual differences suggested that 38% 6-year-olds, 21% 8-year-olds, 4% 12-year-olds, and 16% of adults did not display this effect measured via the preview efficiency index. In 6-year-olds, associations emerged between inhibition and preview efficiency indices for small display sizes, $r(17) = .615$, $p < .001$ and in adults, between switching and inhibition combined and preview efficiency indices for large display sizes, $r(21) = .448$, $p < .001$. Findings suggest that although on a general level all groups obtained a preview benefit with moving items, at an individual level a number of participants did not display the effect, most notable in 6-year-olds, suggesting a possible developmental trend. There were some indications of relationships between time-based visual attention for moving items and executive functions, namely inhibition, albeit with different patterns across age groups, suggesting a potential shift in mechanism - inhibition and the preview benefit for small number of moving items at the age of 6 towards a combination of switching and inhibition and the preview benefit for a large number of moving items at an adult age.

Keywords: Visual search, Visual Attention, Executive Functions, Inhibition, Cognitive Development

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TAILORING PROCEDURES TO MEASURE GENDER STEREOTYPING AND GENDER POLICING IN PRESCHOOLERS

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There is strong empirical evidence that children associate gender labels and activities, toys or occupations, i.e. adopt gender stereotypes, already at the age of three. There is less research on how early they start to "gender police", i.e. to sanction counter-stereotypical behaviors of peers, although there are indications that it follows the stereotype adoption. For such an early age, standard questionnaires are not an option; therefore, researchers typically use visual stimuli and interviewing. In addition, they need to make sure that every particular child's abilities allow them to follow the procedural requirements: the stereotyping task is essentially a classification task, and the sanctioning behavior task entails answering hypothetical questions and might be sensitive to perspective-taking abilities. We compared younger and older boys and girls using a two-task procedure: (a) stereotyping task – categorization of pictures of masculine/feminine colors, toys, and objects as more suited for boys/girls or both and (b) sanctioning task – evaluation of boys/girls playing with gender counter-stereotypic toys. A total of 100 children (3-4 or 6-7 year-olds), were individually interviewed with respect to their readiness and ability to participate. Results show that, although all three sets of stimuli were stereotyped, toys were stereotyped more than colors and objects. Overall stereotyping was more frequent in the older group ($F(1, 96) = 9.66$, $p < .001$, $\eta p2 = .09$). Gender differences were more complex: boys stereotyped masculine stimuli more often than girls did ($F(1, 49) = 20.93$, $p < .001$); the older boys, but not the other groups, sanctioned counter-stereotypical behavior more often than accepted it (boys' behaviors: $F(1, 95) = 5.98$, $p = .016$, $\eta p2 = .059$; girls' behaviors: $F(1, 95) = 3.98$, $p = .049$, $\eta p2 = .04$.); boys' behaviors were sanctioned more often than girls' ($F(1.96) = 4.96$, $p = .028$, $\eta p2 = .05$). Finally, stereotyping and sanctioning were strongly positively related ($R(1, 96) = .38$, $p < .001$). Findings suggest that, very early on, children are not only aware of gender norms, but also ready to sanction peers violating them, and that these tendencies grow stronger with age. Future research should explore the relation between gender stereotyping and multiple classification abilities as well as the Theory of Mind adoption stage. The procedures we developed proved suitable for very young children and could be a useful tool for researchers in the field.

MEASURING INGROUP FAVORITISM IN COOPERATION AMONG CHILDREN AND ADOLESCENTS: META-ANALYTIC INSIGHTS

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Theory suggests that individuals tend to favor social groups to which they belong (ingroups) over social groups to which they do not (outgroups). In domain of economic behavior, adults have been found to exhibit a small but consistent preference to incur a personal cost to benefit ingroups, compared to outgroups. However, evidence to support ingroup favoritism in cooperation in childhood and adolescence is scattered. Moreover, experimental economics research with children and adolescents sometimes differs in procedural and design details from research with adults. We meta-analyzed a recent explosion of economic experiments (2008–2017) that have explored ingroup favoritism in cooperative decision-making across ages before adulthood. We searched a number of databases from their earliest record to November 2017 by title, abstract, and keywords for the following search string: Population-Term (referring to children and adolescents) AND Bias-Term (referring to both ingroup and outgroup bias) AND Game-Term (referring to specific economic games). We used Cohen's *d* as the measure of the difference in cooperation between ingroup and outgroup. If cooperation means and standard deviations were not provided, we derived Cohen's *d* from an *F* score (for one effect size) or from rates of cooperative behavior (for 22 effect sizes). The systematic literature search resulted in 14 papers, reporting 62 effect sizes in a total sample of 4,817 participants, aged between 3 and 19 years. The random-effects model revealed a small overall effect size indicating that children and adolescents were more cooperative towards ingroups than towards outgroups, $d = 0.12$, 95% CI [.01, .24], $k = 47$, $p < .05$. We also conducted single-moderator analyses to test for several conditions that might have influenced this effect, namely participant age and gender, the setup of the cooperation task (dictator game, ultimatum game, trust game, prisoner's dilemma), the type of rewards that were exchanged (monetary vs non-monetary), study design (between- vs within-subjects), and the nature of the group membership (natural vs experimental). Based on our data, we will provide an overview of the different methods used in the studies we sampled and discuss the study characteristics used as moderators in our meta-analysis. We will address the pros and cons of the methods to run economic experiments with children and adolescents and, in light of the meta-analytic findings, suggest directions for future studies.

Keywords: experimental economics, cooperation, ingroup favoritism, children, meta-analysis

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THE DEVELOPMENT OF CONSCIENTIOUSNESS SCALE: MEASURING PERSONALITY TRAITS IN MIDDLE CHILDHOOD CHILDREN

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Authors reached a consensus on broad, higher-order personality traits in adults, but the question of the applicability of the established personality models to children, and consequently, the issue of the measurement of children's personality traits still remains. The goal of this study was the development and validation of a rating scale for assessment of HEXACO Conscientiousness - C trait in children. We specifically focused on middle childhood children (aged 7, 8 and 9). The pilot questionnaire consisted of 83 items and was completed by 104 respondents (87.5% mothers). Item selection criteria were based on the IRT model reliability, fit, separation and item difficulty. Additionally, we explored corrected item-total correlations, principal component loadings, and the psychometric characteristics of the items using RTT10G. The final instrument consisted of 40 items, 10 items mapping each of the four facets of HEXACO C – Organization, Diligence, Perfectionism and Prudence. The sample of 264 children was rated, specifically, 215 were ratings by mothers and 125 were ratings by fathers (76 of which were paired, ratings of the same child by both of the parents). Using exploratory factor analysis (ML method with Promax rotation) four facets were extracted in both mothers' and fathers' ratings, i.e., Organization, Perfectionism, Diligence, and Prudence. A higher-order C factor was extracted in both groups. To estimate the similarity of the factors extracted from mothers' and fathers' ratings orthogonal procrustes rotation was done. Congruence was 1.0, while for facets estimates were the following: .67 (Organization), .87 (Diligence), .70 (Perfectionism), .75 (Prudence). Results suggest that obtained factor structures deviate to some extent from the one proposed by the HEXACO model. We examine discrepancies between mothers' and fathers' ratings in facets. Additionally, we discuss conceptual and practical challenges when assessing personality traits in children.

Keywords: trait Conscientiousness, HEXACO, middle childhood children, parental ratings, factor congruence

DEVELOPMENTAL STABILITY OF SEVEN-FACTOR PERSONALITY STRUCTURE

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The vast majority of studies investigating personality structure is done using adult samples. If personality is assessed in children, parental ratings are preferably used method, while self-reports are seldom used. Here we use self-report measures to study the developmental stability of the seven-factor personality structure defined by the HEXACO model and Disintegration trait. We focus on middle childhood children, young teens, and teenagers. Sample consisted of four groups: 1) age 10-11 (N=164, 49.4% female), 2) age 12-13 (N=195, 48.9% female), 3) age 14-16 (N=319, 59.2% female), 4) age 17-18 (N=201, 49.5% female). Data were collected in several elementary and high schools in Serbia and Montenegro. Personality traits were assessed using 60 items HEXACO, and 20 items DELTA questionnaires. The stability of the seven-factor personality structure was tested using orthogonal procrustes rotations, and the analysis was done on facets of all seven personality traits. Congruence coefficients and factor loadings were calculated for all facets for all six pairwise comparisons. Overall, the average congruence of factors ranged between .69 (Emotionality) and .96 (Disintegration). The average congruence of facets ranged between .41 (Sincerity) and .95 (Sentimentality), with the majority of facets having average congruence above .85. Average factor loadings for Disintegration range between .55

(Depression) and .85 (Perceptual Distortions), for Honesty between .20 (Sincerity) and .39 (Greed avoidance), for Emotionality between .19 (Anxiety) and .53 (Sentimentality), for Extraversion between .34 (Sociability), and .47 (Social self-esteem and Liveliness), for Agreeableness .34 (Patience), and .54 (Flexibility), for Conscientiousness .33 (Organization) and .53 (Diligence), and for Openness .53 (Creativity) and .67 (Inquisitiveness). As expected, personality structure is least stable in the first age group but stabilizes in groups 3 and 4. We discuss, in detail, stability and content of personality factors on different age groups, and practical implications on assessment these results have.

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BIOSIGNALS: MEASUREMENT AND ANALYSIS WITH APPLICATIONS IN PSYCHOLOGY

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BIOSIGNALS: MEASUREMENT AND ANALYSIS WITH APPLICATIONS IN PSYCHOLOGY

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Human body functioning can be directly or indirectly assessed by measurement and analysis of biosignals. These procedures commonly result in the extraction of features i.e., biomarkers that can be further used for description or prediction of various psychological functions and processes. Biomarkers serve to provide additional validity to obtained data and to address some of the issues inherent to commonly used psychological techniques, such as self-report, behavioral, and task-performance paradigm. The benefits of including the physiological approach in psychology research include in-the-moment, automatic assessment of the subjects' reactions, and detection of reactions when no change in behavior or task performance can be observed. The most commonly used measures in psychology are heart rate (HR), heart rate variability (HRV), electroencephalogram (EEG), galvanic skin response (GSR), respiration, jaw-clenching, eye movements and blink interval (measured for example with electromyography - EMG and electrooculography - EOG). Due to the intricate nature of biosignals, measurement and analysis can be rather complex. Biosignals have commonly small signal-to-noise ratio i.e., can be vastly affected by external and internal artifacts, and persons' physiological response(s) are compound in nature and can be influenced by a relatively large number of factors which can make feature extraction diligent or even impossible. Therefore, appropriate procedures for measurement and analysis must be carefully considered and precisely followed. For example, simple electrophysiology measurement can be affected by numerous factors, like skin-electrode impedance, electrode placement, physiological cross-talk (e.g., interference with other physiological signals), cable movements, power hum, etc. To design appropriate protocols for biosignal application in psychology, close collaboration between biomedical engineers and psychologists is a prerequisite for successful scientific study. We present an overview of biosignal-based assessment procedures with selected examples from applications in psychology. Additionally, we discuss how these biomarkers reflect changes in the sympathetic and parasympathetic nervous system activation, and how they should be used in psychological research. A

possible implementation of biomarkers in studies assessing emotional and cognitive load will be presented.

Keywords: signal analysis, biosignals, biomarkers, measurement, psychophysiology

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IMAGINAL PROVOCATION TEST AS A WAY TO INDUCE EMOTIONS IN THE LABS

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The Imaginal Test Provocation Procedure (IPTP) is based on the idea that the respondent's emotions can be induced through storytelling and that these emotions can have a significant impact on other psychological constructs (e.g., moral judgment, decision-making, learning, retrieval). The IPTP requires a respondent to imagine an emotion-provoking scenario involving herself as the protagonist of the story. Immediately after, the respondent rates the degree of targeted emotion experienced in imagining the scene, and how she would have responded had the situation depicted actually have happened. If there is a correspondence between the reported and the scenario-targeted emotion, the procedure is deemed successful. The IPTP usually serves as an experimental treatment, while the respondent's self-report is taken as a measure of treatment success. However, the self-report measure of the respondent's emotional state does not have to correspond with the psychophysiological component of the reported emotion, i.e., the respondents might report about their hypothetical emotional reactions to the scenarios, and not experience actual emotions. We pretested ten anger-provoking scenarios of similar narrative structure and length. The respondents rated six emotions aroused by scenarios and plausibility of each scenario. The average anger ratings ranged from 5.04 ($SD = 1.58$) to 6.24 ($SD = 1.02$), whilst the average rating for other emotions ranged from 1.20 ($SD = .85$) to 5.32 ($SD = 1.65$), with surprise having the highest score, however still significantly less intense than anger ($t(87) = 5.55$, $p < .000$). The respondents were exposed to the scenario that was rated the most plausible and unequivocally targeted anger ($M = 6.02$, $SD = 1.20$). The protagonist in the scenario needed to finish the group project and pass the exam while confronting rude colleagues who passed their part of the work onto her. The scenario was auditively presented to respondents via headphones; they were asked to try to experience the event as vividly as possible and imagine people they knew as characters in the episode. Our aim was to validate the IPTP by obtaining the physiological measures of arousal during the treatment, examining the changes from baseline arousal and comparing the degree of activation between pre- and post-treatment assessments, so as to compare the respondents' self-reports with their psychophysiological print.

Keywords: imaginal test provocation procedure, validation, emotion-provoking scenarios, anger arousal.

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IN PURSUIT OF OBJECTIVITY: PHYSIOLOGICAL MEASURES AS A MEANS OF EMOTION INDUCTION PROCEDURE VALIDATION

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Psychological research in the field of emotions and affects usually relies on self-report measures and questionnaires, and as such, arguably lacks objectivity. An approach combining physiological measures with classical psychological methods may provide a solution to the issue of objectivity, particularly regarding emotion induction in experimental conditions. Triggering emotions in an artificial setting is not a straightforward task as it might seem, nor are the means of assessing its successfulness. For that reason, we explored the possibility of evaluating the effectiveness of an experimental anger induction procedure and assessed it via several physiological parameters. Fifty-nine healthy participants (9 male, age M = 19.92, SD = 0.57) took part in the experiment in which Electrodermal Activity (EDA), Electrocardiography (ECG) and Impedance Cardiography (ICG) outputs were recorded using BIOPAC equipment. Physiological parameters were collected during 3 phases, each of which lasted approximately 2 minutes: 1) relaxation period, i.e., baseline recordings, 2) experimental manipulation in which participants were subjected to anger-evoking audio material, as part of a standard procedure named guided fantasy technique, and 3) post-manipulation period. Subjects were then asked to rate the degree to which they experienced each of six basic emotions (anger, disgust, fear, happiness, surprise, and sadness) and aggressive behavioral tendencies during the course of anger-inducing guided fantasy. We expect significant differences in physiological responses during baseline and anger induction phase if the guided fantasy has a genuine effect on the subjects' mood. Obtained data provide support for such an assumption. Namely, the values of average tonic EDA, as well as heart rate, were greater during the second phase in comparison to the baseline period (F (2, 104) = 28.478, p < 0.001; F (2, 114) = 4.641, p < 0.05), while Pre-Ejection Period (F (2, 114)=5.899, p<0.01) and Systolic Time Ratio (F (2, 114)=6.769, p<0.01) have significantly decreased. Specific physiological measures used in this experiment and their relations with self-report data will be discussed in further detail. The benefits and drawbacks of using objective, physiological, parameters in emotion research are discussed.

Keywords: emotions, anger, electrodermal activity – EDA, electrocardiography – ECG, impedance cardiography - ICG

EFFECTS OF VIOLENT VIDEO STIMULI ON GASTRIC ACTIVITY: ELECTROGASTROGRAPHY-BASED CASE STUDY

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The functionality of the human gastrointestinal tract can be affected by emotional arousal as a result of the autonomic nervous system function. Electrogastrography (EGG) as a non-invasive technique for direct assessment of gastric electrical activity can be used for gastric motility evaluation in relation to the induced emotion. In this work, we aim to investigate the potentials of the EGG technique in testing the somatic markers hypothesis. Specifically, to investigate whether EGG can be used for a quantitative assessment of a *gut feeling,* EGG alterations induced by violent video stimuli were examined. Data were collected in two respondents with no known gastrointestinal disorders: ID1 – female, 29 years old, height 172 cm, and weight 64 kg; ID2 – female, 23 years, 168 cm, 56 kg. Subjects were asked not to consume solid food for 6 hours and liquids 2 hours prior to the fasting recording session and for postprandial session (after meal intake) subjects were asked to consume commercial oatmeal of 274 kcal. Recording consisted of three sections: baseline recording (resting), EGG during the presentation of the violent video stimulus, and EGG recording after the presentation of the video. We recorded two sessions per subject for both fasting and postprandial states with a total of four EGG recordings. The following EGG-based features were calculated: dominant frequency – DF, median frequency – MF, crest factor of power spectral density – CF, and root mean square – RMS of EGG amplitude for each recording. MF and RMS increased from baseline to violent video recording in three out of four obtained recordings by more than 20%. DF increased only in recordings from subject ID2 for more than 39%. CF variations were consistent since an increase in all four recordings was detected (>15%). In summary, though some subject-specific differences were noticed, violent video stimulus caused a certain change in EGG morphology. Our preliminary findings obtained on four recordings from two subjects suggest that violent visual stimuli can cause changes in electrical gastric activity and can be quantitatively detected by analysis of surface EGG biosignals. These findings give support to the somatic markers hypothesis and suggest that changes in EGG caused by violent video stimulation can be related to empathic feelings provoked in the subjects. We discuss possibilities and potential drawbacks of electrogastrography in detecting personality correlates.

Keywords: electrogastrography – EGG, emotion, somatic marker hypothesis, feature extraction

CARDIOPRINT: INDIVIDUAL FEATURES HIDDEN IN ELECTROCARDIOGRAM AND IMPEDANCE-CARDIOGRAM

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Electrocardiography (ECG) recordings have been previously proposed for person verification with comparable results to handprint-based identification. Here, we present a novel hybrid biometric system based on ECG and impedance cardiography (ICG) signal analysis with its robustness to emotional load. We hypothesize that unique biometric features can be detected to allow for precise identification of an individual. For each examinee, signals were acquired in three intervals (of approximately 2 min duration for each phase): (1) recordings during relaxation, (2) recordings while anger-inducting audio material was played, and (3) recording in post-anger phase. All three intervals should allow for accurate identification of individuals. The sample consisted of 62 respondents, average age 19.9 years ($SD = 0.57$), 85% female. Amplitude and temporal features were extracted to describe examinees' signal-specific morphologies, which were used to form training and test sets. Linear and Random Forest (RF) classifiers were constructed with different input features. The training set consisted of 450, while both test sets consisted of 449 inputs. The best accuracy (93.8%) was accomplished with RF when ECG and ICG features from all three phases were used as classifier inputs. We correctly classified 421 (out of 449) ECG-ICG inputs with top features being: (1) QRS interval (mean minimum depth 3.32, times-a-root 38, $p < 0.001$), (2) RS amplitude (2.2, 87, $p < 0.001$), (3) RQ amplitude (2.47, 69, $p < 0.001$), (4) RC interval (2.6, 80, $p < 0.001$), (5) CX amplitude (2.92, 59, $p < 0.001$) where X is a characteristic point in ICG, and (6) right-sided T-wave amplitude (3.12, 48, $p < 0.01$), while other features showed no statistical significance. Our results are promising and indicate that combined individual features from ECG and ICG signals recorded during relaxation and during induced emotional response can be used for highly accurate (~94%) biometric authentication systems with relatively simple classifiers. Future studies should focus on the correlates of ECG and ICG features in individual differences, like personality traits. Furthermore, a more in-depth analysis of the obtained results using a larger sample is needed to obtain more reliable conclusions.

Keywords: biometry, electrocardiography – ECG, impedance cardiography – ICG, individual differences, random forest classifiers

CHILD AND ADOLESCENT DEVELOPMENT
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A LOOK BACK AT INCLUSIVE EDUCATION IN SERBIA: TEN YEARS AFTER

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During the subsequent ten years in Serbia, there has been considerable activity to move policy and practice in a more inclusive direction. In this paper I use evidence from multiple research studies carried our in recent years in order to consider what has been done and what needs to be done to move education system in an inclusive direction. In an attempt to define inclusive education, I will rely on Ainscow, Booth and Dyson (2006) idea that 'inclusion is focused on presence, participation and achievement'.

'Presence' is concerned with where children are educated. Data suggest than there has been a steady reduction in the numbers of pupils attending special schools, and increase in the number of pupils from vulnerable groups (VG) in mainstream education (UNICEF, 2020). Barriers to presence of VG children in mainstram education manifest itself in different ways: underrepresentation in both compulsary and non-compulsary education, overrepresentation in self-contained classrooms and rare transferrs from special to mainstream education.

It is not enough to ensure access, but it has to be access to high quality experiences and support. Although findings related to quality of inclusive education are inconclusive, they suggest discrepancy in assessment of certain aspects of (pre)school education between vulnerable groups and mainstream population (e.g. parental involvement, antidiscrimination culture).

Moreover, inclusive education should have in focus 'achievements' of all children. Research on academic outcomes of VG children in Serbia are scarce. However, the study conducted on population of eightgraders strongly support the view that inclusion of VG students in regular classes does not have a negative impact on achievements of their peers (Jovanović et al, 2017). The same study suggests that positive learning outcomes for all children are not consequence of well developed system of support, but of concurent engagement of competent and motivated individuals. Wellbeing is also considered to be particularly important indicator of the quality of inclusive education. Evaluative studies of inclusiveness on both preschool (OSF, 2020) and primary education level (Kovač Cerović et al, 2016) indicate that (pre)school staff, parents and children agree on high levels of children wellbeing. However, comparing to their peers, VG children show significantly lower levels of wellbeing and peer acceptance.

Efforts used to bring large-scale change in the past decade were predominantly low leverage (e.g. policy documents, conferences, in-service courses). Whilst such initiatives may make a contribution, by and large they do not lead to significant changes in thinking and practice (Senge, 1989). Ten years after introduction of inclusive education, equity issues are still persistent, therefore we should ask ourselves have we been transforming educational system towards inclusion, or we have just renamed it.

Keywords: inclusive education, monitoring and evaluation, education system change

A PROPOSAL TO CONSIDER A NEW MODEL OF THE SELF AND THE METHODOLOGY OF ITS EXPLORING AND TRANSFORMING

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The aim of this work is to present a new concept of the agonistic self as well as a new methodology for its exploring and transforming. Based on Foucault's analytics of power, but also constructivist metaphor of the community of self and the theory of polyphony we propose the self to be conceived as multiple and emerging from the dialogical encounter of the various positions of subjectivities unequaled in power. We propose to define the self as agonistic, which means that the positions of subjectivities as voices struggle each other for the dominance. This theoretical model of the self explains the empirical findings suggesting that the sense of self is fragmented, contextualized, changeable and inconsistent. Further, inspired by the technique of the constructivist rologram, we developed a new approach to exploring and facilitating change in the agonistic self in the contexts of identity research and therapeutic practice. The interviewees were initially asked to think about their experiences in terms of metaphoric voices and to write down short narratives which reflected the standpoints of the voices. Then, the interviewees' repertoires of positions were complemented by the voices of the significant others, like parents or peers. Finally, the relationships between the elicited voices were discussed with particular focus on the dimensions of domination versus marginalization and cooperation versus conflict. The dynamics in the agonistic self was also analyzed by the following interpretive terms: positioning, struggle for dominance, strategic situation, maneuver and resistance. The questions were raised such as 'Which voice is particularly influential or the loudest?', 'Which voices oppose him/her most and how?', 'Can you describe the typical situation in which this voice regains or maintains his/her dominant position?', 'Which voices cooperate most? And which of them enter the conflict?'. The multi-case study research on teacher professional identity is conducted and the results were presented as the illustration of the methodology of the agonistic self.

Keywords: the multiple self, qualitative research, identity, power.

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„EVERYONE MUST DO AS THE LEADER SAYS" – UNDERSTANDING COOPERATION WITH TEN-YEARS-OLDS

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Today, collaborative problem solving is often seen as one of the crucial competencies in successful coping with everyday life. True collaborative work means the continuous shared commitment of two or more speakers to achieve certain goals together, to solve a problem or to construct some new knowledge in the process. Of many years standing researches and projects, like Thinking Together, showed that children of age 6 -14 need an introduction of basic rules before they engage in any shared activity. The question that remains open is whether these rules of collaboration are effective in different contexts and how the students understand them. The aim of this research was focused on how children understand basic rules of collaboration where suitable usage of language was crucial in solving the problems together. Ten pairs of 10 years old solved 16 tasks which were set on establishing different rules of collaboration. Sentences were presented in positive and negative connotations and

the task was directed on detecting the good and the bad rules of collaboration. Children could construct a new rule of collaboration if it was not previously offered. All of the dialogues were transcribed and analyzed by conversation analysis which was focused on spontaneous verbal production within the process of solving both good and bad rules of collaboration, and on the children's first reactions. The results showed that the most of the sentences in all the dyads were successfully marked and that children were able to successfully detect the rules which encouraged the collaboration, but also those that interfered with working together. Still, there were situations where the tasks were successfully solved but the children were not able to offer precise explanations of the meaning of the rule. As the most challenging, stands out the sentence „we must do as the leader says". It is negatively formulated rule which implies the separated responsibility of decision making and most of the errors were made in that case. In certain situations, children constructed the new rules of collaboration, which was allowed by the procedure, but the results were usually reformulated, previously existing rules of collaboration. The results are going to be interpreted within the socio-cultural paradigm. We will try to understand and present the significance of collaborations which emerged spontaneously, provoked by the deliberating the rules of collaboration.

Keywords: cooperation, conversational analyses, meanings, ten-year-olds

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STORM AND WELLBEING OF THE ADOLESCENCE IN SERBIA

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For a long time, adolescence has been considered a period of storm and stress filled with crises and risky behaviours provoked by biological maturation. Empirical studies revealed that storm and stress are not inevitable for all adolescents or even for the majority of them. Adolescents' positive development and wellbeing emerged as new research fields that attract a lot of attention. The aim of this study is to analyse empirical results related to the major issues of Serbian adolescents and to mark open questions and further research direction. A lot of studies showed that culture shapes the development of adolescents and the differences between adolescents from different countries or between adolescents at different historical points should be expected. Ten years of research of the adolescent everyday life doesn't reveal empirical evidence for the storm and stress paradigm. Most of the adolescents have a good relationship with their parents and do not report being depressed or feeling lonely. Binge drinking is the most prominent risky behaviour. About every third adolescent experienced drunkenness over a one month period which is a relatively high percent but not higher than in other European countries. Several studies that used the EPOCH scale as an instrument for measuring wellbeing showed relatively high scores of adolescents from Serbia and did not reveal many differences from the European countries. Also, PISA 2018 study indicated that the overall life satisfaction of the fifteen-year-olds from Serbia is higher than the OECD average. The question arises should those results indicate that concerns about young people in Serbia are unjustified or we should look deeper to identify challenges of today's adolescents. One of the domains in which problems are easily identified is education. Every third adolescent from vocational school hasn't got any teacher that cares about her or him and almost 80% of them do not reach basic literacy level at PISA study. Also, the quality of leisure time (usually spent in passive activities that do not require mental and emotional

engagement) could be considered as the big issue of Serbian adolescents that is shared with adolescents from the western countries.

Keywords: adolescence, wellbeing, risky behavior, Serbia, education

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ROUND TABLES

ŠTA POSLE DOKTORATA?
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Poslednjih godina, u našoj zemlji se povećao broj mladih koji stiću titulu doktora nauka, dok se kapaciteti za njihovo zapošljavanje u akademskim institucijama nisu povećali. Stoga se nezanemarljiv broj mladih suočava sa dilemom da li vredi upisivati doktorske studije, ili da li su pogrešili što su ih upisali/završili. Sve veći broj studija ukazuje na mentalne probleme sa kojima se suočavaju postdiplomci tokom i nakon doktorskih studija. Kako dalje razvijati akademsku karijeru, da li odustati od akademske karijere, da li ima smisla tražiti posao u privredi, da li su dovoljno konkurentni u privredi, da li su protraćili vreme baveći se doktoratom ako se opredele za posao u privredi i da li su im veštine koje su stekli na doktorskim studijama od bilo kakve pomoći za posao u privredi, samo su neka od pitanja koja se nameću mladim doktorima nauka. Ovaj okrugli sto trebalo bi da da odgovore na barem neka od tih pitanja, ali prvenstveno da eksplicira postojanje ovog problema i otvori diskusiju na ovu temu.

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DEČIJA UPOTREBA DIGITALNIH MEDIJA U JUGOISTOČNOJ EVROPI: IZMEĐU RIZIKA, ŠTETNIH POSLEDICA I PRILIKA ZA RAZVOJ I UČENJE
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U akademskoj zajednici se već neko vreme vodi debata oko uticaja digitalnih tehnologija na decu i mlade. Dok neki autori i istraživači smatraju da ima dovoljno dokaza za brigu, uglavnom po pitanju upotrebe mobilnih, odnosno pametnih telefona, društvenih mreža i video igara, drugi tvrde da ne postoji dovoljno dokaza, pogotovo longitudinalne prirode, koji bi potvrdili da zaista postoji jasan negativan uticaj korišćenja ovih tehnologija na decu i mlade. Istraživači koji pokazuju oprez u tvrdnjama o negativnim posledicama takođe naglašavaju važnost sagledavanja pozitivnih aspekata upotrebe digitalnih tehnologija, pogotovo u pogledu dečijih prava na socijalizaciju, učenje, učešće u zajednici, igri, kulturnom životu i umetnosti, kao što je precizirano u Konvenicji o pravima deteta Ujedinjenih Nacija. U svetlu ovih oprečnih i bitno drugačijih interpretacija podataka presečnog tipa, učesnici ovog okruglog stola pokušaće da stave u kontekst podatke o dečijoj upotrebi interneta i digitalnih tehnologija u regionu. Fokusiraćemo se na nalaze istraživanja Deca Evrope na

internetu u Srbiji (podaci prikupljeni 2018. godine na nacionalno reprezentativnom uzorku N= 1150), i poredićemo ih sa podacima dobijenim u drugim istraživačkim projektima u regionu o dečijoj upotrebi digitalnih medija u kojima su panelisti učestvovali proteklih godina; ali takođe i sa podacima istraživanja Deca Evrope na internetu u drugim zemljama. Mreža Deca Evrope na internetu, sprovela je ankete u 19 zemalja u periodu između 2017. i 2019. godine, koristeći isti upitnik koji pokriva širok opseg tema o dečijoj upotrebi digitalnih medija, rizicima i štetnim posledicama kao što su vršnjačko nasilje na internetu, slanje i primanje poruka seksualnog karaktera (engl. *sexting*), izloženost štetnim sadržajima, pornografskim sadržajima kao i dečijoj pornografiji, među mnogobrojnim rizicima. Pozitivni aspekti upotrebe digitalnih medija uključuju digitalne veštine, kao što su programiranje i upotreba digitalnih medija u kreativne svrhe, ili u društveno korisne svrhe. Na ovom okruglom stolu, prvenstveno nas zanima izlaganje rizicima na internetu dece u regionu i kako to izgleda u poređenju sa drugim zemljama; ali takođe i mogućnosti da se iskoriste prilike za pozitivnu upotrebu digitalnih tehnologija

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ISTRAŽIVANJA U DOBA KORONE: TEME I IZAZOVI

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Godina koja je pred nama obeležena je turbulentnim promenama u svim segmentima društva. Zajedno sa učesnicima okruglog stola pokušaćemo da odgovorimo na pitanje kako su se te promene odrazile na istraživanja u domenu društvenih nauka. Svaka pandemija je i socijalni fenomen. Društvene nauke predstavljaju dragoceno oruđe za ispitivanje posledica pandemije, značaja intrapsihičkih, socijalnih i kulturnih faktora i kreiranje smislenih politika. Otvoreno pitanje jeste da li je društvo u Srbiji svesno pomoći koju može dobiti od nas istraživača i da li smo mi svesni kako i koliko možemo pomoći. Pođimo od jednostavnog uvida formulisanog u obliku pitnaja: „Šta će nam efikasna vakcina, ako neće niko da je primi?" Bili smo svedoci da su se istraživači u oblasti psihologije u Srbiji brzo organizovali i, kao i istraživači iz celog sveta, pokušali da uhvate psihološku specifičnost istorijskog trenutka u kojem smo se našli. Bilo je potrebno postaviti i sprovesti istraživanje na način koji je za neke istraživače bio nov. Razgovaraćemo o tome šta je sve bilo novo i kako smo se snašli. Kako se postavlja istraživanje kad nedostaju podaci na osnovu kojih bismo formulisali hipoteze? Tradicionalni terenski rad smo ostavili za neka srećnija vremena. Prelazak na onlajn ispitivanja predstavlja nov izazov kako za reprezenativnost podataka tako i za animiranje ispitanika, odabir što manjeg broja pitanja, izlaženje na kraj sa podacima koji nedostaju. I na kraju, našli smo se u situaciji da su naši rezultati postali zanimljivi i interesantni i široj javnosti. Na koje probleme smo naišli u komunikaciji sa javnim mnjenjem?

CLINICAL PSYCHOLOGY

BAZIČNE PSIHOLOŠKE POTREBE I HEDONISTIČKI ASPEKTI BLAGOSTANJA KOD ADOLESCENATA

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Cilj rada je poređenje prediktivne moći zadovoljenosti triju bazičnih psiholoških potreba (za autonomijom, povezanošću i kompetencijom) u predviđanju sreće i zadovoljstva životom kod adolescenata kao hedonističkih aspekata blagostanja. Istraživanje je izvedeno u dva navrata – prvo 2018 godine na uzorku od 408 beogradskih srednjoškolaca, 84.5% osamnaestogodišnjaka, a zatim 2019 godine na uzorku od 976 srednjoškolaca iz Srbije, 75.3% osamnaestogodišnjaka. Zadovoljenost bazičnih psiholoških potreba ispitana je Upitnikom bazičnih psiholoskih potreba (Nishimura & Suzuki, 2016), sreća Skalom sreće iz Upitnika blagostanja EPOCH (Kern et al., 2016), a zadovoljstvo životom 2018. godine Upitnikom zadovoljstva životom (Diener et al., 1985), a 2019. godine Indeksom ličnog blagostanja (International Welbeing Group, 2013). Rezultati na oba uzorka pokazuju da je zadovoljenost potrebe za povezanošću snažnije povezana sa srećom (2018: $r = .59$; 2019: $r = .54$) i zadovoljstvom životom (2018: $r = .48$; 2019: $r = .48$) nego zadovoljenost potreba za autonomijom (sreća: 2018: $r = .40$; 2019: $r = .39$; zadovoljstvo životom: 2018: $r = .39$; 2019: $r = .40$) i kompetentnošću (sreća: 2018: $r = .35$; 2019: $r = .42$; zadovoljstvo životom: 2018: $r = .36$; 2019: $r = .41$). Rezultati regresione analize pokazuju da je na osnovu zadovoljenosti triju bazičnih psiholoških potreba moguće objasniti nešto više od trećine ukupne varijanse sreće (2018: $R^2_{Adj.} = .39$, $F(3,401) = 87.76$; 2019: $R^2_{Adj.} = .34$, $F(3,966) = 170.79$) i 30% ukupne varijanse zadovoljstva životom adolescenata (2018: $R^2_{Adj.} = .30$, $F(3,400) = 58.38$; 2019: $R^2_{Adj.} = .30$, $F(3,960) = 138.16$). Jedinstveni doprinos zadovoljenosti potrebe za povezanošću predviđanju sreće i zadovoljstva životom (2018: sreća – $\beta = .49$, zadovoljstvo životom - $\beta = .36$; 2019: sreća – $\beta = .40$, zadovoljstvo životom – $\beta = .32$) veći je od jedinstvenog doprinosa zadovoljenosti potreba za autonomijom (2018: sreća – $\beta = .14$, zadovoljstvo životom – $\beta = .18$; 2019: sreća – $\beta = .15$, zadovoljstvo životom – $\beta = .19$) i kompetencijom (2018: sreća – $\beta = .14$, zadovoljstvo životom – $\beta = .17$; 2019: sreća – $\beta = .18$, zadovoljstvo životom – $\beta = .18$) (Za sve koeficijente korelacije, koeficijente multiple determinacije i parcijalne regresione koeficijente $p < .005$). Rezultati su u skladu sa teorijom samodeterminacije, a veća prediktivna moć potrebe za povezanošću u odnosu na preostale dve bazične psihološke potrebe mogla bi se pripisati kolektivizmu, kao bitnom obeležju kulturnog konteksta u kojem odrastaju mladi u Srbiji.

Ključne reči: bazične psihološke potrebe, blagostanje, adolescenti; Srbija

BASIC PSYCHOLOGICAL NEEDS AND HEDONISTIC ASPECTS OF WELLBEING IN ADOLESCENTS

The aim of the paper is to compare the predictive power of satisfaction of three basic psychological needs (for autonomy, relatedness, and competence) for happiness and life

satisfaction in adolescents. The survey was conducted in 2018 on a sample of 408 and in 2019 on a sample of 976 adolescents. The results of the regression analysis show that based on the satisfaction of the three needs, it is possible to explain just over one third of the total variance of happiness and 30% of the total variance of life satisfaction. The unique contribution of satisfying the need for relatedness for prediction of happiness and life satisfaction is greater than the contributions of the other two needs. The results are consistent with the theory of self-determination, and the greater predictive power of the need for relatedness could be attributed to collectivism, as an important feature of Serbia's cultural context.

Keywords: basic psychological needs, wellbeing, adolescents, Serbia

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ISPITIVANJE FAKTORSKE STRUKTURE UPITNIKA ZA PROCENU STAVA PREMA TRAŽENJU STRUČNE PSIHOLOŠKE POMOĆI MHSAS: JEDAN POUČAN PRIMER

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Upitnik za procenu stava prema traženju stručne psihološke pomoći MHSAS konstruisan je oslanjanjem na Teoriju planiranog ponašanja i, prema rezultatima dobijenim pri njegovoj konstrukciji, ima jednofaktorsku strukturu. Upitnik sadrži korensku frazu (Kada bi Ti imao/la neke psihološke probleme, traženje profesionalne psihološke pomoći bilo bi…) i 9 stavki – bipolarnih parova prideva (npr. dobro-loše) na koje se odgovara na sedmostepenoj skali semantičkog diferencijala. Cilj rada bio je ispitivanje faktorske strukture srpske verzije upitnika MHSAS na uzorku adolescenata. Uzorak je činilo 390 beogradskih srednjoškolaca (57.9% ženskog pola), od 16 do 19 godina (pretežno osamnaestogodišnjaka – 84.1%). Ispitivanje faktorske strukture upitnika eksploratornom faktorskom analizom (metoda glavnih osovina) rezultiralo je neočekivanim ishodom: dvofaktorska struktura dobijena promax rotacijom pokazivala je dosledno grupisanje stavki s obzirom na prostorni (levo-desno) raspored negativnih i pozitivnih prideva u paru. Semantička analiza parova prideva nije pružila smisleno tumačenje dobijenih faktora, te je pretpostavljeno da je način odgovaranja pojedinih ispitanika mogao narušiti faktorsku strukturu upitnika. Radi provere ove pretpostavke izvedeni su posebni prosečni skorovi za stavke u kojima je negativan pridev sa leve i za stavke u kojima je negativan pridev sa desne strane. Utvrđeno je da je za 19 (6.6%) ispitanika apsolutna razlika ova dva skora veća od 4. Kako je ova razlika veća za jedinicu od polovine raspona skale, to sugeriše da su ovi ispitanici odgovarali tako kao da su svi negativni pridevi sa leve, a svi pozitivni pridevi sa desne strane skale za odgovaranje. Analizom pojedinačnih odgovora ovih ispitanika utvrđeno je da predstavljaju tipične strukturne autlajere, tj. iznimke. Faktorska analiza bez ovih 19 ispitanika dala je jasno jednofaktorsko rešenje pri čemu sve stavke imaju komunalitet iznad 0.45, a zasićenja svih stavki su veća od 0.68. Rezultati sugerišu da je za korišćenje upitnika MHSAS u sadašnjem obliku neophodno definisati određeni pokazatelj ispitanikovog načina odgovaranja, poput onog koji je predložen u ovom radu, radi otkrivanja nevalidnih protokola. Ovakvo rešenje smatramo boljim od modifikovanja upitnika smeštanjem svih negativnih prideva sa leve a

pozitivnih sa desne strane skale za odgovaranje, jer bi takva modifikacija onemogućila kontrolu ispitanikovog pristupa popunjavanju upitnika.

Ključne reči: upitnik MHSAS, faktorska struktura, autlajer

EXAMINATION OF THE FACTORIAL STRUCTURE OF THE MENTAL HELP SEEKING ATTITUDES SCALE - MHSAS: ONE INSTRUCTIVE EXAMPLE

The aim of this study is to examine the factorial structure of the Serbian version of MHSAS on a sample of adolescents. The sample consisted of 390 Belgrade high school students. The unexpected and uninterpretable two-factor structure obtained by EFA showed a consistent grouping of items with respect to the spatial (left-right) arrangement of negative and positive adjectives in pairs. Factor analysis without 19 subjects identified as structural outliers provided a clear one-factor solution. The analysis excluded cases where the difference between scores for items with a negative adjective on the left and those with a negative adjective on the right was larger by 1 unit than half of the scale range. The results suggest that in order to use MHSAS in its current form, it is necessary to define a particular indicator of the respondent's inattentive responding, such as the one proposed in this paper, to detect invalid protocols.

Keywords: MHSAS; factorial structure; outlier

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PREDIKTORI ZADOVOLJSTVA ŽIVOTOM KOD OSOBA KOJE NEGUJU ČLANA PORODICE

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Zadovoljstvo životom je često istraživan konstrukt u pozitivnoj psihologiji u kontekstu najrazličitijih činioca fizičkog i psihičkog funkcionisanja osobe. Jedan od ciljeva istraživanja sprovedenog 2018. godine PORPOS-3 baterijom, bio je da ispita doprinos zadovoljstva poslom, altruizma, kvaliteta braka (slaganje partnera, rizici za stabilnost braka, zadovoljstvo brakom), obrazovanja, broja dece, starosti i pola, zadovoljstvu životom osoba koje imaju člana porodice kome je potrebna dodatna podrška, briga i nega. Od ukupnog ispitanog uzorka (N = 900), 98 (10.9%) ispitanika je navelo da ima u svojoj užoj porodici osobu kojoj je potrebna dodatna podrška (N(m) = 28, N(ž) = 66), dok je 793 (88.1%) ispitanika (N(m) = 283, N(ž) = 496) izjavilo da nema takvu osobu u porodici. Prosečna starost prve grupe ispitanika je 44.08 (SD=12.32) (20-75 godina), a prosečna starost druge grupe ispitanika je 40.5 (SD = 12.41) (19-79 godina). Svi ispitanici su u braku ili u partnerskoj vezi. Primenjeni su sledeći instrumenti: skraćena skala DAS, kombinacija Skale Altruizma i skale Alzam, a stepen zadovoljstva životom generalno i poslom, procenjivani su na skali od 1 (potpuno nezadovoljan) do 10 (potpuno zadovoljan). Značajni pojedinačni prediktori zadovoljstva životom pojedinaca koji navode da imaju u užoj porodici osobu kojoj je potrebna dodatna podrška, briga i nega su zadovoljstvo poslom (β = .52, p < .001) i rizici za stabilnost braka (β = -.25, p = .008) (F(3, 73) = 16.70, R^2 = .41, adj. R^2 = .39, p < .01). Zadovoljstvu životom na

uzorku ispitanika koji nemaju u užoj porodici osobu kojoj je potrebna dodatna podrška, doprinose značajno zadovoljstvo poslom (β = .43, p < .001), slaganje partnera (β = .21, p < .001), starost ispitanika (β = -.11, p = .005) i obrazovanje (β = .11, p = .001) (F(7, 654) = 43.84, R^2 = .31, *adj. R^2* = .31, p < .01). Zadovoljstvo poslom i institucija braka imaju značajne uloge u zadovoljstvu životom u oba uzorka. Ipak, u okolnostima stresa koji izaziva pojačana nega i briga oko člana porodice povećan rizik za stabilnost braka smanjuje zadovoljstvo životom. Kada porodica nije opterećena dodatnim stresom, poput brige oko člana porodice, bolje slaganje partnera doprinosi zadovoljstvu životom. Zadovoljstvo životom povećava se sa višim nivoom obrazovanja, koje obezbeđuje brojne dobrobiti, a smanjuje sa starošću koja je praćena značajnim telesnim i zdravstvenim problemima u grupi ispitanika koji nemaju dodatno opterećenje oko nege člana porodice.

Ključne reči: zadovoljstvo životom, zadovoljstvo poslom, kvalitet braka, altruizam, nega člana porodice

PREDICTORS OF SATISFACTION WITH LIFE IN INDIVIDUALS WHO ARE CAREGIVERS OF A FAMILY MEMBER

In order to examine the role of satisfaction with work, altruism, quality of marriage (dyadic consensus, risks for marriage stability, satisfaction with marriage), education, number of children, age and gender in satisfaction with life of individuals who have family member in need of special care (the first group, N = 98) and individuals who do not have such family member (the second group, N = 793), we applied shortened DAS scale, combination of Altruism and Alzam scales, and the level of satisfaction with life and with work was evaluated on the scale from 1 (completely dissatisfied) to 10 (completely satisfied). All participants were married/in a romantic relationship in the time of testing. Significant predictors of satisfaction with life in the first group of participants were satisfaction with work and risks for marriage stability, and in the second group were satisfaction with work, dyadic consensus, age, and education.

Keywords: satisfaction with life, satisfaction with work, quality of marriage, altruism, care of family member

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COGNITIVE PSYCHOLOGY

TAKING A BAIT IN POLITICAL DECISIONS: EXPERIMENTAL SIMULATION OF REFERENDUM

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Campaigns shape one's political decision; it is presumed that the wording of the referendum question can influence the voters' choice trough psychological mechanisms underpinning the attribute framing effect (AFE). We tested this notion in an experimental poll about potential referendum and campaign on the Agreement on the future status of Kosovo and Metohija (AKM). We simulated referendum question with emphasizing a specific topic used in the related campaign – dubbed as political token. Participants (N = 4016, age M=40, 43% female) were recruited online. Study consisted of ten experimental situations (20 tasks), in which conveying ecological validity was achieved by mapping four real PT: peace on Balkans, economic prosperity, preservation of the Serbian cultural heritage, and EU membership. Each participant was exposed to a single experimental manipulation, randomly presented, in which they made forced binary choice between the acceptance and the refusal of the AKM. The study employed 2 (frame) x 2 (acceptance) x 5 (token) non-repeated design. The factor token had 5 levels: four mentioned above and fifth level being the combination of all four. The dependent variable was the percentage of the acceptance of the AKM. In general, percentage of the acceptance varied from 24.4 up to 72.4 %, depending on the task. In all ten situations AFE was registered: if refusal leads to positive outcomes (regardless of the token), participants mostly refuse, and vice versa – if the acceptance leads to positive outcomes, participants mostly accept the AKM. To directly oppose the effect of different PT on people's choice and their potential moderation effects we used binary logistic regression. In the second step of the analysis in which interactions of PT and frame were added as predictors, next to the PT, frame, and formulation from the first step, the model was significant and the prediction improved for 7%. As for the individual predictors, only frame type (Exp(B) = 0.442, p=.0) and question formulation (Exp(B) = 0.282, p=.0) are significant, and their interaction (Exp(B) = 8.235, p=.0); none of the PTs, nor their interactions did show effects (ps > .5), meaning that PT type did not affect FE on decision. Interaction of frame and question formulation is expected; positive frame would lead to voting for the AKM if question is formulated through acceptance. If question is formulated through rejection, positive frame would lead to voting against. Findings are in the accordance with the value function in prospect theory, though they do challenge some previous applications on the referendum.

Keywords: attribute framing, referendum, decision making, political decision, peace agreement

EXPLORING LINGUISTIC DIFFERENCES BETWEEN TYPICALLY DEVELOPING AND CHILDREN WITH SLI: EVIDENCE FROM A NONWORD REPETITION TASK IN SERBIAN

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One of the main questions in the research of specific language impairment (SLI) is whether the language characteristics of children with SLI are similar to those of younger typically developing (TD) children (quantitative difference), or do they differ entirely and are never observed in typical development (qualitative difference). The aim of this study was to investigate this question in the phonological domain, by comparing the repetitions of SLI children with those of younger TD children, obtained with a nonword repetition task (NRT) in Serbian. The study included 75 TD children aged 3 to 7 (15 per one-year age group) and 50 children with SLI aged 4 to 8 (8-11 per one-year age group). The used NRT consisted of 48 nonwords with varying prosodic complexity, constructed according to the characteristics of the Serbian language. The prerecorded nonwords were presented to the children in two randomized orders, and their task was to repeat each nonword after hearing it. The repetitions were recorded, transcribed, and coded for accuracy and 16 types of errors on the word, syllable and phoneme level. Four one-way MANOVAs were performed for SLI children of different ages and younger TD children (SLI 5 – TD 3, SLI 6 – TD 3, SLI 7 – TD 4, SLI 8 – TD 5), from whom they did not differ significantly on the overall accuracy on the task (number of incorrect repetitions). These analyses, performed on the number of repetitions containing each of the 16 errors, showed no significant main effect of group for any of the compared ages. There were, however, significant group differences for some errors at different ages ($F(1,24) > 4.45$, $p < .05$, for 8 errors), e.g., SLI children age 7 had significantly more syllable omissions and consonant metatheses than TD children age 4; SLI age 8 had significantly more coda consonant additions than TD age 5. We may conclude that Serbian children with SLI generally make the same types and number of errors in repetitions as younger TD children, indicating a developmental delay, and a quantitative difference in language characteristics between the two groups. The observed differences in the number of some specific errors, however, may indicate an asynchronous delay in the acquisition of some phonological parameters in SLI. This may lead to slightly atypical patterns, and qualitative differences in language characteristics of SLI and TD children. Further analyses of the error patterns occurring in nonword repetitions are required to confirm this.

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THE IMPACT OF WORD FREQUENCY ON THE SERIAL POSITION EFFECT IN THE IMMEDIATE FREE RECALL TASK

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In the free recall task, participants are shown lists of unrelated words in order to memorize as many words as possible, regardless of their ordering in a list. When recalling is immediate, participants tend to recall the first few and last few words best, and the middle items worst. The explanation is that the stimuli at the end are located in the short-term memory (STM), while the stimuli at the beginning are recalled from the long-term memory (LTM).

This is one of the strongest arguments against the unique memory domain. Based on these findings, it could be concluded that there is no interaction between STM and LTM. This hypothesis was tested with an experiment in which the frequency of the stimuli was varied. Frequency contains implicit knowledge of the world, which is stored in the LTM. If a frequency effect on remembering a stimulus from the middle and the end of the list is obtained, the fact that the impact of the LTM process is not limited to the beginning of the sequence could be confirmed.

Each word list was made up of three blocks of five low (L) or high frequency (H) nouns in the singular nominative consisting of 5 and 6 letters, whereby we obtained 8 different list types, e.g. H-H-L, L-L-H etc. In previous studies with free recall task, different frequencies words were presented in two blocks, in random order or alternately, but not in three blocks. In addition, the emphasis was on detecting word links rather than the interaction between STM and LTM.

The sample consisted of 128 students from the University of Banja Luka, divided into 8 experimental groups. Each group learned only one type of lists. Stimuli were exposed auditorily, with a 1 second ISI.

On average, H stimuli were reproduced better than L in the first four positions (minimum difference in fourth position is 29%, $p < .001$). When the first block consisted of L and the second block of H words (lists: L-H-L and L-H-H), the primacy effect was lost: H words from the middle of the list were reproduced successfully than the words from the beginning of the list. Likewise, if the second block consisted of L words, and the third of H words (lists: L-L-H and H-L-H) at position 11 and 12 higher hits were obtained than with the other lists (differences 41 and 33% respectively, $p <. 001$). In addition, the differences between these stimuli and the average values at the last three positions were not statistically significant.

The results indicate that the serial position effect is not a general effect. It depends on the frequency of the stimuli, while LTM plays a role, not only in the reproduction of the stimuli from the beginning of the list, but on all the stimuli except for the last two or three.

Keywords: serial position effect, free recall task, words frequency

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TEMPORAL DYNAMICS OF POLYSEMOUS VERB PROCESSING

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Semantic Settling Dynamics (SSD) model predicts that polysemy effect would change as a function of time spent in processing (Armstrong & Plaut, 2016). In early processing, the processing advantage would be large (compared to unambiguous words), whereas later, the effect would decrease. Research in Serbian described polysemy by quantitatively expressing the magnitude of the ambiguity of a particular word through measures such as number of senses (NoS). Such experiments revealed a facilitatory effect of polysemy in visual lexical decision task (vLDT; Filipović Đurđević, 2007). In SSD framework, this effect would be the equivalent of the early processing. Once the processing is prolonged, we expected reduction of this effect, similar to previous findings comparing polysemy to unambiguous words. This was demonstrated in experiments that employed the prolonging strategy of comparing vLDT (early processing) and auditory lexical decision task (aLDT; late processing). When the stimuli were nouns, we found the expected facilitatory polysemy effect in vLDT and null effect in aLDT (Mišić & Filipović Đurđević, 2019). Compared to the model predictions and the previous research, this loss of effect in later processing was unexpected. Therefore, the aim of this research was twofold – to extend the SSD testing on polysemous verbs and to replicate the results we found on nouns. We tested whether the NoS effect would change in the late processing by using the same prolonging strategy as in previous experiments.

Two groups of participants (71 in vLDT, 75 in aLDT) were presented with 100 polysemous verbs in two versions of lexical decision task – visual and auditory. NoS was estimated based on the senses listed in the Matica Srpska dictionary (2007). Linear mixed modelling revealed that the aLDT was significantly slower than the vLDT. Marginal facilitatory NoS effect was found in vLDT (β = -.020, *S.E.* = .010, *df* = 100.07, *t* = -1.934, *p* = .056). The interaction with task modality was also marginally significant (β = .019, *S.E.* = .010, *df* = 98.84, *t* = -1.871, *p* = .064).

Even though the NoS effect was marginally significant in both the baseline and the prolonged processing condition, the trends point to the same pattern of the results as the ones previously found. Early processing reveals a facilitatory effect, while in later processing, that effect is attenuated. This is a partial replication of the findings from the noun experiment and together they converge to the conclusion that the SSD model cannot give precise predictions regarding the effect change.

Keywords: semantic ambiguity, number of senses, verbs, polysemy, Semantic Settling Dynamics

IS THERE AN EFFECT OF LEXICALITY ON THE CHILDREN'S PRODUCTION OF REFLEXIVE AND RECIPROCAL VERBS IN SERBIAN?

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Previous studies have shown that children acquire reflexive verbs early (Snyder, Hyams & Crisma, 1995). However, more complex types of *se*-verbs are said to be acquired later (Teomiro & Escobar, 2013). Frequency has also proved to play an important factor in the acquisition of verbs (Tomasello, 1992; Lieven, 2008; Anđelković, 2012). The present study was designed to test whether there is any difference in the production of true and lexical reflexive or reciprocal verbs. Miličević (2015) claims that the continua of reflexive and reciprocal verbs start with morphosyntactically derived forms, i.e. true reflexive and reciprocal verbs, which have transitive variants (e.g. *kupati se* 'wash oneself' and *grliti se* 'hug each other'). These are followed by lexical reflexive verbs, which are closer to unaccusative verbs (e.g. *penjati se* 'climb') or lexical reciprocal verbs, which are closer to unergative verbs (e.g. *svađati se* 'argue') respectively. These four types of *se*-verbs were tested in a verb elicitation task. A total of sixty subjects belonging to three age groups (3, 4 and 5 years old, twenty participants each) took part in the research. The children were asked to name the activities presented in the pictures. In two separate analyses, the independent variable was verb type with two levels (true and lexical reflexive and true and lexical reciprocal verbs). The dependent variable was verb production (coded as target or non-target). The data were analyzed with the Mixed Effects Logistic Regression (GLMER), for each of the three age samples. The results of the first GLMER analysis (age 3) suggest that lexical reflexive verbs were produced slightly better than true reflexive verbs, with a marginal statistical difference (β=-2.019; z=-1.850; Pr(>|z|)=.064.). The second GLMER model (age 4) does not show any significant difference (β=1.188; z=1.152; Pr(>|z|)=.249), whereas the last GLMER analysis (age 5) supports the results of the first GLMER analysis (β=2.213; z=2.027; Pr(>|z|)=.042). This difference can be explained with the fact that true reflexive verbs can be replaced with their transitive variants, whereas lexical reflexive verbs cannot. On the other hand, no significant difference was found in the production of true and lexical reciprocal verbs at any of the tested ages (age 3 - β=.124; z=.084; Pr(>|z|)=.084; age 4 - β=.014; z=.011; Pr(>|z|)=.991; age 5 - β=-.711; z=-.452; Pr(>|z|)=.651). The verb frequency effect was not found. Overall, the results of the present study indicate that lexicality can be an important factor in the production of reflexive, but not reciprocal verbs. Future research could show whether there is any difference in the production of reflexive and reciprocal verbs.

Keywords: verb production, reflexive verbs, reciprocal verbs, lexicality, first language acquisition, Serbian

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BELIEF VERSUS PROBABILITY: INDIVIDUAL DIFFERENCES IN META-REASONING

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Modern models of dual-processing propose that parallel Type 1 processes cue responses during reasoning which may or may not be in conflict. If conflict is detected it may be resolved through acceptance of the dominant Type 1 response (rationalization), by abandoning the dominant response (decoupling) or by formulating a third alternative. Meta-reasoning research has shown conflict detection and resolution have significant effects on both response time and metacognitive monitoring outcomes. Conflict generally prolongs response times and decreases metacognitive judgments such as confidence. Recent studies within the dual-process approach have shifted towards research of individual differences in meta-reasoning. Particularly, differences in sensitivity to, and resolution of, conflict. Our goal was to investigate differences in meta-reasoning depending on which Type 1 process was dominant in a simple Base rate task. Participants ($N = 55$) were presented with a description of a person (e.g. person A is attractive) after which they were presented information about a group (e.g. the group consists of 870 models and 130 teachers). Finally, participants had to decide to which cohort does a person randomly chosen from the group belong, and provide a metacognitive judgment of confidence. The task can be manipulated so that belief (stereotypes) and probability (base rates) lead to congruent or conflicted responses. Based on responses in conflict versions we divided the sample into a belief and probability dominant group. We conducted 2(congruence) by 2(group) ANOVAs on response time and confidence measures. Results showed that while conflict prolonged response times for both groups (main effect of congruence $F(1,53) = 43.30$, $p < .01$, $\eta_p^2 = .45$), the effect was larger in the probability dominant group (interaction effect $F(1, 53) = 8.64$, $p < .01$, $\eta_p^2 = .14$). However, there was no difference in the magnitude of the congruence effect on confidence between the groups (only a main effect of congruence $F(1, 53) = 57.66$, $p < .01$, $\eta_p^2 = .52$). Results show probability dominant participants detected the conflict more often and/or that resolving the conflict was more difficult, implying a prevalence of decoupling rather than rationalization but this was not reflected in metacognitive judgments. These results show that the relationship between reasoning and metacognition is more complex and is subject to individual differences to a greater degree than was previously thought.

Keywords: reasoning, reasoning strategies, meta-reasoning, individual differences

INDICATORS OF GRAMMATICAL DEVELOPMENT BASED ON A QUESTIONNAIRE FOR THE ASSESSMENT OF EARLY COMMUNICATIVE SKILLS

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The aim of the study was to systematically assess the occurrence and age-related increase of functional words and specific grammatical parameters in the early language of Serbian children between 8 and 30 months of age based on the adapted version of MacArthur-Bates' Communicative Development Inventories (CDIs). The sample included 126 mothers assessing their child's language by means of the CDI-1 for ages 8-18 months, and CDI-2 for ages 16-30 months. The first questionnaire registers the occurrence of early grammatical words (pronouns, interrogatives, prepositions). The second is intended to evaluate the acquisition of the complex grammatical system: pronouns, prepositional constructions, noun morphology, modal and auxiliary verbs, conjugation, tense, negation, indicators of length and complexity of utterances.

The results of the CDI-1 reveal the occurrence of early grammatical words at the age of 13 to 15 months: pronouns to 'this', moj/moja/moje 'my', and mene/me 'me', and the preposition o 'on, about'. The first Wh-questions gde 'where' and kada 'when' appear at the same age. A larger variety of grammatical words in the sample was recorded at the age of 16 to 18 months: 9 pronouns out of 14 from the list are recorded, 11 prepositions (out of 12 from the list), as well as the first occurrence of the Wh-questions šta 'what' and zašto 'why'. Significant increase was recorded in CDI-2 for the following morpho-syntactic categories (five age groups in the range of 16-30 months, p<0.05): diminutive, possessive adjective, verb person, regular and irregular plural of nouns, preposition-case construction, negative verb forms, present and past tense, while the future tense is not mastered even at the older age levels. The longest utterance increases with age and reaches a length of 5.3 words at 25-27 months of age. The evidence of utterance complexity is recorded in the use of modal verbs, possessive pronouns, possessive adjectives, Wh-questions, dependent clause, direct vs. indirect object, utterance extension. Some aspects of complexity are not mastered even by older age levels (e.g. causative and relational conjunctions). The data obtained on the CDI-2 reveal that a more intensive acquisition of grammar starts at 22 to 24 months of ages,

The obtained results indicate a systematic increase in all functional words and parameters of grammar. Additionally, it provides a preliminary confirmation of the validity of CDIs for the assessment of early grammatical development of children.

Keywords: language acquisition, grammatical development, Serbian, MacArthur-Bates' CDIs, parent report inventory

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IS THE INTENSITY OF PERCEPTUAL EXPERIENCE MODULATED BY AUDITORY MODALITY IN WORD PROCESSING?

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The importance of perceptual experience for the representation and processing of words was documented in numerous researches. Several operationalizations of perceptual richness were proposed. Here we aim to explore the contribution of perceptual intensity to word recognition over and above perceptual diversity (or the number of sensory modalities). Additionally, knowing that words saturated with auditory experience ("knocking") are recognized more slowly in visual lexical decision task (VLD), we wanted to test whether the effect of perceptual intensity was modulated by the presence of auditory sensory modality. Based on embodied cognition accounts, we predicted that words with higher perceptual intensity would take less time to process regardless of the presence of auditory modality.

In experiment 1 (E1) 33 participants were presented with 136 words denoting concepts experienced through one sensory modality, which were divided into two groups: low and high perceptual intensity words. The perceptual intensity was operationalized as the vector length of the five-element vector containing per-modality perceptual strengths. The two groups of stimuli were matched for word length, frequency, familiarity, emotional valence, arousal, context availability, age of acquisition, concreteness and imageability. In E2, the intensity of the perceptual experience was manipulated as a continuous predictor. Here, 40 participants were presented with 134 words experienced with two modalities, which were split according to the presence of auditory modality (e.g. tactile and visual "sponge" vs visual and auditory "applause"). The two groups were matched for the same control variables used in E1, but also for the intensity of the perceptual experience.

We did not observe a significant difference in processing time between the words of high and low perceptual intensity in E1. After controlling for various lexical and semantic variables, in addition to matching words for the number of sensory modalities, the perceptual intensity did not affect reaction times. Similarly, in E2, the increase in perceptual intensity was not followed by a significant change in RT, regardless of the presence of the auditory modality. However, we observed that words with auditory modality elicited longer processing latencies: $t(112.62) = 2.003$, $p < 0.05$.

The inhibitory effect of auditory modality is in accordance with the previous studies. However, the absence of the effect of perceptual intensity calls for further investigations.

Keywords: perceptual experience, effect of perceptual intensity, auditory modality, word processing

PERSONALITY PSYCHOLOGY

KONSTRUKCIJA I VALIDACIJA SKALE STAVOVA PREMA TRANSRODNIM OSOBAMA

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Cilj rada je bila konstukcija i validacija instrumenta stavova prema transrodnim osobama. Preliminarna verzija instrumenta sastojala se od 67 stavki i pilot istraživanje sprovedeno je na 402 ispitanika (žene 68.66%, a muškarci 31.34% uzorka; raspon uzrasta od 14 do 72 godine, $M = 28.69$, $SD = 12.63$), nakon čega je broj stavki smanjen na 16, a metrijske karakteristike finalnog instumnta (STR-16) bile su zadovoljavajuće ($\alpha = .95$, $KMO = .99$, $H5 = .65$). Validaciona studija sprovedena je na 150 ispitanika (muškaraci 39.3%, a žene 60.7% uzorka; rasponu uzrasta od 18 do 64 godine, $M = 32.96$, $SD = 15.27$) i za cilj je imala ispitivanje faktorske valjanosti, konvergentne valjanosti korišćenjem GTS-R skale (*Revidirane skale transfobije i polnih predrasuda*) (Tebbe, 2014) koja meri faktor *transfobije i rodnih predrasuda* i faktor *nasilja zasnovanog na rodu*, kao i korišćenjem skale uverenja o rodu (Tee & Hegarty, 2006), zatim divergentne valjanosti ispitivanjem relacija instrumenta sa skalom autoritarnosti (Todosijević, 2013), kao i proveru prognostičke valjanosti instumenta u predikciji bihejvioralnih indikatora relevantnih za stav prema transrodnim osobama. Faktorskom analizom (metod ekstrakcije maximum likelihood; Promax rotacija) izdvojila su se 3 faktora: *podrška građanskim pravima* ($\alpha = .95$, $KMO = .99$, $H5 = 1$), *transfobija* ($\alpha = .89$, $KMO = .98$, $H5 = 1$) i *rodne predsrasude i nasilje zasnovano na rodu* ($\alpha = .87$, $KMO = .99$, $H5 = 1$). Dobijene su pozitivne (u rasponu od $r = .33$ do $r = .81$; $p < .01$) korelacije između 3 faktora instrumenta STR-16 i 2 faktora GTS-R skale. Regresionom analizom između faktora instrumenta STR-16 i skale uverenja o rodu dobijen je značajan regresioni model ($R^2 = .41$, $F(3,144)=33.30$, $p < .01$) i sva tri faktora STR-16 su se pokazali kao dobri prediktori. Regresionom analizom između faktorskih skorova STR-16 i skale autoritarnosti dobijen je značajan model ($R^2 = .24$, $F(3,144) = 15.22$, $p < .01$) i izvorne korelacije koje su umerene, dakle i niže od konvergentnih. Regresiona analiza između faktora STR-16 i četiri bihejvioralna ajtema pokazala je da su tri od četiri dobijena regresiona modela značajna ($R^2 = .20$, $F(3,144) = 11.69$, $p < .01$; $R^2 = .25$, $F(3,144) = 15.99$, $p < .01$; $R^2 = .29$, $F(3,144) = 19.98$, $p < .01$). Rezultati ukazuju na to da STR-16 zadovoljava faktorsku, konvergentnu, divergentnu i prognostičku valjanost i da je adekvatan instrument za merenje stavova prema transrodnim osobama, tako da se može dalje koristiti u te svrhe u našoj populaciji.

Ključne reči: transfobija, skala, stavovi, transrodnost, validacija

CONSTRUCTION AND VALIDATION OF THE ATTITUDES TOWARD TRANSGENDER PEOPLE SCALE

The aim of this study was to construct and validate the STR-16 test, which is a three-dimensional self-reported inventory of attitudes towards transgender individuals. The pilot version consisted of 67 items and after eliminating items that didn't have satisfactory psychometric characteristics the final version of the STR-16 was left with 16 items and

showed good metric characteristics (α = .95, *KMO* = .99, *H5* = .65). Using factor analysis, in validation study, we extracted 3 factors: *support of civil rights* (α = .95, *KMO* = .99, *H5* = 1), *transphobia* (α = .89, *KMO* = .98, *H5* = 1), *gendernism and gender violence* (α = .87, *KMO* = .99, *H5* = 1). The results indicate that STR-16 meets the factory, convergent, divergent and prognostic validity and show that it is an adequate instrument for measuring attitudes toward transgender people, so it can be used for these purposes in our population.

Keywords: transphobia, scale, attitudes, transgender, validation

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CAN WE USE COGNITIVE TESTS TO ASSESS NON-COGNITIVE CONSTRUCTS? - VALIDATION OF DETERMINATION TEST

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Determination Test (DT) is a cognitive test, a part of the Vienna Test System (VTS) developed by Schuhfried company, aimed to assess reactive stress tolerance in personnel selection. In this research, we examined if DT is a valid measure of reactive stress tolerance. There were no previous researches of the connection between DT and personality traits. If DT is a valid measure of reactive stress tolerance, then it should correlate with Emotionality and Disintegration, i.e., traits mostly influencing general vulnerability to stress. To test the construct validity of DT, in addition to measuring personality traits, we assessed working memory and general cognitive abilities. The sample consisted of 98 students, 80.6% female, average age 21.5 years (*SD* = 2.8). Personality traits (HEXACO and Disintegration) were measured using 100 items HEXACO and 120 items DELTA questionnaires, respectively. Working memory (in an auditory and visual context, and crossmodally) was tested via the WAF test, while general cognitive abilities (GCA) were measured using the Adaptive Matrices test (AMT). Both WAF and AMT are developed in VTS. DT provides several parameters: number of correct, incorrect, delayed, omitted answers, and median reaction time. WAF provides several measures: number of correct reactions, missed reactions, false alarms, and median reaction time. The VTS data were individually collected in a lab; lab-session lasted on average 30 minutes, while personality measures were collected prior to lab sessions. The results showed that DT does not correlate with any of the personality traits, even when controlling for GCA and working memory. However, GCA correlated with the number of correct answers on the DT ($r = .28, p < .001$), and with DT median reaction time ($r = -.28, p < .001$). DT indices correlated with working memory indices: the number of correct answers on DT and the number of false alarms on WAF ($r = -48, p < .001$); the number of correct answers on both tests ($r = .42. p < .001$); the number of missed reactions on both tests ($r = .43, p < .001$). These results may suggest that the DT is not a valid measure of reactive stress tolerance and they do not go in favor of using cognitive tests to assess non-cognitive constructs. But, due to a relatively small number of participants in this study, we need to be critical toward these findings. Further exploration of VTS battery and its validity is needed to allow for reliable and valid assessment in personnel selection.

Keywords: Determination test - DT and reactive stress tolerance, construct validity; personality traits, working memory, general cognitive abilities

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AFFECTIVITY OF THE DARK SIDE: FACETS OF AFFECTIVITY AND THE DARK TRIAD

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Trait affectivity can be considered as a general proneness to experiencing positive (e.g., feeling enthusiastic, alert or active) or negative (e.g., feeling distress and unpleasurable engagement) emotional states. It has been shown that the Dark Triad traits (i.e. Machiavellianism, narcissism and psychopathy) differ in their relationship with the basic personality traits and their facets. Although the affective traits are substantively correlated with some of the basic personality traits, the question on the nature of the relationship of the Dark Triad traits with affective traits and their facets arises. The aim of this research was to examine the relationship of the Dark Triad traits with the affective traits and items they are consisted of. A total of 880 participants (age: $M = 24.23$, $SD = 6.52$, 176 of them male) fulfilled the Short Dark Triad (SD3) and PANAS scales, and research was carried out online. Bivariate correlations showed that narcissism was significantly positively correlated with all positive affect items, while Machiavellianism and psychopathy were correlated with only some of them and correlations were negative. Psychopathy was significantly positively correlated with all negative affect items, and the other two dark traits only with some of them, with the direction of the relationship being negative for narcissism, and positive for psychopathy. Hierarchical multiple regression of each of the dark traits was carried out, with sex and age entered at the first step, and items of positive and negative affective traits at the second step of analysis. Variance explained by positive and negative affect items, over and above sex and age, was 26.4% for narcissism ($\Delta R^2 = .264$, $F(20, 851) = 15.43$, $p < .001$, Cohen's $f^2 = .36$), 12.3% for Machiavellianism ($\Delta R^2 = .123$, $F(20, 851) = 6.47$, $p < .001$, Cohen's $f^2 = .15$), and 16.8% for psychopathy ($\Delta R^2 = .168$, $F(20, 851) = 9.70$, $p < .001$, Cohen's $f^2 = .23$). Dark traits also differed in patterns of the predictive values of positive and negative affect items. Effect size of dark traits variance explained by affectivity was medium to large, and largest in case of narcissism, indicating that affectivity is more pronounced in narcissism than in the other two dark traits. In sum, obtained results reflect theoretically meaningful relations between the affectivity and Dark Triad, but also highlight affective specificities of each of the Dark Triad traits.

Keywords: personality, Dark Triad, positive and negative affectivity

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THE ROLE OF VALUES IN REACTIVE AND PROACTIVE AGGRESSIVE BEHAVIOR

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Values reflect what is important to individuals in their lives. They play an important role in understanding human behavior. Aggressive behavior includes defective value system. Aggressive behavior can be proactive or reactive. Reactive aggression is a reaction to a threat and is often associated with impulsivity and emotions. Conversely, proactive aggression is planned behavior that occurs because of the anticipation of the desired goal that can be achieved by aggressive behavior. We assume that proactive and reactive aggression are differently associated with values. Based on this assumption, we analyzed the associations between the reactive and proactive aggression and different value orientations (i.e. self-realization, conventional, and hedonistic). Data was collected on 180 students (67% females) with a mean age of 22 years (*SD* = 4.14) from faculties in Zagreb, using the Value Orientation Scale (VOS, Franc, Šakić, & Ivčić, 2002) and the Reactive-Proactive Aggression Questionnaire (RPQ; Raine et al., 2006). As predicted, reactive aggression showed positive relation with hedonistic values (β = .25, *p* < .01), though contrary to expectation it was unrelated to the self-realization (β = .09, *p* = .54) and conventional (β = -.08, *p* = .55) values. Consistent with prediction, proactive aggression showed positive relation with hedonistic values (β = .35, *p* < .001), and negative relation with self-realization values (β = -.32, *p* < .01). Contrary to prediction, proactive aggression was unrelated to the conventional value (β = -.01, *p* = .93). Values accounted for 18% of the variance in proactive aggression [*F*(5,175) = 9.10, *p* < .001], and 7% of the variance in reactive aggression [*F*(5,175) = 2.30, *p* < .05]. The results are in line with the theoretical assumptions proposed that proactive and reactive aggressive behavior have different etiologies and that linked to different values.

Keywords: reactive aggression, proactive regression, values

PIKSOP: KONSTRUKCIJA I VALIDACIJA SKALE DOMEN-SPECIFIČNE PROKRASTINACIJE

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Glavni kontekstualni faktor prokrastinacije jeste tip odlaganog zadatka (Haghbin, 2015). Mada je zanemarivanje ovog faktora pri merenju teorijski neopravdano, ono je rasprostranjeno. Iako mnogi instrumenti mere prokrastinaciju preko skupa specifičnih zadataka, nijedan ne nastoji da taj skup bude reprezentativan. Stoga je cilj našeg istraživanja bio konstruisanje i validiranje skale koja meri prokrastinaciju preko 7 teorijski očekivanih domena zadataka: svakodnevni zadaci, hobiji, porodica i bližnji, socijalni kontakti, posao, škola i zdravlje (Klingsieck, 2013). Skup zadataka za ajteme dobijen je pomoću fokus grupe gde su pitanja bila o tome kad i kako ljudi odlažu obaveze. Zabeležene zadatke je u 7 domena klasifikovalo 8 nezavisnih studenata psihologije. Poštujući ovu klasifikaciju konstruisali smo po 10 ajtema za svaki domen. Uz konstruisani upitnik (PIKSOP), ispitanici (*N* = 338, 66% žensko, 15-77 godina (*M* = 24.48, *SD* = 13.81) su popunjavali Skalu opšte prokrastinacije (GPS: Lay, 1982) od 19 ajtema, HEXACO (Ashton & Lee, 2009) od 60 ajtema i 7

bihejvioralnih mera (npr. „Koliko ste sati tokom prošle nedelje odlagali zdravstvene obaveze?"). Pomoću programskog paketa RTT10G i IRT analize, početnih 70 ajtema redukovano je na 21 ajtem - po 3 ajtema za svaki od 7 domena. Redukovani PIKSOP je pokazao dobre metrijske karakteristike (α = .89, *H5* = .51, *KMO* = .97; IRT pouzdanost za ajteme = .97, za osobe = .90; separacija za ispitanike = 3, za ajteme = 6). Faktorska i konvergentna valjanost su proverene modelovanjem strukturalnih jednačina. Modelom je pretpostavljena sedmofaktorska struktura PIKSOP-a, pri čemu su sedam domena prokrastinacije definisani kao latentne varijable prvog reda, a crta prokrastinacije kao faktor drugog reda. Na redukovanom upitniku, mere fitovanja za konfirmatornu faktorsku analizu su bile zadovoljavajuće (*RMSEA* = .069, *CFI* = .989, *TLI* = .987). Radi provere konvergentne valjanosti, modelovan je odnos između crte prokrastinacije iz PIKSOP-a sa dva kriterijuma: skorom na GPS i skorom Savesnosti po HEXACO-u (C). Dobijene procene latentne korelacije su, tim redom: .92 (*SE* = .01), -.82 (*SE* = .02). Korelacije domena iz PIKSOP-a sa odgovarajućim bihejvioralnim merama su se grupisale oko M_r = .26 (*SD* = .09). Psihometrijski indikatori pokazuju da je PIKSOP pouzdan, homogen i reprezentativan. Potvrđena je očekivana faktorska struktura - ljudi odlažu obaveze u okviru 7 očekivanih domena. Konačno, visoke korelacije sa validacionim upitnicima ukazuju na spoljnu valjanost PIKSOP-a.

Ključne reči: prokrastinacija, PIKSOP, tip zadatka, domen-specifičnost, validacija

PIKSOP: CONSTRUCTION AND VALIDATION OF A DOMAIN SPECIFIC PROCRASTINATION SCALE

The main contextual factor of procrastination, type of delayed task, has remained unjustifiably ignored in procrastination measurement. To address this, we constructed and validated a procrastination scale measuring 7 theoretically-based domains: everyday routines, leisure, family and partnership, social contact, work, academic, and health related tasks. Seventy-item version of PIKSOP scale, were constructed using a focus group and independent observers' item classification. Besides PIKSOP, participants (*N* = 338, 66% female, aged 15-77) completed an existing procrastination measure, GPS, HEXACO, and 7 behavioural markers of procrastination. PIKSOP was reduced to 21 items with good metric characteristics (α = .89; *KMO* = .97, *H5* = .51)., Fit measures in a CFA (with 7 first-order factors and one second-order factor) were satisfactory (*RMSEA* = .069, *CFI* = .989, *TLI* = .987). For convergent validity, latent correlation estimates were assessed with GPS and Conscientiousness (0.92 and -0.82, respectively). Correlations with behavioural measures grouped around M_r = .26. Overall, PIKSOP has demonstrated good psychometric properties, and factor and convergent validity.

Keywords: procrastination, PIKSOP, type of task, domain-specificity, validation

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SHOULD LIBERALISM BE A PART OF OPENNESS TO EXPERIENCE AS ITS FACET?

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Both the HEXACO model and the Big Five model suggest that Openness to experience is a complex construct, whereby in some conceptualizations of the Big Five model, such as the IPIP-Big Five, the construct comprises the facet Liberalism. HEXACO model proposes that facets of Openness to experience are Aesthetic Appreciation, Inquisitiveness, Creativity and Unconventionality, while in IPIP-Big Five Openness consists of Imagination, Artistic Interests, Emotionality, i.e., Pure Openness and Adventurousness, Intellect, Liberalism, i.e., Pure Intellect. Previous studies show that Liberalism has the lowest correlations with other measures similar to intellectual openness such as variety seeking. On the other hand, compared to other Openness facets, Liberalism has highest correlations with basic social attitudes and orientations such as conservatism and right-wing authoritarianism. Thus, the aim of this research was to examine the relationship between Liberalism and facets of Openness from two dominant personality models – Big Five and HEXACO. To the sample of 540 participants (age $M = 27.50$, $SD = 9.33$, 75.6% females) items related to Openness from the IPIP Big-Five factor markers (60 items, $\alpha = .88$) and HEXACO-PI-R (16 items, $\alpha = .77$) were administered. Responses on both instruments were given on a 5-point Likert scale. Results show that Liberalism has the lowest correlations with facets from Pure Openness (from nonsignificant to $r = .17$, $p < .01$), and also showed the lowest correlation with all the facets from HEXACO Openness (from nonsignificant to $r = .22$, $p < .01$). While other facets from IPIP-Big Five Openness show moderate to high correlations (ranging from $r = .30$ to $r = .73$, all significant at $p < .01$ level) with HEXACO Openness domain, Liberalism correlates weakly ($r = .16$, $p < .01$). Liberalism also shows low correlations with facets from its Pure Intellect subdomain: Adventurousness ($r = .28$, $p < .01$) and Intellect ($r = .22$, $p < .01$). Considering the weak correlations between Liberalism and the other Openness facets it can be concluded that this facet does not fit well into Openness domain, i.e., that Liberalism is not a proper reflection of Openness trait. The results are discussed in terms of socio-cultural context.

Keywords: Liberalism, Openness to experience, HEXACO-Openness, IPIP-Openness

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TIPOLOŠKI PRISTUP IMPULSIVNOSTI I RELACIJE TIPOVA SA AGRESIVNOŠĆU

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Impulsivnost se najčešće definiše kao multidimenzionalni konstrukt, te smo u ovom istraživanju hteli da ispitamo da li se mogu izolovati različiti tipovi, odn. profili impulsivnosti. Cilj ovog istraživanja je ispitivanje tipologije impulsivnosti u prostoru dimenzija upitnika UPPS-P, kao i njena validacija preko relacija sa funkcionalnom i disfunkcionalnom impulsivnošću (provera konstrukt validnosti profila) i agresivnosti (provera kriterijumske validnosti profila). Na uzorku od 1299 (49.3% muškog pola), starosti od 18 do 69 godina (*AS* = 39.95, *SD* = 13.35), primenjeni su sledeći instrumenti: Skala bihejvioralne impulsivnosti (UPPS-P), Dikmanov inventar impulsivnosti (DII) i Upitnik reaktivne-proaktivne agresivnosti (RPQ). Rezultati analize latentnih profila (LCA) ukazuju na to da se optimalno rešenje sastoji od 5 profila koji se razlikuju kvantitativno, ali i kvalitativno: traženje senzacija (*n* = 132), prosečna impulsivnost (*n* = 558), emocionalna impulsivnost (*n* = 155), blago povišena impulsivnost (*n* = 201) i niska impulsivnost (n = 253). Dobijene su značajne polne razlike ($\chi^2(4) = 25.53$, *p* < .001), pri čemu je muških ispitanika više u profilima blago povišene impulsivnosti i traženja senzacija, ženskih ispitanika je više u profilima prosečne i niske impulsivnosti, dok je u profilu emocionalne impulsivnosti relativno jednak broj ispitanika u odnosu na pol. Relacije sa drugom merom impulsivnosti ukazuju na to da je disfunkcionalna impulsivnosti izražena u sklopu profila emocionalne impulsivnosti, a snižena u sklopu profila traženja senzacija i niske impulsivnosti, dok je funkcionalna impulsivnost izražena u sklopu profila traženja senzacija. U pogledu relacija sa agresivnosti, iako se može očekivati da će reaktivna agresivnost biti više izražena kod svih profila impulsivnosti, rezultati pokazuju da su obe vrste agresivnosti izražene kod profila emocionalne impulsivnosti, dok su obe snižene kod profila traženja senzacija i niske impulsivnosti, a na ostalim profilima se nalaze u okviru prosečnih vrednosti. Iako rezultati potvrđuju konstrukt validnost profila, primetno je da su razlike u agresivnosti između profila kvantitativne i da unutar profila nema razlika između reaktivne i proaktivne agresivnosti, osim u slučaju profila prosečne impulsivnosti u okviru kojeg su ostvareni viši skorovi na reaktivnoj agresivnosti. Prethodna istraživanja su pokazala da se proaktivna agresivnost uvek javlja uz reaktivnu, te su ovakvi rezultati očekivani.

Ključne reči: impulsivnost, traženje senzacija, emocionalna impulsivnost, analiza latentnih profila, reaktivna agresivnost, proaktivna agresivnost

A TYPOLOGY APPROACH TO THE IMPULSIVITY AND RELATIONSHIPS WITH AGGRESSIVENESS

The aim of this study was to examine the typology of impulsivity measured by UPPS-P questionnaire, as well as it's validation through the relations with functional and dysfunctional impulsivity and aggressiveness. The following instruments were applied to a

sample of 1299 (49.3% male) participants, aged 18-69 (M = 39.95, SD = 13.35): Impulsive Behavior Scale (UPPS-P), The Dickman Impulsivity Inventory (DII) and the Reactive-Proactive Aggression Questionnaire (RPQ). The results of the latent profile analysis (LCA) indicated that the optimal solution consisted of five profiles which were different quantitatively and qualitatively: sensation seeking, average impulsivity, emotional impulsivity, above-average impulsivity, and low impulsivity. Functional impulsivity was high in sensation seeking profile, while dysfunctional impulsivity and both reactive and proactive aggressiveness were higher in emotional impulsivity profile.

Keywords: impulsivity, sensation seeking, emotional impulsivity, latent profile analysis, reactive aggressiveness, proactive aggressiveness

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RAZLIKE U PSIHOLOŠKOM DISTRESU I AFEKTIVITETU IZMEĐU PRIPADNIKA OPŠTE POPULACIJE, UBICA I SILOVATELJA

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Rezultati prethodnih istraživanja ukazuju na zaključak da se opšta i zatvorska populacija razlikuju u odnosu na brojne psihološke karakteristike. Sa druge strane, istraživanja koja porede opštu populaciju sa grupama osoba koje su počinile specifične nasilne delikte su veoma retka. Cilj ovog istraživanja je bio da se ispitaju razlike između pripadnika opšte populacije i lica osuđenih za krivično delo (1) ubistvo (čl. 113 i čl. 114 KZ) i (2) silovanje (čl. 138 KZ) u pogledu psihološkog distresa i afektiviteta. U istraživanju su učestvovala 722 ispitanika muškog pola, od kojih je 598 iz opšte populacije i 174 lica osuđena za krivično delo (ubistvo – 134; silovanje – 40), starosti od 20 do 64 godine (AS = 41.62; SD = 14.36). U istraživanju su primenjena dva merna instrumenta, namenjena za procenu psihološkog distresa (CORE-OM) i afektiviteta (PANAS). Sa ciljem utvrđivanja razlika između grupa ispitanika primenjene su dve multivarijatne analize varijanse. Rezultati prve MANOVE ukazuju na zaključak, da se grupe ispitanika značajno razlikuju u odnosu na sve četiri dimenzije upitnika CORE-OM, pri čemu lica osuđena za silovanje postižu značajno više skorove na svim dimenzijama psihološkog distresa od ispitanika iz opšte populacije, a takođe postižu i više skorove od lica osuđenih za ubistvo na dimenziji Problemi. Lica osuđena za ubistvo se ne razlikuju značajno od ispitanika iz opšte populacije na dimenzijama upitnika CORE-OM. Rezultati druge MANOVE ukazuju na zaključak da se navedene tri grupe ispitanika razlikuju u odnosu na negativan afektivitet. Lica osuđena za silovanje postižu više skorove na negativnom afektivitetu u odnosu na preostale dve grupe, dok razlike nisu prisutne između grupe lica osuđenih za ubistvo i ispitanika iz opšte populacije.Odsustvo razlika između opšte populacije i ubica u pogledu afektiviteta se može objasniti time što je većina ubica iz uzorka, k. d. počinila u stanju visokog intenziteta afekta, što se označava privremenim emocionalnim stanjem, pa odatle ne nastaju razlike kada se afekat posmatra kao stabilna osobina ili trenutno stanje u momentu ispitivanja. Razlike između opšte populacije i silovatelja, na gotovo svim ispitivanim merama, ukazuju na specifičan i devijantan afektivni profil silovatelja, što je u skladu sa rezultatima prethodnih istraživanja. Razlike između ubica

i silovatelja nastaju usled specifičnog tretmana silovatelja od strane drugih osuđenih lica tokom izdržavanja kazne zatvora, usled osude za počinjeno k.d. i nepriznavanja krivice.

Ključne reči: psihološki distres, afektivitet, ubistvo, silovanje

THE DIFFERENCE IN THE CONTEXT OF PSYCHOLOGICAL DISTRESS AND AFFECTIVITY BETWEEN GENERAL POPULATION, MURDERERS AND RAPISTS

This research aimed to find out differences between members of the general population and persons convicted of a criminal offense murder and rape (article no. 138) in terms of psychological distress and affectivity. The study involved 722 male participants, from which 598 were members of the general population and 174 were persons convicted of a violent criminal offense. The results showed that persons convicted for rape have significantly higher scores on all dimensions from the general population and murderers, with exception for positive affectivity in which there were no significant differences between groups. Persons convicted for rape have also higher scores from murderers on Problems. The results of this study suggest that rapists differ significantly in state and trait measures of the affectivity from the general population and murderers, while there were very small differences between the last two groups.

Keywords: psychological distress, affectivity, murder, rape

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TIPOLOŠKA PARADIGMA U SVETLU TEORIJE ŽIVOTNE ISTORIJE: RELACIJE TIPOVA SA BAZIČNIM OSOBINAMA LIČNOSTI

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Premda dolazi iz domena evolucione biologije, Teorija životne istorije (LHT) se poslednjih godina primenjuje kao jedan od referentnih okvira unutar psihologije individualnih razlika. Pored objašnjenja raspodele resursa kod prirodnih vrsta generalno (vreme, energija...), a prema važnim životnim funkcijama, LHT podrazumeva i orijentacije ka određenom „stilu" života jedinke, koje se mogu smestiti na kontinuumu „brzo"-„sporo". Rezultati ranijih istraživanja ukazuju na povezanost dimenzija LHT sa brojnim psihološkim konstruktima, poput osobina ličnosti. S obzirom na to da je do sada primenjivana isključivo dimenzionalna paradigma u kontekstu LHT, cilj ovog istraživanja jeste da ponudi odgovor na pitanje da li je moguće identifikovati (latentne) klase/profile životne istorije, ali takođe i ispitati povezanost klasa sa bazičnim dimenzijama ličnosti. Primenjeni su upitnik K-SF-42, namenjen proceni dimenzija LHT, i upitnik VP+2-70 za procenu bazičnih osobina ličnosti (*Savesnost – S; Ekstraverzija – E; Neuroticizam – N; Agresivnost – A; Pozitivna valenca – PV; Negativna valenca – NV; Otvorenost – O*). Uzorak je činilo 1049 ispitanika (61.7% muških), starosti 17-85 godina (*AS* = 38.05; *SD* = 14.87). Analiza latentnih klasa je primenjena sa ciljem utvrđivanja broja i sadržaja klasa. Bejzijanski informacioni kriterijum je sugerisao da je najoptimalnije zadržati rešenja sa 5 klasa (BIC = -18944.47). Razlike između izolovanih klasa u odnosu na bazične osobine ličnosti su ispitane primenom multivarijantne analize varijanse (λ = .838, F(28, 4072) = 6.26, p < .001, η^2_p = .04). Rezultati ukazuju na postojanje značajnih razlika za sve dimenzije, osim *PV* (p = .088). Pripadnici prve klase (*N* = 295),

postižu niže skorove na *E*, a povišene na *N*. Drugu klasu (*N* = 410) karakterišu prosečni skorovi na svim dimenzijama, osim blagog sniženja na *N*. Među pripadnicima treće klase (*N* = 69) je primetno blago povišenje na *E* i *S*, kao i sniženi skorovi na *NV*. Četvrtu klasu (*N* = 163) karakteriše povišenje na dimenzijama *A* i *N* i sniženje na *E* i *S*. Peta klasa (*N* = 112) poseduje najizrazitije varijacije u skorovima - povišenje na *E*, *S* i *O*; i snižene skorove na *A*, *N* i *NV*. Rezultati su kongruentni sa rezultatima prethodnih istraživanja o relacijama osobina ličnosti i (brze/spore) LHT. Primena tipološke paradigme se čini kao informativniji pristup jer mimo uvida u konstelaciju osobina unutar konkretnih klasa, naglašava važnost pojedinih dimenzija LHT za konkretne klase.

Ključne reči: analiza latentnih klasa, VP+2, K-SF-42, teorija životne istorije, LHT

TYPOLOGICAL PARADIGM IN THE LIGHT OF LIFE HISTORY THEORY: RELATIONS BETWEEN TYPES AND BASIC PERSONALITY TRAITS

The recently used framework in the field of psychology of individual differences is Life History Theory (LHT). Previous researches showed that LHT dimensions are associated with personality traits. This research aimed to examine latent classes in the context of LHT, but also their relations with basic personality traits. Results of the latent class analysis show that 5 classes should be identified based on K-SF-42 scores. Value of Bayesian information criterion (BIC = -18944.47) suggested five-class solution to be optimal. All classes were significantly different on all personality traits, with exception of the Positive valence. Results are consistent with previous research on relations between personality traits and (fast/slow) LHT. On the other hand, the typological approach seems like a more informative solution, because it provides a better understanding of personality traits constellation within classes.

Keywords: latent class analysis, VP+2, K-SF-42, life history theory, LHT

PSYCHOMETRIC EVALUATION OF THE MILITANT EXTREMIST MINDSET SCALE

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Due to its wider social impact, there is a growing interest in the study of radicalization and violent extremism. Radicalization and violent extremism can be operationalized through three-dimensional Militant-Extremist Mindset (MEM), including Pro-violence (PV) – acceptance, justification, and advocacy of the use of violence, Divine Power (DP) – beliefs in heaven and God, the role of martyrdom, and afterlife pleasures, and Vile World (VW) – the belief there is something wrong with the world we live in, and that the present-day world is vile and miserable. Despite the growing support of three-dimensional structure of the construct in adults, there is a lack of studies assessing the MEM among the youth, which may be particularly susceptible to radicalization and violent extremism. This study explored the

latent structure and psychometric properties of the MEM scale on a sample of 283 high school students from Belgrade and Sandžak aged between 15 and 18 (*M* = 16.30, *SD* = 0.71;71.7% females). They completed a 24-item version of the MEM scale. The results of confirmatory factor analysis (Maximum Likelihood) of MEM demonstrated insufficiently good fit [χ^2(249) = 543.06, *p* < .001, *CFI* = .86, *TLI* = .83, *RMSEA* = .06, 90%*CI*: .06 - .07] for initial three-factor model of correlated dimensions of PV, VW, and DP, with a single significant latent correlation of .32 between PV and VW factors. All three subscales [PV *KMO* = .96, α = .83, *H2* = .89; VW *KMO* = .95, α = .84, *H2* = .90; DP *KMO* = .92, α = .74, *H2* = .84] exhibited high indices of item sample adequacy, internal consistency, and homogeneity. The model was modified by exclusion of three items from PV and two items from DP subscales from the final version due to their poor psychometric properties and low primary or relatively high secondary factor loadings. The resulting set of 19 items demonstrated a satisfactory fit to the three-factor model of MEM [χ^2(151) = 302.11, *p* < .001, *CFI* = .92, *TLI* = .90, *RMSEA* = .06, 90%*CI*: .05 - .07]. Psychometric properties of the shorter versions of PV [*KMO* = .97, α = .86, *H2* = .95] and VW scales [*KMO* = .94, α = .82, *H2* = .91] proved to be markedly higher after the exclusion of the problematic items. Results on the MEM's latent structure are in line with studies using adult samples. Results indicate that the adapted, shorter version of MEM can be used for assessing radicalization and violent extremism among youth.

INTEROCEPTIVE AWARENESS AND MINDFULNESS: CONSTRUCTS OVERLAP AND CONTRIBUTION TO WELLBEING

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Interoceptive awareness (IA) and mindfulness, although different constructs, are expected to partially overlap since both capture psychological processes related to attention and self-reflection. IA is defined as the conscious level of interoception (sensing, interpreting and integrating signals from the body), while mindfulness refers to focusing attention on experience (either interoception or exteroception) in the present moment in a nonjudgmental way. We aimed to conceptually replicate a study that explored the relationship between IA and mindfulness, revealing a partial overlap between them, but also their independent contribution to personal wellbeing (Hanleya, Mehling, & Garlanda, 2017). We used the same model of body awareness (MAIA, Mehling et al., 2012), but different models of mindfulness

(MAAS, Brown & Ryan, 2003) and wellbeing (SHS, Lyubomirsky & Lepper, 1999). Participants were 470 students of the Faculty of Organizational Sciences, University of Belgrade (66% females, mean age $M = 19.03$). They completed the three scales by indicating their level of agreement with each statement (6-point Likert scales for MAIA and MAAS, 7-point for SHS). Our data did not show substantial overlap between IA and mindfulness. Mindfulness had low positive correlations with NotDistracting ($r = .26$, $p < .001$), Attention Regulation ($r = .10$, $p = .03$), Self Regulation ($r = .12$, $p < .01$) and Trusting ($r = .19$, $p <.001$), but not with other MAIA subscales. Enter method regression analyses (with MAIA in the first and MAAS in the second block and the other way around) revealed that both constructs had an independent contribution to predicting wellbeing. IA and mindfulness significantly (incrementally) predicted wellbeing (all R^2 change p values $< .001$). Interestingly, the significant MAIA predictors of wellbeing were precisely those subscales which correlated with mindfulness as well. Mindfulness and IA appear to be largely independent constructs, as evidenced by both their low to nonexistent correlations as well as independent contributions to wellbeing. Importantly, focusing attention on both the present moment and signals from one's body seems to be relevant for personal wellbeing.

Keywords: Multidimensional Assessment of Interoceptive Awareness (MAIA), mindfulness, Mindful Attention Awareness Scale (MAAS), wellbeing, Subjective Happiness Scale (SHS)

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THE DARK TETRAD AND HEXACO PERSONALITY DOMAINS

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In recent years, there has been a growing interest of researchers in the dark side of personality, most commonly involving the Dark Triad, emphasizing the dark core of personality as a superordinating factor. While relationships between the Dark Triad and basic personality traits are already demonstrated, there has been less research examining relations between personality traits and the Dark Tetrad – which considers Sadism as the fourth trait alongside Machiavellianism, Narcissism and Psychopathy. Thus, the aim of this research was to explore the relationships between basic personality traits and the Dark Tetrad traits. The sample consisted of 150 participants (aged 22 to 61 years, $M = 32.15$, $SD = 8.41$, 56.7% females). Participants were administered items related to HEXACO-PI-R (60 items, α ranging from .58 to .79), the short form of Dark Triad inventory SD3 (9 items for each trait, α ranging from .71 to .73) and Core Sadism scale from VAST inventory (7 items, α = .63). As expected, Sadism ($r = -.36$, $p < .01$) was similarly related with Honesty-Humility, as well as Machiavellianism, Narcissism and Psychopathy ($r = -.31$, $r = -.42$, $r = -.33$, respectively, all significant at $p < .01$ level). Also, Sadism was related to Agreeableness ($r = -.32$, $p < .01$) as well as Machiavellianism, Narcissism and Psychopathy ($r = -.27$, $r = -.23$, $r = -.32$, respectively, all significant at $p < .01$ level). A robust quasi-canonical analysis of covariance, identifying two significant correlations, showed that basic personality traits and Dark Tetrad

traits can be linked in two ways. The first canonical correlation (*Rho* = .60, *Rho²* = .36, *F* = 84.90, *p* < .001) pointed to the relationship between the negative poles of Honesty-Humility and Agreeableness traits on the one side, and all four dark traits on the other side, which is in line with seeing the different dark traits in terms of the common core. The second canonical correlation (*Rho* = .47, *Rho²* = .22, *F* = 43.05, *p* < .001) summarized the relationship of the negative poles of Extraversion, Conscientiousness and Openness from basic personality traits domain, and the composite of Sadism and Psychopathy, which includes Narcissism negatively. This function describes the primarily sadistic and psychopathic, and also socially alienated, non-prudent and low-controlled personality. The results are discussed in terms of the dark core of personality and subtypes of dark personalities defined by dark traits.

Keywords: HEXACO, Dark Triad, Dark Tetrad

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DISINTEGRATION AND APOPHENIA

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Recent literature suggest that apophenic tendencies, i.e., seeing patterns or connections in random, causally unrelated data might be related to Disintegration trait, since its defining features are apophenia, magical ideation and superstition (Knezevic et al., 2017). We aim to examine the extent to which Disintegration trait and different forms of apophenic tendencies are related. We hypothesize that disintegration will be related to belief in conspiracy theories, cognitive and everyday biases. In other words, respondents higher in Disintegration trait should be more prone to perceive regularities in random events and to believe in conspiracy beliefs. The sample consisted of 178 high school students from five different schools in Serbia (59% females, age *M* = 17.53, *SD* = 0.98). Disintegration trait was assessed using 120 items DELTA questionnaire (α = .90). For assessment of apophenia we created two tests of cognitive biases, i.e., subjective perception of randomness in task with coins (α = .89) and in task with flags (α = .89), (SPR), both based on Kahneman and Tversky's research in perception of randomness and heuristics. The task with coins consisted pictures of coins, while the task with flags consisted pictures of flags of the countries that are supposed to compete in ski jumping, both representing a part of a random sequence. Some of the countries' flags are circled, and represent countries which were the first ones to jump. Participants estimated the randomness of such sequences, and higher scores on both tests represented higher cognitive biases. We also created a self-report Inventory of everyday biases (IEB), consisting of 7 items (α = .65). Additionally, we assessed beliefs in conspiracy theories with Broadbent's Generic conspiracy beliefs scale (GCB) (α = .94). Results show strong correlation between Disintegration and beliefs in conspiracy theories (*r* = .56, *p* < .01), and low correlation between Disintegration and IEB (*r* = .21, *p* < .01). Two SPR tasks correlated significantly (*r* = .25, *p* < .01). However, Disintegration, as well as IEB and GCB,

did not correlate with SPR tasks. Lack of significant correlation between Disintegration, IEB and GCB with SPR tasks might be a consequence of different methods we employed in measuring apophenic tendencies, i.e., personality was assessed using self-report method, while apophenia was tested using experimental tasks. We discuss methodological aspects of the study that might influence results.

Keywords: Disintegration, apophenia, cognitive biases, beliefs in conspiracy theories, self-report methods and experimental tasks

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CAN DEDUCTIVE REASONING BE SOCIALLY DESIRABLE: THE EFFECT OF BELIEFS ON PERSONALITY-RELEVANT SYLLOGISTIC REASONING

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Belief bias effect is the tendency to deduce based on the believability of syllogistic conclusion rather than its logical validity. Consistent with this, the aim of the study was to examine whether the reasoning on personality relevant syllogisms would significantly differ in the function of their desirability, independent of the trait content and direction. For that purpose, 84 syllogisms corresponding to the Big Five and Amorality model were constructed. Next, these syllogisms were categorized as desirable (e.g. I empathize with others.) or undesirable (e.g. I am passive.), based on the content of syllogistic conclusion. Each conclusion was formulated in the first person in order to increase the participant's identification with the content. Three hundred participants (240 females, 53 males, and 7 unspecified) took part in the study, with the average age of 20.08 (SD = 2.02). Data were analyzed using a 4 (syllogism type: modus ponens (MP), modus tollens (MT), denying the antecedent (DA), affirming the consequent (AC)) x 2 (desirability: desirable/undesirable content) factorial within groups ANOVA. The dependent variable was the degree of correctly solved syllogisms, operationalized as acceptance/rejection of the syllogism. Personality traits were entered as covariates in the model. Controlling for personality traits, there was a main effect of the syllogism type $F(3, 261) = 4.39$, $p = .005$, $\eta^2 = .048$, a main effect of desirability $F(1, 263) = 4.68$, $p = .032$, $\eta^2 = .017$, and a marginally significant interaction of the syllogism type with desirability $F(3, 261) = 2.44$, $p = .065$, $\eta^2 = .027$. The greatest rate of correct responses was on MP, MT, DA, and AC syllogisms, respectively, though MT and DA success rate was not significantly different. Success rate was also in the direction of desirable compared to the undesirable syllogisms, but pairwise comparisons were non-significant. The marginally significant interaction showed a greater accuracy (i.e. acceptance) of MP and MT syllogisms when the conclusion was desirable, as well as a greater accuracy (i.e. rejection) of DA and AC syllogisms, when the conclusion was undesirable. The results showed reasoning bias independent of personality trait.

Keywords: reasoning, syllogism type, desirability, personality traits

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THERE IS A LIGHT THAT NEVER GOES OUT: LATENT STRUCTURE OF LIGHT TRIAD TRAITS AND THEIR RELATIONS WITH DARK TETRAD

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While the Dark Tetrad (DT) – comprised of Machiavellianism (MC; marked by manipulativeness, amorality, calculating behavior), Narcissism (NC; self-promoting behavior, grandiosity, exploitative interpersonal style), Psychopathy (PS; affective deficits, antisocial behavior, impulsivity), and Sadism (SD; cruel and vicious behavior, gaining pleasure when watching other suffer) – is well-established concept, the newly introduced Light Triad is still relatively unknown to scholars. Authors of Light Triad (LT) propose a three-dimension model of benevolent orientation towards others: Faith in Humanity (FH; believing in people's virtuousness and morality), Humanism (HM; positive evaluation of each individual), and Kantianism (KN; treating people as equal). The main aim of this study was to examine the latent structure and psychometric properties of LT traits and their validity in relation to DT traits on the Serbian sample. A total of 410 participants (M_{AGE} = 22.82, SD_{AGE} = 4.34, 77.3% females) took part in the study. Participants completed the Short Dark Triad questionnaire, measuring MC, NC, PS (9 items each), and VAST, measuring SD (16 items), as well as Light Triad Scale, measuring FH, HM, and KN (4 items each). Confirmatory factor analysis has shown that three-factor model of correlated dimensions of Faith in Humanity, Humanism, and Kantianism demonstrates acceptable fit [$\chi^2(51)$ = 110.60, p < .001, *CFI* = .92, *TLI* = .90, *RMSEA* = .05, 90%*CI*: .04 - .07]. All latent correlations between factors were significant and low to moderate in size, with the highest one between FH and HM (r = .65, p <. 001), and the lowest between FH and KN (r = .27, p =. 004). The first two factors demonstrated fair psychometric properties [FH *KMO* = .80, α = .69, *H2* = .90; HM *KMO* = .77, α = .67, *H2* = .88], while KN showed poor psychometric properties [*KMO* = .44, α = .47, *H2* = .74]. The results have shown that traits of DT accounted for 35% of variance of FH (highest predictive power of MC β = -.39, p <. 001), 32% of HM (highest predictive power of PS β = -.29, p <. 001), and 41% of KN (highest predictive power of SD β = -.35, p <. 001). All relations between dimensions of LT and DT exhibited significant predictive power except one (PS and KN). Our results corroborate the proposed model of three dimensions of LT. Moreover, these dimensions have shown to be distinctive from DT traits. While FH and HM showed good psychometric properties, we propose that KN dimension should be further developed.

Keywords: Light Triad, Dark Triad, Dark Tetrad, latent structure, psychometric properties

WOMEN'S PORNOGRAPHY CONSUMPTION, BODY UNEASINESS, SEXUAL AND RELATIONSHIP SATISFACTION

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The media in general, and pornography in particular, can make women experience feelings of dissatisfaction about their bodies, which can, in turn, lead to additional life problems, such as dissatisfaction with sexual experiences and relationships in general. The main goal of this study is to examine the relations between problematic pornography use (characterized by excessive sexual behaviors, diminished self-control over sexual engagement, use of sex for escaping/avoiding negative emotions, and functional impairment and distress), body uneasiness, sexual and relationship satisfaction. The sample was convenient and consisted of 187 women, ages 18 to 31 ($M = 23.07$, $SD = 2.66$), who have been in a relationship for more than six months. The data were collected using Problematic Pornography Use Scale (PPUS; Kor et al., 2014), New Sexual Satisfaction Scale Short Form (NSSS-S; Štulhofer, Buško, & Brouillard, 2011), Body Uneasiness Test (BUT-A; Cuzzolaro et al., 2006), and Perceived Relationship Quality Components Inventory (Fletcher, Simpson, & Thomas, 2000). The model assumed that higher Problematic use of pornography dimension predicts highly Body uneasiness avoidance, which in turn would predict negatively both aspects of sexual satisfaction (Ego-focused and Partner-focused), which are also assumed as positive predictors of overall Relationship satisfaction. Structural equation modeling (SEM) was used to examine the hypothesized relationships and model provided a good fit to the data $\chi^2(4) = 6.718$, $p = .152$, $CFI = .98$, $TLI = .96$, $RMSEA = .060$ (90% $CI = .000, .137$). Results showed that Problematic use of pornography significantly predicts Body uneasiness avoidance ($\beta = .193$; $p = .007$), which predicts both aspects of sexual satisfaction Ego-focused ($\beta = -.292$; $p < .001$) and Partner-focused ($\beta = -.287$; $p < .001$). Both Ego-focused and Partner-focused sexual satisfaction significantly predicted Relationship satisfaction ($\beta = .245$; $p = .006$ and $\beta = .293$; $p < .001$, respectively). Obtained results supported our hypotheses. It seems that the women in our study may have not been able to recognize the unrealistic nature of the body image ideals that are often portrayed in pornographic scenes so they feel uncomfortable in their bodies and avoid situations where they interact with others. For this reason, a person may enjoy their sexual relations less, which adversely affects the quality of their relationships.

Keywords*: pornography consumption, body uneasiness, sexual satisfaction, relationship satisfaction

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EVALUATION OF THE ACCURACY OF PERSONALITY JUDGMENTS BASED ON WRITTEN VERBAL PRODUCTION

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The process of personality judgment occurs in daily social interactions and represents an attempt to identify traits of someone else's personality and in that way to explain past behaviors, but also to predict future behaviors. The results of this process have implications on future decisions and actions of people. Personality is more frequently assessed in daily life compared to the contexts in which psychologists perform assessments, therefore exploring the accuracy of non-expert personality judgments is of great importance. Traits such as Extraversion and Conscientiousness are more visible in behavior than other personality traits, making them easier to judge accurately. This research aimed to examine the accuracy of non-expert ratings of Extraversion and Conscientiousness based on short written texts. The sample consisted of 215 participants (age $M = 28.58$, $SD = 10.30$, 80.5 % females), and the selection criteria was that participants are not psychologists or psychology students. Participants gave their ratings of Extraversion and Conscientiousness on the Scale for assessing indicators of basic personality dimensions, based on texts written by five different individuals. The scale consists of brief descriptions of the highest and lowest values for each of the facets that represent Extraversion and Conscientiousness (Cronbach's alpha reliabilities ranging from .72 to .89). Responses were given on a 5-point Likert scale. Written texts were collected in a previous study, where participants were instructed to write everything that comes to their minds, continually, without worrying about grammar, for 10 minutes, and were chosen from the collection of 2500 texts. Criteria used to estimate the accuracy of judgments were agreement between self-report measures on HEXACO PI-R from people who wrote the texts and ratings from participants, as well as agreement between multiple raters. The results showed that there is moderate self-other agreement for Extraversion ($r = .440$, $p < .01$) and Conscientiousness ($r = .297$, $p < .01$). Also, the results showed that there is high between-raters agreement for Extraversion ($ICC_{avg} = .99$) and Conscientiousness ($ICC_{avg} = .98$). The obtained results indicate that it is possible to judge one's personality based on written verbal production, as well that raters tend to form similar impressions about the personality of the person who is judged, and are in line with previous research.

Keywords: personality judgment, personality traits, accuracy, written verbal production

ADDRESSING ISSUES IN THE SCORING OF ABILITY EMOTIONAL INTELLIGENCE TESTS: COMPARISON OF TWO METHODS FOR CONSENSUAL SCORING OF THE MSCEIT

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A first-rate measure of ability emotional intelligence (AEI)–the MSCEIT–uses proportion based consensual scoring (PCS) established in an expert or general population sample, meaning that each answer is correct to a certain degree, depending on the number of respondents from the normative sample who judged it as accurate. To our knowledge, other available consensual scoring methods have not yet been used in the scoring of two AEI branches: Understanding Emotions (UE) and Managing Emotions (ME). We present the results of an attempt to devise a mode based consensual scoring (MCS) key for UE and ME tasks in the MSCEIT. Participants were 255 employees (115 female, M_{age} = 40.08; SD_{age} = 8.24) of a large Belgrade dairy company who completed: a) the UE and ME tasks of the MSCEIT; b) three intelligence tests yielding a g-factor; c) the NEO FFI to assess the Big Five; and d) Ryff's Scales of Psychological Well-Being. Raw MSCEIT data were first scored using general PCS, which served to establish the modal answer for each item (one with the highest rate of endorsements in the normative sample). These answers were then attributed a 1-point value, whilst all other alternatives within each item were assigned 0 points to devise the MCS key; this key was also applied to the raw data. Scores obtained via the two scoring methods were then compared with respect to distributional properties, reliability, and validity. Both scoring methods resulted in decent distributional properties for UE, ME, and the total AEI score: Skew and Kurtosis values were well below 1, means almost equal to medians, and score ranges adequate to ensure discriminative power. However, MCS resulted in a considerably larger right tail for all scores, leading to improvement of distribution symmetry. Internal consistencies were .52 to .72 for MCS, and .66 to .78 for PCS. Correlations with the g-factor were in both cases small to moderate: r_{MCS} = .25–.34 and r_{PCS}= .29–.40, all statistically significant (p < .001). Also, the patterns of correlations with the Big Five were the same for MCS and PCS (negative with Neuroticism and positive with other traits), as were coefficient sizes (r_{MCS} = |.06–.41| and r_{PCS} = |.09–.42|). Finally, with MCS, UE and ME predicted 16% of variance in well-being ($F_{(2, 240)}$ = 23.77, p < .001), while 24% were predicted with PCS ($F_{(2, 240)}$ = 39.33, p < .001). To conclude, both consensual scoring methods result in similar psychometric properties for the MSCEIT scores in question, thus supporting further work on the evaluation of the most appropriate scoring format for AEI tests.

Keywords: ability emotional intelligence, MSCEIT, consensus scoring, proportion, mode

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THE RELATIONSHIP BETWEEN LONELINESS AND COGNITION IN HEALTHY OLDER MEN AND WOMEN: THE ROLE OF CORTISOL

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Loneliness has been associated with an increased risk of cognitive decline and dementia in older people, as wellas a dysregulation of Hypothalamic–Pituitary–Adrenal (HPA) axis functioning. In addition, it has been suggestedthat women are more vulnerable to the negative effects of loneliness on cognition. Our aim was to analyze the effectof HPA-axis functioning as a mediator in the relationship between loneliness andcognitive function, and interactionsdepending on sex, in healthy older people. To do so, 86 healthy older people (52.3% female) from 60to 80 years old (*M*=67.44; *SD*=4.37) completed the revised UCLA loneliness scale. A neuropsychologicalbattery was administered to assess global cognition(MMSE; Mini Mental State Examination), attention and executive function(TMT; Trial-Making Test A and B), workingmemory (Letter-Number Sequencing Test), and verbal memory (Rivermead Stories Subtest). Saliva samples were provided on two consecutiveweekdays to obtain awakening and bedtime cortisol levels, the diurnal cortisol slope (DCS), and the area underthe curve with respect to the ground (AUCg). Our results showed that loneliness was not directly associated withcognitive performance. Furthermore, loneliness was only related to higher bedtime cortisol levels. In addition, loneliness was associated with worse performance on attention(TMT-A: path ab: B=.099, SE=.055, 95% CI: .000, .219), executive function (TMT-B: path ab: B=.081, SE=.055, 95% CI: .000, .211), and verbal memory (path ab: B=−.108, SE=.071, 95% CI: −.273, −.004), via bedtime cortisollevels. Therefore, we suggest that HPA-axis functioning is one of the biological mechanisms that mediate therelationship between loneliness and poorer cognitive function, although no sex differences were observed in these associations.

Keywords: Loneliness, Cortisol, Cognition, Older People

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DEFICIT SAMOREGULACIJE KAO PREDIKTOR NEZDRAVOG ODNOSA PREMA HRANI

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Ljudi ne jedu samo kada su gladni niti prestaju da jedu kada su siti; procesi samoregulacije vode ih ka ponavljajućim iskustvima neuspeha u kontrolisanju unosa hrane. Teorija samodeterminacije opisuje tri tipa selfa različite samoregulacije (Hodgins & Knee, 2002). Individue integrisanog selfa vrednuju sebe i prepoznaju važnost sopstvenih autentičnih impulsa. Samovrednovanje egoinvestirajućeg selfa bazirano je na ekstrinzički podstaknutoj inicijaciji. Impersonalni self ima najniži nivo samoregulacije i podrazumeva odsustvo

motivacije i preplavljenost negativnim mislima i osećanjima. Glavni cilj istraživanja bio je utvrditi da li je samoregulacija povezana sa odnosom prema hrani. Uzorak istraživanja činilo je 95 žena starosti od 24 do 45 godina (M = 34.56, SD = 5.06). U istraživanju su korišćeni: *Test samoregulacije ponašanja (EFQ)* koji ispituje različite vrste selfa i *Upitnik o odnosu odraslih prema hrani (AEBQ)* koji ispituje odnos prema hrani na 8 dimenzija: uživanje u hrani, emocionalno prejedanje, emocionalno izgladnjivanje, izbirljivost, reagovanje na hranu, glad, sporost u jelu i osetljivost na sitost. Podaci su obrađeni u osam nezavisnih višestrukih regresionih analiza u kojima su korišćena tri tipa samoregulacije kao prediktori, a pojedinačne dimenzije odnosa prema hrani kao kriterijumi. Većina dimenzija odnosa prema hrani nije mogla biti uspešno predviđena različitim tipovima samoregulacije. Ipak, egoinvestirajući self (β = 0.32 , p < .01) pokazao se kao značajan prediktor osetljivosti na hranu, odnosno lakog pristupanja hrani kada je ona dostupna ($F(3,91)$ = 5.77, p < .01, R^2 = .13) kao i osećaja gladi (β = 0.33 , p < .01) ($F(3,91)$ = 3.59, p < .05, R^2 = .10), dok je impersonalni self (β = 0.28, p < .05) dobar prediktor osetljivosti na sitost ($F(3,91)$ = 2.78, p < .05, R^2 = .05), odnosno lakog okončanja jela. Integrisan self nije se pokazao kao značajan prediktor nijednog aspekta odnosa prema hrani. Potencijalno objašnjenje moglo bi biti da egoinvestirajući self nema kapaciteta da se odupre signalima hrane i emocionalnom uzbuđenju koje stvara osujećenost potrebe za autonomijom - hrana se koristi kao supstitut nezadovoljene potrebe i regulator emocija, dok negativno raspoloženje impersonalnog selfa pojačava reaktivnost centara za nagradu čineći ga osetljivim na signale sitosti. Rezultati istraživanja u skladu su sa ranijim nalazima koji ukazuju na povezanost kvaliteta samoregulacije i nezdrave ishrane (Pelletier et al., 2004) i dodatno ukazuju na potrebu razvijanja veština samoregulacije kao potencijalne prevencije poremećaja ishrane.

Ključne reči: samoregulacija, self; odnos prema hrani, glad, sitost

SELF-REGULATION DEFICIT PREDICTS UNHEALTHY FOOD BEHAVIOR

Our relationship to food is not determined only by hunger and satiety: self-regulation ability of the individual can mediate this process. Self-determination theory postulates three types of the self-regulation processes: integrated, ego-investing, and impersonal self. The main goal of our research was to examine the relationship between self-regulation and eating behavior in adults. 95 female participants aged 24-45 years (M = 34.56, SD = 5.06) completed two questionnaires: *the Ego functioning questionnaire* (EFQ) and *Adult Eating Behavior Questionnaire* (AEBQ). The results of multiple regression analysis showed that ego-investing self predicts food sensitivity ($F(3,91)$ = 5.77, p < .01, R^2 = .13) and hunger ($F(3,91)$ = 3.59, p < .05, R^2 = 0.10), while impersonal self predicts someone's sensitivity to satiety ($F(3,91)$ = 2.78, p < .05, R^2 = .05). Impersonal self does not predict any aspect of eating behavior. These results confirmed that self-regulation failure can influence food behavior, and emphasize the importance of developing self-regulation skills in eating behavior treatment.

Keywords: self-regulation, self, eating behaviour, hunger, satiety

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EDUCATIONAL PSYCHOLOGY

TEACHER ATTITUDES TOWARDS THE INCLUSION PROCESS IN EDUCATION

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Contemporary education means inclusiveness, flexibility, interactivity and individualization of teaching process. A significant factor in the process of inclusion in education are the attitudes of the teachers towards the process of inclusion of children with special needs. The goal of the research was to explore the attitudes of teachers towards the process of inclusion in education process, the teacher's acceptance of the inclusion process. For this purpose, was used a questionnaire SINKL2.0 which contains 19 items, organized in 4 factors: 1. moral imperative of inclusion (MIMI), includes items related to the moral correctness and humanity of the inclusion process; 2. problems with inclusive teaching (PIN), refers to the perception of the teachers of the degree of acceptance and support of children with disabilities by other students; 3. partial inclusion-mainstreaming (PIM), refers to the benefits of special education for children with disabilities, and 4. professional support (SP), refers to the perceived support of the teachers from parents and colleagues in working process with children with disabilities. The survey was conducted on a sample of 80 teachers in secondary vocational schools in Bitola, R. Macedonia (44 female teachers). Cronbach's alpha coefficient of internal consistency is $\alpha = .84$. The range of the scores were 1–5. The highest average scores ($M = 3.82$, $SD = 0.56$), were obtained on the factor partial inclusion-mainstreaming (PIM), which indicates that most of the teachers believe that only students with special needs who can follow the regular classes should be included in the regular schools, while other students with disabilities should be in special schools or classes and occasionally to be included in regular classes, only on classes that they can follow. Many teachers point out that they face problems in the inclusive teaching (PIN), ($M = 3.68$, $SD = 0.68$), which indicates low level of acceptance and adaptation of children with disabilities by other students and that they impede teaching process. The lowest scores ($M = 2.34$, $SD = 0.73$) we have at the scale moral imperative factor of inclusion (MIMI), which indicates that teachers disagree that the inclusion must be implemented by human reasons and just because it is mandatory, regardless of efficiency. Female teachers have more positive attitudes towards the inclusion process than men. It can be concluded that teachers understand the inclusive process according to the traditional view that children with disabilities should be in special classes, and in the inclusion process should only be included the students who can follow the classes, and also teachers consider that children with special needs have problems with other students in the process of adaptation, socialization and getting support by other students, and there are many difficulties to maintain discipline in the classroom with children with disabilities.

Keywords*: inclusion, inclusive education, attitudes, children with special needs, teachers

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PREDIKTIVNA VALIDNOST INDIKATORA PRIJEMNOG ISPITA ZA USPEH U STUDIRANJU NA VISOKOJ ŠKOLI ZA VASPITAČE

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Većina istraživanja u visokom obrazovanju promoviše potrebu za sistematskim praćenjem uspeha studenata u studiranju u cilju kontrole kvaliteta i povećanja efikasnosti studijskih programa. Cilj ovog istraživanja je utvrđivanje relevantnosti kriterijuma prijemnog ispita za uspešnost u studiranju na Visokoj školi za vaspitače. Na prigodnom uzorku studenata koji su diplomirali u periodu 2013-2019, multiplom regresionom analizom, testirana je mogućnost predikcije dužine studiranja, na osnovu tri skora sa prijemnog ispita (1. uspeh iz srednje škole; 2. test iz srpskog jezika i književnosti; 3. test opšte kulture i informisanosti). Analiza je pokazala da je moguće predvideti dužinu studiranja na osnovu prijemnog ispita, i to sa 13% uspešnosti ($F(3, 406) = 20.260$, $p = .000$ $R^2 = .130$), pri čemu su sva tri prediktora statistički značajna: srednjoškolski uspeh ($t = -2.294$, $p < .022$, $r = -.091$); test srpskog jezika i književnosti ($t = 4.429$, $p < .000$, $r = .095$); test opšte kulture i informisanosti ($t = -7.126$, $p < .000$, $r = -.333$). Dalje je testirana mogućnost predikcije uspeha u studiranju operacionalizovanog kroz prosečnu ocenu studija u celini, Analiza je pokazala da je moguće predvideti uspeh u studiranju na osnovu prijemnog ispita, i to sa 28.8% uspešnosti ($F(3, 406) = 54.720$, $p = .000$, $R^2 = .288$;), pri čemu su značajni prediktori srednjoškolski uspeh ($t = 9.651$, $p < .000$, $r = .437$) i postignuće na testu opšte kulture i informisanosti ($t = 7.033$, $p < .000$, $r = .342$). Test opšte kulture i informisanosti ima zadovoljavajuću prediktivnu vrednost za svaku ispitivanu grupu predmeta (B1= .263; B2= .190; B3= .121; t1=5.767;t2=4.181; t3=2.517; p1< .000; p2< .000; p3< .012; r1= .296; r2= .244; r3= .169) U teorijskom smislu rad je ponudio odgovore na pitanja prirode znanja koja se proveravaju na prijemnom ispitu u školi za vaspitače.

Ključne reči: prediktivna validnost, vaspitači, prijemni ispit

PREDICTIVE VALIDITY OF ENTRANCE EXAM INDICATORS FOR STUDY SUCCESS AT THE PRE-SCHOOL TEACHER TRAINING COLLEGE

The aim of the research is to determine the relevance of the entrance exam criteria for the study of success at the Pre-school Teacher Training College. The analysis showed it was possible to predict the length of the study based on the entrance exam, with 13% success ($F(3,406) = 20.260$, $p = .000$), with all three predictors being statistically significant: High school success ($t = -2.294$, $p < .022$, $r = -. 091$); Test of Serbian language and literature ($t = 4.429$, $p < .000$, $r = .095$); General culture and information test ($t = -7.126$, $p < .000$, $r = -. 333$). The possibility of predicting success (operationalized through the average grade of the study) was further tested. The analysis showed it was possible to predict it on the basis of the entrance exam, with 28.8% of success ($F(3,406) = 54.720$, $p = .000$), with significant predictors of high school success ($t = 9.651$, $p < .000$, $r = .437$) and achievement on the general culture and information test ($t = 7.033$, $p < .000$, $r = .342$).

Keywords: predictive validity, pre-school teacher, entrance exam

SVAKODNEVNE AKTIVNOSTI SREDNJOŠKOLACA U SRBIJI: POREĐENJE VREMENA PROVEDENOG U OBRAZOVNIM AKTIVNOSTIMA PRE I NAKON POJAVLJIVANJA DRUŠTVENIH MREŽA

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U radu su analizirane aktivnosti kojima se mladi u Srbiji bave tokom radnih dana, sa posebnim fokusom na strukturisane aktivnosti koje se tiču učenja. Početkom 2018. godine sprovedeno je obimno istraživanje čiji su učesnici bili učenici prvog i trećeg razreda 26 srednjih škola u Srbiji, a rezultate smo poredili sa prethodnim istraživanjem iz 2007. godine u kojem su učestvovali učenici istih škola. U oba istraživanja primenjivan je metod budžeta vremena: u retrospektivnom 24-časovnom vremenskom dnevniku ispitanici su opisivali aktivnosti u koje su bili uključeni, mesta na kojima su se aktivnosti obavljale i osobe s kojima su učestvovali u interakciji. Cilj istraživanja bio je poređenje količine vremena koje su provodili u obrazovnim aktivnostima srednjoškolci 2007. u odnosu na srednjoškolce 2018. godine, odnosno pre i nakon pojavljivanja društvenih mreža. Rezultati pokazuju da učenici iz novijeg istraživanja u proseku provode manje vremena u učenju (M = 70.01min; SD = 80.57) u odnosu na srednjoškolce koji su učestvovali u istraživanju 2007. godine (M = 93.66 min; SD = 84.33; t (876) = 5.451, p < .01). Treba napomenuti da postoji razlika i u broju učenika koji nisu navodili učenje kao jednu od aktivnosti tokom dana (25% u 2007. i 37% učenika u 2018. godini), kao i da 4% učenika u talasu iz 2018. godine navodi da uči dok su istovremeno na društvenim mrežama. Kada su u pitanju ostale strukturisane aktivnosti povezane sa učenjem, nema značajnih razlika između učesnika dva talasa istraživanja u vremenu provedenom u vannastavnim aktivnostima, pohađanju privatnih časova i treniranju. Manje ukupnog vremena provedeno u učenju, najzastupljenijoj mentalno angažujućoj aktivnosti, govori u prilog tome da je svakodnevica današnjih srednjoškolaca okrenutija pasivnim i relaksirajućim aktivnostima nego što je to bio slučaj pre deset godina. Korišćenje društvenih mreža - nova aktivnost koja se pojavila u vremenskim dnevnicima učenika u novijem istraživanju u odnosu na staro, spominje se u vremenskim dnevnicima 38% učenika i izveštavaju da u ovoj aktivnosti u proseku provode 27 minuta tokom radnih dana. Rezultati će se porediti imajući u vidu promene i u drugim aktivnostima koje čine svakodnevni život srednjoškolaca u Srbiji.

Ključne reči: učenje, srednjoškolci, metod vremenskog dnevnika, društvene mreže

EVERYDAY ACTIVITIES OF HIGH SCHOOL STUDENTS IN SERBIA: EDUCATIONAL ACTIVITIES BEFORE AND AFTER SOCIAL NETWORKS EMERGED

The study aimed to compare the time spent in educational activities between 2007 and 2018 or before and after the advent of social networks. Participants in both studies were high school students (1st and 3rd grade) from the same 26 schools. The 24-hour time diary method was used: students described the activities they were involved in during the day, the places where they were engaged, and the people they interacted with. The results show that students in recent research spent on average less time in learning (M=70.01min; SD=80.57) than 2007 survey participants (M=93.66min; SD=84.33; t(876)=5.45, p<0.01). Around every third

student (38%) reported using social networks (on average 27 minutes) while 4% used social networks while learning. The results are compared considering other changes in the structure of adolescents' everyday life.

Keywords: learning, high school students, time diary, social networks

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HIGH SCHOOL STUDENTS' ACHIEVEMENT AND MOTIVATION IN MATHEMATICS – DO GENDER AND GENDER ROLE IDENTIFICATION PLAY A ROLE?

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Current literature shows that males are overrepresented in the fields of Science, Technology, Engineering and Mathematics (STEM) and that they have higher performance in Mathematics. According to Expectancy-Value theory of motivation, occupational choice is influenced by a person's values and expectancy for success. Even at the school age females have lower mathematical self-efficacy and higher mathematical anxiety, and they value more tasks with a clear social purpose than STEM-related tasks. Girls with higher levels of gender identification are even less motivated in Mathematics and perform worse than other girls and boys. Similar trends are registered in Serbia – boys outperform girls in mathematical literacy, have lower mathematical anxiety, and males predominate in the STEM fields, both in higher education and the workforce. Since there were no studies in the Serbian context exploring the relationship between gender and gender role identification with achievement and motivation in Mathematics, our goals were: a) to investigate if there are gender differences in achievement and motivation in Mathematics, and b) to explore if Mathematics achievement and motivation are dependent on gender role identification. Participants were 206 students (M_{age}=16.25, 68% females) from one central Belgrade high school. They reported their school achievement (ranking scale: „excellent", „very good", „good" and „satisfactory"), and their mark in Mathematics (2-5), in the previous school year. Relaying on Expectancy-Value theory, the motivation in Mathematics was assessed through the single-item five-point Likert type scales for mathematical self-efficacy and valuing of Mathematics, both designed for the purpose of this study. Bem Sex Role Inventory (20 items, 7-point Likert type scale) was applied and scores for femininity and masculinity were calculated. While no gender differences in the achievement and self-efficacy were found, results show that the male students value Mathematics more than their female counterparts ($t(204) = 2.36$, $p = .02$), as it was demonstrated in the international studies. Correlation analyses between femininity and masculinity and achievement in Mathematics, self-efficacy and valuing show that femininity correlates significantly with the achievement in Mathematics ($r = .19$, $p = .02$) in the subsample of girls, while no other significant correlation was found. This can be explained by less traditional gender-related values of the students from our sample.

Keywords: motivation, achievement, gender, gender role identification, Mathematics

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GPA, PERSONALITY, INTELLIGENCE, AND ATTITUDES TOWARDS SCIENCE AS CORRELATES OF SCIENTIFIC MISCONCEPTIONS AMONGST UNIVERSITY STUDENTS

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Acceptance of science-related misconceptions & "myths" has been shown to have detrimental effect on scientific literacy and, in turn, predicts anti-scientific attitudes, lower academic achievement (GPA), and undesirable socio-economic outcomes. We wanted to determine both prevalence of common scientific misconceptions among university students and their association with several established relevant correlates, namely: students' GPA, intelligence, personality, and attitudes towards science (ATS). 516 Republic of Srpska's (B&H) university students (58.9% females) of various years and fields self-reported their GPA and completed short Big 5 personality and general intelligence (g) tests. They also self-reported three dimensions of ATS: Antipathy towards science and scientists (AS), Importance and affinity towards science (IS), and Deficiency of science (DS). Scientific misconceptions were measured by 29 yes-no questions about basic scientific facts and reasoning on which people are commonly mistaken. This included claims about vaccines causing autism, dinosaurs and human coexisting, basic probabilistic reasoning, etc. The results show that the average score of correct answers about scientific misconceptions is around theoretical middle: $M = 14.96$, $SD = 4.06$. The score significantly correlates (all $BF_{10}s > 100$) with higher g ($r = .27$), lower Neuroticism ($r = -.17$), lower AS ($r = -.27$), higher IS ($r = .19$), and lower DS ($r = -.19$). Note that correlations with ATS diminish but persist (all $BF_{10}s > 10$) even when other examined variables are controlled for (AS: $r = -.18$; IS: $r = .15$; DS: $r = -.15$). For individual misconceptions, all supported correlations (i.e., $BF_{10}s > 10$) are of a small intensity ($|.14|$ to $|.23|$). There is 1x positive correlation with the GPA, 7x positive correlations with g, 2x negative correlations with Conscientiousness (suggesting lower chances of answering correctly on "men evolving from monkeys" and "bulls disliking red color" questions), 2x negative correlation with Neuroticism, 9x negative correlations with AS, 1x positive correlation with IS, and 2x negative correlations with DS. Overall, GPA is a surprisingly bad correlate of scientific misconceptions knowledge, the effect of personality is mostly limited to Neuroticism, with g, and especially ATS, being small but consistent correlates. Since g is arguably unchangeable, this implies that an improvement in university students' ATS might be a potential part of the strategy for improving their scientific literacy.

Keywords: scientific literacy, attitudes towards science, academic achievement (GPA), Big 5 personality ("OCEAN"), general intelligence (g)

MOTIVATION FOR TEACHING AMONG DIFFERENT GROUPS OF PRESERVICE TEACHERS

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Despite the unfavourable status of the teaching profession in Serbia, the number of studies investigating teachers' motivation for teaching has remained relatively low. The goal of this study was to explore the motivations for a teaching profession and to determine if there were differences in motivation depending on the teaching program and disciplines preservice teachers studied. Participants were 433 preservice teachers from four Serbian state universities (M_{age}= 22.6, SD = 2.32). There were 25.2% participants from teacher training faculty (prospective class teachers), 30.3% from Science and Engineering faculties and 44.5% from Social science and Humanities faculties (prospective subject teachers). Relying on the FIT-Choice model, 42-item Factors influencing choice of a teaching career scale was applied, which consists of 13 motivation constructs/ reasons for choosing a teaching career. The highest rated reasons for choosing a teaching career were: Intrinsic value (M = 6.14, SD = 1.08, range 1–7), Shape future of children (M = 5.72, SD = 1.34), Perceived teaching abilities (M = 5.43, SD = 1.16) and Work with children (M = 5.41, SD = 1.56), while choosing teaching as a Fallback career was the lowest ranked factor (M = 1.78, SD = 1.16). ANOVA with the type of faculty being independent variable pointed to significant differences on: Time for family ($F(2, 430)$ = 8.148, $p < .001$, $\eta p^2 = .037$), Enhance social equity ($F(2, 430)$ = 6.706, $p < .001$, $\eta p^2 = .030$), Social influences ($F(2, 430)$ = 4.502, $p < .005$, $\eta p^2 = .021$), Work with children ($F(2, 430)$ = 10.226, $p < .001$, $\eta p^2 = .045$), and Shape future of children ($F(2, 430)$ = 4.250, $p < .005$, $\eta p^2 = .019$). Scheffe's post hoc test revealed that the prospective Social science and Humanities teachers scored lower on the factor Time for family than both prospective class and Science and Engineering teachers. Prospective class teachers scored higher on Enhance social equity and Work with children than prospective subject teachers. Prospective class teachers are more strongly motivated by the factor Shape future of children than the prospective Science and Engineering teachers, and more motivated by Social influences (those of the family and friends) than the Social science and Humanities teachers. Results are discussed in the light of broader socioeconomic situation, societal values and the preservice education characteristics.

Keywords: motivation, teaching profession, preservice teachers, FIT-Choice

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PSYCHOMETRIC VALIDATION OF THE ICAR MATRIX REASONING TEST

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Short intelligence tests represent convenient way of conducting cognitive ability testing in educational research. However, there are very few such tests available, especially royalty free. ICAR project offers several 'free of charge' cognitive tests, amongst which is a short, 11-task Matrix Reasoning (MR) test. The goal of this research was to conduct a psychometric validation of the ICAR MR test on elementary school ($N = 510$), high school ($N = 544$), and university students ($N = 508$) samples from the Republic of Srpska. Both elementary and high school subsamples were comprised of the final school year students. University subsample was comprised of students from all years. Of the total sample, 56.1% were females. Proposed single factor MR model had good fit: CFI=.97, TLI=.96, RMSEA=.04, SRMR=.04. IRT analysis showed moderate discrimination for eight items and high for the remaining three. Items were of moderate to higher difficulty with slightly higher information value in the upper latent trait interval (i.e., 52.5% information was between 0 and 3 logits, and 39.3% was between -3 and 0 logits). There was no substantial differential item functioning between student and gender groups. Test means were the lowest in elementary school subsample ($M = 3.84$, $SD = 2.53$), followed by high school subsample ($M = 4.56$, $SD = 2.48$), with the highest values in university subsample ($M = 5.42$, $SD = 2.98$). Test scores had the highest correlation with the GPA of elementary school students ($r = .39$, $p < .001$), followed by high school students ($r = .26$, $p < .001$), and university students ($r = .11$, $p = .017$). ICAR MR test scores correlated highly with the ICAR progressive matrices test ($r = .52$, $p < .001$; value available only for the elementary school subsample). We conclude that ICAR MR test has adequate psychometric properties for a short general intelligence test and we recommend its use for educational research purposes.

Keywords: matrix reasoning, short intelligence test, grade point average (GPA), item response theory (IRT), psychometric test validation

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AKADEMSKA SAMOEFIKASNOST I ŠKOLSKI USPEH KAO PREDIKTORI SOCIJALNE DISTANCE PREMA ŠTREBERIMA I USPEŠNIM UČENICIMA

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Imenica štreber označava osobu koja je ambiciozna, marljiva i aktivno i egoistično stremi ka postignuću (Duden, 1999, 2007 prema Bodroža i Jakšić, 2014). Imajući u vidu da etiketa štrebera sa sobom nosi diskriminaciju, a sa druge strane, činjenicu da veći deo istraživanja razloge za to traži u osobinama štrebera, postavlja se pitanje koje su to osobine procenjivača koje doprinose tome da oni negativno doživljavaju štrebere. Naš cilj bio je da ispitamo da li osobe niske akademske samoefikasnosti (sigurnosti u školske kompetence) više izbegavaju bliske odnose sa štreberima zbog negativnog efekta poređenja na njihovo samopouzdanje, kao i da li samoefikasnost moderira vezu proseka ocena i socijalne distance prema štreberima. U istraživanju je učestvovalo 136 učenika šestog i osmog razreda, ujednačenih po polu, koji su čitali opise tri tipa izmišljenih učenika - štrebera, uspešnih i tipičnih i na petostepenoj skali socijalne distance odgovarali na osam pitanja (npr. „Koliko bi želeleo/la da ova osoba bude u tvom užem društvu"). Opis štrebera i uspešnih učenika sadrže istu informaciju o odličnom školskom uspehu, ali dok prvi sadrži i stereotipne osobine štrebera („nikad ne beži sa časova...") (Bodroža i Jakšić, 2014), uspešni učenici su opisani neutralnim informacijama na osnovu kojih je teško formirati utisak o osobi. Opisi tipičnih učenika sadrže isključivo takve informacije (npr. mesto stanovanja i šta studiraju brat i sestra). Ispitanici su popunjavali skalu akademske samoefikasnosti (Morgan-Jinks Student Efficacy Scale, 1999; α=74) i izvestili o proseku ocena. Efekat tipa opisa dobijen je i na muškom (F (2, 61) = 11.184; $p < .001$; $\eta_p^2 = .155$) i ženskom uzorku (F (2, 75) = 23.204; $p < .001$; $\eta_p^2 = .236$). Najveća distanca je prema štreberima kod oba pola. Kod devojčica nema razlike između procena uspešnih i tipičnih učenika, a kod dečaka je ta razlika marginalna ($p = .066$). Faktorskom analizom drugog reda na skali akademske samoefikasnosti izdvojena su tri faktora, ali je korelacija samoefikasnosti i socijalne distance dobijena samo na jednom faktoru, *Sigurnost u sposobnosti* („Ja sam jedan/a od najboljih učenika u svom odeljenju") ($r = .44$; $p < .001$) i to na uzorku dečaka kod opisa uspešnih učenika. Moderatorski efekat samoefikasnosti na vezu sa prosekom ocena nije dobijen ni kod dečaka ni kod devojčica. Rezultati ukazuju da na distancu prema štreberima najviše utiču njihove socijalno nepoželjne osobine, a ne uspeh ili osobine procenjivača. Kod procene uspešnih učenika osobine procenjivača su bitnije, te su dečaci koji imaju nisku sigurnost u svoje sposobnosti najviše skloni izbegavanju kontakta sa njima.

Ključne reči: štreber, socijalna distanca, akademska samoefikasnost

ACADEMIC SELF-EFFICACY AND SCHOOL GRADES AS PREDICTORS OF SOCIAL DISTANCE TOWARDS NERDS AND SUCCESSFUL STUDENTS

Having in mind that most of the studies with the topic of discrimination against nerds put focus on nerds' traits, we wanted to examine the opposite – what are the traits of the students who discriminate nerds the most. Participants in our study were 136 sixth and eighth grade students. They read vignettes about nerds, successful students and typical students and answered on eight- question social distance scale (e.g. "From 1 to 5, how much would you like to have this person as your close friend"). Participants also answered on Morgan-Jinks Student Efficacy Scale (1999). Results have shown that social distance is the highest towards nerds, mostly because of their stereotypical traits and not the evaluators'. On the other hand,

higher social distance towards successful students who are not counted as nerds depends on the evaluator's gender and level of academic self-efficacy. Boys who have low level of confidence in their competences tend to avoid close contact with successful students.

Keywords: nerd, social distance, academic self-efficacy

IMPLICIT THEORIES OF INTELLIGENCE IN ADOLESCENTS: EXPLORATIVE AND SOCIODEMOGRAPHIC PERSPECTIVE

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Implicit theories of intelligence are defined as understanding of the intelligence nature, based on the individual's unfounded attitudes. It refers mostly to an individual's beliefs regarding whether or not intelligence is (un)changeable psychological characteristic. According to Dweck's model, implicit theories of intelligence are a bipolar dimension, with theories of entity (intelligence is unchangeable) and incrementality (intelligence is changeable) as its extreme poles. However, new research claim that entity and incrementality theory are distinctive dimensions, and that development of implicit theories of intelligence depends on sociodemographic characteristics, such as gender and age. For example, younger adolescents are more prone to think that intelligence is changeable psychological characteristic in comparison to older adolescents. Nonetheless, boys, more than girls, think that intelligence is changeable, but there are some research results which claim that gender is not related to beliefs about intelligence in period of adolescence. The aim of this research was to examine the structure and sociodemographic correlates of implicit theories of intelligence in adolescents. Implicit Theories of Intelligence Scale (ITIS) was applied on a convenience sample of 840 students (58.8% females) from Serbian high schools (mean age: 16.9, SD = .98). Results of parallel analysis indicated the presence of two different and unrelated (r = -.07, p = .07) types of implicit theories of intelligence in adolescents: incremental (7 items; 21.74% of explained variace; α = .74) and entity (7 items; 13.05% of explained variance; α = .67). Two-way MANOVA was conducted, with age and gender as independent variables, and ITIS dimensions as dependent variables. Results suggested age differences (Wilks' λ = .20, F = 10.23, p < .01) in the direction that younger students (1st and 2nd grade) had been more prone to incremental viewpoints of intelligence in comparison to older students (3rd and 4th grade). There were no gender differences, nor interaction between age and gender in case of both types of beliefs about intelligence nature. The results of this study suggest that ITIS could be used for measuring different beliefs about intelligence nature in adolescents. It seems that older students are more inclined to believe that intelligence is unchangeable, so they could be considered as future target group for implementation of preventive interventions in order to educate them about the importance of intelligence enhancement.

Keywords: adolescence, age and gender differences, implicit theories, intelligence

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DEVELOPMENT AND VALIDATION OF CHILDREN MATH-GENDER STEREOTYPES SCALE

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Math-gender stereotypes are defined as biased gender-related attitudes toward achievement, preferences and talent in mathematics. Traditionally, math is considered as tipycally "male" domain. That kind of stereotype is already present at early elementary school stage. Although there were attempts to identify these stereotypes through implicit measurement, there are still small number of psychological scales which could be used for assessment of math-gender stereotypes in children. Additionally, there is an evidence of math-gender stereotypes' negative impact on math achievement and self-efficacy in children. The aim of this research was to develop and validate new scale for assessment of math-gender stereotypes in children. Scores from applied math test and measure of math self-efficacy were colected from 157 (47% boys) early elementary school stage children from Serbia (mean age = 8.53). Math-gender Stereotypes Scale for Children (MSSCh) was developed using the 8 emotional neutral photographs of boys' (4) and girls' (4) faces from open Child Emotional Faces Picture Set (ChEFS) base. In pilot study, boys' and girls' faces were named with typical names and estimated as typical for Serbian culture by psychology students. For each pair of photographs (1 boy VS 1 girl) participants were asked to say if boy or girl from picture has better math grades and which of them is more talented for math. The answers were coded as 1 (boy), or 0 (girl). Factor analysis on polychoric correlation coefficients suggested 2-factors solution: stereotypes about math talent (26% of explained variance; $\alpha = .68$) and stereotypes about math achievement (20% of explained variance; $\alpha = .64$), with KMO = .71 for the whole sample. Both stereotypes were negatively related to math achievement (achievement: $r = -.21$, $p < .05$; talent: $r = -.18$, $p < .05$) and to math self-efficacy (achievement: $r = -.22$, $p < .05$; talent: $r = -.18$, $p < .05$) in the group of girls, but not in the group of boys. The results of this study suggest that MSSCh can be used for measuring math-gender stereotypes in children, although future studies have to improve internal consistency of the instrument. It seems that girls are more affected by math-gender stereotype threat than boys in early elementary school period, and that the MSSCh can be used for screening of girls who express dysfunctional gender stereotypes about mathematics.

Keywords: early elementary school children, math-gender stereotypes, validation

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UVERENJA ZAPOSLENIH U OBRAZOVANJU O RAZVOJU KREATIVNOSTI DECE I MLADIH U OBRAZOVNOM KONTEKSTU

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U prethodnim studijama implicitnih teorija kreativnosti razvijen je induktivnim putem Ekspertski model za podsticanje kreativnosti u obrazovnom kontekstu. Model čine sledeće kategorije: nastavne/obavezne i vannastavne/slobodne aktivnosti, obrazovna klima, nastavni/studijski program, nastavnik, upravljanje kreativnošću i partnerstvo za kreativnost. Cilj ovog istraživanja, bio je utvrđivanje uverenja zaposlenih u obrazovanju o razvoju kreativnosti dece i mladih na osnovu primene Modela. Uzorak je obuhvatio zaposlene u predškolskim ustanovama (N = 116), osnovnim školama (N = 244), srednjim školama (N = 262) i na univerzitetu (N = 46). U slučaju predškolskih, osnovnoškolskih i srednjoškolskih ustanova, preko 90% ispitanika bili su vaspitači i nastavnici, dok su preostali deo činili stručni saradnici i uprava. Svi predstavnici visokoškolskih ustanova bili su nastavnici. Primenjen je Upitnik za ispitivanje implicitnih teorija o kreativnosti, koji je sadržao više pitanja otvorenog i zatvorenog tipa. U ovom radu analizirani su odgovori na jedno pitanje otvorenog tipa o mogućnostima za podsticanje kreativnosti u obrazovnom kontekstu. Prikupljeni podaci podvrgnuti su tematskoj analizi sa unapred definisanim kodnim sistemom. Utvrđene su statistički značajne razlike u uverenjima koja se odnose na vrste doprinosa obrazovne ustanove razvoju kreativnosti među zaposlenima iz predškolskih, osnovnoškolskih, srednjoškolskih i visokoškolskih ustanova (Rao-Skotov χ2(605, 21) = 62,64, p < 0,001). Zaposleni u predškolskim ustanovama češće ističu doprinos slobodnih aktivnosti, obrazovne klime, upravljanja kreativnošću i partnerstva u podsticanju kreativnosti, dok se u odgovorima nastavnika visokoškolskih ustanova češće ukazuje na doprinose nastavnih aktivnosti, nastavnika i studijskog programa. Dobijeni nalazi ukazuju da su vaspitači i nastavnici koji su zaposleni u obrazovnim ustanovama na početku obrazovnog ciklusa u većoj meri usmereni na dete i sistemsku podršku, dok kod univerzitetskih nastavnika dominira orijentacija na nastavnika, od koga zavisi kreiranje i realizacija programa. U diskusiji se razmatra kako transformisati uverenja zaposlenih tako da se na svim nivoima formalnog obrazovanja obezbedi usmerenost na razvojne potrebe dece i mladih, kao i na širu sistemsku perspektivu razvoja kreativnosti u društvu. Upoznavanje različitih tipova uverenja može predstavljati početnu tačku u njihovom menjanju na individualnom, institucionalnom i društvenom nivou.

Ključne reči: kreativnost, obrazovanje, zaposleni u obrazovanju, uverenja, Ekspertski model za podsticanje kreativnosti.

EDUCATORS' BELIEFS ABOUT CREATIVITY DEVELOPMENT OF CHILDREN AND YOUTH IN EDUCATIONAL SETTING

The goal of the study was to identify educators' beliefs about creativity development of children and youth in educational setting by applying the Expert Model of Supporting Creativity. Research participants included educators from preschools (N = 116), primary schools (N = 244), secondary schools (N = 262) and universities (N = 46). Implicit theories of creativity questionnaire was administered, while we analyzed answers to one question regarding the potential for creativity development in educational setting. Data were analyzed

using thematic analysis with a predefined coding scheme. Statistically significant differences were identified in educators' beliefs about the contribution of educational institutions in creativity development (Rao-Scott χ2(N=605, df=21) = 62.64, p < 0.001). Preschool educators pointed to the free activities, educational climate, managing creativity and partnership more frequently, while university educators point to teaching activities, teachers and the study program. We discuss how educators' beliefs can be transformed to provide the focus on developmental needs of children and youth.

Keywords: creativity, education, educators, beliefs, Expert Model of Supporting Creativity

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KAPACITETI ZA REZILIJENTNOST ADOLECENATA SA TEŠKOĆAMA U EMOCIONALNOM I SOCIJALNOM RAZVOJU

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Rezilijentnost, kao jedan od istaknutih protektivnih procesa koji efekte ostvaruje u izazovnim životnim situacijama, od posebnog je značaja za osobe koje se suočavaju sa različitim teškoćama. U cilju ispitivanja kapaciteta za rezilijentnost adolescenata sa teškoćama u emocionalnom i socijalnom razvoju, sprovedeno je, tokom juna 2019. godine, istraživanje na uzorku od 298 učenika prvog i drugog razreda iz četiri beogradske srednje škole (49.7% devojčica). Podaci su prikupljeni Merom rezilijentnosti za decu i mlade (Child and Youth Resilience Measure – CYRM-28), α=.90, i Upitnikom snaga i teškoća (The Strengths and Difficulties Questionnaire – SDQ), α=.78. Rezultati istraživanja pokazuju da su kod 29.9% učenika prisutne teškoće u emocionalnom i socijalnom funkcionisanju u meri koja zahteva intervencije dodatne podrške. Ovi učenici, u odnosu na učenike bez teškoća, ostvaruju značajno niže skorove na individualnim (t(296) = 4.10, p = .000), relacionim (t(296) = 5.21, p = .000) i kontekstualnim resursima (t(296) = 3.81, p = .000), kao i na ukupnim kapacitetima za rezilijentnost (t(296) = 5.05, p = .000). Posmatrano prema pojedinačnim teškoćama, razlike na svim ispitivanim konstruktima ostaju značajne kod problema sa vršnjacima i simptoma hiperaktivnosti. Kod problema ponašanja značajnost se javlja samo u domenu relacionih resursa, dok kod emocionalnih problema razlike među grupama nisu značajne. Na osnovu dobijenih nalaza može se zaključiti da adolescenti sa teškoćama u socijalnom i emocionalnom razvoju imaju manje dostupne resurse koji im omogućavaju razvijanje socijalne i emocionalne kompetencije, pozitivnih ličnih vrednosti i mreže vršnjačke podrške (individualni resursi), da imaju slabije razvijen sistem podrške u svom primarnom okruženju (relacioni resursi), kao i da imaju niži osećaj pripadnost zajednici, manje pridaju značaj obrazovanju i imaju manje razvijenu spiritualnost (kontekstualni resursi). Sa aspekta praktičnog delovanja, poželjno je ove nalaze uzeti u obzir pri planiranju mera dodatne podrške deci i mladima sa teškoćama u socijalnom i emocionalnom razvoju.

Ključne reči: rezilijentnost, adolescenti, teškoće u emocionalnom i socijalnom razvoju

CAPACITIES FOR RESILIENCE OF ADOLESCENTS WITH DIFFICULTIES IN EMOTIONAL AND SOCIAL DEVELOPMENT

Resilience, as one of the prominent protective processes that exerts its effects in challenging life situations, is of particular importance for those categories of children and youth who face various difficulties. In order to examine the capacity for resilience of adolescents with emotional and social disabilities, a survey was conducted in June 2019 on a sample of 298 first and second grade students from four Belgrade high schools, using the Child and Youth Resilience Measure – CYRM-28 and The Strengths and Difficulties Questionnaire. Survey results show that 29.9% of students have difficulties in the field of social and emotional development that require additional support. Compared to students without difficulties, these students achieved significantly lower scores on individual, relational, and contextual resources, as well as on total capacity for resilience. These findings should be taken into account when planning support measures for children and youth with difficulties in social and emotional development.

Key words: resilience, adolescents, difficulties in social and emotional development

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PERSONALITY CORRELATES OF 'CLASSICAL MUSIC' PROFESSIONALS AND THEIR MUSIC PREFERENCES

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The question about the origins of music preferences brings us to the following dichotomy: Do they form a part of social or professional identity or are the choices made individually in concordance with one's psychological needs? Findings indicate relatedness of the specific personality traits to the preferred music genres in general population. In this study, we aim at revealing whether professional musicians have exclusive preference towards classical music or not and in which way their genre preferences for listening to music are related to their personality profile. The sample consisted of 99 professional musicians (38 males) with the age span of 18 to 55. They were final-year bachelor and master students who had had music experience in the classical genre for more than 14 years. The HEXACO-PI-R (100 items) was used and it showed good reliability ($\alpha = .844$). Musical preferences were registered by a fourteen-scale (1-5) self-report questionnaire concerning different musical genres. PCA (Varimax rotation with Keizer normalization) showed that musical preferences grouped around five factors (62.844 % of variance accounted): *Reflective and Complex*, *Energetic and Rhythmic*, *Intensive and Rebellious*, *Classical Music* and *Conventional Music*. Personality dimensions were not extensively correlated to music preference factors. Namely, findings have shown that the musicians higher on Openness to Experience preferred Intensive and Rebellious Music ($r = .27$, $p < .01$), while those who were more individualistic (opposite of Altruism) preferred Classical Music ($r = -.24$, $p < .01$). The musicians who preferred Conventional Music had the highest scores on Honesty, which referred to modesty, sincerity and fairness ($r = .21$, $p < .05$), and low scores on Emotionality, feeling little worry and having a low need to share with others ($r = -.32$, $p < .01$). We may conclude that music preferences of professional musicians make a structural matrix which is very similar to the four-dimension model (non-musicians) of Rentfrow and Gosling (2003), with *Classical Music* as the fifth factor, which implies that musicians have music preferences similar to the general population. The results point to a conclusion that the character of music demands appropriate

personality capacities in order to be understood and appreciated, as well as that choice of preferred music is driven by psychological needs, which is 'stronger' than the professional music experience.

Keywords: music preferences, musicians, personality, HEXACO-PI-R

PISA 2018 SURVEY: TO GO TO SCHOOL OR NOT, THAT IS THE QUESTION

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PISA 2018 survey shows that, compared to OECD countries, students from Serbia value school less (24% believe that trying hard in school is not important, while this belief share 12% pupils in OECD countries) and skip classes more often (41% responded that they have skipped a class at least once in two weeks prior to the assessment, while OECD average is 27%). Four groups were defined based on the skipping class behaviour (did or did not skip class) and school valuing attitude (value schoolwork or not). The aim of the study was to compare these groups in terms of their reading literacy and explore differences on several predictors of academic success. The sample consists of 6609 students from 190 secondary schools who participated in PISA 2018 study by taking the reading, mathematics, and science literacy tests, and filling out a background questionnaire. Eight academic success predictors were extracted from the questionnaire: belonging to the school, the experience of being bullied, parents' emotional support, disciplinary climate, socio-economic status (SES), life satisfaction, perceived teachers' interest, and support. The four groups differ in reading literacy achievement ($F(3, 5064) = 64.64$, $p < .001$). Post hoc Tukey HSD test shows that two groups defined as not skipping classes have better achievement than groups that skip classes ($p < .001$). MANOVA showed statistically significant differences in the selected predictors through the valuing-attendance different groups ($F(24, 14641,34) = 2.69$, $p < .01$; Wilk's Λ = 0.99, partial $\eta2$ = .004) These groups differ in sense of belonging to school ($F(3, 5055)$ = 5.63, p < .01), having experience of being bullied ($F(3, 5055) = 12,11$, $p < .001$), perceived parent's emotional support ($F(3, 5055) = 6.80$, $p < .001$), and perceived teachers' support ($F(3, 5055) = 2.9$, $p < .05$). The groups were similar in terms of disciplinary school climate ($F(3, 5055) = .29$, $p > .05$), perceived teachers' interest ($F(3, 5055) = .90$, $p > .05$), the overall life satisfaction ($F(3, 5055) = 2.34$, $p > .05$), and SES ($F(3, 5055) = 1.16$, $p > .05$). Post hoc Tukey HSD test showed that members of the riskiest group (not valuing school and skipping classes) have a stronger sense of belonging than the pupils who value school and don't skip classes ($p < .001$). This result indicates that peer pressure to attend school irregularly or not value school could exist. Also, pupils from the former group reported more being bullied experience ($p < .001$), parents' emotional support (p < .001), and teachers' support ($p < .05$). The effectiveness of this support should be analysed.

Keywords: PISA 2018, reading literacy, Serbia, truancy, school valuing

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TRAIT EMOTIONAL INTELLIGENCE AND BURNOUT IN TEACHERS: CAN TRAIT EMOTIONAL INTELLIGENCE MODERATE EFFECTS OF STUDENT DISRUPTIVE BEHAVIOUR ON BURNOUT?

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Throughout their career, teachers face numerous stressful events, which is why they are ranked high among burnout-affected professions. Negative effects of work-related burnout are well documented, turning research inquiry towards factors and mechanism underlying burnout development and relief. So far, trait emotional intelligence (TEI) has been show to prevent burnout and absorb negative effects of work-related stress in several professions, including teaching. Among teachers, student disruptive behaviour (SDB) is perceived as a major work environment stressor. Thus, this study sought to examine the relation between teacher burnout, TEI and perceived SDB, with an additional goal to test whether TEI moderates effects of SDB on burnout in teachers. Study sample were 70 (57 females) subject teachers. Age ranged from 24 to 59 years (M=41.78), while length of service was 6 months to 44 years (M=14.04). They completed: the Trait Emotional Intelligence Questionnaire-SF assessing TEI; the Maslach Burnout Inventory-Educators Survey yielding scores for burnout dimensions of Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA); and the School Disruption Scale providing teachers' evaluations of SDB. Self-reports indicated high TEI and low burnout (low EE and DP, high PA), while ratings of SDB were low to medium. TEI was negatively related to EE ($r = -.38$, $p < .01$) and DP ($r = -.36$, $p < .01$), and positively associated with PA ($r = .49$, $p < .01$). Contrarily, higher ratings of SDB related to greater EE ($r = .41$, $p < .01$) and DP ($r = .34$, $p < .01$), and lower PA ($r = -.35$, $p < .01$) in teachers. A regression model comprised of TEI and SDB successfully predicted burnout by explaining 27% of EE ($F(2, 67) = 12.56$, $p < .001$), 21% of DP ($F(2, 67) = 9.08$, $p < .001$), and 31% of PA ($F(2, 67) = 15.13$, $p < .001$) variability. Moderation analyses testing for interaction effects (TEI x SDB) revealed that both TEI and SDB affected burnout dimensions in an independent and direct manner. Current results show that TEI meaningfully relates to burnout in teachers. However, whether TEI helps teachers to cope with stressful work-related events or successful stress management busts teachers' self-perceptions of emotion-related abilities remains yet to be uncovered. Our findings once more confirm that teachers who observe their students as disrespectful and hostile are more affected by burnout symptoms; and, as it seems, effects of teachers' observations on burnout are not moderated by TEI.

Keywords: teachers, burnout, trait emotional intelligence, disruptive behaviour of students

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PERCEPTION

COLOR DISCRIMINATION STRATEGY DEPENDS ON THE COLOR LABELS RETRIEVAL

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Our previous study of the blue-green stimuli discrimination has shown that participants tend to use color labels when the task requires remembering colors, while this strategy becomes less important in tasks without memory load (Jakovljev & Zdravković, 2017). We hypothesized that participants tend to use the most optimal strategy depending on the task – in the memory task, it might be easier to remember the color label than its visual representation, while in the perceptual task relying on visual information alone might be the fastest way of discriminating simultaneously presented colors. Here, we further tested this hypothesis by exploring whether participants' strategies are altered if colors are made difficult for labeling. We choose 16 colors for which participants (18) knew labels only in 38.2% of the time (as opposed to 87.13% for blue and green stimuli). In experiment 1, participants (15) conducted simultaneous discrimination in which they answered which of the two bottom stimuli (test and distractor) has the same color as the target stimulus presented above. In experiment 2, participants (14) conducted delayed discrimination in which test and distractor were presented one second after the target stimulus. In both tasks, we applied a visual interference by varying the shape of the stimuli, which resulted in four experimental conditions: neutral (all stimuli had the same shape), control (all had different shapes), congruent (target and test: same color, same shape) and incongruent (target and test: same color, different shapes). Repeated measures ANOVA showed the same effect of visual interference in both tasks – participants were significantly slower in the incongruent condition both in simultaneous ($F_{(1,14)} = 20.02$; $p < .001$; $\eta p2 = 0.59$) and delayed discrimination ($F_{(1,13)} = 9.96$; $p < .001$; $\eta p2 = 0.43$). Our results showed that when color labels are more difficult to retrieve, participants tend to rely on visual information regardless of the task – visual information becomes equally important for tasks with memory load. Although our previous results show the importance of color labeling, the choice of the color stimuli in these experiments altered its usage. This is in line with our hypothesis that participants tend to choose the most optimal strategy that is available in the given task.

Keywords: color discrimination, color labeling, visual interference

UTICAJ VIZUELNE INTERFERENCIJE NA EFEKAT KATEGORIČKE PERCEPCIJE BOJA

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Kategorička percepcija boja (KPB) predstavlja brže i tačnije razlikovanje nijansi iz različitih jezičkih kategorija u odnosu na nijanse iz iste kategorije. Prethodni nalazi sugerišu da mehanizam KPB zavisi od zadatka diskriminacije boja – u zadacima u kojima treba pamtiti boju ispitanici imaju tendenciju da je imenuju, dok se u zadacima bez memorijskog opterećenja oslanjaju na vizuelnu informaciju. U ovom istraživanju je dodatno ispitivana uloga vizuelne informacije za KPB u zavisnosti od zadatka diskriminacije. Ispitanicima su na ekranu računara prikazivani kvadrati i krugovi u nijansama oko plavo-zelene granice u prostoru boja. U zadatku diskriminacije je primenjena vizuelna interferencija konstruisana dodavanjem rama oko stimulusa mete. Variranjem boje rama su formirani uslovi interferencije: kongruentni - boja rama odgovara boji mete; neutralni - bez rama; kontrolni - ram je ahromatski i nekongruentni - boja rama odgovara boji distraktora. U eksperimentu 1, ispitanici (18) su radili zadatak simultane diskriminacije u kom su odgovarali koji od dva stimulusa (test ili distraktor) odgovara boji mete iznad njih. U eksperimentu 2 su ispitanici (18) radili zadatak odložene diskriminacije boja u kom su test i distraktor prikazivani jednu sekundu nakon mete. Analiza varijanse je pokazala da je vizuelna interferencija eliminisala KPB u zadatku simultane, ali ne u zadatku odložene diskriminacije - kada je boju trebalo pamtiti, ispitanici su bili brži u razlikovanju nijansi iz različitih kategorija (F(1,17)= 20.15, p< 0.01 η2= 0.54). Efekat vizuelne interferencije je bio značajan u oba zadatka – nekongruentni uslov je značajno usporavao ispianike u simultanoj diskriminaciji (F(3,51)= 4.97, p< 0.05 η2=0.23), a ubrzavao ih u odloženoj diskriminaciji (F(3,51)= 5.92, p< 0.01 η2= 0.26).
Rezultati govore u prilog nalazima da je vizuelna informacija važan mehanizam KPB-a u zadacima bez memorijskog opterećenja, te da vizuelna interferencija ometa diskriminaciju boja u ovim zadacima. Facilitatorni efekat interferencije zabeležen u odloženoj diskriminaciji potencijalno potiče od toga da obojeni ram koji je nekongruentan sa metom (a odgovara distraktoru) omogućava ispitanicima kategorizaciju tačnog i netačnog odgovora i pre nego što se prikažu test i distraktor. Ovi rezultati dodatno sugerišu razliku u mehanizmima diskriminacije boja u zavisnosti od zadatka.
kategorička percepcija boja, zadatak diskriminacije boja, vizuelna interferencija.

Ključne reči: kategorička percepcija boja, zadatak diskriminacije boja, vizuelna interferencija

THE EFFECT OF VISUAL INTERFERENCE ON THE CATEGORICAL PERCEPTION OF COLOR

Categorical perception of color (CPC) represents faster and more accurate discrimination of colors from different comparing to same linguistic categories. In this study, we investigated the role of visual information for CPC depending on the type of the color discrimination task. Blue and green circles and squares were presented within the color discrimination task, and we applied visual interference by adding a colored frame around the target stimulus. In

Experiment 1, participants (18) performed simultaneous discrimination, answering which one of the two stimuli (test or distractor) matched the target above them in color. In Experiment 2, subjects (18) performed delayed discrimination where target was presented one second before test and distractor. Results showed that visual interference canceled CPC in simultaneous, but not in the delayed task, and while interference slowed simultaneous, it enhanced delayed discrimination. Results imply that visual information represents an important CPC mechanism in tasks without memory load.

Keywords: categorical perception of color, color discrimination task, visual interference

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CONFLICT AND FACILITATION IN VISUAL COGNITION: A DUAL-PROCESS APPROACH

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Modern dual-processing models propose that multiple Type 1 processes run simultaneously. When two or more processes generate different responses, conflict may be detected and, if so, needs to be resolved. We aimed to investigate the effects of conflict between highly automated visual cognition processes, namely object differentiation (counting) and grouping. In a within-subject design, participants (N = 55) were shown images of ungrouped (equidistant) or grouped circles after which a number cue was presented. Their task was to decide whether the cued number was same as the number of circles. The cue could be the true number of circles, the number of groups (when the circles were grouped) or a filler (+/- 1 of the number of circles). When the circles were grouped the true number of circles and the number of groups were conflicting results from the two processes (differentiation and grouping). We expected that, when circles were grouped, response times would be longer when rejecting the group cue than rejecting the filler cue and that both would be slower than accepting the true cue. Further, accepting true cues was expected to be slower in the grouped compared to the ungrouped condition, and that rejecting filler cues would be faster in the grouped when compared to the ungrouped condition. A one-way ANOVA partially confirmed the first hypothesis (F(2, 108) = 11.88, p < .01, ηp2 = .18). Participants were slower to reject group and filler cues than to accept true cues, but there was no difference between the first two. A 2(grouping) by 2(true vs. filler) ANOVA showed participants were more accurate when accepting true cues in the ungrouped condition while being more accurate when rejecting fillers in the grouped condition (interaction effect - F(1, 54) = 18.93, p < .01, ηp2 = .26). Response times revealed that participants were equally fast when accepting true cues regardless of grouping, but were significantly slower to reject filler cues when stimuli were ungrouped (interaction effect - F(1, 54) = 35.34, p < .01, ηp2 = .40). We can conclude that manipulating different visual cognition processes to produce conflict is possible, but it produces a slightly different effect compared to reasoning research. Of particular note is the fact that grouping does not have a large impact on accepting true cues but does facilitate rejecting fillers. The results show parallelism of automated Type 1 processes in visual cognition discussed within a dual-process framework.

Keywords: Gestalt grouping, visual cognition, counting, dual-process theory

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SHINY HAPPY FACES – FACIAL EXPRESSIONS RECOGNITION IN PHOTOGRAPHS, CARTOONS, AND EMOTICONS

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Results of previous studies point out the importance of certain parts of the face for recognizing certain emotions, and also show that recognition of emotions is faster on stimuli such as facial caricatures in comparison to photographs. With that in mind, we assumed that simplicity of stimulation might help in accurate emotion identification, and therefore, the aim of the study was to examine the accuracy of emotion facial expression recognition in relation to the type of emotion (happiness, sorrow, surprise, anger, disgust, fear) and the type of visual presentation (human face photo, drawing or an emoticon). Three presentation types are chosen as such, because they vary in simulation simplicity/complexity. The experiment was created in OpenSesame with a total of 30 participants. Stimuli contained facial expressions, shown as achromatic photographs, face drawings or as emoticons. Photographs were coded by Facial Action Coding System, and then converted into drawings with Prisma application. As emoticons we chose those for which most participants agreed that they represent certain emotion, in the pilot study. Stimuli were randomly displayed, with a 1000 ms exposure, after which a set of choices (a list of terms for all 6 emotions) appeared. The task for the participant was to click on the emotion he/she thinks was shown on the stimulus. As the dependent variable we used the number of accurately recognized facial expressions in all 18 situations (six emotions combined with three modes of presentation of facial expression). The results showed that there is an interaction of the type of emotion being evaluated and the type of visual presentation (F = 10.55 (10; 290), p <0.01, η^2 = 0.27). The facial expression of fear was most accurately assessed in the drawing of the human face. Emotion of sorrow was most accurately recognized in the assessment of emoticon, and the expression of disgust was recognized worst on the emoticon. Other expressions of emotions were equally well assessed independently of the type of visual presentation. These results show that facial expression complexity is important for some emotions, such as fear, sorrow and disgust, but in opposite directions. For sorrow simplest presentation appeared as the best, while for disgust it appeared as worst. For the emotion of fear, middle complexity of stimulus appeared as most adequate. Such results are probably a consequence of facial expressions similarity for some emotions.

Keywords: emotions, photo of a human face, drawing of a human face, emoticon

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UTICAJ PERCEPTIVNOG OPTEREĆENJA NA EFIKASNOST PODIJELJENE PAŽNJE

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U ovom istraživanju se ispitivala efikasnost podijeljene pažnje u zavisnosti od tipa zadatka. Poznato je da uspješnost obavljanja dvostrukih zadataka zavisi od složenosti zadataka koji se obavljaju. Postavlja se pitanje da li će povećanje perceptivnog opterećenja u jednom zadatku uticati na efikasnost dijeljenja pažnje. Perceptivno opterećenje predstavlja količinu informacija koje su uključene u obradu vizuelnih stimulusa i zavisi od broja stimulusa ili perceptivnih zahtjeva zadataka. Istraživanje je realizovano na uzorku od 62 ispitanika. U eksperimentu je korišten modifikovan zadatak Mekove i Roka (Mack & Rock, 1998) za ispitivanje implicitno podijeljene pažnje. Zadatak ispitanika je bio da procijene dužinu linija krstića prikazanog na ekranu i da detektuju, lokalizuju i identifikuju novi stimulus. Taj stimulus je bio krug kao jednostavna geometrijska forma, malih dimenzija, plave boje, prikazan na periferiji (tj. izvan fokusa područja pažnje određenog kružnom površinom oko linija krstića) i pozicioniran na zamišljenoj liniji koja presijeca kvadrant krstića pod uglom od 45°. Procjena dužina linija je tretiran kao zadatak većeg perceptivnog opterećenja zbog toga što uključuje detekciju i diskriminaciju. Kao zadatak manjeg perceptivnog opterećenja je primjenjen zadatak detekcije boje linija krstića. Rezultati binarne logističke regresije su pokazali da postoji uticaj nivoa perceptivnog opterećenja na uspješnost detekcije (Beta= -1.25, p<.05) i lokalizacije (Beta= -1.39, p<.05) novog vizuelnog stimulusa, ali ne i na uspješnost identifikacije (Beta= -.50, p>.05). Dobijeni nalazi se mogu objasniti modelima koji obradu informacija objašnjavaju ograničenim kapacitetima pažnje. U okviru tih modela se izdvaja teorija perceptivnog opterećenja prema kojoj se u uslovima visokog opterećenja zauzimaju veći kapaciteti pažnje, ostavljajući manje preostalih resursa za obradu drugih stimulusa. S druge strane, rezultati se mogu tumačiti i u okviru modela zasnovanog na strukturi kognitivnog sistema. Model epizodičkog pamćenja pretpostavlja da se privremeno skladištenje informacija odvija unutar jedinstvenog memorijskog prostora. Pronalaženje objekata u memoriji postiže se praćenjem pokazivača, čime se vremensko trajanje obrade produžava. U uslovima temporalnog ograničenja i prebacivanja fokusa pažnje na dva zadatka, dolazi do smanjenja efikasnosti obrade, čime se objašnjava manja tačnost u identifikaciji novog stimulusa.

Ključne reči: perceptivno opterećenje, podijeljena pažnja, dvostruki zadaci

THE EFFECT OF PERCEPTUAL LOAD ON THE EFFECTIVENESS OF DIVIDED ATTENTION

This study investigates the relationship between perceptual load and divided attention. Perceptual load represents the amount of information involved in processing visual stimuli and depends on the number of stimuli or perceptual demands of the task. A modified task of Mack and Rock (1998) was used in which subjects should assess the length of the cross's lines displayed on the screen and detect, localize and identify a new stimulus. The task of higher perceptual load was line length estimation, while the task of lower perceptual load was line color estimation. The binary logistic regression showed that there was an effect of the level of perceptual load on the detection and the localization of the new visual stimulus, but

not on the identification. Results can be explained by models that explain information processing by the structure of the cognitive system, but also by models that emphasize limited attention capacities.

Keywords: perceptual load, divided attention, dual task

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VIRTUAL ARCHITECTURE – SUBJECTIVE EXPERIENCE OF VIRTUAL AND REAL OBJECTS

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The subjective experience of various objects is usually investigated on photographs of objects, or in case of art, on artistic pictures, shown as digital photographs on a computer screen. Even when research is done on architectural objects, such as various types of buildings, as stimuli researchers usually use photographs of those objects. According to that, we might ask, would our subjective experience of certain objects change if we observe it as a real three-dimensional object or its two-dimensional projection on a photograph? In our experiment 46 psychology students estimated their subjective experience of 10 objects shown in four different presentations. As a subjective experience measure, we used 12 bipolar adjective scales, grouped into four factors (attractiveness, regularity, arousal, and calmness) and 3 unipolar scales constituting aesthetic experience factor. Objects used as stimuli were designed and created by architecture students, as a part of their regular educational activities. Students created 3D objects (size around 20cm*20cm*20cm) and their drawings containing two-dimensional projections from four different viewing directions. After that, we photographed those objects from the same four viewing directions and created their virtual reality copies in Unity software for the Oculus Rift VR headset. So, we had four types of stimuli, real 3D objects, drawings, photographs, and 3D virtual reality objects. Results show significant differences between four types of object presentations on all scales of subjective experience: attractiveness (F=6.952; df=3, 135; p<0.01), arousal (F=8.764; df=3, 135; p<0.01), calmness (F=5.209; df=3, 135; p<0.01), regularity (F=12.678; df=3, 135; p<0.01). On the other hand, different presentations of objects did not affect the aesthetic experience of participants (F=1.78; df=3, 135; p>0.05). Real 3D objects were experienced as more attractive and calmer than their presentations (drawings, photographs, and VR), which were experienced as similar among themselves. VR presentation reduced arousal in comparison to all other presentations. Only on regularity VR and real 3D objects were experienced as same and more regular than drawings and photographs. These findings suggest that presentation type (real or virtual object, photograph, and drawing) does not affect the aesthetic experience, while it does change all other dimensions of subjective experience.

Keywords: subjective experience, aesthetic experience, virtual reality objects, real 3D objects

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THE EFFECT OF OBJECT DIMENSIONALITY ON LIGHTNESS CONSTANCY

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Lightness constancy refers to the fact that the lightness (i.e. perceived reflectance) of an object remains roughly constant even though luminance of the object changes. Previous studies showed effects of scene articulation, depth separation and illumination levels on lightness constancy (Gilchrist, 1980; Henneman, 1935; Jameson & Hurvich, 1961; Katz, 1935). However, they all used simple two-dimensional (2D) stimuli. On the contrary, in everyday conditions, we are dominantly exposed to complex three-dimensional (3D) objects which also have different photometric qualities (i.e. luminance gradients, shadows and specular highlights). The main goal of this study was to test whether there is a difference in constancy between 2D and 3D objects.

20 naïve participants took part in an experiment conducted in a dark chamber. 18 objects were presented on CRT, 2D (rectangle, triangle and circle) and 3D (cylinder, cone and pyramid) with varied luminance (12.3 cd/m², 22.7 cd/m², 35.5 cd/m²). Task was to provide lightness matches for the presented stimuli using Munsell scale (16 surfaces spanning from black to white) placed on the bottom of the chamber. ANOVA for repeated measures revealed no interaction between object dimensionality and luminance ($F_{(2,38)}=1.068$, $p=.354$). The main effect of object luminance was significant ($F_{(2,38)}=258.313$, $p<.001$). Increase in luminance was followed by increase in perceived lightness, lightness constancy was best for objects with highest luminance level. The main effect of object dimensionality was also significant ($F_{(1,19)}=57.862$, $p<.001$), 2D objects were perceived as having higher lightness than 3D objects of the same luminance. On average, 3D objects were perceived 0.6 Munsell steps lighter than standard, while 2D objects were perceived as 1 Munsell step lighter than standard, indicating better constancy for 3D. Our results showed that lightness constancy is better for 3D than for 2D objects. Considering that most of previous and some current research on lightness constancy are still conducted on simple 2D stimuli, the influence of photometric features found on 3D objects should be further investigated.

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ORGANIZATIONAL PSYCHOLOGY

'SVETLA' I 'MRAČNA' STRANA NARCIZMA KAO PREDIKTORI KARIJERNE ADAPTIBILNOSTI

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Ubrzan razvoj i česte promene u poslovnom okruženju zahtevaju kontinuirani napredak ljudskih resursa i unapređenje kompetencija zaposlenih. Karijerna adaptibilnost (CA) ili spremnost da se odgovori na izazove karijerne tranzicije je važan faktor poslovne uspešnosti. Istraživanja su pokazala da je grandiozni narcizam postavljen jednodimenzionalno, pozitivni prediktor poželjnog organizacionog ponašanja. Cilj rada bio je proveriti povezanost CA i njenih dimenzija sa NARC modelom, koji obuhvata dihotomnu strukturu narcizma ("svetli" i "mračni" narcizam). Analiziran je inkrementalni doprinos dimenzija narcizma, kao i efekat pola i položaja u predikciji dimenzija CA. Ispitano je 98 muškaraca i 112 žena, prosečno starih 39.4 godine, 37.6% rukovodilaca u različitim organizacijama u Republici Srbiji. Primenjene su skala karijerne adaptibilnosti CAAS koja meri Zabrinutost, Kontrolu, Radoznalost i Poverenje, i skala NARQ, koji meri narcizam kroz dimenzije Divljenje i Rivalitet. Utvrđene su značajne pozitivne korelacije (u opsegu od $r=.22$, $p<.01$ do $r=.51$ $p<.01$) CA i svih njenih subskala sa ukupnim skorom NARQ i Divljenjem, ali ne i sa Rivalitetom. Hijerarhijska regresiona analiza, gde su prediktori u I bloku bile dimenzije NARQ, u II bloku pol i položaj, a u trećem njihove interakcije, pokazala je da Divljenje pozitivno, a Rivalitet negativno predviđa CA ($R^2=.25$, $F(2,207)=35.12$, $p<.01$), i da je kod rukovodilaca ($R^2=.29$, $F(4,205)=21.65$, $p<.01$) CA veća. *Zabrinutost* značajno pozitivno predviđaju Divljenje i viši položaj ($R^2=.30$, $F(4,205)=22.12$, $p<.01$). Divljenje i rukovodeći položaj predviđaju pozitivno *Kontrolu* ($R^2=.22$, $F(4,205)=14.96$ $p<.01$), a Rivalitet negativno. *Poverenje* negativno predviđa Rivalitet, a Divljenje pozitivno ($R^2=.20$, $F(2,207)=26.35$, $p<.01$). Divljenje pozitivno predviđa i *Radoznalost,* koje je više kod žena i rukovodilaca ($R^2=.16$, $F(4,205)=10.12$, $p<.01$). U predviđanju *Radoznalosti* je dobijena jedina značajna interakcija, između Rivaliteta i položaja ($\beta=.65$, $t=2.14$, $p<.05$). Kod rukovodilaca Rivalitet negativno predviđa *radoznalost,* a kod izvršilaca pozitivno. Rezultati govore u prilog premisi da 'svetli' narcizam, nezavisno od polne pripadnosti, može imati protektivnu ulogu u procesu karijernih tranzicija, jer doprinosi uspešnijoj karijernoj adaptibilnosti, kao i napredovanju u karijeri. Antagonistički ili "mračni" narcizam očekivano ima kontraproduktivno dejstvo.

Ključne reči: karijerna adaptibilnost, CAAS, NARC, pol, položaj

THE BRIGHT AND THE DARK SIDE OF NARCISSISM AS PREDICTORS OF CAREER ADAPTABILITY

In the literature, narcissism (usually conceptualized as a one-dimensional, homogenous trait) is inconsistently reported advantageous for career adaptability (CA), the ability of workforce to cope with transitions within their professional careers. Here, relationship between narcissism and CA was investigated on an *ad hoc* Serbian sample consisting of 98 male and 112 female participants (mean age = 39.4 years; 37.6% leaders). CA was assessed by Career

Adaptability Assessment Scale and its dimensions: Concern, Control, Curiosity, and Trust. Narcissism was assessed by NARQ, a psychometric scale differentiating between the bright (Admiration) and the dark (Rivalry) manifestations of narcissism. Admiration was a positive predictor of all CA dimensions while Rivalry was negatively associated with Control and Trust and the total CA score. Rivalry was negatively predictive of Curiosity among the leaders but positively predictive among the employees. Our data stress the utility of NARQ's bidimensional approach to narcissism for the study of CA.

Keywords: career adaptability, CAAS, NARQ, gender, position

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RELATION BETWEEN JOB CHARACTERISTICS, ORGANIZATIONAL CLIMATE AND INDIVIDUAL AND TEAM ENGAGEMENT IN THE SERVICE SECTOR

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Many of modern organizations in service sector compete to attract and retain highly motivated and engaged employees. These endeavors are usually pointed toward making encouraging organizational climate and toward making job characteristics more compelling. The aim of this research was to analyze the relation between job characteristics, organizational climate and work engagement in a service sector organization, applying both qualitative and quantitative approach. This research was performed through two separate studies. In Study 1, we have explored the important aspects of individual and team work engagement within particular organization. Thus, we have organized 4 focus group discussion that covered 33 employees, both men and women from different hierarchical positions. The focus group discussion, aimed at revealing the important organizational and job characteristics related to individual and team engagement, discovered the importance of following topics: involvement and welfare, supervisory and peer support, autonomy, skill variety, problem solving and workload. In Study 2 we have analyzed the relationship between individual and team engagement and the set of above listed variables. The sample consisted of 98 employees (46% women; 24% managers). We have used Work Engagement Scale (Bakker et al.); Team Work Engagement Scale (Schaufeli et al.); Organizational climate measure (Patterson et al.), Work Design Questionnaire (Morgeson & Humphrey), Perceived Coworker Support (Hayton, Carnabuci, Eisenberger) and Quantitative Workload Inventory (Spector). The results of the regression analysis indicated the predictors explained 40% of individual work engagement variance ($R^2 = .40$, $F(9,88)=6.58$, $p<.01$). It was found that skill variety ($\beta = .30$, $p<.01$) and welfare ($\beta = .36$, $p<.01$) significantly predicted individual work engagement. Further results of the regression analysis indicated the same predictors explained 43% of team work engagement variance ($R^2 =.43$, $F(9,88)=7.42$, $p<.01$). It was found that involvement in organizational decision making ($\beta = .28$, $p<.05$), welfare ($\beta = .31$, $p<.05$) and peer support ($\beta=.23$, $p<.05$) significantly predicted team work engagement. The results imply that both organizational and job characteristic interventions are needed in order to optimize individual and team engagement.

Keywords: job characteristics, organizational climate, individual engagement, team engagement, service sector

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THE EFFECT OF POOR POSTURE AND DISCOMFORT ON PRODUCTIVITY IN TIME LIMITED TASKS

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Ergonomic risk factors are gaining in importance in last several years. Their importance has been particularly spotted in their influence on work productivity. Researchers have found that non-compliance with the ergonomic rules (that leads to bad posture habits) could produce discomfort which might, in return, distract people from being productive and satisfied at work. Stress could also lead to decreased productivity by increasing discomfort, especially the one resulting from time limited work tasks. The aim of this study was to examine whether discomfort is the mediator in the relationship between poor posture and productivity in the time limited tasks. Participants were students from the University of Belgrade and University of Novi Sad, ages between 19 and 30 years. This experiment used 60 participants, which 32 were male participants and 28 were female. Participants were divided in 4 groups depending on whether they perform task with/out time limit and whether they are put in poor or in a proper posture during the task performance. The task was about spotting the differences between two pictures, which is an indicator of work productivity. The mediator variable was discomfort which was measured on scale 1 to 15 whether participant felt discomfort during the experiment. Results showed that non-compliance with ergonomic rules can decrease work productivity in 'spot the differences' task $F(1, 58) = 7.90$, $p<0.01$ and increase discomfort $F(1, 58) = 30.094$, $p<0.01$). Limited time did not turn out to be important for productivity $F(1, 58) = 0.567$, $p>0.05$ and perceptions of discomfort $F(1, 58) = 0.014$, $p>0.05$). Feeling of discomfort had negative correlation with productivity (r=-.285, $p<0.05$), but it did not have the mediating role in the relationship between poor posture and productivity (β = .669, $p>0.05$). The conclusion of this research is that physical risk factors can lead to discomfort and together they can decrease intellectual work productivity. The research has significant implications for further ergonomic research and workplace design.

Keywords: poor posture, discomfort, productivity, time limited tasks

FACTORS AFFECTING COMPUTER PROFICIENCY AMONG OLDER ADULTS

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The elderly are using mobile phones, computers, the Internet and social networks with growing frequency, with the primary goal of maintaining their independence and remaining active members of society. However, many existing technological systems are not sufficiently adapted to the needs of older users. To facilitate use and to encourage older people to use technology, it is necessary to identify factors that make it easier or more difficult for them. Cognitive abilities, attitudes toward computers, education, gender, age, and personality dimensions (extroversion, openness to experiences, and neuroticism) stand out as some of the most important predictors of computer and technology adoption. The main objective of this research was to examine the specific contribution of cognitive ability, attitudes toward the computer, and personality dimensions (extroversion, openness to experiences, and neuroticism) in understanding older people's computer proficiency. The study involved 82 respondents (35 men and 47 women), aged 50-87. Respondents completed the cognitive assessment test (BEG SERIJA), the Big Five Inventory, the attitude assessment test CAMYS (Computer Attitude Measure for Young Students), and the Computer Proficiency Questionnaire (CPQ). Correlation analysis found that individuals with higher levels of cognitive ability, more positive attitudes toward computers, who are more open to experiences, and/or have lower levels of neuroticism are significantly more successful when performing various computer activities. Hierarchical regression analysis showed that statistically significant predictors of older user's computer performance were cognitive ability and attitudes toward computers ($F(5,76) = 19.013$; $p<.01$). Attitude towards the computer has a greater contribution in explaining older people's computer proficiency ($\beta =.637$, $p<.01$) than cognitive ability (for MATRIX TEST: $\beta=.211$; $p<.05$, for SQUARES TEST: $\beta=.206$; $p<.05$). From the obtained results it may be concluded that older people's computer proficiency depends on their attitudes towards the computer and cognitive abilities. Attitudes toward computers stand out as a significant predictor of older people's performance and expertise when performing various computer activities.

Keywords: Older adults, Attitudes towards computers, Cognitive abilities, Personality dimensions, Computer proficiency

PSYCHOLOGICAL CAPITAL AND SELF-PERCEIVED EMPLOYABILITY: THE ROLE OF CAREER ADAPTABILITY

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In the face of constant changes and phenomena such as "careers without borders", the question arises as to what kind of self-perceived employability students, people just entering the world of work, can have. Focusing on self-perceived employability and psychological as well as personal resources of an individual, the aim of this study was to explore and understand relationship between psychological capital, career adaptability and self-perceived employability, and to further examine weather career adaptability can have mediating role in this relation. Participants were 311 university students (63.3% female) aged between 22 and 30 years old, from five different faculties (Faculty of Philosophy, Faculty of Transport and Traffic Engineering, Faculty of Agriculture, Faculty of Economics and Faculty of Organizational Sciences). Instruments used in this study were questionnaire for estimating self-perceived employability for university students 16-item scale, Self-Perceived Employability (Rothwell, Jewell &Hardie), next was adapted version of psychological capital questionnaire for students, Psychological Capital Questionnaire PCQ–24, (Liran& Miller) and the questionnaire for assessment of career adaptability 24 item scale Career Adapt Abilities Scale – CAAS (Savickas&Porfeli). Analysis show that there were significant correlations between psychological capital and self-perceived employability (r = .58; *p* < 0.01), as well as between psychological capital and career adaptability (r = .69, *p* < 0.01) and between career adaptability and self-perceived employability (r = .48; p < 0.01). Finally, it was shown that career adaptability had mediating role in the relationship between psychological capital and self-perceived employability (b = 0.07; *p* < 0.05, Sobel test z = 2.32; *p* < 0.05). The findings of this research indicate that students who have higher level of psychological capital, more personal resources and who feel more ready, confident in themselves and are willing to adapt will have higher level of self-perceived employability, and therefore better perception about „fitting in" and advancing in job market.

Keywords: psychological capital, career adaptability, self-perceived employability, students

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JOB SATISFACTION AND ORGANIZATIONAL CITIZENSHIP BEHAVIOUR: MODERATING ROLE OF ORGANIZATIONAL JUSTICE

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Organizational Citizenship Behaviour (OCB) is individual behaviour that is discretionary, not explicitly recognized by the formal reward system, and which in aggregate, promotes the effective functioning of the organization. Previous studies show that attitudes toward work have the most important role in expressing OCB and that the effects of the organization's characteristics in expressing the OCB are achieved indirectly through attitudes toward work. The aim of this study was to determine whether the relationship between OCB and job satisfaction is moderated by organizational justice. The sample consisted of 315 employees

(51,75% male), age 19 to 69 (*M*=33.76, *SD*=10.64), with a length of service from 1 to 40 years (*M*=10.15, *SD*=9.44). We used the Organizational Citizenship Behaviour Questionnaire (Coleman & Borman), Job Satisfaction Survey (Spector) and Organizational Justice Scale (Colquitt). Results of the hierarchical regression analysis show that job satisfaction explains 8.2% of the variance of OCB (F(1,317)=28.289, $p<.001$; β=.286; $p<.001$). Introduction of the organizational justice results in a significant increase in the amount of explained variance of OCB (ΔR^2=.029, F(2,316)=19.630; $p<.001$; β=.237; $p<.001$), but also in a decrease in the standardized regression coefficient of job satisfaction (β=.120; $p>.05$). The introduction of the interactive effect of job satisfaction and organizational justice led to a significant increase in the amount of explained variance of the OCB (ΔR^2=.054, F(3,315)=20.651; $p<.001$; β=.234; $p<.001$). Results show that organizational justice is a significant moderator in the relationship between job satisfaction and OCB. This moderation pattern was tested with Hays' (Hayes) "Process" SPSS macro. Results showed that among employees with low (θ$(X{\rightarrow}Y)$/M=54.00=-.059, t (315)=-1.019; $p>0.05$) and moderate (θ$(X{\rightarrow}Y)$|M=67.00=.079, t(315)=1.630; $p>0.05$) experience of organizational justice, job satisfaction has no statistically significant effect on OCB. But among employees with high experience of organizational justice, OCB increases with increasing job satisfaction (θ$(X{\rightarrow}Y)$|M=79.00=.206, t(315)=3.688; $p<0.01$). This study revealed that the relationship between job satisfaction and OCB is not simple and it partially depends on the perceived organizational justice. In particular, OCB significantly increases with increasing job satisfaction only with employees who have high levels of organizational justice experience.

Keywords: Organizational Citizenship Behaviour, job satisfaction, organizational justice, moderator

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EXPOSURE TO WORKPLACE CYBERBULLYING AND PERCEIVED STRESS: THE ROLE OF HOPE AND RESILIENCE

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Work-related stress has numerous negative consequences that affect both employees and their families as well as an organization as a whole. An unstoppable pace of technological development has led to the emergence of a new stressor - workplace cyberbullying. Workplace cyberbullying can be defined as a situation in which an individual is repeatedly subjected to various negative acts at work that are conducted through technology. According to Job Demands-Resources model (JDR) personal resources (such as hope and resilience) could act as cushions against the unfavorable effects of job demands, such as workplace cyberbullying. The aim of this research was to examine whether hope and resilience have moderating role in the relationship between exposure to workplace cyberbullying and perceived stress. The sample consisted of 147 employees from various sectors. We have used the following instruments: Workplace cyber bullying measure – WCM (Farley et al.), Perceived Stress Scale (Cohen et al.), State Hope Scale (Snyder et al.), and Psychological Capital Questionnaire – PCQ, resilience subscale (Luthans et al.). The results revealed that there is a positive correlation between exposure to workplace cyberbullying and stress perception (r = 0.22; $p<0.01$) and that both hope (ΔR^2 = 0.09, F(1,143) = 20.33; $p<0.01$, b =

0.02, t = 4.51; $p<0.01$) and resilience (ΔR^2 = 0.04; $F(1,143)$ = 7.43; $p \leq 0.01$, b = 0.02, t = 2.73; $p<0.01$) have moderating role in the relationship between workplace cyberbullying and perception of stress. The results suggest that employees with higher hope and resilience had lower perception of stress intensity compared to employees with lower hope and resilience, who are similarly exposed to workplace cyberbullying. Hope and resilience, as psychological resources, could lessen the effect of workplace cyberbullying, which is in accordance with the Job Demands-Resources Model.

Keywords: workplace cyberbullying, perceived stress, hope, resilience, Job Demands-Resources model (JDR)

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RELATION BETWEEN NEUROTICISM AND LOCUS OF CONTROL WITH STRESS AT WORK

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In a time of globalization and constant market uncertainty, work organizations are forced to make frequent and sudden changes. This in turn leads to an increase in occupational stress among employees, which can seriously endanger people's health and safety. Considering that work organizations achieve their goals through work efficiency and employee performance, more and more attention must be paid to the selection, preservation of health and the development of human resources aimed at achieving these goals. More recently, there is a growing body of research showing that certain personality traits are significant moderators of occupational stress, so in this study we tried to examine whether there is a correlation between neuroticism and locus of control with subjective experience of occupational stress, with the assumption that they have an internal locus of control less susceptible to stress, while neuroticism is seen as an indicator of a greater subjective experience of stress. The survey was conducted on a convenient and heterogeneous sample of 92 bank employees of both sexes, aged 26 to 60 years (M = 38.7 ± 8.4). For measurement of personality traits two scales were used: WLCS/Work Locus of Control Scale, and the EPQ-N/Eysenck Personality Questionnaire, while the occupational stress was used scale from Osipov's Personal Strain Questionnaire/PSQ. Survey results across the entire sample indicate that there is a negative correlation between locus of control and experience of stress (r = -.52.3; $p <0.01$), while the correlation between neuroticism and stress was positive (r = .64.0; $p <0.01$). This confirms the general assumption of this research about the significance role of certain personality traits in the process of experiencing stress at work. The results obtained can be of practical use in the selection and classification of staff for jobs characterized by the presence of stress factors, which could mitigate or prevent the adverse effects and effects of occupational stress on the health, well-being and work efficiency of employees.

Keywords: personality, neuroticism, locus of control, stress at work

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DEVELOPMENTAL PSYCHOLOGY

DEVELOPMENTAL CAPACITIES OF CHILDREN AGED 0 TO 8 LIVING IN THE HOME FOR CHILDREN WITHOUT PARENTAL CARE

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Despite the ample evidence on multiple developmental and behavioral problems associated with growing up in an institution, there are no studies looking into the development of very young children placed in the institutions in Bosnia and Herzegovina and its neighboring countries. The aim of this study was to assess individual developmental capacities of 16 children currently living in the Home for children and youth without parental care in Banja Luka. The assessment was done as a part of a larger project of an individually tailored early intervention program, in order to provide baseline data for the evaluation of the program. The children differed in terms of their age (range 1 to 8 years), the age of admission (range 2 months to 6 years), and the number of years spent at the institution (range 3 months to 7 years). All children attended regular daycare, preschool or school programs and were not categorized as children with special needs. Each child's developmental status was compared with the developmental norms typical for his or her age. To that end, we used the Developmental Behavioral Scales (RBS, Pištoljević, Zubčević, & Džanko, 2016), which is a standardized developmental measure for Bosnian-Herzegovinian children, and the Developmental test Čuturić (RTČ, Čuturić, 2007), standardized for the population of Croatian children. In addition, based on the individual results, we looked for common developmental trends perceived on the group's level. Given the small sample size and varying ages of the children, we only provide raw data and proportions. The results on the RBS show that most children did not achieve minimal developmental milestones typical for their age in language, motor and cognitive development (13, 12 and 11 out of 16 children respectively), whereas one half of the children did not reach minimal developmental milestones in social development and self-help (8 and 7 out of 16 children respectively). The results on the RTČ confirm this trend, showing that only 3 out of 16 children developed appropriately for their age. In general, the higher the number of years spent at the institution and the lower the age of admittance, the bigger their developmental delays are. Rare exceptions and interesting cases are presented on an individual level. Our results confirm the existing evidence on the consequences of pre-institutional trauma and institutional care in a previously unresearched setting. They are discussed in the context of the project aiming to reduce the harm and stimulate the development of these children until the conditions are met for them to leave the Home.

Keywords: early development, children without parental care, institutional care, developmental delay

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ODNOS VREDNOSTI I RIZIČNOG PONAŠANJA KOD ADOLESCENATA

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Vrednosti predstavljaju standarde o poželjenim ciljevima i vodeće kriterijume za procenu sebe i drugih, akcija i događaja. Iako su vrednosti tokom odraslog doba jedna od stabilnih psiholoških struktura, tokom perioda adolescnecije, osobe prolazeći kroz ovaj period razvijaju i ustaljuju sopstvene vrednosti. Kako adolescencija predstavlja period istraživanja i visokih rizika čiji uzroci leže u ponašanju, a vrednosti predstavljaju sržno motivacione konstrukte koji deluju pokretački kod različitih vrsta ponašanja cilj ovog istraživanja bio je ispitati odnos između vrednosti i rizičnog ponašanja kod adolescenata. U okviru šire studije na uzorku od 1358 učenika (56% ženskog pola) prvih i trećih razreda gimnazija i srednjih stručnih škola iz nekoliko gradova Srbije primenjeni su skraćena verzija Švarcovog upitnika vrednosti – PVQ (Schwartz et al., 2001) i upitnik za merenje frekvencije rizičnih ponašanja (konzumacija cigareta, alkohola i psihoaktivnih supstanci, vožnja u alkoholisanom stanju, klađenje, upuštanje u nezaštićene seksualne odnose). Rezultati kanoničke korelacione analize ukazuju na postojanje dve statistički značajne kanoničke korelacije (Rho1 = .403, Rho2 = .198, p < .01). Prva kanonička funkcija u prostoru vrednosti objašnjava 1.9% varijanse, dok varijansa objašnjena ovom funkcijom u prostoru rizičnog ponašanja iznosi 6.5%. Druga kanonička funkcija u prostoru vrednosti objašnjava 0.3% varijanse, dok u prostoru rizičnog ponašanja objašnjava 0.6% varijanse. Struktura prve kanoničke funkcije ukazuje da su vrednosti hedonizam koji se ogleda u provodu i ugađanju sebi, stimulacija koju karakterišu okrenutost ka avanturama i uzbudljivom životu i moć koja se ogleda u orijentisanosti ka bogatstvu i skupim stvarima u pozitivnoj vezi sa učestalošću konzumacije alkohola i klađenjem u kladionicama. Struktura druge kanoničke funkcije ukazuje da su vrednosti konformizam koji se ogleda u pristojnom ponašanju i tradicionalizam koji se ogleda u vrednovanju i poštovanju tradicije i običaja u negativnoj vezi sa učestalošću konzumiranja ekstazija, lepka ili lekova za smirenje i u pozitivnoj vezi sa učestalošću posete kladionicama. Dobijeni rezultati ukazuju na mogućnost postojanja medijatora koji posreduju vezu između vrednosti i rizičnog ponašanja, te je u narednim istraživanjima potrebno mapirati ove fenomene.

Ključne reči: adolescencija, vrednosti, rizično ponašanje

RELATIONSHIP BETWEEN VALUES AND RISKY BEHAVIORS IN ADOLESCENCE

Adolescence is often characterized as a period in which risks are undertaken due to strong exploratory desires. Having in mind that values have motivational effects on different kinds of behaviours, the main goal of this study was to examine relationship between values and risky behaviour in adolescents. The results show there are two statistically significant canonical correlations (Rho1 = .403, Rho2 = .198, p < .01). First function in the space of values explains 1.9%, while in the space of risky behaviour explains 6.5% of variance. Second function in the space of values explains 0.3%, while in the space of risky behaviour explains 0.6% of variance. Structure of the first function show that hedonism, stimulation and power are in positive association with frequency of alcohol consummation and betting. Structure of second function shows that conformity and traditionality are in negative association with frequency of ecstasy, glue and sedatives consummation and in positive

association with betting. Demonstrated results are indicating that there may be variables that mediate this relationship, which should be further examined in future research.

Keywords: adolescence, values, risky behaviours

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CORPORAL PUNISHMENT IN CHILDHOOD AND AGGRESSIVENESS AS PREDICTORS OF THE CORPORAL PUNISHMENT APPROVAL

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Corporal punishment (CP) is a common practice, despite the evidence linking it to detrimental child outcomes. Support for CP can be transferred intergenerationally, as parents who experienced frequent CP themselves tend to endorse CP and use it with their own children. Their children, in turn, tend to use more aggressive conflict resolution strategies with peers, possibly prompting the parents to CP them even more. Consistent with this, data shows that when the early age aggression levels are controlled for, use of CP predicts an increase in child aggression at later age. Links between the adult dispositional aggressiveness and support for CP have also been observed. It is implied here that CP can cause more aggressive behavior, as it signals to children that hitting is an acceptable way of dealing with conflict. The goal of this research was to test the relationship between the recalled childhood CP frequency and levels of trait aggressiveness with the approval of CP amongst adults from Serbian culture. We used a convenience sample of 390 participants (82.3% females) from the Republic of Srpska (50.3%) and the Republic of Serbia (49.7%). The mean age was 25.50 ($SD = 6.46$) years. The frequency of CP in childhood was measured by three questions referring to how often the participant was CPed by mother, father, and compared to other kids. The approval of CP was measured by three questions, referring to the intent to use CP on one's own kids, approval of using belts or rods for CP, and considering spanking to be perfectly normal. Trait aggressiveness was measured by four AVDH questionnaire dimensions: anger, vengefulness, dominance, and hostility. Results show that, when adjusted for the relevant demographic variables and a number of children, higher CP in childhood ($\beta = .30$, $p < .001$), age ($\beta = .26$, $p = .008$), and vengefulness ($\beta = .20$, $p = .002$) predicted higher approval of CP. There was also a significant indirect effect of CP in childhood through vengefulness on the approval of CP ($\beta = .051$, $p = .019$). Participants from the Republic of Srpska, compared to Serbia, had slightly higher approval of CP ($\beta = -.10$, $p = .050$). In total, predictors explained a total of 22.8% approval of CP variance. The results are consistent with the intergenerational cycle of violence hypothesis, which suggests that more CP in childhood can lead to more approval of the CP in adulthood, partially through a possible increase in aggression, i.e., vengeful aggressive tendencies in this case specifically.

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SKALA STANDARDA RANOG RAZVOJA: PROVERA PSIHOMETRIJSKIH KARAKTERISTIKA

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Cilj istraživanja bila je provera metrijskih karakteristika Skale standarda ranog razvoja, konstruisane kako bi se identifikovala deca kod kojih je prisutan rizik ili kašnjenje u razvoju. Uzorak je činilo 1388 roditelja dece uzrasta od 1 do 60 meseci (741 (53.4%) dečaka i 647 (46.6%) devojčica), sa teritorije Srbije. Roditelji su popunjavali Skalu standarda ranog razvoja zajedno sa instrumentom Uzrasti i razvoj deteta (Ages & Stages Questionnaires® (ASQ-3)). Skala je konstruisana na osnovu Standarda ranog razvoja (Baucal i saradnici, 2012). Odabrani standardi operacionalizovani su u ajteme koji su sadržali opis aktivnosti, kao i primer odgovarajućeg ponašanja deteta. Sačinjeno je 8 skala koje pokrivaju sledeće uzraste:1-4 meseca i 30 dana (13 ajtema), 5-6 meseci i 30 dana (21 ajtem), 9-12 meseci i 30 dana (27 ajtema), 13-18 meseci i 30 dana (26 ajtema), 23-24 mseca i 30 dana (29 ajtema), 28 meseci i 16 dana - 36 mesci i 30 dana (27 ajtema), 39-50 meseci i 30 dana (24 ajtema) i 57-66 meseci (24 ajtema). Za svaki ajtem roditelji su procenjivali da li dete može samostalno da obavlja navedenu aktivnost, ponekad ili još uvek ne. Odgovori roditelja su u skladu sa tim ocenjivani sa 10, 5 ili 0, a ukupan skor na skali računat je sabiranjem skorova na pojedinačnim ajtemima i deljenjem sa brojem ajtema. Prosečni skorovi na svim navedenim uzrastima su bili relativno visoki (u odnosu na maksimalan skor koji je bio 10) i kretali su se u zavisnosti od uzrasta od $M = 8.05$ ($SD = 1.21$) do $M = 8.86$ ($SD = 1.10$). Raš analizom utvrđeno je da se radi o pouzdanom instrumentu (pouzdanost za ispitanike je oko 0,8 a za stavke 0,98), koji meri jedan fenomen (odnosno postignuće u ranom razvoju) i ima mali broj ajtema sa lošim metrijskim karakteristikama. Istom analizom pokazano je da skala dobro razlikuje uzraste, odnosno da je skor mlađe dece niži od skora starije. Takođe procene roditelja na instrumentu Uzrast i razvoj deteta i Skali standarda ranog razvoja su u korelaciji na svim uzrastima, što govori u prilog valjanosti instrumenta. Razlike s obzirom na pol su se javile na uzrastima: 9-12 meseci (t (203)=-2.342, p<.05), 14-18 meseci ($t(201) = -2.664$, p < .01) i 30-36 meseci ($t(201) = -2.024$, p < .05). Sve razlike su bile u smeru viših skorova kod devojčica. Podaci ukazuju da Skala standarda ranog razvoja može da se koristi u cilju identifikacije dece kod koje je prisutno kašnjenje u razvoju.

Ključne reči: rani razvoj, standardi, Raš analiza, psihometrijske karakteristike

EARLY DEVELOPMENT STANDARDS SCALE: PSYCHOMETRIC CHARACTERISTICS

The aim of the research was to assess psychometric characteristics of the Early Development Standards Scale, constructed to identify children at risk or with developmental delay. Based on the Early Development Standards (Baucal et al., 2012), eight scales were constructed,

covering ages from 1 to 60 months. In total, 1388 parents from Serbia participated. Relatively high mean scores were obtained at all ages. The instrument has good metric characteristics. The results of Rasch analysis showed that the scale is a reliable instrument (reliability for respondents is about 0.8 and for items 0.98), it measures one phenomenon (outcomes in early childhood development) and it has a small number of items with poor metric characteristics. There are significant correlations between scores on the Early Development Standards Scale and Ages & Stages Questionnaires across all ages. Gender differences were obtained at 9-12 months, 14-18 months and 30-36 months, indicating higher scores for girls.

Keywords: early childhood development, standards, Rasch analysis, psychometric characteristics

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DIFFERENCES IN THE SOCIAL PERCEPCION BETWEEN STUDENTS WITH DISABILITIES IN REGULAR AND SPECIAL SCHOOL

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The aim of this pilot-study is to investigate whether students with intellectual disabilities who attend regular school will show wider social perception with members of their peer group and also with other persons included in school life than the students with same disabilities who attend special school. The sample consists of 38 participants. The first group consists of 15 students, (6 male and 9 female) with disabilities, who attend regular school with typical children, which would enable them to progress, socially, emotionally and intellectually within their scope. The average age of the students is 16.6. The second group consists of 23 students (18 male and 5 female) from special school, with organized program, together with students with similar disabilities, without opportunities to learn social skills. The average age of the students is 17. The groups are equal in the type of intellectual disability (Mild Mental Retardation; IQ 50–69;) type of education (secondary graphic vocational) and all students live with their families. The research was conducted in the High school and the Special school for disabilities in Bitola, N. Macedonia. The following instrument has been applied: Drawing as a form of expressing of students own emotional and social perceptions, conflicts, interests and wishes. Each student was supposed to make a simple drawing and they got the same instruction to draw the members of peer group and persons, with which they collaborate and have contacts in school life and what activities they want to do with them (with no time limits, the instruction was repeated several times). These drawings are compared based on three aspects: 1. Drawing peers or not. 2. Drawing teachers or not. 3. Drawing some activities with peers or not. The comparative drawings analyses from both of groups are based on three aspects presented in percentages. Twenty percent of the students from regular school did not draw peers or teachers and any activities, while 80% draw peers, teachers and some activities. Students from special school – 60% did not draw peers or teachers and any activities, only 40% included peers, teachers and some activities. From the statistical analyzes applied, there are significant differences between percentages; SD% = 55,79; Q = 44,22; CR = 2,42>1,96; 2,42>.05. Although it is a pilot- study conducted on a relatively small sample, interesting results have been obtained – there is a significant difference in the social perception among students with disabilities in regular school (with inclusion) compared to students in special

school. The obtained results show that students from regular school have wider perception of members of their peer group and of other persons included in school life in their drawings than the students with the same disabilities who attend special school.

Keywords: drawing, social perception, students with disabilities

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MATERIAL AND FINANCIAL TRANSFERS WITHIN INFORMAL CAREGIVING DYADS IN SLOVENIA

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By its definition, informal care is not (financially) reimbursed, however, caretakers often provide material and financial support to their carers as a reward for their help (ADL, IADL, other care tasks). While there is some evidence that children are likely to receive financial transfers from their elderly parents when caring for them, there is a gap in extant literature regarding transfers to/from other members of one's social network and the differences regarding the type and intensity of care received. Using nationally representative data of people aged between 50 and 101 ($N = 2884$, 38.8% males, $M_{age} = 67.5$, $SD = 9.9$) from waves 6 and 7 of Survey of Health, Aging and Retirement in Europe (SHARE), we explored whether material and financial gifts are given specifically to carers and whether gifting is related to type and intensity of care older people give and receive. The results show that a majority of participants (44.9%) only gift or care without receiving either in exchange, while 10.4% engage in transactional relationships (caring-receiving gifts or gifting-receiving care). We found that those participants are more likely to gift their carers than other members of their social network ($\chi^2_{(129)} = 445.41$, $p < .000$, $V = .58$, $p < .000$), but the likelihood of gift-giving within transactional relationships was not related to type (i.e., paperwork, practical household, personal care; $\chi^2_{(4)} = 2.02$, $p = .699$) or intensity of care received ($r_{pb} = .07$. $p = .092$). Specifically, almost a half of caretakers within transactional relationships gave gifts to their carers (42%) or children of their carers (15%). On the contrary, 1.6% of older carers received a material or financial transfer from their caretakers, and at the same time were more likely to receive gifts when caring was more intensive ($r_{pb} = .41$, $p = .005$). As older people often struggle financially, the results point to a potentially problematic subgroup of caretakers, engaged in transactional caring relationships, who feel obliged to "pay" for the care provided to them. Moreover, as SHARE captures only larger financial/material transactions, our results could represent just the tip of the "transactional" iceberg. Further research is thus warranted, also looking into smaller gifts and possible protective and risk factors linked to financial expectations and feelings of guilt within caregiving dyads.

Keywords: informal caring, financial transfers, informal carers, older people, SHARE

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IS THE PUNISHMENT FAIR? CHILDREN'S EXPECTATIONS ABOUT PARENTAL DISCIPLINE PROCEDURES

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Parents are expected to discipline their offspring in the case of misbehaviour, such as lying to parents or wrestling with a sibling. Understanding whether discipline procedures are proportional to the act of misbehaviour and thus found to be fair may differ between parties involved. Understanding of punishment fairness appears to relate to a number of features, the amount of information about the event, comprehension of the social context, cognitive development and age, among them. The purpose of the study was to analyse age- and gender-related differences in individual's concept of discipline related punishment in childhood. The study involved 30 boys and 30 girls (age 6-12 years). Structured Piagetian type of interview was used; it included four stories about different types of children's misbehaviour (Broken Window, Lie, Pushing One's Way into the Queue, and Broken Doll). The interviews were backed with drawings and performed individually, 30-60 min each. The data were coded according to Leman and Björnberg (2010) guidelines, into 7 categories and 15 additional sub-categories. Data were analysed in terms of age- and gender-related differences. A series of chi-square tests yielded few differences between age and gender groups in terms of expected parental approaches to punishment. Children did not expect boys and girls to be punished differently for the same type of misbehaviour, nor they believed fathers would use different discipline methods than mothers. Whereas both younger and older children tended to give the same types of answers in terms of content, the explanations of older children's answers were more complex than those of younger ones ($\chi^2(4) = 25,45$; $p < 0,05$). The findings indicate that children's expectations about punishment were not gender associated; the findings also indicate that it is not the content but the complexity of attributions about punishment which is likely to change with child's age.

Keywords: parental discipline procedures, children, misbehaviour, punishment

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TYPICAL PATTERNS OF ADOLESCENTS' MUSICAL PREFERENCES AND ACTIVITIES DURING LEISURE

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This work is a part of a broader study dealing with adolescents' leisure time. Research confirms that music plays a vital role in adolescents' everyday life and suggests that they are exposed to music almost all the time and in a variety of situations using the Internet (North, & Hargreaves, 2008). Adolescents also differ significantly in their musical preferences. This

study aims to identify typical patterns of adolescents' musical preferences and practices during leisure. The sample comprised 1358 secondary school students (56% of whom are female) from different school types in 10 Serbian cities; 51% of the interviewees are in the first and 49% in the third grade. From the questionnaire about adolescents' leisure habits, that included closed questions, we selected 20 items related to various music activities and habits. Those items can be classified in the following categories: music as an extracurricular activity, music as a hobby, listening to different music genres and following music themes via various media (Internet, TV, magazines). Explanatory factor analysis (Oblimin rotation) was performed on these items. Results revealed five extracted factors, which explain around 50% of the data variance. The first factor (18.4% of variance explained) represents a pattern of preference for listening to pop and rock music vs. folk music. The second factor (9.9% of variance explained) describes a habit of following musical themes in media and on the internet, including following musical idols and famous figures. The third factor has all negative loadings, regarding listening to any modern music, like techno, electro, and house (8.8% of explained variance). The next one represents an "old fashion" pattern -listening to the classical, jazz or rhythm & blues music and the last factor represents a pattern of musical behavior, which includes besides listening to the music, music as a hobby, or music as an extracurricular activity (6.8% and 6.6% of variance, respectively). The paper discusses the meaning of different identified patterns as a tool for describing musical preferences of today's youth and the importance of music in youth leisure time.

Keywords: adolescents, music, leisure patterns

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IDOLS OF SERBIAN ADOLESCENTS: DIFFERENCES BETWEEN TWO
GENERATIONS.
PUBLIC FIGURES AS ADOLESCENTS' ROLE MODELS: WHAT CHANGED IN 10
YEARS?

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The work deals with comparison of idol preferences between 2 generations of adolescents. The data were gathered within 2 research waves, in 2007 and 2018. The survey included 1283 secondary school students (1st and 3rd grade) from 26 schools in 10 Serbian cities in the first wave, and 1358 students from the same grades, schools and cities in the second. The idols and reasons for their appreciation were categorized in the same way and in accordance with previous studies (Stepanović et al., 2009, 2017). However, in 2007 students stated their reasons while in 2018 they estimated given reasons on the 5-point scale. More students from the second wave have idols (61.9%) than those from the first (48.9%) (χ^2 = 45.575, df=1, Cramer's V = 0.13, *p* =.0,00). Ana Ivanović is the most popular person in the first wave, appreciated by 2.6% of students who have idols. Novak Đoković is the most popular role model in the second wave (6.9%). Idols preferences differ in 2 waves modestly (χ^2 = 16.576, df = 6, Cramer's V = 0.10, p = .0,11; with Bonferoni method adjustments). Students from the first wave prefer sportsmen more than those from the second, while those from the second admire show business stars and fictional characters more. Students from the second wave

prefer foreign idols to domestic, while such difference is not spotted in the first wave (χ^2 = 9.632, df = 1, Cramer's V = 0.082, $p < .01$). Moreover, they prefer male idols over female and such a trend did not exist in the first wave (χ^2 = 11.064, df = 1, Cramer's V = 0.088, $p < .01$). Factor analysis (Promax rotation) was performed on reasons students gave in 2007 and those estimated by students in 2018. For 2007, 3 factors were extracted, explaining 22% of variance: 1) professional success; 2) fame, wealth and physical appearance; 3) social power and personal traits. Three factors are extracted for 2018 (49% of variance): 1) fame, wealth, physical appearance and social power; 2) personal traits and professional success; 3) humanity and communicativeness. A growing number of adolescents who have idols and higher appreciation of show business and fictional characters in the second wave, as well as further analyses regarding show business subcategory, indicate influence of Internet and social media on the younger generation having in mind that generation tested in 2007 was not exposed to social media at that time.

Keywords: adolescents, idols, two generations

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ADOLESCENTS' LEISURE ACTIVITIES: TYPES OF SOCIAL NETWORKS AND SPECIFIC HOBBIES

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Previous empirical findings suggest that two types of social networks could be considered, according to their potential for adolescents' development. The first type is oriented towards personal communication and exchange (e-mail, Viber, WhatsApp, Skype, Snapchat) and the second one is more public and used to provoke a reaction (YouTube, Twitter, Instagram, Facebook). The aim of this work is to determine if there are correlations between certain hobbies and social networks that reflect two distinguished types. This research is part of a broader study about the everyday life of adolescents in Serbia. The sample included 1358 secondary school students, the first and the third grade (56% girls). On 17 items selected in the applied questionnaire students estimated how often they engage in specific hobbies (blog writing, creative writing, drawing/painting, graphic design, composing/playing music, making jewelry/clothes, computer-related activities, e.g. programming and artistic photography) and answered how active they are on mentioned social networks. Positive low correlations are found between specific hobbies and certain social networks: writing & Twitter ($r_{pb} = .065$, $p < .05$); blog & Snapchat ($r_{pb} = .066$, $p < .05$); photography & Instagram ($r_{pb} = .055$, $p < .05$), photography & Snapchat ($r_{pb} = .067$, $p < .05$). Not so low, positive correlations are found between graphic design and following social networks: Twitter ($r_{pb} = .065$, $p < .05$), Skype ($r_{pb} = .098$, $p < .01$), e-mail ($r_{pb} = .143$, $p < .01$); computer activities and: Twitter ($r_{pb} = .089$, $p < .01$), Skype ($r_{pb} = .131$, $p < .01$), e-mail ($r_{pb} = .207$, $p < .01$). On the other hand, drawing, practicing music and making clothes do not have any positive correlations with considered social networks. Writing is completely related to the social networks of the second type, and blog to the first. The remaining three hobbies are associated with both types. Graphic design and computer activities have similar profiles and sole correlations with an e-mail. Involvement in these hobbies might represent a part of the preparation for the formal studies. Adolescents who practice photography prefer personal communication, but probably need a platform such as Instagram to present their work, which

could also be considered as an introduction to professional activities. Different types of social networks, according to their capacity for personal exchange and public exposure and reaction, could be supportive in practicing different hobbies, especially graphic design and computer-related activities.

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SOCIAL PSYCHOLOGY

PREDIKTORI SOCIJALNE OTVORENOSTI IZMEĐU MIGRANATA I DOMICILNOG STANOVNIŠTVA U BOSNI I HERCEGOVNI

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Masovan tranzit migranata iz Afrike i Azije u zemlje Evrope, neizvjesnost njhovog statusa u balkanskim zemljama otvorili su brojne izazove, samim tim i potrebu za istraživanjem ove pojave. Politička i medijska zloupotreba migrantske krize su dodatno podstakli vidljivu međugrupnu netoleranciju te smo se u ovom radu fokusirali na ispitivanje koliko su migranti i domicilno stanovništvo (DS) otvoreni za uzajamnu interakciju te koji su sociopsihološki prediktori otvorenosti. Pri tome smo se najviše oslanjali na teorije socijalnog identiteta, socijalnih distanci, Olportovu kontakt hipotezu, integrativnu teoriju prijetnje, teorije crta ličnosti, te ulogu drugih socio-demografskih i ekonomskih faktora.

Upitnikom je ispitano 462 pripadnika DS (52.8% žena) iz Republike Srpske (RS) i Unsko-sanskog kantona (USK). Pored njih ispitano je i 244 migranta (43% žena) koji su smješteni u prihvatnim centrima u USK. Sprovedene su i tri fokus grupe sa migrantima te četiri sa DS. Upitnik je kreiran za potrebe istraživanja i sadržavao je modifikovanu verziju Bogardusove skale socijalne distance/otvorenosti te adaptirane skraćene skale za brojne sociopsihoške prediktore kao što su: direktan i indirektan kontakt sa drugom stranom, crte ličnosti uključujući i crte iz tzv. „mračne trijade", socijalne identifikacije, konzervativizam, liberalizam, percepcija društvene nepravde, zabrinutost za budućnost itd. Terensko istraživanje je sprovedeno u prvoj polovini 2019. godine.

Rezultati ukazuju da kod 30%-40% DS postoji strah od narušavanja bezbjednosti te kulturološkog i političkog uticaja migranata. Set prediktorskih varijabli objašnjava 20% varijanse otvorenosti migranata prema DS pri čemu je najjači prediktor manja dužina boravka u BiH (R^2=.20; $F(10.201)=4.91$; $p<.001$). Kad je u pitanju predikcija otvorenosti domicilnih prema migrantima, objašnjeno je 23% varijanse (R^2=.23; $F(20,450)=6,01$; $p<,001$). Otvoreniji su mlađi i liberalniji ispitanici koji imaju više kontakata i poznanika migranata, te izraženiju crtu ličnosti Prijatnost.

Zaključujemo da je interakcija između migranata i DS zasnovana na površnim i rijetkim kontaktima, a njihova uzajamna percepcija prožeta brojnim stereotipima, pogotovo od strane DS. Direktni kontakti se nameću kao najkonstantniji prediktori uzajamnih odnosa, koji u određenoj mjeri mogu da zasjene i efekat međureligijskih sličnosti i razlika, te su i rezultati najviše prodiskutovani u kontekstu kontakt hipoteze.

Ključne riječi: migranti, domicilno stanovništvo, otvorenost, Bosna i Hercegovina.

PREDICTORS OF SOCIAL OPENNESS BETWEEN MIGRANTS AND DOMICILES IN BOSNIA AND HERZEGOVINA

In this study, we examined the extent to which migrants and the domicile population are open to mutual interaction and what are the social and psychological predictors of openness. The research was implemented on a sample of 244 migrants (43% women) who are accommodated in temporary reception centres in Una-Sana Canton (USC), and 462 domiciles

(53% women) of Republika Srpska (RS) and USC. Additionally, seven focus groups were implemented, out of which three with the migrants and four with domiciles.

The set of predictors explained 20% variance of openness of migrants towards the domiciles, whereby the strongest predictor is lower length of stay in BiH (R^2=.20; $F(10.201)$=4.91; p<.001). When it comes to prediction of openness of domicile residents towards migrants, 23% of variance is explained (R^2=.23; $F(20,450)$=6,01; p<,001). More open are those respondents who are younger, liberal, have more contacts and acquaintances with migrants, and stronger personality trait Agreeableness.

Keywords: migrants, domestic population, openness, Bosnia and Herzegovina

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DERIVING A TYPOLOGY OF POLITICAL EXTREMISM AMONG THE YOUTH IN BOSNIA AND HERZEGOVINA

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A long history of interethnic and interreligious violent conflicts, together with a transition economy riddled with corruption and unstable political situation make Bosnia and Herzegovina a fertile soil for extremist political ideologies. Our study aimed to explore the prevalence of such ideologies among the youth by using a typological approach. To this purpose, we administered a survey to a total of 1058 participants (16-30 years, 55.1% male) throughout Bosnia and Herzegovina. To identify the typology we employed latent profile analysis on a set of 20 ordinal items substantively related to extremist ideologies (e.g. apology of violence, dogmatism, anger about societal injustice). Statistical measures (information criteria) and theoretical considerations suggested that the solution with seven classes could adequately describe the population. We labeled one of these classes (*n* = 187, 17.7%) as *potential violent extremists* since its members showed a clear apologetic attitude toward using violence to promote social change. In addition, we labeled the single largest group of participants (*n* = 351, 33.2%) as *political radicals* since its members reported somewhat less supportive views of political violence, but they nevertheless supported ruthless actions to establish "a just society". Moreover, all seven classes can be well discriminated (*p<* .01, *BF10>* 100) using a set of external variables administered in a battery (e.g. social dominance orientation, perception of injustice, concerns about the future, conservatism, Dark Triad traits). We believe that the person-based approachprovides a neededcomplement to explain the prevalence of extremism through personal (e.g. Militant Extremist Mindset)and/or context-related (e.g. Social Movement Theory)determinants.Aside from arguing for typologically based analysis in this domain of research, we discuss why every second young respondent showed sympathy to politically extremist attitudes and whether this could predict an eruption of political violence in Bosnia and Herzegovina.

Keywords: political extremism, youth, person-oriented analysis.

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THE ACCURACY OFPERSONAL/GROUP GENDER DISCRIMINATION DISCREPANCY

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Acording to recent surveys, women in Serbia report on high levels of discrimination against their gender group, but are less likely to perceive themselfs as victims. This phenomenonis reffered to as the personal/group discrimination discrepancy and it is usually attributed to motivationalbias. However, in order to determine the relative significance of factors proposed by motivational explanations, their effects must be examined after controlling for the effects of the actual gender discrimination experiences. Therefore, the aim of this research was to examine the extent to which personal and group perceptions of gender discriminationand the measure of their discrepancy are influencedby the experiences of discrimination, compared to predictors advanced by motivational and cognitive approach (self-esteem, gender identification, gender egalitarianism, belief in just world). Sample included 273 women from different age groups (19-62, M = 37.4) and SES who completed e-survey with following scales: Perceptions of personal and group gender discrimination (general and in 4 domains:upbringing, education, work and partner relationships); Modified Schedule of Sexist Events (SES-LM);Rosenberg Self-Esteem inventory; Gender identification scale;Gender egalitarianism scale; Belief in just world scale. Personal/group discrimination discrepancy was observed both in general (d = 1.12) and domain specific perceptions (d = 0.80-1.26).Experiences of gender discrimination accounted for the 32% of variance in general personal discrimination perceptions, while this percentage varied through domains (28-41%).Other predictors had none or small additive effects (1-3%).Group perceptions are rooted less in the experiences (general group perception 17%, domain specific group perceptions 3-17%) and somewhat more in the social beliefs (gender egalitarianism and belief in just world, 1-11%). Experiences of discrimination were the strongest predictors of the measures of personal/group discrimination discrepancy (general discrepancy 9% and domain specific discrepancies 6-13%). Personal/group discrepancy was smaller in women who experienced more gender discrimination. Above experiences, gender egalitarianism was the only significant predictor (1-3%). Ourfindings suggest thatperceptions of gender discrimination arestrongly rooted in the personal experiences of gender discrimination. On the other hand, motivational factorsthat were advanced in previous research failed to explain significant proportion of the personal/group discrimination discrepancy.

Keywords: gender, discrimination, personal/group discrimination discrepancy

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MAPPING STUDENTS' CIVIC IDENTITY: DO DEMOGRAPHIC CHARACTERISTICS MATTER?

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Youth participation and civic involvement are in decline, both globally and in the region of South-eastern Europe. Even though the issue has been gaining traction in research endeavours over the past decade, scarce research to date has focused specifically on civic identity. A strong civic identity, referring to one's beliefs, emotions, expectations, and experience regarding his/her membership and engagement in various communities, may represent an important predictor of civic engagement. However, an empirical substantiation to this proposition, especially in Europe, is still lacking. Thus, we aimed to explore how demographics (which were found to be linked to civic engagement in general samples) affect the saliency of civic identity, and whether civic identity in turn contributes to actual civic engagement in a diverse sample of university students ($N = 188$, 53.1% males, aged 18-26, enrolled in various study fields), who are among the most active social groups. Along with self-reports on their demographics and civic engagement, the participants responded to a newly developed Multifactor Civic Identity Scale, created to assess the saliency of civic identity across four subdomains (civic involvement, duties, rights, and membership). The results show that – in contrast to civic engagement, where most participants fall into the lower end of the continuum – scores across the four subdomains, and total civic identity were approximately normally distributed. Both civic identity and civic engagement were largely independent of students' gender, age, and field of study, while the students residing with their parents scored slightly lower than their peers living (partly) away from home ($F_{(2,174)} = 3.48$, $p = .032$, $\eta^2 = .038$). Hierarchical linear regression models containing only demographics were not significant, however, the inclusion of civic identity salience improved their power in predicting mean regularity of engagement in civic activities ($R^2 = .11$, $F_{(5,145)} = 3.52$, $p = .005$) and hours spent in community service ($R^2 = .12$, $F_{(5,143)} = 3.75$, $p = .003$). Still, the shares of explained variance are modest, which – while supporting our expectations – also points to the fact that civic identity is not reflected directly in behaviour, warranting further scholarly interest. Although our sample was relatively homogenous, the results suggest further research should look beyond demographics (and university students) to identify factors of civic identity development.

Keywords: civic identity, civic engagement, students, gender differences

POVEZANOST INTERNET ZAVISNOSTI SA SOCIO-DEMOGRAFSKIM KARAKTERISTIKAMA I ŠKOLSKIM USPEHOM SREDNJOŠKOLACA

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Internet zavisnost (IZ) je jedna od aktuelnih tema u poslednjih nekoliko godina zbog sve većeg korišćenja interneta, naročito među mladima (Dufour et al, 2016). Cilj ovog istraživanja bio je da se ispita koliko su učenici srednjih škola zavisni od korišćenja interneta i koliko to utiče na njihov uspeh u školi, kao i to da li postoji razlika u pogledu učestalosti korišćenja interneta u odnosu na neke faktore (pol, uspeh u školi i td). Neka istraživanja su ukazala da ne postoji razlika u pogledu IZ i pola (Dufour et al, 2016). Istraživanje na turskim srednjoškolcima je pokazalo da je broj učenika koji pokazuju znake IZ učestaliji među decom višeg ekonomskog statusa (Kayri & Günüç, 2016), kao i da su učenici sa boljim školskim uspehom imali niži nivo IZ (Türel & Toraman, 2015). U skladu sa iznetim, pretpostavili smo da se dečaci i devojčice neće razlikovati s obzirom na nivo internet zavisnosti, kao i da će nivo biti viši u grupi onih sa višim materijalnim statusom i onih sa lošijim školskim uspehom. Istraživanjem je obuhvaćeno 110 učenika srednjih škola, Gimnazije i Medicinske škole u Pasjanu, opština Gnjilane (što je 80% od ukupnog broja učenika), uzrasta između 14 i 18 godina, od kojih su 23,6% bili muškarci, a 76,4% devojke. Za potrebe istraživanja napravili smo upitnik, koji je u prvom delu sadržao socio-demografska pitanja, koja su kasnije poslužile kao nezavisne varijable (pol, obrazovanje, uspeh i td). Drugi deo upitnika sadržao je 20 stavki Testa internet zavisnosti (IAT), sa odgovorima na šestostepenoj skali Likertovog tipa, od 0 -*nikad* do 5 - *uvek*. Sumativni skor na skali IAT koristio se u daljim analizama kao zavisna varijabla. Hipoteze su testirane pomoću Spirmanove rang korelacije i Man-Vitnijevog U testa. Rezultati su pokazali da ne postoje razlike po polu (U=925.5, p=0.7) što je u skladu sa polaznom hipotezom. Nadalje, zabeležena je značajna povezanost školskog uspeha i nivoa IZ: $\rho=-0.23$, $p<0.05$. U skladu sa našom pretpostavkom oni sa višim uspehom pokazuju niži nivo zavisnosti. Veza između socioekonomskog statusa i skora na IAT-u nije se pokazala statistički značajnom: $\rho=-0.06$, $p=0.54$, čime odbacujemo polaznu hipotezu. Nepostojanje polnih razlika u nivou IZ govori o tome da se u prevenciji ovog poremećaja treba podjednako obratiti pažnja na oba pola. Učenici slabijeg školskog postignuća imaju viši nivo IZ i oni predstavljaju ranjivu populaciju. Sa druge strane, ekonomski status porodice se nije pokazao kao značajan faktor rizika.

Ključne reči: internet zavisnost, srednjoškolci, ekonomski status, školski uspeh, pol

CORRELATION BETWEEN INTERNET ADDICTION AND SOCIO-DEMOGRAPHIC CHARACTERISTICS AND SCHOOL ACHIEVEMENT AT HIGH-SCHOOLERS

Due to the apparent increase of internet addiction (IA) among young people, it is relevant to examine this problem, especially in the area where no research on the topic has been done so far. This research aims to explore some determinants of internet addiction among high-schoolers. Previous studies found no sex differences, however, students with high economic status tended to have higher levels of IA. Students with better school achievement had lower level of IA. A total number of 110 high-schoolers from Pasjan enrolled in this study (23,6% boys). The Internet Addiction Test – IAT was used to measure the level of internet addiction. Results revealed no sex differences, as well as no influence of economic status of the family on the level of IA. We confirmed findings concerning the correlation between school

achievement and level of IA, where those high-schoolers with better school achievement had lower IA.

Keywords: Internet addiction, secondary school students, economic status, school achievement, gender

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EXCESSIVE INTERNET USE AMONG ADULTS

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Problematic Internet use is excessive use of various Internet applications and includes behaviours such as playing games, gambling, watching and sharing pornography, social networks activities and similar. Excessive Internet use is related to computers, tablets, smartphones and similar devices that allow Internet access. Excessive internet use is often considered a type of behavioural addiction with characteristics that are similar to substance use disorders. Although people of various age are vulnerable to excessive Internet use, most research was conducted on youth. The purpose of this research was to explore media coverage of problematic Internet use in Croatia. Specific aims of this research were 1) To analyse frequency of articles related to excessive Internet use of adults in Croatian media 2) To determine general features and main topic of those articles. We hypothesized that less than half of the articles related to excessive Internet use would deal with adults. Further we hypothesized that main topics would be related to Internet addiction, prevention of excessive Internet use and health problems. The sample consisted of all Croatian printed media (journals, magazines, newspapers) that were published in 2014, 2016 and 2018. Out of this sample, all articles dealing with excessive use of Internet were selected and analysed. Analytic matrix included general data about article (e.g. date, page, size of article) and dominant topic and specific topics related to excessive Internet use. For the purpose of the current study we focused on media portrayal of problematic use of Internet among adults. We analysed length, position, journalistic form and dominant themes of those articles. The results showed that only minority of the articles was focused on excessive internet use among adults, that articles rarely included systematic and in-depth analysis of possible problems, and often only superficially portrayed excessive internet use. Main topics were: general (often sensational) description of excessive use, general or specific Internet addictions (e.g. mobile phones addiction), health problems. Prevention or therapy was mentioned only in a few articles.

Keywords: excessive internet use, problematic internet use, media coverage

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FENCE: MERA DEFANZIVNOSTI U ODNOSU PREMA ISTORIJSKIM NARATIVIMA

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Kada su ljudi suočeni sa okolnostima neukrotivog konflikta poput kosovskog konflikta, često se dešava da imaju tendenciju da štite i vrednuju istorijske narative svoje etničke grupe. U ovom istraživanju testirana je mera defanzivnosti u odnosu prema dominantnim istorijskim narativima vlastite etničke grupe (FENCE-Firmly Entrenched Narrative Closure). Cilj ovog istraživanja je validacija FENCE skale (α=0.86), kroz ispitivanje njenih veza sa Slepim Patriotizmom (α=0.81) tj. nekritičnim pozitivnim vrednovanjem svoje grupe, Konstruktivnim patriotizmom (α=0.85) koji predstavlja kritički odnos prema sopstvenoj grupi i Etosom Konflikta (α=0.94) koji se odnosi na skup dominantnih uverenja koja su karakteristična za društva suočena sa neukrotivim konfliktom. Takođe, želeli smo da proverimo na koji način FENCE previđa relevantne ishode tj. nedostatak otvorenosti za istorijske kontranarative (BLOC - Behavioural Lack Of Openness for Counternarratives) (α=0.92) i procene autora i teksta koji sadržajem konfrontira dominantne etničke narative o konfliktu (α=0.91). Tekst je bio sastavljen u formi vinjete čija tema su bile represivne mere jugoslovenske vlade prema albanskom stanovništvu na Kosovu u prvoj polovini prošlog veka. Istraživanje je anketnog tipa i izvršeno je na uzorku etničkih Srba iz Srbije (N=233). Rezultati istraživanja su pokazali da FENCE korelira sa Slepim Patriotizmom (r=0.65, p<.01), što je i očekivano, međutim iznenađujući je podatak da postoje niske, ali značajne korelacije sa Konstruktivnim Patriotizmom (r=0.20, p<.01), što. O odnosu prema istoriji o kosovskom konfliktu govori i delimično preklapanje defanzivnog stava u percepciji istorije sa Etosom Konflikta (r=0.83, p<.01). Takođe, FENCE motivacija je povezana sa smanjenom otvorenošću prema kontranarativima (r=0.20, p<.01), kao i sa negativnijim procenama autora i teksta koji izazivaju dominantni narativ (r=0.43, p<.01). Analiza medijacija pokazuje da Slepi Patriotizam previđa negativne procene autora i konfrontirajućeg teksta (β= .55, SE = .12, 95% CI: .31, .79), a FENCE se pokazala kao delimičan medijator ovog odnosa (β= .27, SE = .10., 95% CI: .07, .46). Ovakvi rezultati govore o tome da je defanzivnost u stavu prema istorijskim narativima barijera prihvatanju multiperspektivnosti, tj. sagledavanja istorijskih narativa iz perspektive druge grupe, kao i uključivanju u aktivnosti koje bi predstavljale put ka približavanju dveju grupa u sukobu.

Ključne reči: Neukrotivi konflikt, defanzivnost u percepciji istorije, smanjena otvorenost na kontranarativima, Slepi Patriotizam, Konstruktivni Patriotizam, Etos Konflikta

FENCE: A MEASURE OF DEFENSIVENESS IN RELATION TO HISTORICAL NARRATIVES

The study aimed to validate the measure of defensiveness towards dominant historical narratives of the ethnic ingroup (FENCE). We examined its relationship with Blind and Constructive Patriotism, Ethos of Conflict, and its power to predict a lack of openness to historical counternarratives, and the evaluation of a historically confronting text. A survey with ethnic Serbs from Serbia (N=233) showed positive relations between FENCE and blind patriotism(r=0.65, p<.01), Ethos of conflict (r=0.83, p<.01) and lack of openness to counternarratives (r=0.20, p<.01), but also with Constructive patriotism (r=0.20, p<.01). Blind patriotism predicted negative evaluation of the text confronting the dominant narrative

(β= .55, SE = .12, 95% CI: .31, .79), and FENCE was a partial mediator of this relationship (β= .27, SE = .10., 95% CI: .07, .46).We discuss the role of historical defensiveness as a barrier towards achieving multiperspectivity in understanding history between groups in an intractable conflict.

Keywords: Intractable conflict, defensiveness of attitudes towards historical narratives, behavioural lack of openness to counternarratives, Blind Patriotism; Constructive Patriotism, Ethos of Conflict

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DA LI JE KORIŠĆENJE DRUŠTVENIH MREŽA I IGRANJE IGRICA NA INTERNETU POVEZANO SA ZADOVOLJSTVOM ŽIVOTOM MEĐU MLADIMA?

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Pojedini oblici aktivnosti na internetu, posebno korišćenje društvenih mreža (DM) i igranje igrica, često se dovode u vezu s negativnim psihološkim stanjima kod mladih. Za pretpostavljenu negativnu povezanost korišćenja DM i igranja igrica sa psihološkim varijablama poput samopoštovanja i subjektivnog blagostanja daju se objašnjenja u oba smera: Ili oni koji su nezadovoljniji sobom češće traže pribežište u ovakvim aktivnostima, ili ove aktivnosti negativno utiču na mlade koji ih upražnjavaju. Brojna istraživanja u kojima su spomenute varijable operacionalizovane na raznovrsne načine ne daju, međutim, jednoznačne rezultate u pogledu postojanja tih povezanosti i njihovog predznaka. Predmet ovog rada je analiza povezanosti učestalosti korišćenja socijalnih mreža i igranja igrica na internetu sa zadovoljstvom životom, kao i analiza uloge pola i uzrasta u ovim povezanostima. Empirijsku osnovu rada čine podaci iz međunarodnog istraživanja *FES Youth Study in Southeast Europe 2018/2019* koje je realizovano u deset država jugoistočne Evrope (uključiv i Srbiju) na reprezentativnim uzorcima mladih uzrasta od 14 do 29 godina, pri čemu smo iz ukupnog uzorka izdvojili mlade koji imaju redovan pristup internetu (ukupno N = 10.589). Podaci su prikupljeni anketnim istraživanjem i intervjuima licem-u-lice (49,5% devojaka, uzrast M = 21,9, SD = 4,4). Učestalost posećivanja društvenih mreža i igranja igrica na internetu ocenjivana je na trostepenim skalama (1 – Nikad / 3 – Često). Zadovoljstvo životom u celini ocenjivano je na petostepenoj skali (1 – veoma nezadovoljan/na / 5 – veoma zadovoljan/na). Rezultati ukazuju da je povezanost učestalosti korišćenja društvenih mreža i zadovoljstva životom pozitivna i značajna, ali veoma niskog intenziteta (r = 0,04**). Regresionom analizom nije utvrđen moderatorski efekat uzrasta i pola. Povezanost učestalosti igranja igrica na internetu i zadovoljstva životom je negativna i značajna, ali jednako niskog intenziteta (r = -0,04**). Regresiona analiza pokazala je da je interakcija igranja igrica i pola (β = 0,10*), kao i igranja igrica i uzrasta (β = -0,15**) značajan prediktor zadovoljstva životom, tj. da su ove dve varijable moderatori veze zadovoljstva životom i igranja igrica na internetu. Negativna veza izraženija je među devojčicama i mladima starijeg uzrasta. Rezultati u celini ne daju osnova za popularne teze o "fejsbuk depresiji" i negativnim efektima upotrebe interneta na psihičko blagostanje mladih.

Ključne reči: društvene mreže, igranje igrica na internetu, životno zadovoljstvo, mladi.

IS THE FREQUENCY OF SOCIAL NETWORKING SITES VISITING AND ONLINE
GAMING RELATED TO LIFE SATISFACTION AMONG YOUTH?

The paper analyses the relationship between the frequency of social networking sites visiting and online gaming and life satisfaction, as well as of the role of sex and age in it. The data from the international *FES Youth Study in Southeast Europe 2018/2019* survey, conducted in ten Southeast European countries (including Serbia) on the representative samples of young people aged 14 to 29 years, were used, selecting those with regular Internet access (total N = 10,589). Both the association between the frequency of use of social networks and life satisfaction and the correlation between online gaming frequency and life satisfaction were significant, but of very low intensity (r = .04** and r = -.04** respectively). Only the latter relationship was moderated by sex and age. The obtained results do not support the popular views on "Facebook depression" and the negative effects of Internet use on youth well-being.

Keywords: social networking sites, online gaming, life satisfaction, youth.

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UTICAJ INFORMACIJE O GLUMCIMA I REŽISERU NA FILMSKE PREFERENCIJE

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Poznato je da i jedna specifična informacija o nekom predmetu ili osobi može snažno da utiče na to kako ga ljudi opažaju. Npr. dosta ljudi će pre reći da je neki odevni predmet lep ako ima oznaku poznatog brenda. Još u klasičnom eksperimentu (Razran, 1950) pokazano je da na procene lepote neke devojke može da utiče njeno (izmišljeno) ime. Isto tako, ispitanici ispoljavaju veću želju da gledaju film ako dobiju informaciju da u njemu ima erotskih elemenata (Bahk, 1998). Producenti filmova često ističu informacije o tome ko je sve (od „slavnih" glumaca i režisera) učestvovao u snimanju filma, nadajući se da će tako povećati gledanost. Zbog toga smo odlučili da ispitamo da li samo izlaganje specifične informacije o („poznatim") akterima umetničkog filma može da poveća preferenciju opisa i želju da se film gleda. Sa internet stranice aladin.rs preuzeti su opisi 5 filmova različitog žanra (koji na sajtu imdb.com imaju prosečnu ocenu od 5.4/10 do 6.3/10), koje, prema procenama dva nezavisna procenjivača, nisu snimili „poznati" akteri. Opisi su izloženi ispitanicima iz kontrolne grupe. Ispitanicima iz eksperimentalne grupe je uz iste opise data i specifična informacija (netačna) da su filmove snimili akteri koji su prethodno procenjeni (dva nezavisna procenjivača) kao "poznati". Svim ispitanicima u eksperimentalnoj grupi su prikazane iste informacije o akterima filmova. Ispitanici su na skali od 1 do 5 procenjivali koliko im se opis svakog od filmova sviđa i u kojoj meri žele da ga gledaju. U istraživanju je učestvovalo 38 ispitanika (20 devojaka), prosečne starosti 24.47 godina (SD = 2.512). Rezultati su pokazali da je eksperimentalna grupa (M = 3.55 (0,54)) ispoljila značajno veću (F (1, 37) = 13.657; *p* = .001) preferenciju prema opisima filmova nego kontrolna grupa (M = 2.8 (0,7)). Želja za gledanjem filmova (F (1, 37) = 11.001; *p* = .002) je takođe bila izraženija u eksperimentalnoj (M = 3.56 (0,67)) nego kontrolnoj (M = 2.8 (0,72)) grupi. Dakle, naši rezultati pokazuju da će isti opis filma biti pozitivnije ocenjen ako su ga snimili poznati akteri. Posebno važan rezultat, sa stanovišta „reklamiranja" filma, je to da i želja za gledanjem filma u tom slučaju postaje značajno veća. Ovaj rezultat je u skladu sa teorijama ubeđivanja koje se zasnivaju na uslovljavanju, a predstavlja i eksperimentalno utemeljenje za raširenu praksu producenata da na reklamama za film ističu informaciju o poznatim akterima koji su učestvovali u snimanju.

Ključne reči: uticaj specifične informacije, ubeđivanje putem uslovljavanja, filmske preferencije, filmska industrija

THE INFLUENCE OF INFORMATION ABOUT ACTORS AND DIRECTORS ON MOVIE PREFERENCES

It is known that even one specific information can change our global perception of an object or phenomenon. Since movie producers often highlight the information that a movie was made by famous director and actors, we decided to examine whether that specific information by itself can increase preferences for a movie description. We presented five movie descriptions to two groups of respondents; the experimental group also got specific information (fake) that the movies are made by famous director and actors. After each movie description, respondents rated their preference and desire to watch it. Results showed that, on average, the experimental group rated movie descriptions more positively (F (1, 37) = 13.657; *p* = .001) and reported higher desire to watch them (F (1, 37) = 11.001; *p* = .002) than the control group. Our findings are the experimental confirmation for effectiveness of highlighting the information about movie director and actors.

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THE SHAPING OF A STORY: NARRATIVE CONSTRUCTION TASK AS A TOOL TO MEASURE CONSPIRACY-PRONENESS

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Conspiracy theories are complex narratives that causally link multiple events and actors together. Believers tend to achieve their narrative coherence by establishing higher-order beliefs that can encompass even the specific contradictory conspiratorial claims. In spite of the complex structure of conspiracy beliefs, and an active role that a believer takes in producing them, previous studies have mostly ignored this and assessed it by single Likert-type statements.

In this study, we adapted and validated a narrative construction task to assess conspiracy proneness. To this end, we first presented the respondents with a bogus event, ambiguous enough that it can be interpreted in a conspiratorial or non-conspiratorial manner ("rounding down" clients' bank accounts). We then presented a list of potential claims related to it, divided into three groups — non-conspiratorial, mildly and extremely conspiratorial (12 for each group). Their task was to construct a coherent narrative by selecting and then organizing the supplied items. We also included contradictory information (4 pairs for each group), to check if participants' would include them in their narratives. We derived indices of proneness to conspiratorial interpretation by counting the proportion of conspiratorial claims in the final narrative; we also tracked the number of chosen contradictory claims.

A total of 218 participants completed all the materials. To validate the narrative measure, participants also filled in three questionnaires of belief in conspiracies — conspiracy mentality, the belief in specific and contradictory conspiracies scales, as well as a measure of

proneness to endorsing incompatible beliefs — doublethink. The proportion of conspiratorial claims included in the narratives was on average 60%, while hardly any contradictory claims were selected (M = 1.6; SD = 1.1). Regression with measures of conspiracy beliefs as predictors showed that conspiracy mentality was the only significant predictor of the proportion of conspiratorial claims in the narrative ($F(3, 214) = 2.768$, $p = .04$; $R^2_{adj} = .024$, partial $r = .154$).

We discuss potential explanations for the inconsistent relations with traditional measures and offer guidelines for improving the task. We also address the reasons for the fact that, when asked to build a causal explanation, respondents predominantly opted for the conspiratorial claims even though they were offered more "mundane" causes for the event.

Keywords: conspiracy theories, narrative construction, contradictory beliefs, measurement, validation

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THE SOCIO-PSYCHOLOGICAL "INFRASTRUCTURE" OF CONFLICT IN CROATIAN, BOSNIAK AND SERBIAN HISTORY TEXTBOOKS - COMPARING 1996 TO 2017

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Although the peace agreement officially ended the clashes between former Yugoslav republics more than 20 years ago, the conflict is still very present in institutionalized historical narratives in all successor states. The so-called "socio-psychological infrastructure of conflict" (SPIC, Bar-Tal, 2007), as a shared cognitive-affective repertoire, psychologically prepares groups for participation in the conflict. The same repertoire, however, poses an obstacle for reconciliation after its' resolution. History textbooks are a particularly important societal channel for dissemination of such ideology since they reach out to young generations as educational epistemic authorities. We tried to identify the presence of SPIC in Croatian, Bosniak and Serbian elementary school history textbooks published post-war (1996) and today (2017), expecting fewer SPIC-related topics in the current textbooks in comparison to the post-war ones in all three ethnicities. First, we sampled the textbooks, choosing the most widely used ones in each period. In selected textbooks, we identified chapters that mention relations among three ethnicities. We proceeded to split them into paragraphs as units of analysis (N=945). Two independent coders classified each paragraph in nine categories: *justness of one's own goals*, *delegitimization of the rival*, *security*, *victimization*, *positive ingroup image*, *patriotism*, *national unity*, *peace* and *collective emotional orientation of fear, hate and revenge*. In post-war textbooks, 44.8% of all sampled paragraphs were indicative of SPIC. Contrary to our expectation, in current textbooks we haven't observed a statistically significant decrease ($\chi^2(1, 945) = 1.308$, $\varphi = .037$, $p > .05$), with 48.7% of SPIC-related paragraphs. The same was true for each country and all elements of SPIC analysed separately. What is more, when we focused only on elements of SPIC typical for the state of

conflict (first four categories from above and collective emotional orientation), we observed a marginally significant increasing trend (χ2(1, 945) = 3.147, φ = .058, *p* = 0.08).

The results suggest that the foundation of conflict set during the war years persists in history textbooks of today in all three countries. Although our coding scheme wasn't sensitive enough to detect subtle differences in its intensity, the results clearly show that young people are still dominantly exposed to one-sided master narratives which prepare them for conflict rather than for cooperation.

Keywords: history textbooks, intergroup relations, Yugoslav conflict, history education, conflict resolution

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ETNIČKE GRUPE I TEORIJE ZAVJERE U BOSNI I HERCEGOVINI

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Teorije zavjere predstavljaju narativni obrazac koji politička dešavanja i šire političke procese objašnjava kao posljedicu smišljenih i naoko nepovezanih aktivnosti o izvršavanju nezakonitih ili nemoralnih postupaka. Konstitutivne etničke grupe u Bosni i Hercegovini (Srbi, Hrvati i Bošnjaci) predstavljaju izrazito politizovane kolektive budući da su etnički identiteti utkani u politički sistem države. Upravo zbog toga problem našeg istraživanja definišemo kroz eksploraciju i poređenje zavjereničkih narativa etničkih grupa u BiH. Očekivali smo da se etničke grupa razlikuju na onim teorijama zavjere koje su dio narativa njihovih identiteta i međugrupnih odnosa, a da se neće razlikovati na nekim globalnim teorijama zavjere koje nisu kontekstualno specifične. Istraživanje je sprovedeno u drugoj polovini maja 2018. godine na reprezentativnom uzorku od 1023 punoljetnih stanovnika Bosne i Hercegovine, metodom anketiranja licem u lice. Teorije zavjere smo operacionalizovali kroz 24 tvrdnje vezane za lokalne i globalne teorije zavjere koje smo derivirali iz dosadašnjih istraživanja. Kao što smo očekivali, najveće varijacije između grupa nalazimo kod tvrdnje o ulozi haškog suda (F(3, 1019)=193.913, p=.000, η^2=.363), zatim o ulozi srpskih intelektualca i političara u ostvarivanju ideje Velike Srbije (F(3, 1019)=192.581, p=.000, η^2=.362), zatim kod tvrdnje o akcijama Bljesak i Oluja (F(3, 1019)=159.299, p=.000, η^2=.319), tvrdnje o podjeli BiH (F(3, 1019)=111.833, p=.000, η^2=.248), tvrdnje o tome da zapadne zemlje udruženo rade protiv mog naroda (F(3, 1019)=99.719, p=.000, η^2=.227), te tvrdnje o tome da se priče o terorizmu izmišljaju da se kazne muslimani (F(3, 1019)=80.765, p=.000, η^2=.192). Ono gdje se etničke grupe ne razlikuju značajno su stavke o sudbini naroda na Balkanu kao plodu zakulisnih igara imperijalnih sila, o sprezi mafije i državnih struktura u privatizaciji, te o ulozi Masona u upravljanju svjetskim zbivanjima. Generalno, najveće razlike nalazimo na pojedinačnim stavkama vjerovanja u teorije zavjere koje se odnose na međuetničke relacije kao posljedice ratova 90-tih godina. Očigledno je da neriješena pitanja iz perioda oružanih sukoba još uvijek itekako žive kod populacije u BiH. Viktimizacijski narativi kod etničkih grupa nailaze na dobru osnovu u ovim pojednostavljenim objašnjenjima događaja, od kojih mnogi nisu još uvijek ni razjašnjeni. Etničke grupe u BiH još uvijek imaju zrcalne poglede na svoju ulogu i ulogu drugih grupa u proteklim sukobima.

Ključne riječi: etničke grupe, teorije zavjere, zavjerenički narativi

ETHNIC GROUPS AND CONSPIRACY THEORIES IN BOSNIA AND HERZEGOVINA

Conspiracy theory is the term that refers to a set of oversimplified and usually false social beliefs in omnipotent and malign groups that coordinate activities with harmful aims against a particular group or the general public. The main problem of the study was an exploration of differential conspirational narratives among ethnic groups in Bosnia and Herzegovina. In a representative sample of citizens of B&H, belief in conspiracy theorie*s* was assessed using 24 statements that express particular conspiracy theories. Ethnicities differ mostly on conspiracy theories related to the conflicts of the 1990s, such as: the establishment of Greater Serbia; the expulsion of Serbs from Croatia; the role of the Hague tribunal; and the division of B&H. These issues are still unresolved and are still relevant for the citizens of B&H. This was expected as victimization narratives, encouraged by different ethnic groups, find fertile ground in oversimplified explanations of social events.

Keywords: ethnic groups, conspiracy theories, conspirational narratives

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EKOLOŠKA SAVESNOST: RASPROSTRANJENOST EKOLOŠKIH STAVOVA I PONAŠANJA MEĐU GRAĐANIMA SRBIJE

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Istraživanja pokazuju da je u proteklih nekoliko decenija došlo do velikih promena u temperaturi, koje će nastaviti da rastu. I dok se širom sveta održavaju ekološki protesti, podsećajući nas na važnost globalnog zagrevanja i kako čovek može doprineti smanjenju istog, u Srbiji se čini da postoji stagnacija i smanjena svest o ovakvim temama. Čak i ako možemo primetiti relativno pozitivan stav prema ekologiji među građanima Srbije, možemo videti veliki zaostatak u oblasti zaštite životne sredine.Ovo nije ništa čudno s obzirom da prethodna istraživanja pokazuju velike nekonzistentnosti između ekoloških stavova i ponašanja. Koristeći nacionalno reprezentativni uzorak (N= 1183) iz 2019.godine, po prvi put sprovodimo obuhvatnu analizu ekoloških stavova građana Srbije. Ispitujemo rasprostranjenost: a) ekoloških stavova, b) ekoloških ponašanja, c) njihovu međusobnu povezanost, d) kao I povezanost sa demografskim karakteristikama. Ekološki stavovi su ispitani pomoću NEP skale ekološke ideologije, koja ispituje verovanja o prirodi i ulozi ljudi na planeti (pr: "ravnoteža prirode je dovoljno jaka, da se nosi sa uticajima modernih industrijskih zemalja") (Alpha skale = .899). Ekološka ponašanja su ispitana pomoću skale prilagođene za balkanske zemlje u kojima reciklaža i druge „zelene" institucionalizovane aktivnosti nisu implementirane, iz skale je u tu svrhu izbačeno 3 pitanja (alpha skale = .929). Rezultati pokazuju da su ekološki stavovi bili pretežno pozitivni (AS = 3.97 nasakli od 5, SD=1.12), ovaj nalaz je u skladu sa prethodnim istraživanjima. Ipak, iznenađujući je nalaz da su građani često primenjivali ekološki štedljiva ponašanja, kao što su reciklaža stakla i novina (AS = 2.86 naskali od 4, SD = 1.33). Ovaj visok nivo ekološke svesti se čini paradoksalan sastanjem za gađenosti zemlje Srbije. Mogu se primetiti razlike u ekološkim stavovima u

odnosu na pol (F(1) = 6.868, p<.01), obrazovanje (F(19) = 2.234, p<.01), zaposlenost (F (6) = 2.02, p<.01), finansijske situacije(F(4) = 3.784, p= 0.05), i mestu stanovanja (F (66) = 5.263, p<.01), dok se razlike u ekološkom ponašanju vide samo po poslednje dve demografske karakterisitke. Zaključujemo da žene, osobe sa nižim stepenom obrazovanja, u lošijoj finansijskoj situaciji (posebno penzioneri ili osobe bez posla) imaju pozitivnije ekološke stavove. Nalazi su tumačeni u svetlu teorije planiranog ponašanja.

Ključne reči: ekološki stavovi, ekološka ponašanja, socio-demografski korelati

ECOLOGICAL CONSCIENTIOUSNESS: ENDORSEMENT OF ECOLOGICAL ATTITUDES AND BEHAVIORS IN A SERBIAN POPULATION

Serbia seems to be stagnating in terms of ecological awareness and "green" policies. Even though studies show relatively positive attitudes towards ecology among the Serbian population, environmental protection is still not a priority. This inconsistency is not surprising given that previous research has shown differences between environmental attitudes and behavior. In this research we attempt to conduct the first comprehensive analysis of environmental attitudes of the Serbian population. Using a nationally representative sample (N=1183), gathered in 2019, we examine the endorsement of: a) ecological attitudes, b) ecological behaviors', as well as their relationship, and demographic variance. Results show relatively positive ecological attitudes (AS = 3.97 on a 5 point Likert scale, SD=1.12), and behaviors (AS = 2.86 on a 4 point Likert scale, SD = 1.33). The correlation between these two variables was moderate (r=.292, p<.01), and there was significant variance differences regarding gender (F(1) = 6.868, p<.01), education (F(19) = 2.234, p<.01), employment status (F (6) = 2.02), SES (F(4) = 3.784, p= 0.05), religion (F (6) = 2.63, p=0.15), and dwelling (F (66) = 5.263, p<.01). Implications of results are discussed using planed behavior theory.

Keywords: ecological attitudes, ecological behavior, socio-demography

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POREĐENJE BAZIČNE STRUKTURE SOCIJALNIH STAVOVA ODRASLIH I ADOLESCENATA

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Počevši sa merenjem na najnižim uzrastima uočava se povećanje diferencijacije crta ličnosti iz leksičkog pristupa, a zatim povrćavanje integracija i stabilnost sve dok se ne uspostavi tradicionalno 5-dimenzionalno rešenje u adolescenciji. Analoški, leksički pristup u izučavanju socijalnih stavova može da pruži isti potencijal za ispitivanje razvojnih pravilnosti. Izvedena je studija poprečnog preseka na četiri uzrasne grupe - prvi razred srednje škole (N=212), treći (N=222), prva godina studija (N=197) i odrasli (N=540). Korišćen je upitnik Leksičkih socijalnih stavova – Srbija (LSS-S-60) koji ispituje 6 dimenzija. Na svakom uzrastu je sprovedena eksploratorna faktorska analiza sa 6 fiksiranih faktora i promax rotacijom. Za proveru kongruentnosti ekstrahovanih faktora kod adolescenata u odnosu na odrasle, korišćeni su Takerovi koeficijenti (rc). Nacionalistički i stavovi prema Tradicionalnim i religioznim izvorima autoriteta pokazuju visoku kongruentnost na sva tri uzrasta u poređenju sa odraslima (rc u rasponu .896-.936).

Egalitaristički i Humanistički stavovi su kod prvaka ujedinjeni u jedan faktor koji opisuje opštu tendenciju (ne)odobravanja postojećeg ekonomsko-političkog poretka. Kod trećaka (rc=.873) i studenata (rc=.843) izdvaja se faktor Egalitarističkih stavova kongruentan sa Egalitarističkim stavovima odraslih dok se Humanistički stavovi još uvek nisu izdvojili kao stabilan faktor (rc=.751, odnosno rc=.609). Stavovi prema zastupanju Ličnih interesa i prema Spiritualnosti kod prvaka i trećaka su kongruentni (rc u rasponu .875-.900) sa stavovima odraslih, ali kod studenata nisu (rc=.672, odnosno rc=.835). Leksički socijalni stavovi kroz uzraste obuhvaćene studijom uglavnom pokazuju povećavanje integracije i stabilnosti (Tradicionalni i religionzi izvori autoriteta i Nacionalistički) ili su u procesu diferencijacije i počinju da nalikuju na stavove odraslih (Humanistički i Egalitaristički). Ipak, pogoršavanje stabilnosti stavova prema Ličnim interesima i Spiritualnosti koje se uočava kod najstarijih adolescenata osporavaju zaključivanje o trendu povećavanja diferencijacije, a zatim i integracije. Kada je u pitanju prediktivnost merenja leksičkih socijalnih stavova u adolescenciji LSS-60 upitnikom, šestofaktorsko rešenje pokazuje uspeh kao i na uzorku odraslih. Na svakom uzrastu objašnjeno je od 18% do 32% razlika u odnosu prema aktuelnim društvenim pitanjima u Srbiji kao što su: imigracije, nezavisnost Kosova i priključivanje Evropskoj Uniji.

Ključne reči: socijalna kognicija, ortogenetički princip razvoja, diferencija i integracija, socijalni stavovi, individualne razlike

COMPARISON OF BASIC SOCIAL ATTITUDES STRUCTURE IN ADULTS WITH ADOLESCENTS

Cross-section design was used to explore the development of social attitudes in adolescents. Sample consisted of high school first graders (N=212), third graders (N=222), first-year students (N=197) and adults (N=540). The questionnaire used was Lexical social attitudes – Serbia (LSS-S-60). Stability of six-factor solution was tested in every age group. Tucker's congruence coefficient was calculated between adolescents and adults. Attitudes toward Traditional and religious sources of authority and Nationalism were highly congruent to adults (rc ranging between 896-936). In the first graders, Egalitarianism and Humanitarianism attitudes build together a general factor to evaluate the current economic and political situation. Then, in third graders (rc=.873) and students (rc=.843), Egalitarianism attitudes emerge as a stable factor and become congruent to adults as not to be seen for Humanitarianism dimension (respectively rc=.751, rc=609). Personal interests and Spiritualism are congruent in both high schooler groups to adults (rc ranging between .875-.900), yet not congruent with adults in the student population (respectively rc=.672, rc=.835).

Keywords: social cognition, social attitudes, individual differences, orthogenetic principle of development, differentiation and integration

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GENERALNO ZADOVOLJSTVO ŽIVOTOM STANOVNIKA BIVŠE JUGOSLAVIJE I ONIH KOJI SU JE NAPUSTILI

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Osnovni cilj ovog istraživanja je utvrditi da li postoji razlika u generalnom zadovoljstvu životom četiri grupe ispitanika: stanovnici Bosne i Hercegovine, stanovnici koji žive u zemljama bivše SFRJ a koje nisu dio EU (Srbija, Crna Gora, Makedonija), stanovnici zemalja bivše SFRJ koji su dio EU (Slovenija i Hrvatska) i ispitanici koji žive izvan granice bivše SFRJ. Zadovoljstvo životom predstavlja kognitivnu komponentu subjektivnog blagostanja i najčešće se definiše kao subjektivna evaluacija osobe o tome koliko je njen život dobar i kvalitetan u odnosu na sopstvene standarde i kriterijume koje ona smatraju važnim. Za procjenu zadovoljstva životom je korišćen Indeks ličnog blagostanja. U ovoj analizi koristili samo samo stavku generalnog zadovoljstva životom, gdje su ispitanici procjenjivali svoje blagostanje na skali od 0 (nimalo zadovoljan) do 10 (potpuno zadovoljan). Istraživanje na građanima je sprovedeno polovinom 2019. godine na uzorku od 4971 punoljetnih građana metodom on line ankete. Analiza varijanse pokazuje da postoji statistički značajna razlika između naše četiri grupe ispitanika na varijabli generalnog zadovoljstva životom (F= 88.807, df= 3, p= ,001). Ispitanici iz dijaspore su najzadovljniji svojim životom (M= 7,95), a slijede ih stanovnici Slovenije i Hrvatske (M= 7,45), zemalja bivše SFRJ koji nisu u EU (M= 6,80) i Bosne i Hercegovine (M= 6,71). Kada pogledamo razlike između naših grupa vidimo da su te razlike značajne i srednje izražena između stanovnika Bosne i Hercegovine i dijaspore (p= .001, Cohen's d= -0.625) istanovnika koji žive u zemljama bivše SFRJ, a koje nisu dio EU i dijaspore (p= .001, Cohen's d= -0.710). Dobijeni rezultati nam govore da je generalno zadovoljstvo životom najviše prisutno kod ispitanika koji su napustili prostore bivše Jugoslavije, ali se oni ne razlikuju značajno od ispitanika iz Slovenije i Hrvatske, koji jesu živjeli u SFRJ, ali su njihove zemlje danas dio EU. Stanovnici bivše SFRJ, bez obzira da li danas žive u EU ili ne, ne razlikuju se međusobno u stepenu zadovoljstva životom. Veoma je teško reći zbog čega je dijaspora srećnija u odnosu na druge kategorije ispitanika jer postoji mnogo faktora koji mogu uticati na to: bolja ekonomska situacija, bolji rad institucija sistema, politička stabilnost, veći osjećaj bezbjednosti i sl. ili svi ti faktori zajedno.

Ključne riječi: zadovoljstvo životom, BiH, SFRJ, dijaspora

OVERALL SATISFACTION WITH THE LIVES OF THE PEOPLE OF THE FORMER YUGOSLAVIA AND THOSE WHO ABANDONED IT

The objective is to determine differences in life satisfaction between four groups of 4971 respondents (from Bosnia and Herzegovina, former Yugoslavian republics that are not in EU, former Yugoslavian republics now in EU and respondents living outside the borders of the SFRY). Life satisfaction is a subjective evaluation of a person's well-being and quality of life. It is measured by personal well-being index. ANOVA shows that there is significant difference between 4 groups (F = 88.807, df = 3, p =, 001). The life satisfaction is highest among those who left the former Yugoslavia, but they are not significantly different from the respondents from former republics of SFRY which are now in EU. The residents of the former SFRY, whether they live in the EU or not, do not differ regarding life satisfaction. The results might be explained by differences related to state system functioning in countries respondents live in.

Keywords: life satisfaction, BiH, SFRY, diaspora

RELATIONSHIP BETWEEN MORAL FOUNDATIONS AND SEXUAL PREJUDICE

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Moral foundations theory (MFT) proposes that one' moral judgement relies on five moral foundations (MFs) – Harm (H), Fairness (F), Ingroup loyalty (I), Authority (A) and Purity (P). MFs are shaped by culture, and were found to strongly correlate with political ideologies. MFT authors mapped two clusters of MFs that highly correlate with liberalism and conservatism, thus named individualizing (H, F) and binding (I, A, P) MFs, respectively. People who predominantly rely on binding foundations tend to express conservative attitudes, e.g., towards minority groups. Many global studies showed that conservatism is linked to binding MFs, however, no studies tested whether the same structure of MFs is represented in the Serbian sample. We tested whether MFT predictions can be replicated in Serbian sample. We chose sexual prejudice as an indicator of conservatism and invited participants on social media to fill out MFs questionnaire (MFQ) and Test of homophobia (H25), in one 15-minute session. Total sample ($N = 283$) consisted of mostly women (66.4%; age M = 25, SD = 8.310), mostly undergrad students (52.7%) of average socio-economic status (45.2%). Both MFQ (30 items; $\alpha = .836$) and H25 (25 items; $\alpha = .973$) showed high reliability calculated through Cronbach's alpha. Reliability of MFQ subscales (6 items each) was on par with previous findings (H $\alpha = .582$; F $\alpha = .538$; I $\alpha = .655$; A $\alpha = .715$, P $\alpha = .769$). Lower reliability of H and F could be due to restriction of range (H: $M = 3.83$, $SD = .764$, $Med = 4$; F: $M = 3.89$, $SD = .671$, $Med = 4$), or because items were worded in a way reminiscent of "universal truths", leading to high agreement. As the theory predicted, binding MFs were positively correlated to sexual prejudice (I: $r = .423$, $p < .01$; A: $r = .568$, $p < .01$; P: $r = .595$, $p < .01$) and more strongly than individualizing MFs that were negatively associated with sexual prejudice (H: $r = -.185$, $p < .01$; F: $r = -.296$, $p < .01$). Multiple regression analysis showed MFs to explain 45.2% of variance ($R^2 = .463$; $F(5,253) = 43.585$, $p < .01$). P was the best predictor of homophobia ($\beta = .446$, $p < .01$), while I was insignificant predictor ($\beta = .173$, $p = .403$). Strongest relation between homophobia and P is based on the feeling of disgust. Our findings suggest that among Serbian students MFT predictions are valid. Though, they indicate that division between two clusters of MFs and their relation to prejudice could be less clearly separated like it is usually found in Western samples.

Keywords: moral foundations theory, homophobia, sexual prejudice, moral reasoning

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TRANSGENERACIJSKO PRENOŠENJE PONAŠANJA I STAVOVA U VEZI MEĐUETNIČKIH ODNOSA: SLUČAJ SRPSKE I MAĐARSKE ZAJEDNICE U VOJVODINI

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Deca iz višeetničkih zajednica grade socijalne odnose pod specifičnim uslovima koji zavise od dinamike odnosa dve grupe, gde su međugrupni kontakt i socijalne norme važne odrednice. Porodica kao glavni agens socijalizacije u detinjstvu prenosi društvene norme i norme ponašanja prema pripadnicima druge grupe. Zbog toga, mnogi istraživači pretpostavljaju direktni ili indirektni uticaj roditelja na međugrupne stavove i ponašanje dece. U ovom istraživanju ispitivano je prenošenje međuetničkih normi i obrazaca ponašanja sa roditelja na decu u mešovitim srpsko-mađarskim sredinama u Vojvodini. U istraživanju je učestvovalo 258 dece (119 srpske i 139 mađarske nacionalnosti) i njihovi roditelji. Zasebno je ispitivan uticaj međuetničkih normi i ponašanja majki i očeva na učestalost kontakta, socijalnu distancu i sklonost diskriminaciji kod dece. Roditelji su izveštavali o nivou obrazovanja, učestalosti kontakta sa pripadnicima druge etničke zajednice, sklonosti diskriminaciji, doživljaju međugrupne napetosti i normama prihvatanja i odbacivanja međugrupnog kontakta sa drugom etničkom grupom u najužoj sredini. Primenjena je kvazikanonička korelaciona analiza gde su levi set predstavljale varijable deteta (učestalost kontakta, socijalna distanca i sklonost diskriminaciji), a desni set nabrojane varijable majke, odnosno oca. U analizi relacija varijabli deteta i majke, izdvojena su dva para značajnih kvazikaninočkih funkcija ($\rho_1 = .226$, p < .001; $\rho_2 = .178$, p = .005). Struktura prvog para kvazikanoničkih funkcija sugeriše da je veća sklonost diskriminaciji i socijalna distanca deteta povezana sa majčinom sklonošću diskriminaciji i normativnošću odbacivanja međetničkih odnosa. Drugi par kvazikanoničkih funkcija pokazuje da je manja socijalna distanca i veća učestalost kontakta sa drugom etničkom zajednicom kod deteta povezana sa manje izraženom normativnošću odbacivanja međuetičkih odnosa kod majki, njenim nižim obrazovanjem i većom učestalošću kontakta. U analizama relacija varijabli deteta i oca dobijen je jedan statistički značajan par kvazikanoničkih funkcija ($\rho = .237$, p = .001). Manje izražene socijalna distanca i sklonost diskriminaciji i veća učestalost kontakta sa drugom etničkom zajednicom kod dece povezane su sa očevim učestalijim kontaktom, većom normativnišću prihvatanja i manjom normativnošću odbacivanja međuetničkog kontakta i manjom sklonošću ka diskriminaciji. Rezultati istraživanja potvrđuju da se roditeljska ponašanja i stavovi o međetničkim odnosima odražavaju na obrasce međetničkog ponašanja njihove dece, iako je ta veza relativno slaba. Takođe, mali uzorak u ovom istraživanju ograničava mogućnost šire generalizacije nalaza.

Ključne reči: međetnički odnosi, Srbi, Mađari, roditelji, deca

TRANSGENERATIONAL TRANSMISSION OF INTERETHNIC BEHAVIORS AND ATTITUDES: THE CASE OF SERBIAN AND HUNGARIAN COMMUNITY IN VOJVODINA

In this study we examined how parents' interethnic attitudes and behaviors correspond to contact frequency, social distance and readiness for discrimination of other ethnic group among children of Serbian and Hungarian ethnicity. Sample included 258 children from Vojvodina (119 Serbian, 139 Hungarian of similar age and gender structure) and their parents. The results of quasicannonical analyses of covariance showed that child's social distance, discrimination and less frequent contact with other ethnic group are related to both mother's and father's propensity toward discrimination, perception of normativeness of rejection of other ethnic group, less frequent contact and mother's lower education. Nevertheless, the relationships between parents' and children's attitudes and behaviors were rather weak and generalisability of results is limited by the small study sample.

Keywords: interethnic relations, Serbs, Hungarians, parents, children

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SUPPLEMENTING THE DEFICIT MODEL: IMPACT OF CULTURAL WORLDVIEW AND SCIENCE LITERACY ON PUBLIC TRUST IN SCIENCE

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The Deficit model attributes public distrust of scientists and their findings to a mere lack of knowledge. However, it has been disproven on multiple occasions, and in its place Kahan et al. presented the Cultural Cognition Thesis, using cultural worldview (represented by hierarchy/egalitarianism and individualism/communitarianism dimensions) to explain attitudes towards science. Our study tests both theories' assumptions, the basic factors of trust in scientists: science literacy (Deficit model) and cultural worldview (CCT). Science literacy and ideology were tested as predictors of trust in scientists on specific issues: vaccination, climate change, nuclear energy, evolution and GMO and general trust toward scientists. Drawing from a nationally representative sample of adult Serbian population from December 2018 (N = 1451), we tested: a) science literacy within the public; b) public trust in scientists in general and on specific issues; c) the impact of cultural worldview and science literacy on trust in scientists. Our sample was 54% male, with the average age of 43.51, and varied in education: 10.6% only finished primary school, 56.3 with secondary school and 32.7 finished university. The results show moderate to high levels of science literacy (NSF Science Indicators scoring method): M = 5.17, SD = 1.57 (min = 0, max = 8). By comparison, the mean of the US sample is 5.9, SD = 1.86 (Kahan, 2012). Public trust in scientists was average, ranging from M = 2.57 (SD = 1.53) for GMO to M = 3.32 (SD = 1.41) for climate change, on 5 point scales and M = 13.36 (SD = 4.32, min = 4, max = 20) for general trust in science. Our study confirmed the significant predicting ability of both science literacy β = .194 (p = .000) and cultural worldview: hierarchy β = -.123 (p = .000) communitarianism β =

-.123 (p = .000) in regards to trust in scientists on specific issues, but only ideology for general trust in science: hierarchy β = -.098(p ≤ .01) communitarianism β = -.126 (p = .000). Even though we've found moderate to high levels of science literacy, furthering scientific knowledge within the public remains an important cause. Our study confirmed the significance of both science literacy and ideology in predicting trust in scientists in specific fields (not the science in general). However, neither model explains the majority of variance in science scepticism.

Keywords: science literacy, cultural worldview, trust in science

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PREDICTORS OF MENTAL WELL-BEING IN A NATIONALLY REPRESENTATIVE SERBIAN SAMPLE

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This study aims to analyze the predictors of mental well-being using a nationally representative sample of the population of Serbia. A widely accepted definition of mental well being is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. The predictors of mental well-being have been widely explored on nationally representative samples from other, mainly economically developed countries. However, they are completely neglected in Serbia. We used a nationally representative Serbian sample of 1056 respondents (51.9% females, M_{age} = 48.79, SD_{age} = 17.38) from 2016 that comes from the European Quality of Life Survey (EQLS). Within EQLS, mental well-being is measured using the WHO-5 Well-Being Index. Our predictors were gender, age, education, employment status, marital status, size of locality, satisfaction with standard of living, satisfaction with family life, subjective health, religious participation, and physical exercise. Results of regression analysis showed that our model explained about 41% of the variance of mental well-being, $F(13, 981)$ = 53.218, $p < .001$, R^2 = .413). Secondly, using the enter method we found that overall subjective health is the most important predictor of mental well-being ($β = .423$, $t = 12.499$, $p < .001$). Satisfaction with family life ($β = .199$, $t = 7.303$, $p < .001$), physical exercise ($β = .184$, $t = 6.080$, $p < .001$) and satisfaction with standard of living ($β = .163$, $t = 5.755$, $p < .001$), follow. Being divorced, widowed, and female were not significant predictors. The essential effects of health, satisfaction with family life and standard of living, as well as physical exercise, are indicated in much previous research from other European countries. The primary effect of non-material well-being domains is not surprising, having in mind that the WHO-5 scale (like the other most common mental well-being measures) is entirely composed of affective well-being items, which are showed to be more associated to non-material well-being indicators. Also, previous research on a nationally representative data from Serbia indicated that affective well-being is more related to non-material well-being indicators (such as perceived health, personal security, and social connections) in comparison to material ones.

Keywords: mental well-being, Serbia, European Quality of Life Survey

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ACTIVE AND RESTRICTIVE PARENTAL MEDIATION AS THE PREDICTORS OF ADOLESCENTS' EXCESSIVE INTERNET USE

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Parents' role in preventing excessive Internet use (EIU) can be very important. They can actively mediate children's online behaviour by encouraging and instructing safe Internet use. However, parents can take a more restrictive role by setting rules on what can be done on the Internet, when, with whom and for how long. These two mediation strategies could "prevent" EIU differently, and in two main ways: by determining the time that children spend online and/or (dis)encouraging the children's digital skills. In this paper, we tested a SEM model related to parents' active and restrictive mediation practices. The data collected in 2018 in the EU Kids Online survey in Serbia on a nationally representative sample of children aged 9 to 17 years (N = 1,150) were used. Restrictive mediation was measured by nine questions probing for the presence of restrictive rules in the family regarding the Internet use (α = .90). Active mediation was measured by eleven questions related to the active encouragement/help in the Internet use provided by parents (α = .89). Time spent online represents the average number of hours that children reported spending daily online. Digital skills were measured by probing for a number of things, twenty-one in total, that children knew how to do online (α = .91). EIU was measured by a seven-item scale covering various symptoms of the EIU, like compulsiveness, lack of control etc. (α = .84). All variables were operationalized as mean values of the respective groups of items. The model tested the possible mechanism of "influence" of the parental strategies on the EIU by examining the paths from active/restrictive practices to the EIU (1) through limiting the time spent online and (2) through increasing digital skills. The model showed a satisfactory fit (RMSEA = .07, CFI = .98). Total effects showed that both active (β=-.04) and restrictive (β=-.14) practices lead to lower EIU. Both active and restrictive parenting lowers EIU by reducing the time spent online, which is positively related to the EIU. Compared to the active (β=-.11), restrictive mediation (β=-.40) is more strongly related to lowering the time spent online, thus making it a more important predictor of EIU. Still, unlike active parenting (β=.05), restrictive parental practices decrease the children's digital skills (β=-.52), making adolescents less digital savvy at the same time.

Keywords: excessive internet use, active parental mediation, restrictive parental mediation, adolescents, Serbia.

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GMO CONTROVERSY: SYSTEM DISTRUST AS A PREDICTOR OF GMO REJECTION

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As GMO faces a great public distrust it is important to identify main factors causing distrust and to try to develop courses of further action. This study was based on survey conducted in May, year 2018 on representative sample (N=1480): male=53%, average age M=42.81, years of education M=12.77, financial situation (M=2.96), number of family members M=3.53. We hypothesized low level of acceptance of GMO products in Serbia (H1), and psychological variables (Trust in Institutions, System Justification, Conspiracy Mentality, Political Cynicism) with greater predictive power on GMO attitudes, than socio-demographic variables (H2). Political cynicism was assessed by eight items on a Likert scale (α =.946) (Pavlović, 2013: 11). Conspiracy mentality was assessed with a five-item version of CMQ (Bruder et al., 2013) with an 11-point scale (α=.889), Trust in Institutions was constructed of 17 items on a Likert-type, 4-point scale (α =.931), with direct propositions concerning trust in official institutions of the state (Government, Police etc.). System Justification was measured using a 4 items of the System justification scale (Kay & Jost, 2003) rated on a 5-point Likert scale (α =.881). Perception of GMO products was measured by five-point Likert type scale on 4 items (Cronbach α=.775). Results showed high rejection of GMO products with 77.5%, while only 3.3% of the sample viewed GMO in a completely positive light. The distribution was positively skewed (SE=2.99). To test H2, variables introduced at stage one of two-stage hierarchical multiple regression were socio-demographic, while stage two included psychological variables. First regression model wasn't statistically significant, $F_{(4,621)}$=221, p<.065. After introducing psychological variables explained variance was 9,3%, $F_{(8,617)}$=7.889, p<.000. First model had only one significant β coefficient, *Number of Family Members*, β=-1, p<.014, while second model included three new significant predictors – *System Justification,* β=.136, p<.001 and *Trust in Institution* β=.175, p<.000. In the second model *Number of family members* also proved to be a significant predictor with β=-.094, p<.016, as did *Years of Education* with β=.104, p<011. Low public trust in the system certainly represents an obstacle in developing healthy public attitudes in general. Proper communication between institutions and public demand is needed if positive public changes were not to be blindly excluded.

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MY ETHNICITY IS OLDER THAN YOURS! DELEGITIMIZING OTHERS ETHNIC IDENTITY PREDICTS INTER-ETHNIC ATTITUDES

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In the every-day discourse, some ethnic groups are not perceived as legitimate while others legitimacy is put into question: e.g., Serbs sometimes refer to Bosniaks as Serbs whose ancestors were once converted to Islam. Whilst there is ample evidence that delegitimizing certain gender or sexual identities (e.g. bisexual) can lead to less tolerant attitudes towards that group, there is less research on the role of delegitimizing in interethnic attitudes. To this end, we constructed a scale that measures proneness to ethnic identity delegitimization (EIDL; 14 items, e.g., historically older ethnic groups have a right to question the existence of the younger groups). As this is a new instrument, we will first report its psychometric properties. To validate the construct, we further explored if EIDL is a predictor of preference of ethnic ingroup over ethnic outgroup (IG preference), over and above the well-established generalized measures of intergroup relations: social dominance orientation (SDO) and psychological essentialism (PE). The data from 137 ethnic Serbian participants (76% women), aged 18-62 ($M = 28.1$, $SD = 8.47$) was collected via social media. They completed EIDL scale (7-point Likert scale; $\alpha = .932$), SDO scale ($\alpha = .892$), and PE scale ($\alpha = .89$). They also assessed their feelings towards their ethnic ingroup (Serbs) and outgroup (Bosniaks) on a Feeling thermometer; we calculated IG preference by subtracting outgroup feelings from the ingroup feelings. The factor structure of EIDL (Maximum likelihood extraction, Promax rotation, Parallel analysis) revealed the two highly correlated factors ($r = -.755$, $p < .001$) that accounted for 53% of the variance. Higher-order factor analysis indicated that the EIDL scale is unidimensional. To examine the predictive power of the EIDL scale to predict IG preference, we conducted a hierarchical linear regression. In the first step, SDO and essentialism explained 12.8% of the variance ($F(2,134) = 9.854$, $p < .001$). In the second step, EIDL score accounted for additional 5.7% of the variance ($\beta = .291$, $p = .003$; $F_{change}(3,133) = 9.326$, $p < .01$), being better predictor than both SDO ($\beta = .026$, $p = .778$) and PE ($\beta = .185$, $p = .052$). The EIDL scale was unrelated to age and education level. First results support the validity of the newly developed measure of delegitimizing ethnic identity and show that it predicts ingroup favouritism over and above tendencies to endorse social hierarchies (SDO) and essentialize ethnic identities (PE).

Keywords: ethnic identity, identity delegitimization, interethnic relations

DOŽIVLJAJ RODITELJSKOG STRESAI I SAMOPROCJENA RODITELJSKE KOMPETENTNOSTI MAJKI U RAZLIČITIM TIPOVIMA JEDNORODITELJSKIH OBITELJI

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Ispitivani su slijedeći problemi: Razlike u doživljaju roditeljskog stresa majki u jednoroditeljskim obiteljima s obzirom na broj djece i tip obitelji; Razlike u samoprocjeni roditeljske kompetentnosti majki u jednoroditeljskim obiteljima s obzirom na broj djece i tip obitelji; Povezanost doživljaja roditeljskog stresa i samoprocjene zadovoljstva roditeljskom ulogom. Podaci su prikupljeni tehnikom snježne grude. Od 150 ispitanica 50 su neudane majke, 50 rastavljeno, a 50 udovica. Najveći broj sudionica (57,3%) ima srednju školu, 35,3% ih ima fakultet, 8% imaju završen poslijediplomski studij, a 4,7% ima osnovnu školu. Najviše je majki jednog djeteta (53,3%), 36,7% ima dvoje djece, 8% skrbi o troje, a oko 2% četvero i petero djece. U istraživanju je korištena Skala roditeljskog stresa, Skala samoprocjene kompetentnosti roditelja (sa subskalama efikasnosti i zadovoljstva ispunjavanjem roditeljkske uloge), te upitnik općih podataka. Utvrđena je statistički značajna razlika u doživljaju roditeljskog stresa majki u jednoroditeljskim obiteljima s obzirom na to jesu li majke jednog ili više djece (t(148) =2.29, p<.05, d=0.02). Nema značajne razlike u samoprocjeni roditeljskog stresa majki s obzirom na vrstu jednoroditeljske obiteljie, niti u samoprocjeni roditeljske kompetentnosti majki s obzirom na broj djece o kojoj skrbe. Nije utvrđena razlika u samoprocjeni roditeljske kompetentnosti majki s obzirom na vrstu jednoroditeljske obitelji. Utvrđena je statistički značajna umjerena negativna povezanost između rezultata na subskali zadovoljstva ispunjavanjem roditeljske uloge i rezultata na Skali roditeljskog stresa (r(148)= -0.68, p<.05), kao i umjerena negativna povezanost između rezultata na subskali efikasnosti u roditeljskoj ulozi i rezultata na Skali roditeljskog stresa (r(148)= -0.64, p<.05). Rezultat da majke koje skrbe o jednom djetetu doživljavaju veće razine stresa nego one koje skrbe o više djece nije u skladu sa dosadašnjim istraživanjima. Izostanak razlika u doživljaju roditeljskog stresa majki u različitim tipovima jednoroditeljskih obitelji je u skladu sa teorijskim modelom obiteljske strukture. Rezultati da nema razlika u samoprocjeni roditeljskih kompetentnosti majki s obzirom na broj djece, niti na tip obitelji, također nisu u skladu sa nalazima istraživanja. Majke koje su zadovoljnije roditeljskom ulogom i koje se smatraju efikasnijima u ulozi roditelja, doživljavaju manje roditeljskog stresa. Takav rezultat je u skladu sa dosadašnjim istraživanjima koja pokazuju kako više razine samopercipirane roditeljske efikasnosti i kompetentnosti ujedno dovode i do pozitivnih posljedica u vidu frekventnijih interakcija majka-dijete, te bolje djetetove povratne informacije.

Ključne riječi: jednoroditeljske obitelji, roditeljski stres, roditeljska kompetentnost, roditeljstvo

EXPERIENCE OF PARENTING STRESS AND SELF-ESTIMATION OF PARENTAL COMPETENCE BY MOTHERS WHO LIVE IN VARIOUS SINGLE-PARENTS FAMILIES

The aim was to examine differences in the experience of parenting stress, and self-assessments of maternal parenting competence in single-parent families concerning the

number of children, and the family type. The study involved 150 female respondents (50 widows, 50 divorced mothers, and 50 unmarried mothers). The questionnaire consisted of the Parental Stress Scale, the Parental Competence Self-Assessment Scale, and the General Data Questionnaire. The results show that mothers differ in perceived levels of stress, but not in self-assessment of parental competence concerning the number of children they care for and family type. Mothers with one child experience higher levels of parenting stress than mothers who care for two or more children. Although these findings are not in accordance with previous investigations they, at least partially, might be explained by theories regarding family structure. The results also show that mothers who feel more competent experience less stress.

Keywords: single-parent families, parental stress, parental competence, parenthood

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CIVIC EDUCATION AND THE ACCEPTANCE OF DEMOCRATIC VALUES: THE ROLE OF PARTICIPATORY CLASS CLIMATE

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Numerous studies show that civic education (CE) courses can be successful in increasing students' political knowledge, but that their effects in changing students' values are rather limited, reasonably because values do not change as a result of mere "exposure" to CE "messages". It is noted that only specific "messages", related to the context (open class climate) and teaching methods (participatory methods) can be effective. Some students, especially those with lower socio-economic status (SES), can benefit more in such circumstances, since they, supposedly, lack such practices in off-school context. The aim of this paper is to analyze the relevance of participatory class climate (PCC) for the acceptance of democratic values among Serbian students who attend the CE courses and to analyze the moderating role of students' SES. The data collected in the CE evaluation study (N = 1073, 42% of boys) were used. The final year students from 20 schools (74% vocational, 26% grammar) participated in a pen-and-paper survey. Operationalization of the PCC consisted out of three indicators, for which students' estimation of occurrence was collected (1 – Never to 5 – Very often): how often teacher encourages the freedom of expression and critical thinking (5 items); how often CE classes includes participatory methods (e.g. discussion, simulation; 6 items); how often the class atmosphere is open and constructive (4 items). These measures were positively and significantly correlated and combined into the measure of PCC (α =.78). Students also evaluated the importance of nineteen values. The syndrome consisting of seven values related to freedom, equality, justice and minority rights was used as a measure of the acceptance of democratic values (α =.88). Multiple regression analysis was performed, with students' SES, durability of attendance of CE, PCC and SES x PCC interaction as predictors, $F_{(4, 605)} = 21.06$, $p < .001$, Adj. $R^2 = .12$. Democratic values are more embraced by the students of higher SES ($\beta = .51$) and those from the classes including a more prominent participatory climate ($\beta = .82$). Interaction term was significant ($\beta = -.69$), implying that the relationship between PCC and the importance of democratic values is

moderated by SES: students with lowest SES had gained the most from class participation in terms of accepting the democratic values. The findings have clear-cut implications for organizing the CE attendance and the promotion of civic culture among youth.

Keywords: civic education, participatory teaching methods, values, Serbia

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ESTETSKA PROCENA ŠARA PIROTSKIH ĆILIMA U ODNOSU NA DIMENZIJE SLOŽENOSTI, SIMETRIJE I KONTRASTA

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Istraživanje se bavi estetskom procenom geometrizovanih formi – šara sa pirotskih ćilima. Prethodna istraživanja pokazuju da složenost, ukrašenost i simetrija u likovnom delu utiču na estetski doživljaj vizuelnih objekata. Takođe, pokazuju da su složenost i simetrija najčešći kriterijumi grupisanja geometrizovanih formi. U ovom radu je ispitana estetska procena ornamentike etno porekla. Namera je bila da se izdvoje dominantni kriterijumi po kojima se grupišu pirotske šare.

Istraživanje je rađeno na uzorku od 30 ispitanika – studenata Fakulteta likovnih umetnosti, oba pola, starosti od 17-27 godina, obučavanih u oblasti likovnih umetnosti ali ne u oblasti pirotskog ćilimarstva. Stimuluse je činilo 18 standardizovanih šara sa pirotskih ćilima koje su se razlikovale prema složenosti (jednostavne šare su imale manje od 20 pravougaonih linija, a složene više od 20), simetričnosti (simetrične i asimetrične forme) i kontrastu svetline (sa i bez crnih elemenata). Zadatak ispitanika je bio da svaku šaru pojedinačno procene na 12 sedmostepenih skala semantičkog diferencijala čiji su polovi bili definisani opozitnim pridevima (jednostavno–složeno, obično–neobično, dosadno–zanimljivo, diskretno–upadljivo, nepoznato–poznato, nedopadljivo–dopadljivo, neskladno–skladno, neodređeno–određeno, neprijatno–prijatno, asimetrično–simetrično, statično–dinamično i ozbiljno–šaljivo). Skale su namenski izabrane i ranije su korišćene u esetskoj proceni vizuelnih objekata. Vreme izlaganja i procene nisu bili ograničeni.

Metodom K-means izdvojena su dva klastera. Prvi klaster čini 10 šara. Šare su simetrične, složene, ukrašene crnim elementima. Na skalama se procenjuju kao izrazito simetrične, složene, zanimljive, upadljive, neobične, skladne i dopadljive, a umereno prijatne, dinamične, poznate i određene.

Drugi klaster čini 8 šara. Šare su asimetrične, bez crnih elemenata. Na skalama se procenjuju kao: neobične, dinamične, šaljive, poznate, određene, prijatne, nezanimljive, neupadljive, neskladne, nedopadljive, jednostavne i asimetrične.

Analiza varijanse pokazuje da se klasteri međusobno razlikuju na skalama: složeno $F(1;16)=10,60$, $p<.01$; zanimljivo $F(1;16)=16,05$, $p<.01$; upadljivo $F(1;16)=9,33$, $p<.01$; dopadljivo $F(1;16)=35,49$, $p<.01$; skladno $F(1;16)=14,44$, $p<.01$; prijatno $F(1;16)=14,92$, $p<.01$; simetrično $F(1;16)=12,55$, $p<.01$ i šaljivo $F(1;16)=4,79$, $p<.05$. Šare prvog klastera se značajno više procenjuju na skalama: složeno, zanimljivo, upadljivo, dopadljivo, skladno, prijatno i simetrično, a šare drugog klastera na skali šaljivo. Na skalama: neobično $F(1;16)=3,65$, $p>.05$; poznato $F(1;16)=1,72$, $p>.05$; određeno $F(1;16)=1,09$, $p>.05$ i dinamično $F(1;16)=.58$, $p>.05$ nisu dobijene statistički značajne razlike.

Dobijeni rezultati su u skladu sa ranijim istraživanjima doživljaja vizuelnih objekata. Estetske procene ispitanika su zasnovane na složenosti, zanimljivosti, upadljivosti, dopadljivosti, skladnosti, prjatnosti, simetriji i šaljivosti. Visoko su vrednovane simetrične, složene, crno-bele šare. Nalazi su u skladu sa tradicionalnim dizajnom koji ove šare najčešće smešta u središnji deo tepiha.

Ključne reči: pirotska šara, estetska procena, složenost, simetrija, ukrašenost

AESTHETIC EVALUATION OF PIROT CARPET PATTERNS REGARDING COMPLEXITY, SYMMETRY AND CONTRAST

The topic of the research is aesthetic evaluation of traditional ethno patterns of Pirot carpets. Previous researches of art reception demonstrated that complexity, level of decorative elements added and symmetry were significant factors of reception of visual art objects. Also, complexity and symmetry appeared as most powerful criteria of classification of art objects. This research focused at aesthetic evaluation of traditional ethno patterns, known as Pirot carpet ornaments. The idea was to test the criteria for pattern classification.

Subjects were 30 students of visual arts, from Faculty of Fine Arts of both genders, age spanned from 19-27, who were educated in the field of visual arts but were not familiar with traditional ethno production of Pirot carpets. As stimuli, 18 standardized, colorless patterns were chosen. Sample of stimuli regarding complexity included simple forms (patterns in the forms of simple contour with less than 20 rectangular lines) and complex forms (patterns with more than 20 rectangular lines). Regarding symmetry, sample included symmetric and asymmetric patterns, and regarding the contrast of the patterns there were patterns with and without black parts (black and white fields in the pattern). Patterns were presented one by one, subject evaluated each of them using 12-scale instrument of semantic differential created for the particular purpose, which included selection of scales previously used in measuring aesthetic reception of visual objects (simple-complex, unusual-usual, boring-interesting, unnoticeable-salient, familiar-unfamiliar, ugly-beautiful, disharmonic-harmonic, indefinite-definite, unpleasant-pleasant, asymmetric-symmetric, static-dynamic, serious-funny). There were no time limits for evaluation.

K-means method identified two clusters. First cluster includes 10 patterns which are recognized as symmetric, complex, with black fields. They were highly estimated as symmetric, complex, interesting, salient, unusual, harmonic as well as moderately pleasant, dynamic, familiar and definite. Second cluster includes 8 patterns which are asymmetric and contain no black elements. They were estimated as unusual, dynamic, funny, familiar, definite, pleasant, uninteresting, unnoticeable, disharmonic, ugly, simple and asymmetric.

Analysis of variance showed differences between clusters for the following scales: complex $F(1;16)=10,60$, $p<.01$; interesting $F(1;16)=16,05$, $p<.01$; salient $F(1;16)=9,33$, $p<.01$, beautiful $F(1;16)=35,49$, $p<.01$; harmonic $F(1;16)=14,44$, $p<.01$, pleasant $F(1;16)=14,92$, $p<.01$, symmetric $F(1:16)=12,55$, $p<.01$ and fanny $F(1;16)=4,79$, $p<.05$.

Scales: usual $F(1;16)=3,65$, $p>.05$; familiar $F(1;16)=1,71$, $p>.05$; definite $F(1;16)=1,09$, $p>.05$ and dynamic $F(1;16)=0,58$, $p>.05$ showed no statistic differences between clusters.

As predicted by researches of visual art reception, subjects formed their aesthetic impressions based on complexity, interestingness, salience, beauty, harmony, pleasentness, symmetry and fun. Symmetric, complex and black and white contrasted patterns are highly evaluated. This finding is in accordance with traditional design where these forms are usualy positioned in the central part of the carpet.

Keywords: aesthetic evaluation, Pirot carpet, complexity

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RELATION BETWEEN AESTHETIC EVALUATION AND POSITION OF PIROT CARPET PATTERNS

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Udruženje za empirijska istraživanja umetnosti

The research is focused on relation between aesthetic reception and position of ethno patterns. Traditionally, Pirot carpets are designed according to standardized procedure and position of the pattern is important aspect of design. In this research subjects, trained in visual arts but not familiar with this form of ethno production, estimated preferable position and aesthetic value of patterns.

30 students of visual arts from University of Arts have been included as subjects (76% female; 24% male, average age 20). As stimuli, 18 standardized, black-white patterns were used. Subjects estimated each pattern using 12-scale instrument of semantic differential created for the particular purpose. It included scales previously used in measuring aesthetic evaluation (simple-complex, unusual-usual, boring-interesting, unnoticeable-salient, familiar-unfamiliar, ugly-beautiful, disharmonic-harmonic, indefinite-definite, unpleasant-pleasant, asymmetric-symmetric, static-dynamic, serious-funny). Also, the question regarding preferable position (central, middle, periphery) was included.

Analysis of variance showed that space orientation is linked with nine out of twelve scales. Statistically significant differences appeared at scales: complex $F(2)=19,65$, $p<.01$; unusual $F(2)=19,08$, $p<.01$; interesting $F(2)=33,57$, $p<.01$; salient $F(2)=33,26$, $p<.01$; beautiful $F(2)=30,05$, $p<.01$; harmonic $F(2)=10,08$, $p<.01$; pleasant $F(2)=17,95$, $p<.01$; symmetric $F(2)=16,72$, $p<.01$ and dynamic $F(2)=5,09$, $p<.01$. High values on these scales are significantly related with tendency to place the patterns in the central place of the imagined surface. Scales: familiar $F(2)=.24$, $p>.05$; definite $F(2)=1,61$, $p>.05$ and funny $F(2)=.66$, $p>.05$ showed no statistically significant differences regarding preferable space position.

Results show that preferable space position of patterns is linked with aesthetic evaluation, more beautiful and aesthetically highly valued patterns showed statistically significant tendency to be positioned in the center. Patterns that are estimated as simple, usual, uninteresting, unnoticeable, ugly, disharmonic, unpleasant, asymmetric and static are more frequently related with middle and peripheral positions. Results are in accordance with the assumption that highly evaluated objects tend to be placed in the central position of the works of art. Also, it is congruent with traditional design of Pirot carpets where most beautiful patterns are placed in the central position.

Keywords: ethno patterns, aesthetic evaluation

COLLECTIVE CREATIVITY AND EMOTIONAL EXPERIENCE

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Assumptions that unpleasant and arousing content can stimulate individual creativity have been partially confirmed by empirical research. However, it is questionable, in which way particular dimensions of emotional experience affect the production within the collective creative processes. In this research, we have examined whether certain dimensions of an emotional experience, i.e. valence and arousal, influence a collective creativity, and in what way. Does a collective creativity show similar pattern of interdependence as an individual one? The research was carried out within the experimental session with 28 students of the Faculty of Dramatic Arts in Belgrade. For visual stimulation, the Nencki Affective Picture System (NAPS) was used, from which six images were selected so that the level of valence (positive vs. negative) and arousal (high vs. low) were systematically varied. During the session, the students were divided into the 4-members groups, and they were exposed to the selected images, one at a time. For each image, the groups were asked to generate as many creative titles as they can, within time limitation of 10 minutes. After each image cycle, students rotated among themselves, so total number of groups was 24. All titles were categorized and assessed by the creativity coefficient, based on their originality. The main effect of valence on collective creativity [$F(1,22)=7,54$; $p<.05$] has been confirmed by ANOVA, while the effect of arousal has not been confirmed as statistically significant. In addition, high negative correlation between the collective creativity and valence has been confirmed as well [$r=-,64$; $p<.01$]. The analysis shows that unpleasant and disturbing images resulted in more creative collective products, and that generative processes within the collective depends on emotional experience in a similar way as in the case of individual work. Further examination of collective creativity should take into account the relevance of emotional experience in relation to dynamic (emergent) aspects of generative processes.

Keywords: creativity, collective, emotional experience, valence, arousal

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VISUAL ART AND VR: EXPERIENCE OF ART EXIBITION IN VR VS. REAL-WORLD SETTING

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Recent developments of digital technologies in the field of virtual reality (VR) have led to innovative possibilities of examining art experience in realistically simulated contexts, like VR galleries and museums. Previous studies that compared art experience in a simulated 3D virtual museum context to the experience of the same artworks presented on computer screen suggested differences in the aesthetic and affective responses to artworks across these two contexts (Jankovic, Jevremovic & Carbon, 2019). In the present study, we compared the aesthetic and affective experience of an art exhibition presented in a VR gallery and in a real-world setting. Twenty-eight participants (the guests who attended exhibition opening) visited the exhibition, which consisted of the same twelve paintings in a VR gallery and a real gallery. Visitors were randomly assigned to one of two groups upon arrival to the gallery. Half of the participants visited the exhibition in the VR first, and subsequently in the real-world setting, while the other half visited the exhibitions in the opposite order of settings. After experiencing the exhibitions in both settings, participants rated their aesthetic experience of exhibitions on a 10-point liking scale, and affective experience on three other scales (pleasantness, impressiveness and interestingness). In addition, participants answered a set of open-ended questions related to their experience of exhibitions in these two contexts. Results showed no statistically significant difference in aesthetic experience of the exhibition in the VR gallery compared to the real-world setting ($t(27) = 1,54$, $p = .134$). Further, exhibitions in both contexts were experienced as similarly pleasant ($t(27) = -0,70$ $p = .487$). However, the exhibition in the VR gallery was experienced as being more impressive ($t(27) = 2,22$ $p = .035$) and more interesting ($t(27) = 3,06$ $p = .005$) than the exhibition in the real-world setting. Qualitative analysis further indicated that visual art experience in virtual reality was mostly described as interesting, which supported results obtained by quantitative analysis. The findings of this study are consistent with those obtained in the previous one (Jankovic, Jevremovic, & Carbon, 2019), suggesting that art in the VR context is perceived as more arousing compared to other art-related contexts.

Keywords: virtual reality, VR gallery, art experience, arousal

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SVI SU MORALNI, SAMO NEKI SU FOBIČNI: KORIŠĆENJE TEORIJE MORALNIH OSNOVA U SMANJENJU HOMOFOBIJE

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Radi stvaranja politika zasnovanih na dokazima za borbu protiv homofobije, sprovedena je studija zasnovana na idejama Teorije moralnih osnova. Ova teorija nalaže da se set stavova i mišljenja, kao što je homofobija, mogu promeniti ukoliko se poruka koja želi da se prenese formuliše u skladu sa moralnim rezonima individue. Teorija navodi pet moralnih osnova, od kojih su tri karakteristične za politički i socijalno konzervativne pojedince, nazvane grupišuće moralne osnove (unutargrupna lojalnost, poštovanje autoriteta i čednost). Ova studija sastoji se iz tri dela, dva pilotska istraživanja čiji je cilj bio skupljanje i kreiranje materijala za treći i glavni eksperimentalni deo. Sproveden eksperiment baziran je na dvofaktorskom mešovitom nacrtu, sa ponovljenim faktorom vreme (pre- i posttest) i neponovljenim faktorom tretman (eksperimentalni i kontrolni). U eksperimentalnoj grupi ispitanici su bili izloženi pro-gej porukama, koje su formulisane tako da oslikavaju vrednosti ljudi koji se oslanjaju na grupišuće moralne osnove pri rasuđivanju. Zavisna varijabla bila je skor na testu homofobije. Izmeren je glavni efekat faktora vreme – došlo je do smanjenja skora na testu homofobije na celom uzorku, dok faktor tretman i interakcija faktora nisu statistički značajni. Smanjenje homofobije bilo je veće u eksperimentalnoj grupi.

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NEUROFIZIOLOŠKI KORELATI USPEŠNOSTI INHIBITORNE KONTROLE U ZADATKU ANTISAKADA: KOMBINOVANA ERP I STUDIJA OČNIH POKRETA

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Inhibitorna kontrola spada u domen egzekutivnog funkcionisanja, a za njeno ispitivanje često se koristi zadatak antisakada. Ovaj zadatak zahteva odgovor samo u vidu očnih pokreta, a nedavno je razvijen i njegov standardizovan protokol što ga čini podesnim za izučavanje neurofizioloških tj. ERP korelata kognitivnih funkcija koje su mu u osnovi. Istraživanja ERP korelata inhibicije najčešće ukazuju na prisustvo takozvane N2 komponente. Međutim, nalazi nisu konkluzivni usled velikog varijabiliteta korišćenih zadataka.

Cilj ovog istraživanja je bio zato da se ispitaju ERP signali registrovani pri zadatku antisakada kako bi se uporedili profili neuralne aktivnosti koja prethodi prosakadama (očnim pokretima ka stimulusu-meti) i antisakadama (očnim pokretima na suprotnu od mete), kao i da se ustanovi da li uspešnost u inhibiciji na zadatku antisakada ima svoje ERP korelate u vidu amplitude i latence N2. Takođe je provereno i da li se ovi ERP pokazatelji menjaju tokom vremena kao odraz uvežbavanja ili zamora u zadatku.

Ispitanicima su snimljeni ERP signali i očni pokreti tokom obavljanja ovog zadatka. Analizirani su samo tačni pokušaji – oni kod kojih je inhibitorna kontrola bila uspešna. Rezultati nisu pokazali prisustvo N2 komponente, ali su se predviđene razlike u ERP profilima ispoljile u vidu P3 komponente, koja bi se mogla tumačiti kao odraz uloženog kognitivnog napora. Pokazana je i njena korelacija sa tačnošću u zadatku. Uprkos zabeleženom većem broju grešaka tokom druge polovine zadatka kao efektu zamora, nisu ustanovljene promene u ERP profilima prve u poređenju sa drugom polovinom pokušaja.

Ovakvi nalazi pozivaju na dodatno razmatranje ERP markera inhibicije ili preispitivanje zadatka antisakada kao mere inhibicije, koji bi se u svetlu ovih nalaza pre mogao smatrati indikatorom kognitivne kontrole.

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SKLONOST KA DUPLOM MIŠLJENJU KAO KORELAT VEROVANJA U TEORIJE ZAVERE

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Istraživanja pokazuju da verovanje u jednu teoriju zavere povećava verovatnoću verovanja u neku drugu teoriju zavere, iako one mogu imati vrlo različit sadržaj. Štaviše, ljudi nekada prihvataju i međusobno kontradiktorne teorije zavere o istom događaju. Cilj ovog istraživanja bio je da se utvrdi da li opštija sklonost, nazvana sklonost ka duplom mišljenju (istovremeno slaganje sa logički međusobno suprotstavljenim iskazima) predviđa verovanje u teorije zavere na opštijem i specifičnijem nivou, kao i prihvatanje kontradiktornih teorija zavere. Uz to, ispitivali smo i da li je ove veze moguće svesti na vezu zavereničkog mišljenja sa analitičkim i racionalnim stilom mišljenja. U istraživanju je učestvovalo 519 ispitanika, dok je njih 240 popunilo upitnike u celini. Ispitanici su najpre popunjavali upitnik duplog mišljenja, konstruisan specifično za ovo istraživanje tako da odgovori na niz sadržinskih i metodoloških primedbi upućenih postojećim instrumentima. Nakon toga, usledio je zadatak slobodne konstrukcije narativa, u kome su ispitanici birali tvrdnje koje su u različitoj meri "zavereničke" kako bi opisali uzroke izmišljenog događaja, a na osnovu njihovih izbora izvedene su mere verovanja u teorije zavere. Potom su registrovani analitički i racionalni stil mišljenja, kao i opšta sklonost ka zavereničkom mišljenju i verovanje u specifične i kontradiktorne teorije zavere. Rezultati pokazuju da postoji umerena korelacija između duplog mišljenja i mera verovanja u teorije zavere (raspon r od .26 do .37), a duplo mišljenje doprinosi predviđanju verovanja u teorije zavere i povrh stilova mišljenja. Mere izvedene na osnovu konstrukcije narativa slabo su povezane samo sa merom opšte sklonosti ka verovanju u teorije zavere. U diskusiji su razmotrene karakteristike nove skale duplog mišljenja i zadatka konstrukcije narativa, kao i veze sklonosti ka duplom mišljenju i verovanja u teorije zavere. Ova povezanost ukazuje na to da sklonost ka duplom mišljenju može biti jedan od mehanizama koji omogućava postojanje kontradiktornosti u zavereničkim narativima. Iako bliska sposobnosti, sklonost ka duplom mišljenju treba shvatiti pre kao kognitivni stil kojeg odlikuje tolerancija na protivrečnosti.

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POSLEDICE VARIRANJA KOLIČINE USKRAĆENOSTI SAHAROZE NA ISPOLJAVANJE ANKSIOZNOSTI I AGRESIVNOSTI KOD MIŠEVA

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U ovom bihevioralnom istraživanju ispitivana je povezanost uskraćivanja nagrade kao pozitivnog stimulusa i ispoljavanja ponašanja koje se dovodi u vezu sa agresivnošću i anksioznošću kod C57bl/6 miševa. Gubitak nagrade je izvor stresa i emotivne pobuđenosti kod životinja, i može se izazvati u laboratorijskim uslovima primenom procedure koja se naziva „Konzumatorni sukcesivni negativni kontrast" (cSNC). U cSNC situaciji životinje kojima je deset dana bio dostupan 32% rastvor saharoze ispoljavaju ponašanja koja se dovode u vezu sa ispoljavanjem stresne reakcije, anksioznošću i agresijom nakon što im se koncentracija saharoze u rastvoru smanji na 4%.

U predstojećem eksperimentu ispitivan je uticaj variraja intenziteta devaluacije pozitivnog stimulusa na ispoljavanje ponašanja u vezi sa stresom. Preciznije, ispitan je uticaj variranja količine uskraćene saharoze u rastvoru na promene u ispoljenom anksioznosti i agresivnosti kod miševa.

Ponašanje koje se dovodi u vezu sa anksioznošću je mereno standardizovanim bihevioralnim testovima: „Test otvorenog polja" (Open field test) i „Test uzdignutog krstastog lavirinta" (Elevated plus-maze test), dok je ponašanje u vezi sa agresijom mereno „Testom standardog oponenta" (Standard opponent test) i „Tuba testom socijalne dominacije" (Tube test). Trendovi razlika koji su dobijeni među grupama u ispoljavanju ponašanja, upućuju na to da u situaciji devaluacije, frekvencija i intenzitet bihevioralnih odgovora anksioznosti i agresije rastu sa porastom količine uskraćenosti saharoze. Važan doprinos ovog rada jesu dobijene značajne razlike između grupe kojoj je u najvećoj meri uskraćena koncentracija saharoze u rastvoru (grupa 4%) i kontrolne grupe (grupa 32%) u pogledu ispoljenog agresivnog ponašanja. Ovaj rezultat je zanimljiv, s obzirom na to da se u literaturi uglavnom govori o reakciji anksioznosti u situaciji devaluacije, dok svega nekolicina autora izveštava o ispoljavanju frustracije i agresije.

Nakon bihevioralnih testova miševi su žrtvovani kako bi se dobila tkiva i krv za dalju analizu. Radi mapiranja molekulskih mehanizama u osnovi ponašanja koje se javlja kao reakcija na devaluaciju prijatnog stimulusa odlučeno je da će se vršiti Western blot analiza na sledećim moždanim regionima: hipotalamus, prefrontalni korteks, strijatum i hipokampus (levi i desni) i imunohistohemijska analiza mozgova. Nivo kortikosterona u krvnoj plazmi biće izmeren radi fiziološke potpore dobijenim rezultatima. Navedene analize biće naknadno vršene kako bi se rezultati dobijeni bihevioralnim pristupom dopunili i molekularnim i fiziološkim pristupom.

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INTERNET KOMUNIKACIJA I SUBJEKTIVNO BLAGOSTANJE: PROVERA HIPOTEZA STIMULACIJE I PREMEŠTANJA

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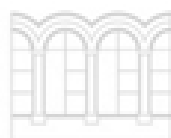
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Ovim istraživanjem se pokušalo odgovoriti da dva osnovna pitanja. Prvo se odnosilo na prirodu relacije internet komunikacije i subjektivnog blagostanja. Proveravale su se pretpostavke hipoteze stimulacije i hipoteze premeštanja. Drugo pitanje se odnosilo na to kakvu ulogu ekstraverzija, depresivnost, usamljenost i socijalna podrška ostvaruju na relaciju internet komunikacije i subjektivnog blagostanja. Dakle, ovo istraživanje je imalo dva cilja. Prvi cilj istraživanja je bio provera pretpostavki koje su proistekle iz hipoteze stimulacije i hipoteze premeštanja, odnosno utvrđivanje relacije između subjektivnog blagostanja i internet komunikacije. Drugi cilj istraživanja se odnosio na uključivanje moderatora u nacrt i ispitivanja njihovog efekta u odnosu na hipotezu stimulacije i hipotezu premeštanja. Odnosno pretpostavka je da su obe hipoteze validne, ali u različitim uslovima. Stoga je cilj istraživanja da se ispita pod kojim je uslovima koja hipoteza validna. U istraživanju je učestvovalo 699 ispitanika, raspona starosti od 16 do 60 godina (M = 24.75, SD = 5.59) od čega je ženskih ispitanika bilo 555 (79.4%). Internet komunikacija je bila operacionalizovana preko Skale motiva za korišćenje Instagrama (Instagram Motives For Its Use Scale – IMFIUS: Sheldon & Bryant, 2016). Za procenu subjektivnog blagostanja korišćeni su instrumenti SWLS (Satisfaction With Life Scale; Diener et al., 1985) i SPANE (The Scale of Positive and Negative Experience; Diener et al., 2010). Moderatori u istraživanju su operacionalizovani preko subskale Ekstraverzije inventara za procenu ličnosti BFI (Big Five Inventory; John & Srivastava, 1999), skraćene verzije Skale socijalne podrške Studije medicinskih ishoda (The Eight-Item Modified Medical Outcomes Study Social Support Survey; Moser et al., 2012), subskale Depresivnosti DASS-21 (Depression, Anxiety and Stress Scale; Lovibond & Lovibond, 1995) i Skale usamljenosti (De Jong Gierveld Lolenliness Scale; de Jong Gierveld & Kamphuis, 1985). U analizi podataka su korišćene hijerarhijske regresione analize. Rezultati istraživanja su pokazali da je motiv korišćenja Instagrama Dokumentacija značajno pozitivno povezan sa zadovoljstvom životom i pozitivnim afektom, dok je motiv korišćenja Instagrama Praćenje aktivnosti drugih/znanje o drugima značajno pozitivno povezan sa negativnim afektom. Utvrđeno je kada je kriterijum pozitivan afekat da postoji moderacijski efekat ekstraverzije na odnos između njega i motiva za korišćenje Instagrama Popularnost. Odnosno, kada je ekstravertnim osobama motiv za korišćenje Instagrama popularnost, primetno je da im je pozitivni afekat niži.

Možemo reći da ovim istraživanjem ni hipoteza stimulacije niti hipoteza premeštanja nisu dobile svoju potvrdu, rezultati ne idu značajno u prilog validaciji nijedne hipoteze.

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