

XXVII SCIENTIFIC CONFERENCE

EMPIRICAL STUDIES IN PSYCHOLOGY

13 – 16TH MAY, 2021.

FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE



INSTITUTE OF PSYCHOLOGY
LABORATORY FOR EXPERIMENTAL PSYCHOLOGY
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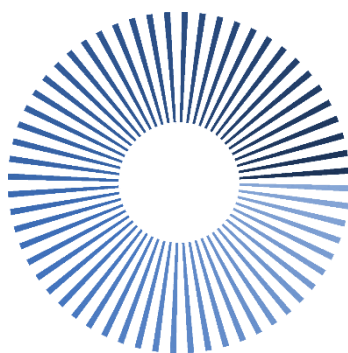
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BELGRADE, 2021

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Cover photo:

TUNING FORKS (E. Zimmermann, Leipzig – Berlin)

Instruments for generating tones of a given frequency. They are used in studies of auditory sensitivity for determining the differential, absolute and upper thresholds. Figure shows a set of three tuning forks generating the C-major chord, each fork generating the tones of 256 Hz (c¹), 320 Hz (e¹), and 384 Hz (g¹) respectively. The forks were tuned to the pitch of the originals from the German Physico-Technical Imperial Institute (Phys.-techn. Reichsanstalt).

Proofreading and layout by Milana Rajić

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KEYNOTE LECTURES

**CAREER DEVELOPMENT AND EMPLOYABILITY: EMPIRICAL STUDIES WITH
THE UNEMPLOYED**

Maria do Céu Taveira

University of Minho, Portugal

This oral presentation will address the issues of career development and employability in adults, with special attention to the unemployed condition. We will examine the dimensions of career development that favor adaptability, and their relationship to employability. We will pay special attention to empirical studies conducted with unemployed adults before and after the pandemic. We draw implications for research and for the design of counseling interventions that support the career development and employability of unemployed adults.

**THE TOOL OF THE TRADE: TELLING A STORY OF STUDENT SUCCESS USING
POWERFUL INDICATORS**

Lucia Tramonte

University of New Brunswick, Canada

Starting from the CREATE model for zones of exclusion (Lewin, 2007), Dr. Tramonte will present the journey of research and data design to track progresses with the Goals of the Sustainable Development. From the design of a framework focused on children's life course to the re-analysis of existing data and the creation of new ones, she will discuss the assessment and the experience of PISA for Development. Why and how do we break apart from the concept of SES; why focusing on social vulnerability to identify patterns of school dropout or poor achievement? In a final example, she will show how principals of a framework of educational prosperity can be visualized with GIS using public data.

INVITED LECTURES

DEVELOPMENT OF ASSESSMENT SCALES FOR THE OECD'S STUDY ON SOCIAL AND EMOTIONAL SKILLS

Miloš Kankaraš

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The Study on Social and Emotional Skills (SSES) is a new large-scale international research project launched by the OECD and conducted in 2019 in ten cities worldwide. The overall purpose of the SSES is to assist participating cities in understanding the importance of these skills better and improving policy measures for the development of their students' social and emotional skills.

The study assessed fifteen social and emotional skills of 10- and 15-year-old students and included a large scope of other personal and contextual variables. Selected skills are assessed using a triangulation approach in which individual students' skills were evaluated through information provided by themselves (self-reports) and through reports from their parents and teachers (other-reports). This means that the SSES involved the development of 15 scales for three respondent groups (students, teachers, and parents), two cohorts of students, and 11 languages spoken in ten participating cities.

In light of the study's complexity, a comprehensive and elaborate instrument development process was organized and conducted, including several quantitative and qualitative empirical testing rounds. It involved more than 50 thousand respondents worldwide and represented one of the most extensive instrument development processes undertaken in this area.

In this paper, we outline all phases of the process of development of SSES assessment scales. We first describe initial item pool generation. Cognitive interviews used for examination of clarity and appropriateness of selected items for younger students are then described. This is followed by the presentation of the two initial quantitative studies of the parent- and student-reports used for the initial quantitative evaluation of items and scales' psychometric characteristics. The final pilot study is then described, and its findings are presented in detail. The complete forms of the instruments are then presented and their psychometric characteristics outlined. The paper ends with an outline of the lessons learned and potential avenues for future research.

Keywords: social and emotional skills, skill assessment, OECD, large scale international study, triangulation, self-reports, other

SYMPOSIA

SYMPOSIA I:
UNRAVELING INEQUITY IN EDUCATION DURING COVID: WHO, WHY, AND
HOW REMAIN/BECOME DISADVANTAGED?
SYMPOSIUM INTRODUCTION

Olja Jovanović Milanović

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With COVID-related school closures, many countries have turned to home-based online instruction to ensure continuity of learning. However, the focus on online learning means that many disadvantaged learners are left behind due to a lack of resources of different kinds. Symposium will discuss the impact of the COVID-19 pandemic on learners who were already experiencing social and educational disadvantage, but also if the COVID-19 crisis created new gaps among students that had been successfully bridged within school context. Since the disturbances, such as pandemic, offer a potentially powerful lens for understanding the interconnection between micro-level events and macro-level structures, we hope that this symposium will contribute to better understanding of the interaction between the COVID-19 pandemic, structural inequalities, and student diversity across different educational contexts.

DOING VULNERABILITIES - EFFECTS OF THE PANDEMIC ON THE (RE)
CONSTRUCTION OF VULNERABILITIES IN THE CONTEXT OF EDUCATION

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Since the 'beginning' of the pandemic, new information about the current crisis situation is available almost every hour. Measures against the spread of COVID-19 are constantly being updated, changed and adapted, which has an impact on educational practices, policies and planning like in every other area. On the other hand, the inequities due to the pandemic are discussed in relation to educational context, too. In this paper, we aim to present theoretical foundations related to the concept of vulnerability in the context of COVID-19. In several studies, for example, restrictions on access to digital tools or the issue of educational injustice has been a topic in the literature with a perspective on "particularly vulnerable" groups. Vulnerability gains different meanings within a short period of time and it is attributed to different groups of people during pandemic due to newly created vulnerabilities. Although vulnerabilities are not only relevant in a crisis situation, they are particularly visible and sometimes exacerbated. An analysis and in-depth description of the functions of the social constructions about vulnerability is relevant per se for educational processes that reinforce such tendencies, but are also able to counteract them. In the sense of a democratic thinking of freedom, we aim to direct one's gaze to some of the blind spots in the context of education

that are in danger of remaining hidden in the wake of the crisis. This discussion pays attention to the fact that specific needs of individuals are and remain hidden in the shadow of the pandemic, which will be zoomed in with a special focus on the vulnerabilities of the people with disabilities. The deepening effect of the pandemic on the existing invisibilities and the increasing social distancing, loneliness, and otherness will be contextualized in educational context.

Keywords: vulnerability, people with disability, inclusion, crises, pandemic

A "NEW" DYNAMIC? EARLY CHILDHOOD EDUCATION AND CARE DURING THE COVID-19 PANDEMIC

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As a structural group, children are subordinated due to a lack of positions of power and access to resources when compared to adults. In turbulent times, such as the currently unfolding COVID-19 pandemic, it is presumed that the subordinated groups are the ones who feel the consequences of such a crisis at a larger scale when compared to the structural groups with more power and resources. Available research on the effects of the various changes brought upon by the pandemic in relation to early childhood education and care (ECEC) as well as research on the perspectives of all involved stakeholders is hardly scarce, especially taking into consideration the limited time available for conducting such research. For this narrative literature review, a literature search was conducted in three electronic databases using key words in English (the following combinations of words were used: covid-19/coronavirus/pandemic and early childhood/preschool/kindergarten). The search focused on journal articles published from the beginning of January 2020 until March 2021. Review of selected research indicates a focus on the varying national responses to the pandemic in relation to ECEC as well as the "novel" expectations from the different stakeholders of ECEC in conditions of increased stress and instability. For example, parents, among other things, having to work from home as well as care for their children and be much more involved in their children's education, which was at some periods of time going on at home; early childhood teachers, among other things, having to cater to both children attending early childhood settings as well as those who are at home, having to learn to navigate an online "enactment" of early childhood curriculum as well as having to support families and communities in this changed educational context; and children, among other things, having to learn to cope with a changed and often changing social context of their everyday lives, disrupted routines, instability, stressed adults, lack of movement and varying sensory experiences, as well as, in some cases, a missing mandatory early childhood education programme before starting elementary school. Whilst all of them have to adapt to a lot of challenges, adults could see this as an opportunity to further their competences – actively, consciously work on developing competences needed to get through the pandemic – a sort of a heightening of the roles they have had thus far. The children, on the other hand, are the ones who are at a disadvantage and in some cases have to depend on the adults to provide something that has been denied to them because of the pandemic as well as develop some entirely new competences. This distinction is why supporting and researching children's perspectives on the pandemic is critical for understanding its effects.

Keywords: children, power, COVID-19 pandemic, early childhood education and care (ECEC), early childhood teacher

DIGITALLY MEDIATED EDUCATIONAL INEQUITY

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The emergency remote schooling confronted students from vulnerable groups (SVG) with novel educational obstacles and amplified some of the old ones. Besides compromising the education of SVG, health risk of in-person contacts and prevailing reliance on digitally mediated communication also limited the possibilities for research. This study explores (in)equity by relying on the perspective of teachers and mainstream students. Digitally mediated dynamic storytelling engaged 145 students and 79 teachers in writing stories about online schooling and letters to a peer. In total, 432 narratives were thematically analysed. Students addressed many barriers in online schooling - lack of technical equipment (5% of students), difficulties in learning without in-person instruction (23%), and chaotic and demanding schedules (63%). Narratives revealed school-work related anxiety (12%), demands for understanding (8%), and additional support from teachers (13%) and family members (7%). Also, 4% wrote about digitally mediated peer-support, which is a lever most SVG cannot rely on. Teachers described a major displacement of their professional roles due to numerous obstacles, and thus the inability to address needs of SVG. Difficulties in mastering the digital world (35%), chaotic procedures (56%), overwhelming daily communication and working long hours (45%), left them with little resources to support SVG. Still, 40% of teachers addressed the schooling of SVG in their narratives, however by referring to disadvantaged students mostly. Also, 40% recognized some students lack equipment, 32% expressed concerns about lack of parental assistance. The narratives included expressions of understanding and care for SVG and statements of determination to find a way around the obstacles. More importantly, 8% of teachers reflected on how circumstances enabled better understanding of the individual differences, e.g., they describe how “shy” students became active under new conditions or how they got to know their students better than ever. This led to pinpointing the importance of the individualized approach to every child in the narratives. The narratives shine a realistic but often dramatic light on the ways how exclusion happens, and indeed happened during last years’ lockdowns. They also portrayed ways how teachers, at least some, re-constructed education individualization thus hopefully laying the ground for a re-thought of inclusive practices and equity in the future.

Keywords: equity, vulnerable groups, emergency remote schooling, inclusion

PERCEIVED STRESS, PARENTAL STRESS AND PARENTAL RESILIENCE DURING THE CORONAVIRUS PANDEMIC: A RESEARCH AMONG HUNGARIAN PARENTS

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The ongoing global coronavirus disease (COVID-19) has severe and multifaceted consequences regarding people's lives, their physical and mental health. Parents everywhere in the world are impacted by stressors and strains that follow in the wake of restrictions. Our aim was to examine the effects of coronavirus pandemic and the consequences of restrictions on parents' mental well-being. In our online survey, we apply the Hungarian version of the Perceived Stress Scale, the Parental Stress Scale, the Parental Resilience Elements Questionnaire and a self-design questionnaire asking the participants about the significant changes they may experience in different domains of their life due to the pandemic. In our ongoing research the number of participants is 177 so far (155 female and 22 male), between 28-62 years old. The current results reveal that 70% of the parents experienced significant changes in the circumstances of their work, 54% of all the parents, and 68% of the subgroup of parents of children with special needs faced difficulties due to the changing circumstances of their child's education. Regarding the field of parenting, 39% of all the parents and 40% of the subgroup of parents of children with special needs experienced significant changes due to the pandemic. The current results also show the tendency that parents of children with special needs reported higher level of perceived stress ($t(164)=0.443$, $p>0.05$), higher level of parental stress ($t(175)=1.099$, $p>0.05$) and lower level of parental resilience ($t(175)=-0.818$, $p>0.05$), however, these differences are not statistically significant. Our findings underline some of the negative effects of the pandemic and the restrictions on parents' mental health and highlights the more vulnerable group such as parents of children with special needs, who and whose family may need much more professional support in the face of this adversity.

Keywords: parental stress, resilience, COVID-19, children with special needs

SYMPOSIA II:
INTERNATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS: FROM THE FIRST
TRIAL TO THE SECONDARY ANALYSES

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PISA and TIMSS, two international assessments of student achievement, have been developed more than 20 years ago. Each study involves at least 50 countries and thousands of students in a participating country. The aims of these studies are different: TIMSS developed by IEA is more content or standards orientated assessing how much students have achieved in schools, whereas PISA assessment, developed by OECD, is more literacy orientated focusing on how well students are prepared for the outside world. Along with the main study, both OECD and IEA have created additional assessments, for example, TIMSS Advanced, PIRLS, and PISA for School. Symposium will discuss the idea behind PISA for school (PISA-based Test for Schools or PBTS), as a new assessment tool used to analyse students' achievement at the school level and to help school leaders understanding and improving their students' abilities to cope with the problems in the outside world. Serbia has been participating in PISA and TIMSS studies since 2003. It allows us to monitor trends in student achievement while assessing changes that have occurred in curriculum, instruction, and other aspects of education. We will discuss during the symposium how to communicate results about students' achievement and how to use these studies as reach resource for policy-making and secondary analyses.

THE HAPPIER THE BETTER ACHIEVER OR NOT? EXPLORING THE CONNECTION
BETWEEN STUDENTS' ACHIEVEMENT AND WELL-BEING: PISA 2018 SURVEY

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Results from PISA 2018 survey showed a curvilinear relationship between students' reading performance and their subjective well-being (increasingly positive until a certain point, after which as well-being continues to increase performance decreases).

Study had 2 aims: 1. Test if the curvilinear relationship is present among Serbian students. 2. Explore if self-efficacy, fear of failure and attitude towards learning differentiate the most satisfied but lower performing students from less satisfied but higher performing ones. The sample consisted of 5359 Serbian students who participated in PISA 2018 by taking the reading literacy test and background questionnaire that explored students' subjective well-being and school experience.

Three groups are defined based on composite score "subjective well-being" that consisted of life satisfaction, meaning in life and positive feelings: 1. the least satisfied 2. moderately satisfied 3. the most satisfied. We hypothesized that the group of students who are the least and moderately satisfied would have the highest performance while those who are the most satisfied would have the lowest performance. ANOVA showed statistically significant

differences ($F(2, 5359) = 19.494, p < .001$) and Post Hoc test revealed that students who are the least and moderately satisfied have better performance than those who are highly satisfied ($p < .001$), thus confirming hypothesis.

For the second aim of the study, discriminant analysis was conducted. We expected that students with the highest satisfaction and low performance would have better self-efficacy and lower fear of failure, but also that they would value school less compared to students with lower or moderate satisfaction and higher performance. Discriminant analysis revealed one discriminant function ($L = 0.78, \chi^2(10, 4879) = 1213.703, p < .001$), that explained 99.6% of variance, canonical $R = .22$. Discriminant function is best at differentiating the most satisfied students from the least satisfied students. Structure matrix showed that the most satisfied students have higher self-efficacy ($r = .80$) and lower fear of failure ($r = -.36$). But contrary to our assumption, this group also has a better attitude towards learning ($r = .57$) and trying hard ($r = .58$) at school than the less satisfied but better performing students. Further investigation is needed in order to understand which factors prevent the most satisfied students from performing like their less satisfied but more successful peers.

Keywords: PISA 2018, reading literacy, well-being, student's beliefs, school valuing

PREDICTING ACADEMIC OVERACHIEVEMENT USING QUALITY OF SOCIAL CONNECTIONS AND PERSONAL WELL-BEING: PISA 2018 STUDY

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Results from the PISA survey throughout the years show that there is a bond between students' index of economic, social and cultural status (ESCS) and their academic achievement. To shed light on variables that mediate that relationship, we analyzed data from the PISA 2018 survey. The sample included 6609 15-year-old high school students in Serbia. To examine what makes students' achievement differ from the expected based on their ESCS, we subtracted predicted values in reading competency (ESCS predictor) from students' actual achievement. Thus, we created a new variable – level of overachievement, which was used as a criterion for multiple linear regressions. As mediators we tested 1) students' perception of relationships with parents and teachers, 2) students' well-being and self-concept and 3) growth mindset. The first regression included predictors measuring aspects of students' perception of relationships with parents and teachers: social connection with parents, parents' emotional support, teacher's interest, teacher support in test language lessons, disciplinary climate, teacher feedback, teacher-directed instructions and teacher stimulation of reading engagement. The regression model was significant ($R^2 = .125, F(8, 3876) = 69.367, p < .001$), and all variables were significant predictors ($p < .001$ all, except teacher support: $p < .01$). The second regression included variables referring to students' well-being and self-concept: work mastery, self-concept of reading competence, perceived difficulty of reading, self-efficacy, general fear of failure, attitude towards school, sense of belonging and a variable that consists

of a sum of general life satisfaction, meaning in life and positive affect. This regression model was significant as well ($R^2 = .111$, $F(8, 4693) = 73.328$, $p < .001$), and all variables except self-efficacy were significant predictors ($p < .001$ all, except attitude towards school and sense of belonging: $p < .05$). Surprisingly, variables measuring attitude towards school and subjective well-being had negative values of b ponder. Finally, we explored the differences in level of overachievement between students with a fixed and growth mindset. The t -test was also significant ($t(5818,85) = 8.554$, $p < .001$), suggesting that students with a growth mindset have a higher level of overachievement. This paper highlights the importance of positive social connections for achievement, but also raises alarm about the well-being and self-concept of overachievers.

Keywords: PISA study, ESCS, overachievement, social connections, well-being

SOCIO-EMOTIONAL SKILLS IN PISA-BASED TEST FOR SCHOOLS

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The PISA-based Test for Schools (PBTS) is the OECD international school-based assessment that measures 15-year-old students' abilities to think critically, solve problems and communicate effectively in the cognitive areas of reading, mathematics and science. The student questionnaire also collects information on students' attitudes towards learning and their school's learning environment, as well as their socio-economic background and their social and emotional skills.

Through the analysis of PBTS data, this paper aims to provide some information on student's cognitive skills, their engagement and feelings with a special focus on social and emotional skills. Since 2019, the PBTS student questionnaire incorporates 40 items on students' social and emotional skills from the OECD's Study on Social and Emotional Skills. The Survey assesses five broad emotional sub-domains, of which the PBTS incorporated one skill for each of the five sub-domains: Optimism for emotional regulation, Assertiveness for engaging with others, Empathy for collaboration, Self-control for task performance, and Curiosity for open-mindedness. Data from four countries (Brazil, Russian Federation, Spain and the US) students were collected in 2019 and 2020 as a part of the PBTS project. Results at school level are reported in two ways: (1) average scores for each of the five sub-domains, on a nationally standardized scale, where higher values indicate higher levels of each skill, (2) association measures between each sub-domain score and school environment (measured by the index of classroom disciplinary climate), student perceived health and student overall life satisfaction. These relationships are analysed after controlling for the effect of students' socio-economic status and other demographic differences.

The data shows positive correlation between all five sub-domains and school environment with the highest correlation for Optimism and Self-control. Similarly, the association is significant and positive for five sub-domains and students perceived health and life satisfaction with the highest significantly positive correlation between Optimism and students' life satisfaction.

Keywords: PISA, socio-emotional skills

TIMSS 2019 IN SERBIA: THROUGH THE LENS OF SDG 4

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UNESCO's 2030 Agenda for sustainable development in the field of education aims at "ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. The paper discusses main findings of the TIMSS 2019 study in Serbia through the lens of the UNESCO's Sustainable Development Goal 4 (SDG 4), more specifically targets 4.2., 4.5 and 4.c. The SDG 4 target 4.2 defines "equal access to quality early childhood development, care and pre-primary education so that they are ready for primary education". Results from TIMSS 2019 show that the coverage of children attending a preschool program "3 years or more" has increased by 9% compared to the previous 2015 TIMSS cycle. In addition, the positive relationship between years of attending the preschool education and higher average achievement in mathematics and science of 4th graders in Serbia was demonstrated. TIMSS 2019 data for Serbia also provide some insights on home learning resources relevant for SDG 4 target 4.5., aimed at establishing equal access to all levels of education for the children from vulnerable groups as well as to diminish gender disparities. A difference of 187 points on average in students' achievement in mathematics and science was observed between those who have many resources (MAT: 574; SCI: 576) and those who do not have enough of them (MAT: 387; SCI: 389). In Serbia, a statistically significantly higher number of 4th grade students with many home learning resources reach low international benchmark of 400 points (99%), compared to peers who have less home learning resources (44%). The SDG 4.c target refers to the increase the percentage of teachers who will dedicate a larger number of hours of in-service training in different areas of mathematics and science. When it comes Serbia, professional development (PD) in the fields of mathematics and science is at relatively low level in comparison to international average. Number of teachers of the 4th grade students in Serbia who spent less than 6 hours or none in math and science related PD is high (38% for mathematics and 48% for science). The future PD needs expressed by teachers are in line with the current trends regarding the use of ICT in the field of education, especially in the context of COVID 19 pandemic. The data from TIMSS 2019 allow for policy makers to develop evidence-based strategies in order to accomplish presented SDG 4 targets, especially in the context of the current reforms of educational system in Serbia.

Keywords: TIMSS 2019, Sustainable Development Goal, Serbia, quality of education, evidence-based policies.

TRENDS IN MATHEMATICS ACHIEVEMENT IN THE 4TH GRADE OF PRIMARY
SCHOOL: TIMSS 2019 IN SERBIA**Nada Ševa**Institute for Educational research, Belgrade | nadaseva@gmail.com**Smiljana Jošić**

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Monitoring of changes in students achievement is important in a twofold way: it represents one of the main indicators of impact of current educational policies, at the same time providing information of further steps when it comes to the possible changes in teaching practices and other systemic changes. This paper presents trends in mathematics achievement of the 4th grade primary school students attained in three research cycles of TIMSS in Serbia: TIMSS 2011, TIMSS 2015 and TIMSS 2019.

The main finding from TIMSS 2019 indicates a significant drop in average mathematical achievement by 10 points in comparison to TIMSS 2015 (508 vs. 518 points). Serbian students in TIMSS 2019 maintained on average to be at the level of intermediate international benchmark, same as in previous TIMSS cycles. However, the observed lower achievement resulted in significant change in distribution of the students across different benchmarks, with significantly lower percentages in advance and high level benchmarks. Results across different content and cognitive domains showed that the difference between TIMSS 2019 and TIMSS 2015 was mainly due to the 28 points difference in content domain *Data* (489/TIMSS 2019 vs. 518/TIMSS 2015). In addition, there is a significant decline in TIMSS 2019 for cognitive domains *Application of knowledge* (509/TIMSS 2019 vs. 521/TIMSS 2015), as well as *Reasoning* (503/TIMSS 2019 vs. 517/TIMSS 2015 vs. 514/TIMSS 2011).

The observed results will be discussed in the context of relation between three levels of curriculum foreseen within TIMSS framework: intended curriculum (which topics are planned to be taught at the systemic level), implemented curriculum (which topics are taught before or during the year of testing) and attended curricula (which topics students learned). For example for content domain *Data*, teachers in TIMSS 2019 reported lower percentages of students that were *Not yet taught or just introduced* to the certain topics in comparison to previous cycle (implemented curriculum). However students in TIMSS 2019 had lower number of correct answers for several tasks repeated in two cycles from *Application of knowledge domain* (attended curriculum), indicating that attention of teachers should be oriented towards higher cognitive domains. Insights from this level of the analysis will provide policy-relevant information to help improve mathematics teaching and learning in the context of the first cycle of education in Serbia.

Keywords: TIMSS 2019, trends, mathematics achievements, primary school

ROUND TABLES

KOMUNIKACIJA I VAKCINACIJA: KOLIKO STE IMUNI NA NAUKU?

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Prema Merriam-Webster rečniku, reč 2020. godine je "pandemija", uz "koronavirus". Izgledalo je kao da se tih reči nećemo rešiti skoro, ali onda je na scenu stupila vakcina. Procene su da će upravo "vakcina" biti najkorišćenija reč 2021. godine. Zaista, vakcinacija kao tema je prisutna u svakodnevnim razgovorima i u medijima, na internetu i u zdravstvenom sistemu. Ipak, da li je tolika "količina" komunikacije dovela do toga da se vakcinacija bolje razume? Kako u realnosti izgleda komunikacija o vakcini, ko su glavni učesnici i ko diktira narativ, s kim i kako treba razgovarati o vakcini i nauci? Gde je poverenje?

Naši gosti, koji iz različitih perspektiva prilaze ovoj složenoj temi, će ponuditi odgovore na pitanja: Koje su medijske prakse i izazovi izveštavanja o vakcinama? Koje je poreklo antivakcinalnog pokreta i gde se pozicionira u odnosu na druge pseudonauke? Zašto su senzacionalizam i zastrašivanje u medijskom izveštavanju o vakcinama loši? Zašto (i kako) treba da ističemo priče o ljudima koji su se vakcinisali? Šta javnost treba da zna o kolektivnom imunitetu? Kako demistifikovati laži o vakcinama i da li je moguće prevazići barijeru između ličnog i statističkog? Šta ćemo saznati kada vakcinaciju razmatramo kao centralno pitanje percepcije nauke naseg doba, kao što su to nekada bile postavke, npr. Kopernika ili Darvina. Pored ovoga, biće predstavljeno i novo, aktuelno, istraživanje izvršeno na uzorku iz Srbije u kom su učesnici bili osobe koje ne žele da se vakcinišu ili se trenutno premišljaju u vezi vakcinacije. Oni su odgovarali na pitanja zbog čega ne žele da se vacinišu (ili se trenutno predomišljaju) i da li postoji nešto što bi moglo da promeni njihov stav i da odluče da se vakcinišu. Biće reči o njihovim odgovorima i o povezanosti ovih stavova sa drugim socio-psihološki relevantnim varijablama.

EDUCATIONAL PSYCHOLOGY AND PSYCHOLOGISTS IN EDUCATION DURING
THE COVID-19 PANDEMIC

Organizer: **Section of University Teachers in Educational Psychology (SUNPO), Serbian
Psychological Society**

Moderators:

prof. dr Mirjana Beara

Assistant Professor of Educational Psychology

doc. dr Olja Jovanović Milanović

Associate Professor of Educational Psychology

Panelists:

prof. dr Tinde Kovač Cerović

Professor of Educational Psychology

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doc. dr Dobrinka Kuzmanović

Professor of Educational Psychology

Marina Nadejin Simić

School Associate, Executive Board Chair of Serbian Psychological Society

Most governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the COVID-19 pandemic, forcing education systems worldwide to make a transition from the traditional face-to-face learning to remote learning in a very short time period. The changes in physical, social, psychological, emotional and cognitive context of teaching and learning altered professional and personal needs, roles, and practices of different educational stakeholders, including psychologists in education – associates/teachers from primary to university education.

The roundtable discussion will explore the challenges faced by educational stakeholders during the COVID-19 pandemic, the role of educational psychology and psychologists in education in responding to these challenges, as well as the ways of strengthening and supporting the community of psychologists during the COVID-19 crisis. This roundtable discussion will be an opportunity for psychologists to reflect on the experience of education during COVID-19, as well as to discuss the role of educational psychology and psychologists in education in the post-COVID era.

CLINICAL PSYCHOLOGY

COVID-19 RELATED FEARS, DISTRESS TOLERANCE AND TENDENCY TO WORRY
IN RELATION TO SUBJECTIVE WELL-BEING: A SERIAL MEDIATION MODEL

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The aim of this study was to explore the relations of fear of COVID-19 and fear of pandemic consequences, to subjective well-being (SWB), represented by positive affect (PA), negative affect (NA) and life satisfaction (LS). We assumed that both fears are related to SWB in a direct way, and indirectly: fears as a distressing experience activate distress intolerance, which further activates tendency to worry as a cognitive avoidance response, leading to lower SWB. An online survey was conducted among the Serbian general population during the first wave of the pandemic ($N=1409$; 78.1% female, $M=38.82$, $SD=9.24$). Measures used were Fear of COVID-19 Scale ($\alpha=.83$), Distress Tolerance Scale ($\alpha=.91$), Penn State Worry Questionnaire ($\alpha=.92$), 1 - item life satisfaction measure, Scale of Positive and Negative Experience ($\alpha=.92$ for PA, $\alpha=.87$ for NA) and a 5-item scale constructed for this study measuring fear of pandemic consequences ($\alpha=.72$). We did a path analysis of a serial mediation model, using MLE, and BC bootstrapping procedure with 1000 samples to calculate 95% confidence intervals. The findings for fear of pandemic consequences confirmed both hypotheses. Indirect effects were: .06, 95% CI [0.4, 0.8] on NA; -.05, 95% CI [-.06, -.03] on PA; -.02, 95% CI [-.03, -.01] on LS. Direct effects were also significant ($p < .001$): .20 on NA; -.21 on PA; -.25 on LS. Fear of COVID-19 had indirect effects on all aspects of SWB: .09, 95% CI [0.6, 0.12] on NA, -.08, 95% CI [-.11, -.06] on PA, -.03, 95% CI [-.05, -.02] on LS, but only one direct effect in expected direction - on NA (.20, $p < .001$). The direct effect on PA was insignificant ($p = .413$), and the effect on LS was small and positive (.10, $p < .001$), probably a suppression effect. We found indirect effects through both mediators separately and through serial mediation, with only insignificant pathways through distress tolerance on LS. To conclude, both fears are related to a significant decrease in SWB. Distress intolerance and tendency to worry are accountable for one part of this decrease, with fear of COVID-19 activating stronger distress intolerance. Our findings also indicate that worry is not reducible to distress avoidance function. Finally, fear of pandemic consequences was more detrimental for PA and LS than fear of COVID-19. This is important because we can expect this fear to grow stronger with the ongoing pandemic duration, and it has not been the focus of scientific research so far.

Keywords: COVID-19 fears, distress tolerance, tendency to worry, subjective well-being

PROGNOSTIČKA VRIJEDNOST RAZLIČITIH FAKTORA PERFEKCIONIZMA U
OBJAŠNJENJU ANKSIOZNOSTI**Andrea Vlašić**Fakultet društvenih znanosti dr. Milenka Brkića / andrea.vlasic@hercegovina.edu.ba

Perfekcionizam, kao težnja za nepogrešivošću, pozitivno utječe na uspjeh u brojnim aspektima života, ali je, također, u zavisnom odnosu s različitim negativnim zdravstvenim ishodima, poput anksioznosti, depresije i psihosomatskih simptoma. Kao višedimenzionalan konstrukt, operacionaliziran Frostovom Multidimenzionalnom skalom perfekcionizma (MPS-F), sačinjen je od 6 faktora: Zabrinutost zbog pogrešaka, Organiziranost, Roditeljska očekivanja, Osobni standardi, Dvojba u vlastitu izvedbu i Roditeljska prigovarivanja. Cronbachovi alpha koeficijenti za subskale varirali su od .76 do .92. U ovom istraživanju korišten je hrvatski prijevod MPS-F. Postavlja se pitanje koji aspekt perfekcionizma predviđa pojavu anksioznosti. Cilj ovog istraživanja je ispitati prediktorski doprinos 6 faktora perfekcionizma pojavi anksioznosti. U online istraživanju korištena je survey metoda, te je ispitano 189 ispitanika, od kojih njih 70 (37%) ima anksiozni poremećaj (dijagnosticiran od strane psihijatra), dok preostali nemaju dijagnosticirane psihijatrijske poremećaje, ne liječe se psihijatrijski, niti su u procesu psihoterapije. 156 (82.5%) ispitanika u uzorku je ženskog spola. Prosječna dob uzorka je 38 ± 9.3 . Rezultati binarne logističke regresije su pokazali da model objašnjava između 15.1 i 20.6% ukupne varijance anksioznosti. Od ispitanih 6 prediktora, samo 2 su dala značajan nezavisan prediktorski doprinos, a to su Zabrinutost zbog pogrešaka ($Exp(B) = 0.94, p < .05$) i Dvojba u vlastitu izvedbu ($Exp(B) = 0.88, p < .05$). Prema kognitivnoj teoriji karakteristike anksioznih osoba su upravo negativne misli i zaokupljenost samim sobom, što se reflektira u faktorima Zabrinutost zbog pogrešaka i Dvojba u vlastitu izvedbu. Roditeljska očekivanja i Roditeljska prigovarivanja, kako ih osoba percipira, nisu se pokazala značajnima, što govori da utjecaj važnih drugih nije ključna za pojavu anksioznosti. Organiziranost i Osobni standardi nemaju statistički značajan prediktorski doprinos pojavi anksioznosti. Ovaj podatak je od velikog praktičnog značaja, jer daje informaciju da se u psihoterapiji ne usmjeravamo na snižavanje (ne)realno visokih osobnih standarda ili organiziranje svakodnevice, nego da svoju pozornost usmjerimo na rad s negativnim mislima i sigurnošću u sebe i svoju izvedbu, te prihvaćanje vlastitih pogrešaka.

Ključne riječi: anksiozni poremećaj, perfekcionizam, zabrinutost zbog pogrešaka, dvojba u vlastitu izvedbu

PROGNOSTIC VALUE OF VARIOUS FACTORS OF PERFECTIONISM IN
EXPLAINING ANXIETY

Perfectionism correlates to various adverse health outcomes, such as anxiety and depression. It consists of 6 factors: Concern over Mistakes, Organization, Parental Expectations, Personal Standards, Doubts about Actions, and Parental Criticism ($\alpha = .76 - .92$). The study explored the predictor contribution of perfectionism factors to anxiety on 189 subjects (37% with an anxiety disorder), aged 38 ± 9.3 . Binary logistic regression model explained 15.1 - 20.6% of the total anxiety variance. Two predictors were significant: Concerns over Mistakes ($Exp(B) = 0.94, p < .05$) and Doubts about Actions ($Exp(B) = 0.88, p < .05$). Cognitive theory says the characteristics of anxious people are negative thoughts and self-preoccupation, reflected in the factors Concern over Mistakes and Doubt about Actions. Parental expectations and Parental Complaints couldn't predict anxiety disorder, suggesting that the influence of important others is not key to the onset of anxiety. The results will be discussed.

Keywords: Anxiety Disorder, Perfectionism, Concern over Mistakes, Doubts about Actions

ODNOS SEKSTINGA I NEGATIVNIH EMOCIONALNIH STANJA KOD
ADOLESCENATA: LONGITUDINALNO ISTRAŽIVANJE

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Istraživanja pokazuju da značajan broj mladih ljudi koji prakticiraju seksting ponašanje vrlo često izvještava i o negativnim emocionalnim stanjima kao što su depresija, anksioznost, stres. No još uvijek ne postoji jasno objašnjenje veze između sekstinga i negativnih emocionalnih stanja, a broj longitudinalnih istraživanja je malen. Stoga je cilj ovog longitudinalnog istraživanja bio ispitati može li se na temelju sudjelovanja u sekstingu (primanje, slanje i razmjenjivanje seksualno sugestivnih sadržaja putem mobitela i interneta) predvidjeti izraženost negativnih emocionalnih stanja (anksioznost, depresija i stres) za 11 mjeseci, odnosno može li se na temelju negativnih emocionalnih stanja bolje predvidjeti sudjelovanje u sekstingu za 11 mjeseci. Istraživanje je provedeno na srednjoškolcima u dobi od 14-18 godina ($N=413$, 59.81% djevojaka) u lipnju 2016 te svibnju 2017. Za ispitivanje negativnih emocionalnih stanja korištena je hrvatska inačica Skale depresivnosti anksioznosti i stresa ($\alpha=.82$), a za ispitivanje seksting ponašanja korišten je Upitnik seksting ponašanja ($\alpha=.82$), te upitnik sociodemografskih podataka.

Dobiveni rezultati pokazuju da gotovo 40 % adolescenata sudjeluje u nekom obliku seksting ponašanja. Utvrđene su značajne razlike u količini seksting ponašanja s obzirom na spol. Mladići značajno više izvješćuju o slanju ($U=1.32$, $p<.001$, $U=1.33$ $p<.001$) i o primanju ($U=1.58$, $p<.05$, $U=1.64$ $p<.001$) spomenutih sadržaja od djevojaka u obje točke mjerenja. Regresijskom analizom kod djevojaka je na temelju izraženosti stresa moguće predvidjeti da će češće slati seksualno sugestivne sadržaje za 11 mj. ($R^2=.233$, $F(3,243)=1.94$, $p<.01$, $\beta=.279$, $p<.05$). Nadalje, sudjelovanje u primanju i razmjenjivanju seksualno sugestivnih sadržaja predviđa razinu depresivnosti za 11 mjeseci ($R^2=.078$, $F(3,243)=6.89$, $p<.05$; $\beta=.19$, $\beta=.213$, $p<.05$), razmjenjivanje predviđa razinu anksioznosti ($R^2=.08$, $F(3,243)=7.07$, $p<.05$, $\beta=.21$, $p<.05$), a primanje razinu stresa ($R^2=.09$, $F(3,243)=8.14$, $p<.05$, $\beta=.23$, $p<.05$) kod djevojaka. Kod mladića slanje predviđa razinu depresivnosti ($R^2=.028$, $F(3,162)=1.55$, $p<.05$, $\beta=.29$, $p<.05$) i anksioznosti ($R^2=.046$, $F(3,162)=2.63$, $p<.01$, $\beta=.364$, $p<.05$) za 11 mjeseci. Iako objašnjenje varijance nije veliko govori o različitim trendovima kod djevojaka i mladića kao i o tome da bi ipak seksting mogao voditi negativnim emocionalnim stanjima i lošijem mentalnom zdravlju prije nego obrnuto.

Ključne reči: seksting, adolescenti, negativna emocionalna stanja, longitudinalno istraživanje

THE RELATIONSHIP OF SEXTING AND NEGATIVE EMOTIONAL STATES AMONG
ADOLESCENTS: LONGITUDINAL STUDY

The aim of this longitudinal study was to examine whether participating in sexting behaviour (receiving, sending and/or exchanging of sexually suggestive or provocative contents via mobile phones) is able to predict the levels of negative emotional states (anxiety, depression and stress) 11 months after in high school students ($N=413$, 59.81% females), or vice versa; i.e., if negative emotional states could predict participating in sexting behavior 11 months later. In order to examine that, the longitudinal study was conducted in two time frames that

were 11 months apart. Sexting Behaviour Questionnaire, Depression Anxiety Stress Scales and the basic questionnaire of sociodemographic data were used in order to examine the aforementioned.

Regression analyses show that receiving and exchanging sexually suggestive content can predict levels of negative emotional states in girls, while sending such content predicts levels of negative emotional states in boys. Negative emotional states mostly cannot predict participation in sexting 11 months after. This suggests that sexting could have negative impact on adolescents' mental health.

Keywords: sexting, adolescents, negative emotional states, longitudinal study

LONELINESS, DEPRESSION AND ANXIETY: THE MEDIATING ROLE OF IRRATIONAL BELIEFS

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The current study builds upon previous research that examined the phenomena of loneliness, depression, anxiety, and irrational beliefs and aims to investigate whether irrational beliefs concerning own self and life experiences can be found in lonely people that could contribute to depression and anxiety. The research was conducted on the sample of 556 participants (69.8% female), aged 18 - 25 ($M = 21.98$, $SD = 2.32$) who completed The General Attitude and Belief Scale (GABS; $\alpha = .97$) assessing irrational beliefs, UCLA Loneliness Scale ($\alpha = .84$) estimating loneliness, and Depression Anxiety Stress Scale (DASS – 21; $\alpha = .95$), with focusing on the subscales that measure depression and anxiety. Parallel multiple mediation was used to test the two mediation models with one rational and six irrational beliefs as mediators between loneliness and depression (first model), and loneliness and anxiety (second model). Also, covariates gender, age, number of close friends, marital status, household, employment and income were included in the mediation analyses. Results from the first mediation model have shown that total effect of loneliness on depression is significant ($c = .56$, $SE = .03$, 95% CI [.4952, .6263], $t = 16.81$, $p < .001$). Also, both direct ($c' = .31$, $SE = .03$, 95% CI [.2406, .3710]), $t = 9.21$, $p < .001$), and indirect effects are significant, i.e., that there is a partial mediation. The indirect effect is achieved through two irrational beliefs: Self-Downing ($a2b2 = .18$, $SE = .03$, 95% CI [.1225, .2401]) and Need for Comfort ($a5b5 = .11$, $SE = .03$, 95% CI [.0640, .1645]). Results from the second mediation model have shown that the total effect of loneliness on anxiety is significant ($c = .42$, $SE = .04$, 95% CI [.3544, .4930], $t = 12.01$, $p < .001$), as well as direct ($c' = .19$, $SE = .04$, 95% CI [.1181, .2587], $t = 5.26$, $p < .001$) and indirect effect, where the mediators are also Self-Downing ($a2b2 = .10$, $SE = .03$, 95% CI [.0434, .1661]) and Need for Comfort ($a5b5 = .19$, $SE = .03$, 95% CI [.1347, .2480]). These findings provide first evidence that two types of irrational beliefs, i.e., Self-Downing and Need for Comfort, have a partial, but significant role in the connection between loneliness and depression, as well as the connection between loneliness and anxiety. We can conclude that lonely people with depressive and/or anxiety symptoms could benefit from REBT interventions aimed at identifying, challenging, and modifying self-deprecation and need for comfort beliefs.

Keywords: loneliness, anxiety, depression, irrational beliefs, REBT

RESILIENCE, WELL-BEING AND COPING STRATEGIES DURING THE COVID-19
PANDEMIC AND RESTRICTIVE MEASURES IN SERBIA

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Since a number of studies from different contexts predominantly focus on negative physical and mental health consequences of the Covid-19 pandemic, we will try to specifically elucidate sources of resilience and efficient coping strategies. The presentation will draw from a qualitative study that explored experiences, well-being, coping strategies and future expectations of people from different age groups in Serbia who managed to maintain good everyday functioning and mental health during the first wave of the pandemic.

Data was collected through semi-structured interviews focused on three broad topics: 1) participant's pre-pandemic life context and quality of life (concerning work/study, peer/family relations, free time and health); 2) their everyday experiences and functioning during the first wave of the pandemic; 3) their expectations of the future (both personal and collective). The sample consisted of 54 participants (38 female): a) 15 emerging adults (18 to 26 y/o, $M=21.87$), b) 23 adults (31 to 58 y/o, $M=42.78$), c) 16 seniors (65 to 87 y/o, $M=71.19$).

As a result of thematic analysis, and given the specific focus of this presentation, the following themes emerged: 1) Treating the pandemic crisis as an opportunity (to seize the day, to spend quality time with family, to slow down); 2) Online socializing as a viable alternative; 3) Adhering to the preventive measures as a way to cope with anxiety regarding the health risks; 4) Selective violation or circumvention of restrictive measures; 5) Critical approach to inconsistent and unreliable information; 6) Moderate optimism regarding the (personal) future and recognizing the potentials of the crisis.

Family and social support, and a stable financial situation, plays a vital protective role in the lives of participants from all age groups. Regarding personal resources – efficient and proactive coping skills (e.g., responsible behaviour, compensatory activities, accepting both bad and good aspects of life, humour, etc.), as well as a moderate level of optimism, make individuals more resilient during a crisis. Although our study indicates a significant capacity for resilience, it did not include people that are vulnerable, less resourceful or coming from marginalized and underprivileged groups. Additionally, emphasizing the capacities and strengths of people to cope with the crisis does not intend to downplay the manifold and ubiquitous negative effects of the pandemic.

Keywords: Covid-19 pandemic, resilience, well-being, coping strategies, qualitative research

POVEZANOST RAZLIKA U SAMOPROCENI I PROCENI PARTNERA SA DUŽINOM VEZE

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U, do sada, publikovanim istraživanjima, samoprocena i procena partnera korelirana je sa zadovoljstvom i uspešnošću intimnih veza. U ovom radu ispitivana je povezanost razlika u samoproceni i proceni partnera sa dužinom veze, radi utvrđivanja da li se ove razlike smanjuju ili povećavaju. Instrument korišćen za ova ispitivanja je upitnik ličnosti HEXACO, sastavljen iz 100 pitanja, sa odgovorima u vidu 5 - stepenih skala, kojima se procenjuju šest bazičnih dimenzija ličnosti (Poštenje, Emocionalnost, Ekstraverzija, Otvorenost, Savesnost, Saradljivost). Postavljen je online, sa instrukcijom da ispitanici upitnikom procene sebe i partnera. Osim toga, od ispitanika je traženo da navedu pol i koliko vremena su u vezi. Nakon isključenja svih ispitanika koji su naveli da nisu u vezi, od prvobitnih 503 ispitanika, konačni uzorak je činilo 235 ispitanika koji su naveli da su u vezi ($N_{\text{mu}}=211$, $N_{\text{z}}=24$, $M_{\text{mu}}=25.33$, $SD_{\text{mu}}=16.35$). Prosečno trajanje veze bilo je 50.67 meseci ($M_{\text{dovr}}=50.67$ kalendarskih meseci, $SD=45.26$ kalendarskih meseci, raspon dužine veze od 1 do 232 kalendarskih meseci). Rezultati istraživanja su pokazali da se razlike dimenzija ličnosti u proceni sebe i partnera ne menjaju sa dužinom veze, osim na dimenziji Otvorenosti ($r= -.231$, $p<.05$). Primenom moderatorske analize u regresionom modelu, ispitivana je uloga pola na korelaciju razlika u samoproceni i proceni partnera sa dužinom veze, ali se nije pokazao statistički značajnim. Rezultat da osobe tokom trajanja veze doživljavaju partnera sličnijim sebi na dimenziji Otvorenosti ukazuje, da tokom vremena interesovanja partnera konvergiraju.

Ključne reči: HEXACO, crte ličnosti, partnerske veze, samoprocena, procena drugog

CORRELATION BETWEEN SELF-REPORT AND REPORT OF PARTNER'S PERSONALITY TRAITS AND LONGITUDE OF THE RELATIONSHIP

This study examined whether the longitude of relationship correlates with the difference between self-report and report of the partner's personality traits. The HEXACO 100 instrument was used, which examined six personality dimensions (Honesty-Humility, Emotionality, Extraversion, Openness, Agreeableness and Conscientiousness). HEXACO 100 was administered online to the 235 ($N_{\text{mu}}=211$, $N_{\text{z}}=24$, $M_{\text{mu}}=25.33$, $SD_{\text{mu}}=16.35$) which declared to have partner. The instruction was to assess themselves and their partners. Additional data were the gender and the longitude of relationship. The results confirmed negative correlations between difference between self- report and other- report, and longitude of relationship for the Openness dimension ($r=-.231$, $p<.05$) only. This result may suggest that in time the partners' interests converge.

Keywords: HEXACO, personality traits, relationship, self- report, other-report

PRELIMINARY RESULTS ON THE PATTERNS OF INTEROCEPTIVE AWARENESS
IN DEPRESSION, ANXIETY, STRESS, AND OBSESSIVE-COMPULSIVE
TENDENCIES IN A NON-CLINICAL SAMPLE

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Interoceptive awareness (IA) is the conscious level of sensing, interpreting, and integrating signals from within the body. Multidimensional Assessment of Interoceptive Awareness (MAIA) differentiates between adaptive and maladaptive forms of IA based on eight dimensions: Noticing, Not-Distracting, Not-Worrying, Attention Regulation, Emotional Awareness, Self-Regulation, Body Listening and Trusting. Research shows that when people feel stressed (S) or anxious (A) they also experience amplified and disturbing signals from within the body. Obsessive-compulsive (OC) symptoms seem to go along with an attenuated connection to internal states, while depression (D) relates to various maladaptive IA. However, these relationships were mostly observed in clinical studies, while all these symptoms are also present amongst the non-clinical population. We aimed to systematically explore patterns of relationships between IA and tendencies towards different types of symptomatology in a non-clinical sample. Participants were 218 students of the Faculty of Organizational Sciences, University of Belgrade ($M_{\text{age}} = 19.08$, $SD_{\text{age}} = 0.85$, 68.3% females). They completed MAIA ($\alpha = .55$ to $.87$), Depression, Anxiety, Stress Scale (DASS, $\alpha = .76$ to $.90$), and Obsessive-Compulsive Inventory-Revised (OCI-R, $\alpha = .89$) by indicating the level of agreement with each statement (6-point Likert scale for MAIA, 4-point for DASS, and 5-point for OCI-R). All symptomatology measures were negatively related to Not-Worrying and Trusting (except for a null correlation of Trusting with OC) in a low to moderate intensity ($r = -.14$ to $r = -.41$). D was negatively related to Self-Regulation ($r = -.23$, $p < .05$) and Attention Regulation ($r = -.21$, $p < .01$) and S with Self-Regulation ($r = -.18$, $p < .05$). OC had a negative correlation with Not-Distracting ($r = -.18$, $p < .01$) and positive with Noticing ($r = .12$, $p < .05$), while A was positively related to Noticing ($r = .30$, $p < .01$) and Emotional Awareness ($r = .20$, $p < .01$). In line with past research, our results showed that people with tendencies for different kinds of symptomatology tended to be worried about somebody signals, but they also showed specific patterns of IA. OC tendencies were least connected to any IA dimension, while anxiety was characterized by the amplified perception of body signals. Depression tendencies were related to struggling with regulatory processes and feeling good in one's body, similar to but stronger than what was observed for stress.

Keywords: Multidimensional Assessment of Interoceptive Awareness (MAIA), Depression Anxiety Stress Scale (DASS), OCI-R (Obsessive-Compulsive Inventory-Revised)

EFEKAT VIZUELNE DEGRADACIJE NA BRZINU OBRADU LATINIČNIH I ĆIRILIČNIH RIJEČI

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U ovom istraživanju se ispitivao efekat vizuelne degradacije na brzinu obrade riječi. Proces obrade riječi započinje vizuelnom diskriminacijom i tačnom identifikacijom pojedinačnih slova. Utvrđeno je da se efikasna obrada slova zasniva na perceptivnoj obradi njihovih pojedinačnih segmenata, pri čemu nemaju svi segmenti jednaku važnost. Kao ključne komponente za koje je utvrđeno da nose najveću količinu informacija neophodnu za identifikaciju slova u engleskom i francuskom jeziku izdvojile su se: horizontalne linije, spojevi linija slova, srednji segmenti linija i terminalni dijelovi (krajevi linija) slova (Blais, Fiset, & Arguin, 2009; Lanthier et al., 2009; Perea, 2012; Szwed et al., 2009; 2011). Cilj ovog istraživanja je utvrđivanje ključnih komponenti na kojima se zasniva identifikacija slova u srpskom jeziku, što je posebno važno imajući u vidu da srpski jezik karakteriše ravnopravna upotreba dva pisma (latinice i ćirilice). U istraživanju je fokus stavljen na spojeve linija slova, jer oni ukazuju na relacione odnose između njih te se pretpostavlja da mogu biti nosioci ključnih informacija. U eksperimentu je učestvovalo 37 ispitanika, studenata Univerziteta u Banjoj Luci. Varirana su dva faktora – pismo (latinica, ćirilica) i vizuelna degradacija (degradacija na nivou spojeva linija slova, odsustvo degradacije). Korišten je zadatak leksičke odluke u kojem su stimulusi bili imenice muškog roda u nominativu jednine, dužine 6 slova i pseudoriječi iste dužine. Svi stimulusi su bili napisani malim slovima Arial fontom 48. Utvrđen je efekat vizuelne degradacije na brzinu obrade riječi ($F(3,2216)=14.513$, $p<.001$, $\eta^2=.019$), pri čemu je naknadnom Šefeovom post hoc analizom prosječno vrijeme reagovanja razvrstano u dvije grupe i to (1) degradirane ćirilične (830.2 ms), degradirane latinične riječi (831.1 ms) i (2) nedeegradirane ćirilične (909.1 ms), nedeegradirane latinične riječi (933.56 ms). Efekat degradacije je dobijen i kod pseudoriječi ($F(3,2216)=30.301$, $p<.001$, $\eta^2=.039$). Rezultati ukazuju da degradacija na nivou spojeva linija i kod latiničnih i kod ćiriličnih slova nije usporila obradu, čime početna pretpostavka nije potvrđena. Dobijeni nalazi se djelimično mogu objasniti modelom interaktivne aktivacije i holističkim hibridnim modelom.

Ključne riječi: vizuelna degradacija, obrada riječi, latinica, ćirilica

EFFECT OF VISUAL DEGRADATION ON THE PROCESSING OF LATIN AND CYRILLIC WORDS

It was found that efficient letter processing is based on perceptual processing of their individual segments, where not all segments are of equal importance. The aim of this research is to determine the key components underlying the identification of letters, which is especially important because there are two alphabets (Latin and Cyrillic) in Serbian language. The research focuses on the junctions of letter lines, because they indicate the relations between the structural parts and it is assumed that they can carry critical information. Thirty-seven subjects participated in the experiment. Two factors were varied - alphabet (Latin, Cyrillic) and visual degradation (degradation at the junctions, absence of degradation). The

task of lexical decision was used. The results indicate that the degradation at the level of junctions did not slow down the processing. The obtained findings can be partially explained by the interactive activation model and the holistic hybrid model.

Keywords: visual degradation, word processing, Latin, Cyrillic

THE NUMBER OF SENSES EFFECT IN POLYSEMOUS ADJECTIVE RECOGNITION

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Previous research revealed a significant polysemy effect: namely, it found that words with multiple related senses (polysemous words) are recognised faster compared to the words with multiple unrelated meanings (homonymous words) and words with only one meaning/sense (unambiguous words; Rodd et al., 2002). The measure of ambiguity in polysemous words was the number of senses (NoS), derived from the meanings/senses provided by native speakers. NoS was a significant predictor of reaction time in visual lexical decision task (VLDT) experiments (Filipović Đurđević, 2007). This is in accordance with various models of lexical ambiguity processing. Although some attribute the effect to an increased semantic activation due to the facilitation among the related senses (Armstrong & Plaut, 2016; Rodd et al., 2004), whereas others attribute it to the differences at the level of responding (Hino & Lupker, 1996), they agree in predicting the processing advantage in polysemous word recognition. Research in Serbian revealed this effect in noun and verb processing (Filipović Đurđević & Kostić, 2008; Mišić & Filipović Đurđević, 2019; 2020). The aim of this research was to further generalize the findings and to test whether the NoS effect is present in polysemous adjective recognition. The prediction was that the increase in the NoS and word frequency would be followed by faster adjective recognition.

In this research, the participants were presented with a VLDT consisting of 107 polysemous Serbian adjectives. They were presented in all three grammatical genders using the Latin square design between participants, which allowed each participant to see only one form of the same adjective. Multiple regression revealed that the NoS and frequency were significant predictors of the reaction time: polysemous adjectives with higher NoS and higher frequency were processed faster (NoS: $\beta = -.199$, S.E. = .093, $df = 106$, $t = -2.143$, $p < .05$; frequency: $\beta = -.281$, S.E. = .093, $df = 106$, $t = -3.036$, $p < .05$).

These findings are in accordance with our hypothesis and concur with the previous findings from the experiments with nouns and verbs (Filipović Đurđević & Kostić, 2008; Mišić & Filipović Đurđević, 2019; 2020), as well as various models regarding word ambiguity processing (Armstrong & Plaut, 2016; Hino & Lupker, 1996; Rodd et al., 2004). Together they converge to the conclusion that the NoS facilitates recognition of polysemous words in the VLDT across different parts of speech.

Keywords: lexical ambiguity, number of senses, adjectives, polysemy

THE ILLUSION OF CERTAINTY IN A NATIONALLY REPRESENTATIVE
SAMPLE IN SERBIA

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The illusion of certainty (IC) is a descriptive phenomenon which indicates the tendency to assess the probability or outcomes of a process as completely (100%) certain, i.e. to completely ignore the existence of risk. The cognitive underpinnings of this bias are loss aversion and risk avoidance. In the medical and criminological domain, IC is registered when people consider the results of testing procedures to be completely certain and predictive, meaning that the outcome of these tests can only be binary (positive or negative signal), when in fact, it is always a continual dimension. In order to determine the extent of IC among citizens of Serbia, we collected data on a two-stage stratified random sample ($N = 1004$, 53% of women, $M_{\text{age}} = 48\text{y}$). We asked the citizens if they thought the results of five procedures were absolutely certain. The procedures included polygraph and HIV testing, fingerprint and DNA analysis, and mammography, while the offered answers were *yes*, *no* and *I don't know*. For each of the tests, we collected a measure of a descriptive social norm - participants estimated the percentage of people in Serbia who would answer these questions the same way they did. The results show that IC is considerably high in the whole sample, though it differs for different examined procedures. IC is strongest when it comes to HIV analysis (69%), followed by DNA analysis (67%), mammography results (64%), and fingerprints (61%), while markedly fewer people believe that the polygraph is absolutely certain (29%). When comparing citizens who demonstrate IC with those who do not believe in the absolute certainty of the results, there is a significant difference in assessing how other people would respond. For all procedures except for the polygraph, participants who consider the results to be absolutely certain estimate that 70-75% of the population would agree with their assessment. Those who show no IC think that between 46-52% would agree with them. The strength of the effect for these procedures ranges from 14% to 19%. For polygraph testing, those who show IC think that 61% of other citizens would agree with them, while those without IC think that 52% would agree with them ($\eta^2 = 3\%$). The findings show that for the examined procedures, except for the polygraph, IC is consistently high among Serbian citizens. In future research we will examine cognitive and social factors that contribute to this phenomenon, as well as test interventions that reduce it.

Keywords: illusion of certainty, probability judgement, representative sample, HIV test, DNA analysis, mammography, polygraph testing, fingerprints analysis

PRISTRASNOST POJEDNOSTAVLJIVANJA U NAUČNOM DOMENU

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Sklonost ljudi da prilikom rasuđivanja preferiraju jednostavna naspram složenih objašnjenja, zanemarujući eksplanatornu moć takvog objašnjenja, naziva se pristrasnost pojednostavljivanja (PP; engl. *simplicity bias*, SP). Ova pristrasnost je registrovana kako u naučnom, tako i u nenaučnom mišljenju. Pristrasnost pojednostavljivanja nalaže da ljudi preferiraju jednostavnost nasuprot složenosti u širokom domenu kognitivnog funkcionisanja. U naučnom mišljenju, preferencija jednostavnijih modela često se podudara sa višom verovatnoćom da model dobro aproksimira opservacije. Ipak, i sama ispravnost izbora modela može biti pod uticajem i naučene preferencije jednostavnosti. Pretpostavlja se da je SP kod naučnika ipak manje izražen, imajući u vidu da je u naučnom mišljenju preferiraniji kriterijum prediktivnost modela u odnosu na parsimoničnost. Cilj eksperimenta je bio da se utvrdi da li su ljudi skloniji preferiranju jednostavnijih objašnjenja i da li su naučnici sistematski manje skloni preferenciji jednostavnosti od laika, u dva domena rezovanovanja: pri davanju svakodnevnih objašnjenja i u domenu naučnih objašnjenja. Ispitanicima (N = 200, 73% female) koji su bili naučnici (N = 52) i nenaučnici (N = 148) prikazano je 5 hipotetičkih situacija različitih u pogledu domena (naučni i opšti), a njihov zadatak je bio da odluče šta je uzrokovalo pojave opisane u tim situacijama odabirom prostog ili složenog objašnjenja. Preciznije, ispitanici su birali jednu od sedam mogućnosti koje su obuhvatale tri prosta uzroka sastavljena od po jednog elementa (ponuđenog odgovora), i četiri složena tj. tri kombinacije dva elemenata i jednu kombinaciju tri elementa. Pristrasnost pojednostavljivanja je registrovana na nivou celog uzorka, na svakom od stimulusa ($8.820 < \chi^2 < 144.500$, $df = 1$, $p < .01$). Razlike u izraženosti pristrasnosti, u zavisnosti od domena stimulusa, nisu zabeležene ($F(1) = 0.403$, $p = .526$, $\eta^2 = .002$), kao ni razlike između naučnika i nenaučnika ($F(1) = 0.023$, $p = .878$, $\eta^2 = .000$). Takođe, interakcija faktora domen i zvanje nije registrovana ($F(1, 198) = 0.097$, $p = .756$, $\eta^2 = .000$). Rezultati ukazuju na to da su i naučnici i laici skloni preferiranju jednostavnijih objašnjenja i da se ne razlikuju u pogledu otpornosti na ovu pristrasnost, niti kada su u pitanju naučne, niti kada su u pitanju opšte situacije.

Ključne reči: pristrasnost pojednostavljivanja, jednostavnost objašnjenja, naučna objašnjenja, svakodnevna objašnjenja, , uzročno rasuđivanje i zaključivanje

SIMPLICITY BIAS IN SCIENTISTS' REASONING

Simplicity bias (SP) is the human tendency to prefer simple over complex explanations when reasoning, ignoring the explanatory power of that explanation. SP is registered in both scientific and non-scientific thinking. Considering that in scientific explanations predictive

power is preferred over parsimony, it is assumed that SP is less pronounced among scientists compared to non-scientists. The experiment aimed to determine whether people do prefer simple explanations and whether scientists are systematically less prone to SP than laypeople, investigating two domains: everyday and scientific explanations. Participants were scientists and non-scientists, asked to choose between simple or complex explanation, judging what caused the phenomena described in hypothetical situations. SP was registered in all the participants, on each of the stimuli, but the results indicate that both scientists and laypeople tend to prefer simple explanations and do not differ in terms of resistance to this bias, regarding both scientific and everyday domain.

Keywords: simplicity bias, scientific explanations, simplicity of the explanation, everyday explanations, causal reasoning and inference,

UTICAJ VIZUELNIH KARAKTERISTIKA STIMULUSA NA STRUPOV EFEKAT

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Strupov efekat je kognitivni fenomen koji se ogleda u inhibiciji odgovora u zadatku imenovanja boja kada je naziv boje nekongruentan sa bojom kojom je riječ napisana. Ovaj efekat je zasnovan na interferenciji između čitanja riječi u boji i percepcije boje fonta. Proces čitanja riječi je automatski proces, odnosno nenamjerni, brzi i nekontrolisani proces koji zahtijeva minimalno kognitivno angažovanje (Kostić, 2010; Moors & Houwer, 2006), te je brži od imenovanja svojstava riječi (MacLeod, 2015). Hipoteza o automatskom čitanju je provjeravana u studiji u kojoj su korišteni kompletno obojeni stimulusi i stimulusi gdje je jedno slovo obojeno, a preostala su bila u sivoj boji (Besner, Stolz, & Boutilier, 1997). Rezultati ove studije su pokazali da su stimulusi sa jednim obojenim slovom proizveli mnogo manje Strupovog efekta u poređenju sa kompletno obojenim stimulusima. Cilj ovog istraživanja je bio ispitivanje izraženosti Strupovog efekta ako se javlja samo djelimično nepodudaranje naziva boje i boje kojom je napisana riječ (djelimično nekongruentni stimulusi). U eksperimentu je učestvovalo 72 ispitanika, studenata Filozofskog fakulteta koji su slučajnim odabirom podijeljeni u četiri jednake grupe koje su odgovarale eksperimentalnom uslovu. Variran je jedan faktor – vizuelni izgled stimulusa sa četiri nivoa (kongruentni, nekongruentni, djelimično nekongruentni prednji i djelimično nekongruentni zadnji stimulusi). Djelimično nekongruentni stimulusi su podrazumijevali stimuluse kojima su prva tri ili zadnja tri slova u različitoj boji od boje koju riječ označava. Zavisna varijabla je bila vrijeme reakcije i broj grešaka u klasičnom Strupovom zadatku. Dobijeni rezultati pokazuju da postoji efekat eksperimentalne manipulacije na brzinu reagovanja ($F(3,2875)=23.109$, $p<.001$, $\eta^2=.024$). Naknadnom Šefeovom post hoc analizom utvrđeno je da je prosječno vrijeme reagovanja najkraće za kongruentne stimuluse (952.9 ms), zatim za nekongruentne stimuluse (1097.3 ms) i djelimično nekongruentne stimuluse u kojima su posljednja tri slova nepodudarna sa napisanom riječi (1070.6 ms), dok je najduže vrijeme reagovanja prisutno kod stimulusa u kojima su prva tri slova nekongruentna sa napisanom

riječi (1182.3 *ms*). Kada je u pitanju broj grešaka, nije utvrđen statistički značajan efekat vizuelnih karakteristika stimulusa ($F(3,2875)=1.492$, $p>.05$, $\eta^2=.002$). Navedeni rezultati su u skladu sa nalazima Besnera i saradnika (Besner, Stolz, & Boutilier, 1997).

Ključne reči: Stupov efekat, vizuelne karakteristike, kongruentni stimulusi, nekongruentni stimulus

IMPACT OF THE VISUAL CHARACTERISTICS OF THE STIMULUS ON THE STROOP EFFECT

The Stroop effect is a cognitive phenomenon that is reflected in the inhibition of responses in the color naming task when the color name is inconsistent with the color in which the word is written. Reading is an automatic process and requires minimal cognitive engagement (Kostić, 2010; Moors & Houwer, 2006). The aim of this research is to examine the Stroop effect if there is only a partial mismatch between the name of the color and the color in which the word is written (partially incongruent stimuli, with the first three or last three letters being incongruent). The obtained results show that there is an effect of experimental manipulation on the reaction rate ($F(3,2875) = 23.109$, $p < .001$, $\eta^2 = .024$). The average response time was shortest for congruent stimuli (952.9 *ms*). The longest response time was present in partially incongruent stimuli in which the first three letters are opposite to the written word (1182.3 *ms*). There was no statistically significant effect of the stimuli visual characteristics on the number of errors ($F(3,2875)=1.492$, $p>.05$, $\eta^2=.002$).

Keywords: Stroop effect, visual characteristics, congruent stimuli, incongruent stimuli

SEPARATE EFFECTS OF TWO ASPECTS OF PERCEPTUAL RICHNESS IN THE LEXICAL DECISION TASK: USING BIG DATA APPROACH FOR VIRTUAL REPLICATION

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The Big Data approach resides on collecting data for the large set of words, engaging a large number of participants (Brysbaert et al., 2014; Keuleers et al., 2012; Kuperman, 2016). The crucial benefit is the possibility of conducting virtual experiments (VE) which can serve as replications of previous small-scale studies. The Serbian norming study (Popović Stijačić & Filipović Đurđević, in preparation) contains ratings for twelve lexical-semantic and perceptual richness measures for 2100 words for which we also collected reaction times in the lexical decision task (LD) from 31 participants.

In the present research, we take advantage of this database to replicate two previously reported experiments (E1; E2), which tested the effects of two measures of perceptual richness (Popović Stijačić & Filipović Đurđević, 2019). The first measure was related to the diversity of perceptual experience, as operationalized by the number of sensory modalities

through which the concept can be experienced (NoM). The second was the intensity of the perceptual experience defined as the vector length of the sensory ratings (VL). In both experiments, VL was the continuous predictor. NoM was the factor with three levels in E1 (zero/z, a few/f, many/m) and two levels in E2 (a few, many; controlling for auditory modality). Stimuli within experiments (120 in E1; 100 in E2) were matched for word length, frequency, familiarity, context availability, concreteness, imageability, emotional valence, arousal and age of acquisition.

In both VEs we replicated previously obtained separate effects of the diversity and the intensity of perceptual experience. In VE1 (in bold), NoM inhibited word processing in LD as observed in the original study (plain text): ($M_z=611.8\pm144.6$ / 655.7 ± 151.5 ; $M_f=630.6\pm144.6$ / 676.4 ± 149.3 ; $M_m=633.6\pm152.6$ / 677.3 ± 148.8 ; $B=.05$; $t(106.2)=2.13$; $p<.05$ / $B=.05$; $t(109.4)=1.98$; $p<.05$). At the same time, VL facilitated RTs ($B=-.03$; $t(91.5)=-2.38$; $p<.05$ / $B=-.03$; $t(114.8)=-2.91$; $p<.01$). Similarly, in VE2 we recorded that NoM inhibited ($M_f=605.2\pm151$ / 616.9 ± 138.6 ; $M_m=620.2\pm155.3$ / 638.4 ± 152.3 ; $B=.04$; $t(96.8)=2.4$; $p<.05$ / $B=.06$; $t(91.2)=2.4$; $p<.05$) and VL facilitated RTs in LD ($B=-.03$; $t(96.6)=-3.37$; $p<.01$ / $B=-.03$; $t(96.6)=-3.37$; $p<.01$). Therefore, we replicated the separation of two indices of perceptual richness (Popović Stijačić & Filipović Đurđević, 2019), and demonstrated how collected RTs from LD for the large set of words could be utilized for study replication..

Keywords: perceptual richness, Big Data, lexical decision, virtual experiments, replication study

THE POLYSEMY EFFECT ACROSS INFLECTED WORD FORMS

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Polysemes are ambiguous words with multiple related senses (PAPER – ‘writing paper’ and ‘scientific paper’; Rodd et al., 2002). Previous research established that polyseme processing is also affected by sense uncertainty (Filipović Đurđević & Kostić, 2017). However, Serbian words appear in multiple inflected forms where each form has multiple syntactic meanings and functions and are therefore also ambiguous. The aim of this paper was twofold. The first was to explore the uncertainty effect throughout the inflected forms. We tested whether inflected word forms are equally ambiguous, considering that syntactic properties of a sentence can affect word meaning (Kostić et al., 2003). The second aim was to explore whether the potential (in)consistency of the polysemy effect could be a consequence of the dynamics of mapping cues to outcomes in a discriminative learning (DL) network.

We collected lexical decision data and compared the predictive power of information-theoretic (IT) measures of uncertainty and the measures derived from the DL model (Baayen et al., 2011). We presented 35 polysemous nouns of masculine gender to 124 participants. Each noun was presented in seven inflected forms in a Latin-square design. Reaction times were predicted by two sets of variables – entropy of the sense frequency distribution (Filipović Đurđević & Kostić, 2017). DL predictors were derived from two cue-outcome

weight matrices (Milin et al., 2017). Grapheme-to-lexome (G2L) matrix was calculated from a network mapping trigraphs to lemmata. Lexome-to-lexome (L2L) matrix from a network mapping 1000 co-occurring context words as cues to lemmata.

Diversity measures from G2L and L2L ($r = .36$, $p < .001$; $r = .25$, $p < .001$), and G2L prior measure ($r = .27$, $p < .001$) correlated with entropy. We modelled lexical decision latencies with GAMMs (Wood, 2006) and compared models with entropy and DL predictors interacting with the inflected form. The entropy model revealed differing entropy effects across word forms, with marginal significance in the nominative form. DL model revealed a similar variation in DL predictor effect but had a better fit than the IT model.

Inconsistent entropy effects across word forms suggest that there might be an interaction between semantics and syntax. Correlations between DL and entropy measures reveal that discrimination of orthographic cues might be a process behind this observed complexity. This research opens the question of the need for estimating ambiguity separately across different inflected forms of the same lemmata.

Keywords: Polysemy, Word form, Entropy, Naive discrimination learning

UPDATING IN AGING: EXECUTIVE FUNCTION OR FLUID REASONING?

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Updating is an executive function (EF) defined as the ability to replace old irrelevant information with new and relevant ones. It is usually measured with the n-back task in which the participant responds to a stimulus if it is equal to the stimulus shown n steps/positions before. Other updating tasks have been less studied. One such task is the Memory updating (MU) task in which participant must update numbers according to the corresponding mathematical operation. Both, n-back and MU task require building, maintaining, updating, and releasing arbitrary bindings between stimuli, therefore it is expected that tasks measure the same construct, which is separable from other cognitive abilities. The aim of this study was to examine whether the n-back task and MU task measure unique ability, and to investigate their relationship with other lower- and higher-level abilities, fluid reasoning and inhibition respectively. Healthy elderly ($N=109$) completed the n-back task, MU task, Raven Progressive Matrices (RPM; reasoning ability), and Picture-word (PW; inhibition ability) task. Using the confirmatory factor analysis approach (CFA), three models of updating ability were tested: 1) model with two latent abilities representing two tasks, 2) model with one updating ability, 3) model with one updating ability and a method factor. A model in which updating tasks are saturated with a unique updating factor along with a method factor shows the best fit to data ($\chi^2(6)=12.89$, $p=0.05$; CFI=0.96; RMSEA=0.1). The results of the structural equation modeling (SEM) analysis showed a significant correlation between the ability to update and fluid reasoning (0.59 , $p<.01$), which indicates a partial overlap of these abilities. On the other hand, the updating ability was not related to inhibition (-0.20 , $p>.05$). These results confirm the partial overlap of updating and fluid reasoning measures, but suggest a dissociation of EF in aging.

Keywords: updating ability; fluid reasoning, inhibition

MEASURING RATIONALITY: THE RELATIONSHIP BETWEEN THE MODIFIED CRT AND REASONING TASK PERFORMANCE

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The common version of the Cognitive Reflection Test (CRT) contains three problems which fit into the classical dual-process approach to thinking which posits two types of processing. Type 1 which is based on heuristics, and Type 2 which is based on analytical thinking. The CRT is designed to distinguish between participants according to the ability to overcome heuristic, and activate analytical thinking. Items from the CRT have become widely used and increasingly familiar among prospective participants which increases the demand for alternative forms based on similar principles. Thus, we modified the method (multiple choice with a clear heuristic choice available) while also changing the contents. The aim was to relate performance on this alternative CRT to other reasoning tasks in order to determine whether it captures similar processes. Participants ($N = 590$) had to solve a test with four novel CRT tasks, alongside three reasoning tasks: the Linda problem, the Base rate neglect task and the Covariation detection task. Five groups of participants were formed based on the number of correct CRT responses (0-4). One-way ANOVAs were conducted to determine whether reasoning task performance changed as a function of CRT performance. Results show significantly better reasoning performance as CRT performance increased. In the Linda task this manifested as less representativeness bias ($F(4, 582) = 9.54, p < .01, \eta^2 = .06$). In the Base rate neglect task we observed less stereotype-based thinking ($F(4, 582) = 7.35, p < .01, \eta^2 = .05$) and in the Covariation detection task it was reflected in less bias towards absolute values compared to ratios ($F(4, 582) = 8.29, p < .01, \eta^2 = .05$). An additional analysis grouped the participants according to whether they were mostly responding according to heuristics (3 or more heuristic-based responses) or analytics (3 or more analytic-based responses) in the CRT, creating more extreme groups for comparisons. The, so called, rational group performed better on all three reasoning tasks when compared to the heuristic group (all $t(374) > 4.94, p < .01, d > 0.46$). This modification of the CTR makes it resemble modern approaches in reasoning research and does well to differentiate heuristic- from analytic-based reasoners. However, even though there is a robust relation between the CRT and reasoning tasks future tests should incorporate more problems in order to cover the various processes involved in classical reasoning tasks.

Keywords: dual-process theory, Cognitive Reflection Test, base rate neglect task, Linda problem, covariation detection task

THE INFLUENCE OF ANALYTIC AND HEURISTIC REASONING
ON LEXICAL DECISION TASK

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Dual-process approach to reasoning postulates that human reasoning may appear in two distinct modes: heuristic, automatic and cognitively cheap (type 1), and analytical, deliberate and cognitively expensive (type 2). Answers on Cognitive Reflection Test (CRT) cue three types of answers: correct, heuristic (or typical incorrect) and atypical incorrect answers, assuming the types of reasoning used during solving the tasks. The aim of this study was to examine the cognitive load in CRT, and if and what kind of consequences the two types of reasoning have on subsequent simple cognitive task - the lexical decision (LD). Previous research shows that adding a reference point (RP) to CRT changes the distribution of the three types of answers in favor of correct answers, presumably because the RP serves a cue for engaging in analytical processing. For the three types of answers, we've hypothesized that response times in LD tasks would be the longest for correct, followed by the incorrect and then heuristic ones. Participants ($N=82$) completed 16 pairs of CRT tasks with RP (CRT_r) and without (CRT). Each task was followed by a LD task that consisted of medium frequency range nouns that were (1) the same as words in CRT, (2) semantically related to them, (c) semantically unrelated to them and (4) pseudo-words. The repeated factors were type of CRT, type of words in LD, type of answers on CRT. Three-way ANOVA revealed the main effect of the type of word ($F(2, 81) = 4.247, p = .016, \eta^2 = .06$). None of the interaction (three- and two-way) effects were registered. Reaction time for lexical decision was the fastest for the same words, and the slowest for semantically related words. As for the type of answers, two-way ANOVA revealed main effects of both the type of words ($F(2, 81) = 5.589, p = .005, \eta^2 = .067$) and the type of answers ($F(1, 81) = 4.756, p = .032, \eta^2 = .057$). RT for the same words was the shortest, followed by related words and for unrelated, presumably due to the priming effects. Preceded by the correct answers, the same and the related words, but not the unrelated, were recognized faster than after the heuristic answers, contrary to our expectations. These results suggest that the two types of reasoning affect the subsequent LD, and that this effect is different for Type 1 and Type 2 processes. Obtained results are also consistent with previous research in which the introduction of a reference point in CRT triggered the engagement of type 2 processes.

Keywords: dual processes, cognitive reflection test, heuristics, lexical decision

PERSONALITY PSYCHOLOGY

POVEZANOST PONAŠANJA NA DRUŠTVENIM MREŽAMA SA UPOREĐIVANJEM
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Jedna od funkcija socijalnih mreža je da predstavljaju psihološki prostor u kome korisnici mogu da zadovolje svoju osnovnu potrebu za interpersonalnim kontaktom. Ipak kvaliteta odnosa u virtuelnom prostoru nije isti kako onaj u fizičkom prostoru. Istovremeno socijalne mreže omogućavaju korisnicima da kreiraju virtuelnu savršenu sliku sebe. U virtuelnom prostoru korisnici su u velikoj meri izloženi mogućnosti za poređenje sa drugima, tj. sa savršenom slikom koju drugi formiraju o sebi. Polazeći od ovih saznanja, sproveli smo istraživanje sa ciljem ispitivanja povezanosti ponašanja na društvenim mrežama sa upoređivanjem s drugima i usamljenošću. Istraživanje je sprovedeno online. Poziv za učešće u istraživanju bio je podeljen preko Facebook-a. Uzorak je bio prigodan i obuhvatao je 343 ispitanika, 276 ženskog i 67 muškog pola, starosti od 18 do 63 godina. U istraživanju su korišćeni: *Upitnik za procenu virtuelnih ponašanja na društvenim mrežama* (sastavljen od pet subskala: zavisnost od društvenih mreža, virtuelno otuđivanje, socijalizacija putem društvenih mreža, samoprezentacija u cilju postizanja seksualne stimulacije i profil kao virtuelni self), *Skala sklonosti upoređivanja sa drugima* i *Skala socijalne i emocionalne usamljenosti* (sastavljena od tri subskale: socijalna usamljenost, usamljenost u ljubavi i usamljenost u obitelji).

Sve dimenzije virtuelnih ponašanja bile su značajno povezane sa sklonošću ka upoređivanju sa drugima ($r = .21-.42$). Zavisnost od društvenih mreža ($r = .15-.30$), virtuelno otuđivanje ($r = .28-.45$) i upotreba socijalnih mreža u cilju samoprezentacije radi postizanja seksualne stimulacije ($r = .11-.26$) bili su značajno pozitivno povezani sa svim dimenzijama usamljenosti. Sa druge strane, socijalizacija putem socijalnih mreža i profil kao virtuelni self značajno su korelirali sa usamljenošću u ljubavi (redom $r = .26$, $r = .19$) i porodičnom usamljenošću (redom $r = .25$, $r = .19$). Sklonost ka upoređivanju s drugima bila je značajno povezana sa sva tri aspekta usamljenosti ($r = .17-.28$). Sve korelacije su značajne na nivou .01.

Dobijeni rezultati su u skladu sa prethodnim istraživanjima povezanosti između virtualnog ponašanja i usamljenosti. Koristeći teoriju o socijalnom poređenju interpretiramo dobijene rezultate o povezanosti upoređivanja sa drugima i usamljenosti.

Keywords: društvene mreže, poređenje sa drugima, usamljenost

THE RELATIONSHIP OF BEHAVIOURS ON SOCIAL NETWORKS WITH
COMPARISON WITH OTHERS AND LONELINESS

The aim of this research was to examine the relationship between the different behaviours on social networks, comparison with others, and different dimensions of loneliness. The following instruments were applied to a convenient sample of 343 participants: *Questionnaire for virtual behaviour in social networks* (with five subscales: dependence of social networks, virtual alienation, socialization through social networks, self-presentation in order to achieve sexual stimulation and profile as a virtual self), *Scale of tendency for comparison with others* and *Scale of social and emotional loneliness* (with three subscales: social loneliness, loneliness in love and loneliness in family). The results have shown

significant correlation between different dimensions of virtual behaviour with tendency to compare with others, as well as with loneliness. Results are consistent with previous research about virtual behaviour and loneliness. Using the theory of social comparison, we interpreted the obtained results on the connection between comparison with others and loneliness.

Keywords: social networks, comparing with others, loneliness

THE POWER RELATIONS BETWEEN THE VOICES OF THE SELF AS STRATEGIES OF SELF-REGULATION: THE CASE OF TEACHER PROFESSIONAL BEHAVIOR

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In this study we explore how a new model of the multiple self can help to better understand self-regulation of human behavior. We start from the dialogical self theory and the social cognitive theory of personality. The dynamics of the multiple self is conceived in terms of the patterns of power relations between the voices as personifications of beliefs and guides for socially accountable behavior. The multi-voiced self is understood as a processing component of personality which is responsible for self-regulated behavior and its voices may be viewed as the interacting mediating processes. The goal of this work is to present the most common patterns of interaction between the voices as strategies of self-regulation on the example of teacher professional behavior. The research participants (9 elementary school teachers, all females, years of experience: 1-10 ($N=3$), 10-20 ($N=4$), >20 ($N=2$)) elicited the voices and described their relationships while being interviewed. We used a combine deductive-inductive thematic approach to analyze the data. Starting from preexisting categories of 'dominance' (ability to manage the actions of others), 'resistance' (ability to counter-act in relation to the dominant position), conflict and cooperation we inductively developed the matrix of the categories and main categories. Critical dialogues between the researchers were practiced as the multi-iteration procedure for establishing the intersubjective agreement. The main categories are: 1) functions of the voices; 2) forms of exercising power; 3) tactics; 4) the voices' relations and 5) constellations (patterns of interaction among the voices). The main category of constellations will be further elaborated. The most frequent constellations show that the regulation of teachers' professional behavior is manifested through the stable domination of voices who personify core professional values, implemented either by a common group of executors and facilitators ('The team' constellation) or by alternative executors and facilitators, often those who personify undesirable (rough, aggressive) acts, when the dominant ideology was temporally 'dethroned' by the opponents ('The Intervention team' constellation). The second most common regulatory strategy ensures the dispersion of power as a way to prevent its monopolization by a single ideological stance ('Clash of ideologies' constellation). This model of self-regulation may be used to improve teacher competencies and to prevent burnout.

Key words: multiple self, power relations, self-regulation, teacher professional behavior.

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OSOBI NE LIČNOSTI ADOLESCENATA KAO PREDIKTORI AGRESIVNOG PONAŠANJA

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Teorijsku osnovu rada čini Zakermanov alternativni petofaktorski model ličnosti i koncept agresivnog ponašanja koji se temelji na DSM-IV klasifikaciji mentalnih poremećaja. Cilj istraživanja je bio da se utvrdi prediktivna moć osobina ličnosti u predviđanju agresivnog ponašanja adolescenata. U istraživanju je učestvovalo 205 ispitanika oba pola (51.2% ispitanica i 48.8% ispitanika), uzrasta od 14 do 18 godina ($M=16.22$; $SD=1.27$). Podaci su prikupljeni pomoću instrumenata: Skala agresivnosti za decu i adolescente (SNOP – sa 4 podskale: Prkošenje i suprotstavljanje, Ophođenje, Žrtva i Nasilnik) i Zakerman-Kulmanovog upitnik ličnosti (ZKPQ-50-CC).

Rezultati regresione analize pokazuju da osobine ličnosti objašnjavaju 14.4% varijanse prkošenja kao aspekta agresivnog ponašanja ($F(5,199)=6.671$, $p<.01$), a iz grupe prediktorskih varijabli su se izdvojili agresivnost ($\beta=.321$, $p<.05$) i impulsivno traženje senzacija ($\beta= -.183$, $p<.05$). Osobine ličnosti objašnjavaju 10.9% varijanse ophođenja kao aspekta agresivnog ponašanja ($F(5,199)=4.880$, $p<.01$), a iz grupe prediktorskih varijabli su se izdvojili agresivnost ($\beta=.224$, $p<.05$) i impulsivno traženje senzacija ($\beta= -.243$, $p<.05$). Osobine ličnosti objašnjavaju 9.4% varijanse žrtve kao aspekta agresivnog ponašanja ($F(5,199)=4.116$, $p<.01$), a iz grupe prediktorskih varijabli su se izdvojili impulsivno traženje senzacija ($\beta= -.206$, $p<.05$) i socijabilnost ($\beta= -.191$, $p<.05$). Osobine ličnosti objašnjavaju 11% varijanse nasilnika kao aspekta agresivnog ponašanja ($F(5,199)=4.941$, $p<.01$), a iz grupe prediktorskih varijabli su se izdvojili agresivnost ($\beta=.234$, $p<.05$) i impulsivno traženje senzacija ($\beta= -.213$, $p<.05$). Osobe koje pokazuju visok nivo agresivnosti, a nižu tendenciju ka impulsivnom traganju za senzacijama biće skloniji ispadima besa, svađi sa odraslima, ljutnji, suprotstavljanju zahtevima autoriteta, agresivnom ophođenju koje uzrokuje štetu ljudima ili životinjama, kršenju pravila, ponovljenoj i trajnoj viktimizaciji vršnjaka. Osobe koje pokazuju veći stepen impulsivnog traganja za senzacijama i socijabilnosti, posledično neće se naći u ulozi žrtve u vršnjačkim odnosima. Dobijeni nalazi su u skladu sa prethodnim istraživanjima koja pokazuju da osobine ličnosti, traganje za senzacijama i agresivnost predviđaju pojavu agresivnog ponašanja.

Keywords: osobine ličnosti, agresivno ponašanje, adolescenti

PERSONALITY CHARACTERISTICS OF ADOLESCENTS AS PREDICTORS OF AGGRESSIVE BEHAVIOR

The theoretical basis of the paper is Zuckerman's alternative five-factor model of personality and the concept of aggressive behavior based on the DSM-IV classification of mental disorders. The aim of the study was to determine the predictive power of personality traits in predicting aggressive adolescent behavior. The sample consisted of 205 respondents, aged from 14 to 18 years. Data were collected using the instruments: Aggression Scale for Children and Adolescents and the Zuckerman-Kulman Personality Questionnaire.

People who show a high level of aggression, and a lower tendency to sensation seeking will be more prone to outbursts of anger, quarrels with adults, anger, opposition to the demands of authority, aggressive behavior that causes harm to people or animals, violation of rules, repeated and permanent victimization of peers. Persons who show a greater degree of sensation seeking and sociability, consequently will not find themselves in the role of a victim in peer relationships.

Keywords: personality traits, aggressive behavior, adolescents

LOCATING THE DARK CORE OF PERSONALITY WITHIN THE SPACE OF VALUE ORIENTATIONS

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Recently, the Dark Core of Personality has been introduced as an underlying factor mapping the common features of various dark traits, thus describing one's tendency to ruthlessly pursue one's own interests, even when that harms others or for the sake of harming others, while having beliefs that justify those behaviors. Therefore, the aim was to explore the psychometric properties of Serbian translation of the Dark Core measure, as well as the location of this construct within the value orientations given the well-known relations between the dark traits and focusing on personal needs, but also a theoretical assumption regarding Dark Core factor stability and robustness. The sample consisted of 340 participants ($M_{age} = 30.25$, $SD = 10.94$, 30% males) who completed the Dark Core measure D-70 (70 items related to 12 traits: Amoralism-Crudelia, Amoralism-Frustralia, Egoism, Greed, Machiavellianism, Moral Disengagement, Narcissism, Psychological Entitlement, Psychopathy, Sadism, Self-Centeredness, Spitefulness) and the Portrait Values Questionnaire (40 items related to 10 values: Achievement, Power, Security, Conformity, Tradition, Benevolence, Universalism, Self-Direction, Stimulation and Hedonism). Reliability (α ranging from .48 to .78), representativeness (KMO ranging from .51 to .90) and homogeneity ($H5$ ranging from .64 to 1) were moderate for the majority of the D-70 traits. Exploratory factor analysis of the Dark Core dimensions yielded a salient one-factor solution (51.12% variance). Principal component analysis (Direct Oblimin rotation) conducted on dark traits and value orientation yielded a four-factor solution distinguishing the Dark Core factor from the three orientation factors (focus on opportunity, focus on social outcomes and focus on individual outcomes). Nine out of twelve dark traits loaded on the Dark Core factor with no secondary loadings. However, Greed and Psychological Entitlement cross-loaded on the Dark Core factor and factor that describes focus on individual outcomes (i.e., Achievement and Power), while Narcissism completely loaded on this factor. As expected, the results are indicating that the core features of dark personality are located out of value orientations space. However, Greed and Psychological entitlement cross-loadings and Narcissism loading on the factor that describes focus on individual outcomes are implying these dark traits can be seen as less malicious, closely related to status-seeking and reputation motives.

Keywords: Dark Core, Values, Narcissism, Psychological Entitlement, Greed

SELF-CONCEPT DIFFERENCES AMONG OFFENDERS, DRUG ADDICTS, STUDENTS
AND MENSA MEMBERS

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Self-concept, as a complex set of perceptions and beliefs about one's own abilities, based on interaction between cognitive evaluations and experiences, has a fundamental role in understanding one's worldview and behavior. Thus, it can be a good starting point in explaining adaptive and maladaptive functioning. The aim of the study was to examine the differences in self-concept among four groups: offenders (27.6%), drug addicts (21.8%), students (27.6%) and Mensa members (22.9%) in a total sample of 362 participants (aged 19 to 54, $M = 26.96$, $SD = 7.47$). The sample was convenient. The self-concept was assessed using 100-item Self-evaluative system, which includes 5 defence mechanisms based domains: emotionality, rigidity, misanthropy, moral relativism, externality, and 5 evaluative domains: general competence, physical attractiveness, social acceptance, physical strength and intellect. Cronbach alphas ranged from .78 to .88. One-way MANOVA revealed a group membership effect on overall self-concept ($F(30, 1025.06) = 2.69$, $p < .01$; Wilks' $\lambda = .47$, partial $\eta^2 = .224$), followed by significant ANOVA differences in all domains. Canonical discriminant analysis was used to determine which self-concept domains will discriminate four groups. Three discriminant functions were isolated. The first function ($R = .64$, Wilks' $\lambda = .47$, $\chi^2 = 269.51$, $p < .001$), primary defined by high externality and misanthropy, and low social acceptance, strongly differentiates offenders and addicts from students and Mensa members. The second function ($R = .39$, Wilks' $\lambda = .79$, $\chi^2 = 82.72$, $p < .001$), primary saturated by physical strength, rigidity and externality on positive pole, with emotionality and moral relativism on negative pole, differentiates offenders from addicts. The third function ($R = .26$, Wilks' $\lambda = .93$, $\chi^2 = 24.13$, $p < .001$), which positive pole is highly saturated by intellect, and negative pole by physical attractiveness and social acceptance, differentiates Mensa members from students. Our findings suggest that offenders' and addicts' self-concept is strongly relied on defense mechanisms that serve as justification for their own failure, whereas offenders attribute their failure to external factors, while addicts attribute it more to their own emotionality. In contrast, students' and Mensa members' self-concept is relied on their competence and evaluative domains with a subtle differences in importance of physical attractiveness, social acceptance and intellect.

Keywords: Self-concept, Offenders, Addicts, Students, Mensa members

„NAJSMEŠNIJI VIRUS U ISTORIJI“: NEGATIVAN EFEKAT DEVALVACIJE NA
STAV PREMA VAKCINACIJI PROTIV KORONAVIRUSA

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Koping strategije predstavljaju način suočavanja sa stresnim situacijama i delimično mogu objasniti efekte istog događaja na različite ljude. Osim toga, strategije prevladavanja utiče i na naše ponašanje odnosno (ne)preduzimanje određenih akcija. Početak pandemije COVID-19, u roku od nekoliko nedelja, u potpunosti je promenio naše živote i značajno uticao na smanjenje kvaliteta života. Kao potencijalno rešenje globalne zdravstvene krize istaklo se pronalaženje vakcine. U situaciji kada se suočavamo sa realnim gubicima (zdravlje, život, posao...) da li će naše koping strategije uticati na naše izbore? Autorima ovog rada nije poznato da je ispitivan uticaj koping strategija na stav prema imunizaciji vakcinom protiv koronavirusa.

Cilj ovog istraživanja bio je utvrditi da li je upotreba različitih strategija prevladavanja povezana sa stavom prema vakcinaciji. Istraživanje je sprovedeno onlajn, tokom prvog talasa pandemije, u martu i aprilu 2020. godine. Ukupno 740 ispitanika (537 ženskog pola), prosečne starosti 34.6 ± 12.4 godina, sa teritorije R. Srbije je učestvovalo u istraživanju. Polovina ispitanika je steklo visoko, 46.8% srednje i 3.2% osnovno obrazovanje. Stav prema vakcinaciji meren je pomoću stavke „Primiću vakcinu protiv koronavirusa kada bude dostupna“ na skali od 1 (uopšte se ne slažem) do 5 (u potpunosti se slažem). Koping strategije merene su Kibernetičkom skalom prevladavanja (CCS) na 5 dimenzija: promena situacije ($\alpha = .77$), prilagođavanje ($\alpha = .72$), devalvacija ($\alpha = .76$), smanjenje simptoma ($\alpha = .82$) i izbegavanje ($\alpha = .80$).

Rezultati regresione analize pokazali su da strategije prevladavanja mogu značajno da objasne stav prema vakcinaciji [$R = .03$, $F(734, 5) = 4.44$, $p < .001$]. Kao značajan prediktor izdvojila se jedino devalvacija ($b = -0.12$, $t = -2.37$, $p < .05$), dok ostale strategije prevladavanja pojedinačno nisu mogle da predvide stav prema vakcinaciji. Dodatno, nisu zabeležene polne, uzrasne, ni razlike u stepenu obrazovanja u pogledu stava prema vakcinaciji. Ovakvi rezultati upućuju na to da korišćenje obezvređivanja kao strategije prevladavanja može biti povezano sa formiranjem negativnog stava prema vakcinaciji: ukoliko neko obezvređuje opasnost virusa, smatra ga “običnim gripom”, “izmišljenim virusom” i sl. – manje će biti sklon tome da primi vakcinu. Rezultati istraživanja koji govore o negativnom uticaju devalvacije kao mehanizma prevladavanja na stav prema vakcinaciji su prvi ove vrste kada je u pitanju aktuelna pandemija.

Ključne reči: vakcinacija, COVID-19, strategije prevladavanja, devalvacija

“THE FUNNIEST VIRUS IN THE HISTORY”: NEGATIVE EFFECT OF
DEVALUATION ON THE ATTITUDE TOWARDS CORONAVIRUS VACCINATION

This study aimed to examine the relation between coping strategies and attitudes toward vaccinations. Online research was conducted during the first wave of Coronavirus pandemic in Serbia. A total of 740 participants completed the survey. Coping strategies were measured by CSS scale while attitude toward vaccination was measured with one-item scale: “I will get

a coronavirus vaccine once it gets available". Regression analysis showed that coping strategies could predict attitude toward vaccination [$R = .03$, $F(734, 5) = 4.44$, $p < .001$]. However, only devaluation was a significant predictor ($b = -0.12$, $t = -2.37$, $p < .05$). Such a result indicated that devaluation of some aversive situation (i.e. thinking that coronavirus is "just seasonal flu", "fictional virus" etc.) could decrease vaccination rate. To our knowledge this is the first study that investigated the relation of coping strategies and attitudes toward COVID-19 vaccination.

Keywords: vaccination, COVID-19, coping strategies, devaluation

MIXED RESULTS FOR THE HYPOTHESIS THAT COVID-19 PANDEMICS MAY ELEVATE REPRODUCTIVE MOTIVATION

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One of the key life history assumptions is that mortality rates are positively associated with fast life history dynamics (i.e. higher reproductive output - earlier start of reproduction and higher number of offspring). Since the Covid-19 pandemic has elevated mortality rates throughout the world, we tested this assumption using reproductive motivation, desired number of children and desired age of first reproduction, as the key criteria measures. We assessed reproductive motivation in Serbian young adults before the pandemic started ($N=362$: 65.7% females, $M_r=25.05$; $SD=6.64$), during the pandemic-caused state of emergency (the peak of the epidemic's first wave: $N=389$; 59.4% females; $M_r=25.97$; $SD=2.81$) and after the state of emergency (i.e., after the first wave: $N=430$; 66.4% females; $M_r=24.63$; $SD=6.70$). Furthermore, in the third time-point we measured experiences during the state of emergency (Death awareness, Fear for health, Containment-related behavior, and Familiar individuals infected) and additional measures of reproductive motivation: Reasons for ($\alpha=.92$) and against parenthood ($\alpha=.90$). The design was cross-sectional and the groups were matched by sex, education, and the sampling procedure.

We found the between-group differences (obtained by MANCOVA) which are congruent with life history theory: the desired age of first reproduction ($F_{(2, 1178)}=23.12$; $p<.01$) was lowest after the state of emergency ($M=28.87$; $SD=3.99$) compared to the two previous time-points ($M=29.77$; $SD=3.46$ for the first and $M=30.68$; $SD=3.97$ for the second time-point). However, there were no differences in the desired number of children ($F_{(2, 1178)}=0.41$; $p>.05$). Furthermore, the analysis of the links between experiences during the epidemic and reproductive motivation yielded the results which are incongruent with the life history theory predictions - adverse experiences during the state of emergency were negatively related to the reproductive motivation: Death awareness and Fear for health were negatively related to the Desired number of children ($r=-.12$; $p<.05$ and $r=-.11$; $p<.05$, respectively), while they are positively associated with the Reasons against parenthood ($r=.21$; $p<.01$ and $r=-.10$; $p<.05$, respectively). Since the findings were only partially in accordance with life history theory, we discuss possible reasons which may explain the heterogeneity of results, both theoretical and the ones which address methodological limitations of the study itself.

Keywords: life history theory, Covid-19 pandemic, reproductive motivation, adverse experiences

DIFFERENCES IN MENTAL TOUGHNESS OF ATHLETES

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Mental toughness is a crucial attribute for success in competitive sport. Mental toughness of athletes is an unshakeable perseverance and conviction towards goal despite pressure or adversity. Mentally tough athlete has a high sense of self-belief and an unshakable faith that they control their own destiny, these individuals can remain relatively unaffected by competition and adversity. The aim of this research was to analyze the relations between mental toughness of athletes and their gender, age, type of sports, and years spent in sport training. The sample consisted of 64 athletes, 57.8% men, 62.5% athletes of individual sports, 56.3% athletes who train less than 10 years, 71.9% athletes who are younger than 30 years. The Sports Mental Toughness Questionnaire, which was used to assess participants' mental toughness, is a 14-item tool that measures total mental toughness (Cronbach's alpha $\alpha = .92$). The participants had to respond to items on a four-point Likert-type scale ranging from 1 - "not at all true" to 4 - "very true". Men had higher scores than women on mental toughness (Cohen's $d=0.76$, $t(62)=3.05$, $p<.001$). These differences could be due to different socialization processes of men and women. Results showed that athletes of team sports were mentally tougher (Cohen's $d=0.67$, $t(62)=-2.62$, $p<.05$) than athletes of individual sports. Possible explanation of these differences is that athletes of team sports usually have social support from other team members and athletes of individual sports can't rely on others. Difference between athletes who are younger than 30 years and athletes who are older than 30 years in mental toughness was not statistically significant ($t(62)=-0.12$, $p=.94$). Also, trend-level differences between athletes who train less than 10 years and athletes who train more than 10 years in mental toughness were not statistically significant ($t(62)=-1.78$, $p=.08$). Therefore, it seems that learning experiences and/or biological changes are not reflected in changes in the mental toughness. Finally, age and years of experience were relatively highly correlated ($r=.60$, $p<.001$). Overall, the results suggest that there is a space to increase mental toughness of women and athletes of individual sports by systemic work.

Keywords: mental toughness, athletes, sex, age, years of training

NEW MEASURE OF SECONDARY TRAUMATIZATION: PSYCHOMETRIC
PROPERTIES AND EXTERNAL VALIDITY OF SECONDARY TRAUMATIZATION
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Secondary traumatization (ST) is a condition that results from prolonged exposure to traumatized individuals and which mimics symptoms of post-traumatic stress disorder (PTSD). Even though ST is conceptually linked to PTSD none of the existing measures of this construct proved to cover its manifestations in a manner that would correspond to any of the prominent models of PTSD. Thus, the present study aims to develop, psychometrically evaluate, and validate a new self-report measure of ST that would rely on DSM-5 criteria for

PTSD. A total of 223 professionals (age range 22–65 years, $M=38.99$, $SD=11.12$; 74.9% females) working directly with traumatized individuals, i.e., refugees, migrants, and asylum seekers by providing different services and assistance participated in the study. They completed a newly developed 20-item Secondary Traumatization Questionnaire (STQ) relying on DSM-5 symptoms of PTSD (intrusions – five items, avoidance – two items, negative alterations in cognitions and mood (NACM) – seven items, hyperarousal – six items); a single-item measures of depression and anxiety; 12-item self-perceived quality of life (QoL) ($\alpha=.86$), and Copenhagen Burnout Inventory ($\alpha=.91$). STQ showed high indices of item sampling adequacy ($KMO=.98$), internal consistency ($\alpha=.91$), and homogeneity ($H5=.71$). Six concurrent models of the latent composition of STQ were examined – a single factor model, four-factor models (DSM-5, Dysphoria), five-factor model (Dysphoric arousal), and six-factor models (Anhedonia, Externalizing behaviors). Except for a single-factor, all other models demonstrated fair fit indices, with the four-factor DSM-5 model [$\chi^2=317.21$, $p<.001$, $CFI=.91$, $TLI=.89$, $SRMR=.057$, $RMSEA=.065$ (.054-.076)] being empirically the most adequate one. Factors of intrusions, avoidance, NACM, and hyperarousal were significantly related to depression ($r=.22-.53$, $p<.01$), anxiety ($r=.29-.59$, $p<.01$), QoL ($r=-.21-.39$, $p<.01$), and burnout ($r=.33-.56$, $p<.01$). Additionally, STQ demonstrated incremental value in predicting depression [$R=.15$, $F(4,217)=12.27$, $p<.001$], anxiety [$R=.17$, $F(4,217)=14.94$, $p<.001$], and QoL [$R=.06$, $F(4,217)=4.38$, $p=.002$] over and above burnout [$R=.17$, $F(1,221)=45.59$, $p<.001$; $R=.21$, $F(1,221)=56.94$, $p<.001$; $R=.15$, $F(1,221)=40.33$, $p<.001$, respectively]. The psychometric quality of a newly developed STQ, comparability of its latent composition with PTSD symptom clusters, and its usefulness in the prediction of relevant mental health outcomes is discussed.

Keywords: secondary traumatization, secondary trauma, Secondary Traumatization Questionnaire (STQ), Posttraumatic Stress Disorder (PTSD)

DPS: KONSTRUKCIJA, PSIHOMETRIJSKE KARAKTERISTIKE I VALIDACIJA
INSTRUMENTA ZA PROCENU STRATEGIJA EMOCIONALNE REGULACIJE

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Emocionalna regulacija (ER) podrazumeva različite strategije se koriste u cilju pojačavanja, održavanja ili umanjivanja intenziteta pozitivnih i negativnih emocija. Najuticajniji model ER razlikuje pet grupa strategija, ali standardne operacionalizacije uključuju samo dve specifične – Preispitivanje i Suzbijanje. Cilj ovog istraživanja bio je konstruisati instrument koji meri sklonost ka korišćenju svih pet vrsta strategija ER koje su obuhvaćene modelom, pri čemu je za svaku grupu izabrana po jedna strategija kao predstavnik: Izbegavanje, Modifikacija, Distrakcija, Preispitivanje i Suzbijanje. U pilot studiji supskale Izbegavanje i Modifikacija pokazale su nezadovoljavajuće metrijske karakteristike, te nisu uključene u dalje analize. U finalnoj studiji proveravane su psihometrijske karakteristike revidiranog instrumenta DPS koji obuhvata supskale Distrakcija (10 stavki), Preispitivanje (12 stavki) i Suzbijanje (14 stavki), kao i njegova valjanost. Konvergentna valjanost proveravana je upitnikom Emocionalna regulacija ERQ (Emotion Regulation Questionnaire) i upitnikom Strategije prevladavanja stresa COPE (Cope Inventory), a divergentna upitnikom Internacioni skup ajtema ličnosti IPIP sa 50 ajtema koji procenjuje pet bazičnih crta ličnosti (50-item International Personality Item Pool Representation of Big-Five Structure). Uzorak je bio prigodan i sačinjavalo ga je 605 ispitanika (80.2% ženskog pola), uzrasta 15-44 ($M=18.7$, $SD=2.7$). Primenujući Alpha factoring metodu i kosu rotaciju Promax, eksploratornom faktorskom analizom izdvojena su tri faktora koja odgovaraju teorijski pretpostavljenim supskalama: Distrakcija ($\alpha=.75$, $KMO=.92$, $H5=.65$), Preispitivanje ($\alpha=.79$, $KMO=.93$, $H5=.84$) i Suzbijanje ($\alpha=.88$, $KMO=.78$, $H5=.84$). Sve korelacije dobijenih faktora i korespondentnih supskala bile su statistički značajne ($p<.01$) i iznose redom za faktor Distrakcija $r=.43$ sa Mentalnim isključivanjem (COPE), za faktor Preispitivanje $r=.56$ kako sa Preispitivanjem (ERQ), tako i sa Pozitivnom reinterpretacijom (COPE) i za faktor Suzbijanje $r=.69$ sa Suzbijanjem (ERQ), odnosno $r=-.50$ sa Iskazivanjem emocija (COPE). Značajne povezanosti ($p<.05$) dobijene su između Preispitivanja i svih pet crta ličnosti (-.20 za N, .09-.23 za ostale crte), Suzbijanja sa A, N i E (od -.14 do -.19), i Distrakcije sa E i C (.09, .21). Dobijeni rezultati ukazuju na dobre metrijske karakteristike testa i potvrđuju njegovu valjanost, otvarajući nova pitanja u vezi sa teorijskim postavkama polaznog modela.

Keywords: emocionalna regulacija, strategije prevladavanja, konstrukcija instrumenta, validacija instrumenta

DPS: CONSTRUCTION, PSYCHOMETRIC CHARACTERISTICS AND VALIDATION OF QUESTIONNAIRE FOR EMOTION REGULATION STRATEGIES ASSESSMENT

Emotion regulation (ER) refers to strategies used in order to modulate emotions. The influential ER model distinguishes five strategies, so the aim of this study was to construct an instrument that would assess individual differences in usage of those strategies. Since two subscales initially showed unsatisfactory metric characteristics, participants ($N=605$, 80.2% female, aged 15-44) filled out the DPS questionnaire that encompassed three subscales. Using Alpha factoring method and Promax rotation throughout exploratory factor analysis, three factors were extracted, correspondent to theoretically assumed subscales and interpreted as Distraction ($\alpha=.75$, $KMO=.92$, $H5=.65$), Reappraisal ($\alpha=.79$, $KMO=.93$, $H5=.84$) and Suppression ($\alpha=.88$, $KMO=.78$, $H5=.84$). High correlations with correspondent strategies measured with ERQ and COPE inventory and low correlations with five personality traits assessed by IPIP questionnaire suggest good convergent and divergent validity. Overall, results indicate that DPS has good psychometric properties, whereby they also open new questions regarding the theoretical settings of the initial model.

Keywords: emotion regulation, coping strategies, questionnaire construction, questionnaire validation

KONSTRUKCIJA I VALIDACIJA INSTRUMENTA ZA PROCENU STILOVA UČENJA
SU-19

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Stil učenja se odnosi na način na koji osoba pristupa gradivu tokom procesa učenja. Prethodna istraživanja pokazuju da je kriterijumska valjanost ovog konstrukta često narušena - uprkos činjenici da postoji veliki broj njegovih operacionalizacija, većina njih ne predviđa dovoljno uspešno akademsko postignuće đaka. Oslanjajući se na postojeće modele, cilj ovog istraživanja bio je konstrukcija i psihometrijska validacija instrumenta stilova učenja koji bi dobro predviđao školsko postignuće. Konstruisani instrument (SU-19), za razliku od prethodnih, koji koriste kategorijalni pristup i razdvajaju tipove učenja, stilove učenja operacionalizuje preko 7 dimenzija kroz koje se opisuje način na koji osoba uči. Instrument se sastoji od 52 stavke, na koje ispitanici daju odgovor putem petostepene Likertove skale. U istraživanju je učestvovalo 801 srednjoškolaca (75.5% devojčice, $M=16.82$, $SD=1.52$), od kojih su 160 bili nadareni stipendisti. Faktorskom analizom (ML metoda, Oblimin rotacija) izdvojeno je 7 nisko koreliranih faktora koji objašnjavaju 43% ukupne varijanse: Vremenska

organizacija ($\alpha=.907$), Individualnost ($\alpha=.898$), Povezivanje ($\alpha=.776$), Dubina obrade ($\alpha=.778$), Strategije ($\alpha=.770$), Apstraktnost ($\alpha=.766$) i Motivacija ($\alpha=.721$). Konvergentna valjanost dimenzija potvrđena je statistčki značajnim ($p<.01$) pozitivnim korelacijama sa odgovarajućim dimenzijama Inventara ciljeva i strategija učenja (.224-.810) i Kolbovog inventara (.114-.303) i facetima crta savjesti (.322-.583) i otvorenosti (.202-.448) HEXACO modela. Prethodna istraživanja pokazuju da su upravo savjest i otvorenost crte najsnažnije povezane sa ispitivanim konstruktom. Pokazalo se da je na osnovu skora na dimenzijama SU-19 moguće uspešno predvideti školski uspeh na polugodištu ($F(6,794)=43.312$, $p<.01$, adj. $R=.277$), a kao najbolji prediktori pokazuju se dimenzije Povezivanje gradiva ($\beta=0.280$, $p<.01$) i Motivacija ($\beta=0.291$, $p<.01$). Rezultati kanoničke diskriminacione analize ukazuju na dobru dijagnostičku valjanost instrumenta – sa 82.4% tačnosti razlikuje nadarene srednjoškolce od opšte učeničke populacije. Pored toga, test dobro razlikuje učenike prirodno-matematičkog smera gimnazija od ostalih srednjoškolaca (61.7%). Zaključujemo da SU-19 inventar stilova učenja pokazuje dobru konstruktu, prediktivnu i dijagnostičku valjanost, što čini ovaj test pogodnim za procenu stilova učenja srednjoškolaca, sa značajnom potencijalnom primenom u procesu predviđanja individualnog školskog postignuća.

Ključne reči: stilovi učenja, akademsko postignuće, učenje

CONSTRUCTION AND VALIDATION OF LEARNING STYLE ASSESSMENT INSTRUMENT SU-19

The aim of this study was construction and validation of an instrument for assessing high-school students' learning styles (SU-19). The instrument consists of 7 dimensions that measure a person's approach to learning through 52 items. Total of 801 pupils took part in the study, 160 of which were gifted scholarship students. Results confirm sound psychometric properties and validity of the scale. Factor analysis (ML method, Oblimin rotation) identified 7 factors that explain 43% of the total variance: Time organization ($\alpha=.907$), Individuality ($\alpha=.898$), Connecting ideas ($\alpha=.776$), Depth of processing ($\alpha=.778$), Strategies ($\alpha=.770$), Abstractness ($\alpha=.766$) and Motivation ($\alpha=.721$). The scale significantly contributed to prediction of academic achievement ($F(6,794)=43.312$, $p<.01$, adj. $R=.277$). Discriminant analysis demonstrated its ability to differentiate between gifted students and the general student population with 82.4% success rate. We conclude that SU-19 can be used to assess learning styles of pupils and serve as a useful tool for predicting individual academic achievement.

Keywords: learning styles, academic achievement, studying

THE DARK SIDE OF SPORT: DARK TETRAD IN PROFESSIONAL AND AMATEUR
ATHLETES IN DIFFERENT SPORTS

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Dark tetrad is a set of related but distinct personality traits that includes psychopathy, narcissism, Machiavellianism, and sadism. People scoring high on these socially malevolent traits tend to be low in empathy, agreeableness, honesty/humility and are prone to antisocial behaviours. However, in some social situations, for example, sports competitions, dark traits could prove to be a competitive advantage.

The goal of our study was to examine whether athletes of different professional status, as well as athletes in different types of sport (individual vs team, contact vs non-contact), differ in Dark tetrad traits. 117 athletes from various sports disciplines ($M_{\text{age}} = 22.96$, $SD_{\text{age}} = 5.36$) completed the *Short Dark Triad* to measure psychopathy ($\alpha = .65$), narcissism ($\alpha = .63$), and Machiavellianism ($\alpha = .63$), the *Comprehensive assessment of sadistic tendencies* for assessing physical ($\alpha = .82$), verbal ($\alpha = .76$), and indirect sadism ($\alpha = .71$). Additionally, they self-assessed their competitive success relative to their peers practicing the same sport on a visual slider (1 – 100) and answered questions about their professional status.

Results indicate that athletes in team sports score higher on psychopathy [$F(1, 115) = 3.98$, $p < .05$] compared to individual sports. Further, athletes in contact sports score higher on measures of verbal [$F(1, 114) = 9.54$, $p < .01$] and indirect sadism [$F(1, 115) = 6.46$, $p < .05$] compared to non-contact sports. Regarding sport performance, self-rating of athletic success is positively related to narcissism ($r = .26$, $p < .01$) and negatively to Machiavellianism ($r = -.20$, $p < .05$). Analysis of professional status indicators (yes/no questions) points that athletes who have a signed contract [$F(1, 115) = 5.10$, $p < .05$], whose primary income comes from sport [$F(1, 115) = 5.07$, $p < .05$] and who think of themselves as professional athletes [$F(1, 115) = 6.95$, $p < .01$] score higher on narcissism.

This study expands and supplements few previous studies by stressing the importance of specific aspects of Dark Tetrad for different aspects of sport participation. As for the nature of the sports game, psychopathy and verbal and indirect sadism, as traits manifested by directly engaging with the social environment, appear relevant. Regarding professional status, the most important correlate was narcissism, as a more inward-oriented trait. In summary, our results indicate that dark traits can provide an adaptive advantage in sports competitions.

Keywords: Dark Tetrad, sport performance, athletes, individual/team sports, contact/non-contact sports

DARK TETRAD: THE RELATIONSHIP WITH PARENTING STYLE

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Dark Tetrad consists of four personality traits responsible for socially aversive behavior – Machiavellianism (manipulating and deceiving others), Narcissism (entitlement, grandiose self), Psychopathy (impulsivity, thrill seeking) and Sadism (enjoying in hurting others or watching others being hurt). These traits are constructed to measure subclinical manifestations and are distributed in „normal“ population. Development of dark traits is influenced by environmental factors. Thus, the aim of this study was to examine the relationship between Dark Tetrad and a construct which can be considered as social environment – parenting style. The final sample consisted of 256 participants ($M_{age} = 23.63$, $SD_{age} = 5.58$, 22% males). Inventories used were Short Dark Tetrad (7 items for each trait, α ranging from .75 to .81) and Parent style inventory (30 items for each parent, measuring 3 factors – Responsiveness, Autonomy-granting and Demandingness, α ranging from .72 to .75). Machiavellianism was related with mother's Responsiveness ($r = -.142$, $p < .05$) and Autonomy-granting ($r = -.248$, $p < .01$), father's Autonomy-granting ($r = -.227$, $p < .01$) and Demandingness ($r = .130$, $p < .05$), and marginally related to father's Responsiveness ($r = -.121$, $p = .054$). Narcissism was related solely with father's Responsiveness ($r = .132$, $p < .05$). Psychopathy was related with mother's Responsiveness ($r = -.211$, $p < .01$) and Autonomy-granting ($r = -.169$, $p < .05$) and father's Autonomy-granting ($r = -.125$, $p < .05$). Sadism was related solely to father's behavior, namely Autonomy-granting ($r = -.229$, $p < .01$) and Demandingness ($r = .136$, $p < .05$). These findings suggest that there are relations between Dark Tetrad and parenting style, and are largely in compliance with previous research. Out of all parenting style variables, Autonomy-granting seems to be the most important one in terms of both frequency and intensity of correlations with Dark Tetrad traits, which is discussed in terms of an impact parent-child conflict over child's autonomy has during and after adolescence. Given the fact that Sadism is the newest and because of that – the least examined Dark Tetrad trait, the present study gave additional insights in how Sadism is connected with father's parenting style.

Keywords: Dark Tetrad, parenting style, personality, social environment

EFFECT OF HEXACO AND DARK TRIAD TRAITS ON RISK PERCEPTION AND FEAR OF COVID-19 PANDEMIC

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Recent findings showed opposite conclusions about the role of personality traits in the explanation of various reactions to the COVID-19 pandemic. While one group of research showed significant relations between the basic personality traits and reactions on the pandemic, others highlighted the negligible role of personality traits and showed that situation variables determined behaviors related to pandemic. More specific traits seem to have a higher contribution in the explanation of pandemic-related behavior. For example, maladaptive behaviors during a pandemic can be linked to the Dark Triad traits

(Machiavellism, psychopathy, and narcissism). This study aimed to determine the relations between basic and dark personality traits on the one side and risk perception and fear of the coronavirus on the other side. On a sample of 372 participants (49.7% males) from the general population (age range 18-70, $M = 27.11$, $SD = 11.06$), the Brief HEXACO Inventory (BHI), Dirty Dozen Dark Triad (DDTD), two items from the Fear of the Coronavirus Questionnaire (FCQ), and measure of risk perception during the pandemic were applied. Factor analysis (principal axis method) of risk perception measure revealed a two-factor solution: health risk (risk for self and others, including health consequences) and general risk (economy and health-system risks as well as the risk of a future pandemic). Correlation between the factors was .42. Hierarchical regression was conducted with HEXACO traits in the first and Dark Triad traits in the second step, while fear of coronavirus and two risk factors were used as separate criteria. Results showed that predictors explained a relatively small variance of criteria (3-8%). Fear of the coronavirus was predicted by Honesty-Humility ($\beta = -.18$), Emotionality ($\beta = .20$), and Openness to Experience ($\beta = -.09$), as well as by psychopathy ($\beta = -.14$). Emotionality ($\beta = .27$) and narcissism ($\beta = .16$) explained the health risk, and only Emotionality ($\beta = .15$) had a significant contribution to the explanation of the global risk. Overall, results are consistent with previous findings of the small contribution of personality traits to the explanation of pandemic-related reactions. However, the dominant predictor was Emotionality, while among Dark Triad traits psychopathy and narcissism showed incremental contributions to the prediction.

Keywords: HEXACO, Dark Triad, fear, risk perception, COVID-19

LATENT STRUCTURE OF THE ‘COMMON SENSE’ OPINIONS AND BELIEFS ABOUT CORPORAL PUNISHMENT OF CHILDREN

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Scientific evidence shows that corporal punishment of children (CP) is inefficient and linked with harmful outcomes. However, many parents still favor the use of CP. To explain such a discrepancy between the evidence and practice, it is useful to explore the ‘common sense’ opinions and beliefs that people use to justify or condemn the use of CP. Therefore, the goal of this study is twofold. First, we wanted to determine the latent structure underlying the common, colloquial opinions and beliefs that people have regarding the use of CP. We relied upon a preexisting collection of around 50 ‘common sense’ statements about CP, collected from various sources (social media comments, interviews, discussions, etc.), which we revised to 33 statements used for this study. Research has shown that support for CP is predicted by the experiences with CP in childhood and the levels of trait aggressiveness. Therefore, the second goal was to establish if the same associations hold true for the ‘common sense’ opinions and beliefs about CP as a criterion. The sample consisted of 1376 participants from the Republic of Srpska (age from 18 to 40; 71% women; 27% currently being parents). The CFA suggested that opinions and beliefs about CP have a well-fitting hierarchical latent structure, with three highly correlated first order factors and one second order factor – which is responsible for about 81% of the items’ variance and represents general support for CP. First order factors were identified as: 1) Harsh CP (e.g., use of implements, CP as parents’ right, children should fear their parents, boys should be spanked

harder than girls), 2) Rationalizations for CP (e.g., necessity and usefulness of CP), and 3) Rejection of CP (e.g., futility, ineffectiveness, and harmfulness of CP). As the best fitting (CFI=.965, TLI=.961, RMSEA=.065, SRMR=.042), direct hierarchical/bifactor model was functionally the same (i.e., ‘strongly’ invariant) regardless of participants’ gender, age, and parental status. In line with previous findings, both CP in childhood and trait aggressiveness predicted the ‘common sense’ opinions and beliefs about CP, explaining 37.2% of the second order factor, after adjusting for age, gender, and number of children. Since the latent structure of ‘common sense’ opinions and beliefs about CP is well defined and meaningfully predicted by other variables, we encourage the further study of this construct as potentially important facet of the parenting practices.

Keywords: corporal punishment of children, spanking, opinions and beliefs, aggressiveness, latent structure

EMPATHY OF THE DEVIL: SEX DIFFERENCES IN THE DARK TETRAD AND EMPATHY

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One of the key features of the Dark Tetrad traits (i.e. Machiavellianism, narcissism, psychopathy and sadism) is low empathy, and there is evidence that empathy mediates sex differences in the Dark Triad traits. The aim of this research was to further examine the mediating role of different types of empathy in explaining sex differences in the Dark Tetrad traits. Data was collected online as a part of a larger research project, on a convenience sample of 144 students (age: $M = 22.18$, $SD = 2.26$, 43% male). The Dark Tetrad was measured using Short Dark Triad (α range from .66 to .80) and The Assessment of Sadistic Personality ($\alpha = .85$), while empathy was measured using a relatively novel measure – Affective and Cognitive Measure of Empathy assessing cognitive empathy ($\alpha = .89$), affective resonance (i.e. compassion; $\alpha = .84$) and affective dissonance (i.e. the experience of a contradictory emotional responses – e.g. feeling annoyed with others’ happiness; $\alpha = .86$). At the level of bivariate relationships, male sex was significantly associated with lower affective empathy, namely resonance ($r = -.27$, $p = .001$), and dissonance ($r = -.36$, $p < .001$), and with higher levels of Machiavellianism ($r = .19$, $p = .022$), psychopathy ($r = .21$, $p = .013$), and sadism ($r = .32$, $p < .001$). In order to account for shared variance between the dark traits (as well as between different types of empathy), mediation was examined using single model path analysis, where all four dark traits were simultaneously treated as outcome variables, and all three types of empathy as mediators in the relationship between sex and the dark traits. Sex and three types of empathy explained 10.8% of narcissism variance, 26.4% of Machiavellianism variance, 42.0% of psychopathy variance, and 70.6% of sadism variance. Dissonance was significant mediator of sex differences in Machiavellianism ($b = 0.23$, $z = 3.21$, $p = .001$), as well as in sadism ($b = 0.34$, $z = 3.95$, $p < .001$). Sex differences in psychopathy were mediated by both resonance ($b = 0.11$, $z = 2.52$, $p = .012$), and by dissonance ($b = 0.16$, $z = 2.70$, $p = .007$). Albeit obtained on a relatively small sample, these results further clarify sex differences in Dark Tetrad traits in terms of sex differences in empathy, highlighting specificities of each of these traits which are discussed.

Keywords: Dark Tetrad, empathy, sex differences

FROM MUSIC-AND-I TO MUSIC-IN-ME: CHANGES IN MOTIVATION FOR MUSIC ENGAGEMENT AND LEARNING OVER TIME

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Research in music education has documented the importance of motivational resources for maintaining the dedication to practice at a level that can sustain active musical involvement into adulthood. However, little is known of the ways in which participation in, experiences of, and interaction with music evolve over time supporting musically gifted to cope with the many challenges they face as part of their learning. Therefore, the aim of the study was to explore how musically gifted students perceive the origins and development of their motivation for engaging and enduring with music over time. Through an online survey, the responses of 88 undergraduate music students from the Faculty of Music in Belgrade were collected. The respondents are enrolled in the studies focused on music performance (49) and music theory (39), with majority of them (57) attending the final year of their studies, 5 attending the third year, 17 the second, and 9 students attending the first year of the study. The survey included open-ended questions on the initial and present motivation in music, periods of motivational constraint, and support available through the process of music education. The data were analysed through thematic analysis and resulted in two major themes: Music-and-I – describing the motivation for engaging in music (175 units of analysis) and Music-in-Me – describing functions that music fulfills in musically gifted students' everyday lives (295 units of analysis). While describing the initial motivation in music, participants predominantly described the relationship between them and music, e.g. *Music because it aroused positive emotions in me*, *Music because it was unknown to me*, *Music because I am talented*. The findings suggest that over time music comes to be a means by which gifted students formulate and express their musical identities. Moreover, it becomes an important part of musically gifted students' identity through satisfying their basic needs, regulating their moods and emotions, establishing and developing an individual's sense of identity, creating a context for musical development, and establishing and sustaining meaningful social relations. The findings will be discussed in relation to social constructionist approaches to identity formation.

Keywords: musically gifted, motivation, identity development

ANALIZA ISTRAŽIVANJA PROFESIONALNOG IDENTITETA NASTAVNIKA

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Predmet ovog rada je istraživanje toga kako se fenomen profesionalnog identiteta nastavnika ispitivao u proteklih 25 godina. Pretragom naslova i ključnih reči članaka u elektronskim bazama referentnih naučnih časopisa (Science Direct, EBSCO i SAGE journals), izdvojen je

uzorak radova koji se bave profesionalnim identitetom nastavnika. Konačan uzorak je činilo 227 radova nastalih u periodu od 1994. do decembra 2020. godine. Korišćene tehnike obrade podataka su analiza sadržaja i frekvencijska analiza. Unapred utvrđene jedinice analize su vrsta rada (empirijski ili teorijski), metodologija (korišćene metode i tehnike prikupljanja podataka), specifičan predmet istraživanja i faza profesionalnog razvoja (budući nastavnici, nastavnici početnici i iskusni nastavnici). Utvrđeno je da su radovi koji se bave identitetom nastavnika u prethodnih 25 godina pretežno empirijski orijentisani (86%), dok se manji broj njih bavi teorijskim razmatranjima i metaanalizama. Kvalitativni pristup je dominantan u aktuelnim istraživanjima identiteta nastavnika (82%). Najveći broj studija ima male uzorke ispitanika (uzorak do deset ima više od polovine kvalitativnih studija). Polustrukturirani intervju je najčešće korišćena tehnika, na koju se oslanja trećina svih radova u ovoj oblasti. Pored intervjua, često se koriste i upitnici, sistematsko posmatranje, reflektivni eseji i dnevnici. Identitetom u inicijalnom obrazovanju nastavnika bavi se najveći broj analiziranih radova (47%), a sledeća po učestalosti su istraživanja koja se bave identitetom iskusnih nastavnika (32%), dok se identitet nastavnika početnika i razvoj identitet kroz različite faze profesionalnog razvoja najmanje istražuju. Osnovne teme koje se ispituju su: formiranje i razvoj identiteta nastavnika, zatim povezanost identiteta i različitih psiholoških karakteristika nastavnika (kao što su emocije, motivacija, percepcija posla, očekivanja od profesije, implicitne teorije o nastavi), povezanost identiteta i sociodemografskih karakteristika nastavnika i karakteristika okruženja, kao i specifičnosti razvoja profesionalnog identiteta u određenim disciplinama (najviše u oblasti engleskog jezika). Na kraju, uočava se jasan trend uvećavanja i diferenciranja istraživanja o identitetu nastavnika u savremenim svetskim istraživačkim tokovima: čak 80% analiziranih radova datira iz druge dekade 21. veka, preosali su mahom ih prve dekade 21. veka, dok je svega par radova objavljeno 90-ih godina 20. veka.

Ključne reči: profesionalni identitet nastavnika, analiza sadržaja, pregled istraživanja

ANALYSIS OF RESEARCH ON TEACHERS' PROFESSIONAL IDENTITY

The aim of this paper is to provide a review of teachers' professional identity research in the past 25 years. The sample consisted of 227 papers published in 1994 – 2020 period obtained via titles and keywords search in relevant scientific articles databases (Science Direct, EBSCO and SAGE journals). Content analysis and frequency analysis were used. The results suggest that current studies on teacher identity are mostly empirically oriented and that qualitative approach is dominant with a small sample size. A semi-structured interview is the most frequently used technique. Initial teacher education identity is the most researched area in the professional development continuum. The main research topics are formation and development of teacher identity, the connection between identity and various psychological and sociodemographic characteristics of teachers and environmental characteristics and specifics of professional identity development in certain disciplines. There is a clear trend of increasing and differentiating research on the teacher identity.

Keywords: teachers' professional identity, content analysis, research review

SOMEWHERE "IN-BETWEEN"- EMERGING ADULthood IN SERBIA

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Emerging adulthood is a specific developmental period identified in the decades within young people living in industrialized societies. Arnett identified five distinctive features - it is the age of identity exploration, instability, self-focus, possibilities, and feeling in between. Although confirmed in numerous studies, this life stage is sensitive to cultural specifics, since different cultures have different understandings of what it means to be an adult. The goal of this research was to investigate does the emerging adulthood exist in our society and what characterizes it? To achieve it, we have investigated how young people in Serbia think and feel about adulthood and whether the key characteristics of emerging adulthood could be identified in their experience. The sample of 15 young people (11 female, mean age 21.8) participated in the semi-structured interview. The interview focused on distinctions between adolescence and adulthood, key characteristics of both periods, as well as characteristics of feeling "in-between". Interviews were recorded, transcribed and thematic analysis was conducted to identify major themes. Results showed that our subjects recognize "something in-between" period in their life. They are not adolescents anymore, but they don't feel like adults. To be an adolescent means to be immature, irresponsible, and carefree. They feel bound to adolescence by still living with parents, being rebellious, and without obligation. As developmental tasks of emerging adulthood, they identified work on oneself, defining where to go and what to do, achieving independence, making plans, deciding on important issues in life. This "in-between" period is characterized by confusion, insecurity, indecision, fear of the future. On the positive side, they still can have a good time, careless of consequences, without responsibilities and serious relationships. As for specifics of growing up in our context, young people perceive social transition, fewer opportunities for financial independence, and overprotective parenting. To be an adult means to be responsible for oneself and others, financially independent and have a stable relationship. These findings indicate that emerging adulthood exists in our context, with key characteristics similar to those identified by Arnett. Results are discussed in a light of the meaning of the emerging adulthood period for the young generation in Serbia and its specificities in our cultural context.

Keywords: emerging adulthood, adolescence, identity, responsibility, independency

SAMOPROCENE PROFESIONALNE IDENTIFIKACIJE NASTAVNIKA I SIGURNOSTI U NASTAVNIČKE KOMPETENCIJE

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U istraživanju su ispitivane samoprocene profesionalne identifikacije nastavnika predmetne i razredne nastave u centralnoj Srbiji i njihove samoprocene sigurnosti u nastavničke kompetencije. Nezavisne varijable su faza profesionalnog razvoja (studenti, početnici do dve godine staža u nastavi, iskusni nastavnici sa 5–15 i preko 25 godina staža) i vrsta nastave (predmetna i razredna nastava). Uzorak je činilo ukupno 95 ispitanika, od čega 46 učitelja i

49 predmetnih nastavnika, odnosno 23 studenta i po 24 ispitanika u preostale tri potkategorije. Kao jednostavne mere percipirane izraženosti profesionalnog identiteta i sigurnosti u nastavničke kompetencije korišćene su skale samoprocene, koje su se sastojale od po jedne tvrdnje *Ja sam nastavnik/učitelj* i *Siguran/na sam u svoje veštine, znanje i sposobnosti za posao nastavnika* (1 – *U potpunosti se odnosi na mene, to sam ja*, 10 – *Uopšte se ne odnosi na mene, to nisam ja*). Dobijen je rezultat da samoprocene profesionalne identifikacije rastu sa godinama radnog staža: studenti $AS = 7.79$, $SD = 2.033$, početnici $AS = 8.61$, $SD = 1.305$, srednje iskusni $AS = 9.02$, $SD = 2.177$ i iskusni $AS = 9.54$, $SD = 0.588$. Analiza varijanse je pokazala da ukupne razlike jesu statistički značajne ($F(3,88) = 4.618$; $p < .01$; $\eta^2 = .136$). Post-hoc testom najmanjih značajnih razlika (LSD) utvrđeno da su statistički značajne razlike između studenata i obe grupe iskusnih nastavnika ($p < .01$) i između početnika i vrlo iskusnih nastavnika ($p < .05$). Utvrđeno je da sigurnost u profesionalne kompetencije, takođe, raste sa godinama radnog staža: studenti $AS = 7.46$, $SD = 1.558$, početnici $AS = 7.06$, $SD = 1.462$, srednje iskusni $AS = 8.21$, $SD = 1.654$ i iskusni $AS = 8.42$, $SD = 0.985$. Ukupne razlike su statistički značajne ($F(3,91) = 3.815$; $p < .05$; $\eta^2 = .112$). LSD testom je utvrđeno da su početnici manje sigurni u svoje profesionalne kompetencije u odnosu na obe podgrupe iskusnih nastavnika ($p < .01$). Takođe, utvrđene su statistički značajne razlike između studenata i najiskusnijih nastavnika ($p < .05$). Između nastavnika razredne i predmetne nastave nisu dobijene značajne razlike ni u samoprocenama profesionalne identifikacije (učitelji $AS = 8.7$, predmetni nastavnici $AS = 8.76$) ni u samoprocenama sigurnosti u profesionalne kompetencije (učitelji $AS = 7.73$, predmetni nastavnici $AS = 7.75$). Između ukupnih samoprocena identifikacije sa nastavničkom profesijom i sigurnosti u profesionalne kompetencije nije utvrđena korelacija ($r = .058$, $p > .05$).

Ključne reči: profesionalni identitet nastavnika, kompetencije nastavnika, samoprocene, nastavnici predmetne i razredne nastave,

SELF-ASSESSMENT OF TEACHERS' PROFESSIONAL IDENTIFICATION AND TEACHING COMPETENCE

The research examined self-assessment of professional identification of subject and class teachers in central Serbia and self-assessment of confidence in their teaching competence. The sample consisted of 95 participants (46 class teachers and 49 subject teachers). Results show that the level of teachers' professional identification gradually increases with years of service (students $M = 7.79$, beginners $M = 8.61$, intermediate $M = 9.02$ and experienced $M = 9.54$). These differences are statistically significant ($F(3,88) = 4.618$; $p < .01$; $\eta^2 = .136$). Self-confidence in professional competencies also increases with years of service: students $M = 7.46$, beginners $M = 7.06$, intermediate experienced $M = 8.21$ and experienced $M = 8.42$. These differences are, also, statistically significant ($F(3,91) = 3.815$; $p < .05$; $\eta^2 = .112$). On the other hand, there were no significant differences between class and subject school teachers in both self-assessments. Finally, no correlation was found between the overall level of identification with the teaching profession and self-assessment of confidence in professional competencies ($r = 0.058$, $p > .05$).

Keywords: teachers' professional identification, teaching competence, self-assessment, class teachers, subject teachers

ANALIZA IZAZOVA U OSIGURANJU KVALITETA U VISOKOM OBRAZOVANJU U SRBIJI

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Osnovni cilj Evropskog prostora visokog obrazovanja (EHEA) predstavlja razvoj kompatibilnih i međusobno uporedivih sistema visokog obrazovanja širom Evrope. Kako bi se obezbedili jedinstveni pokazatelji kvaliteta i izgradnja poverenja kao preduslov za mobilnost studenata i nastavnika, razvoj zajedničkih studijskih programa i međusobno priznavanje stečenih kvalifikacija, zemlje članice EHEA su usvojile zajednički okvir u skladu sa Standardima i smernicama za osiguranje kvaliteta u EAHEA (ESG). Srbija se suočava sa brojnim izazovima da odgovori na sve veća očekivanja i tempo promena u ovom dinamičnom okruženju i da potpomogne vlastiti razvoj. U tom kontekstu, Srbija nastoji da njena agencija za akreditaciju i proveru kvaliteta, Nacionalno akreditaciono telo (NAT), postane članica Evropske asocijacije za obezbeđenje kvaliteta u visokom obrazovanju (ENQA). Povod za ovaj rad je ENQA izveštaj iz februara 2020. u kome se ukazuje na potrebu za većom harmonizacijom rada NAT-a sa evropskim standardima. Predmet ovog istraživanja je identifikacija ključnih izazova u osiguranju kvaliteta u visokom obrazovanju u Srbiji, kao i načina za njihovo prevazilaženje. U istraživanju je primenjena metodologija analize dokumenata koja je obuhvatila nacionalnu legislativu, pravilnike NAT, NAT izveštaje o samovrednovanju, ENQA izveštaje o spoljašnjoj proveru agencije i uporednu analizu nacionalnih standarda i ESG 2015. Na osnovu pregleda dokumenata i sprovedenih analiza, identifikovane su četiri ključne oblasti u kojima je neophodno unapređenje: (1) odstupanje od duha ESG 2015 koji u fokus osiguranja kvaliteta stavljaju proces nastave i učenja, odgovarajuće okruženje za učenje i njegovu povezanost sa istraživačkim radom i inovacijama; (2) nedovoljno elaboriran i jasan koncept kvaliteta u visokom obrazovanju i sistem internog osiguranja kvaliteta na nivou visokoškolskih ustanova; (3) dominacija kontrolne nad razvojnom ulogom NAT-a u sistemu spoljašnjeg osiguranja kvaliteta i (4) primena mehanizama za sprovođenje provere kvaliteta (karakteristike procedura i standarda kvaliteta i obezbeđivanje kvaliteta rada recenzenata). U radu se analiziraju i diskutuju ovi izazovi i nude moguća rešenja - preporuke za njihovo prevazilaženje. Detektovani problemi nisu tehničke već konceptualne prirode i zahtevaju saradnju, pregovaranje i usaglašeno delovanje različitih partnera da bi se ostvario bolji kvalitet visokog obrazovanja koje predstavlja jedan od glavnih razvojnih resursa Srbije.

Ključne reči: visoko obrazovanje, osiguranje kvaliteta, Nacionalno akreditaciono telo (NAT), Standardi i smernice za osiguranje kvaliteta u Evropskom prostoru visokog obrazovanja (ESG 2015), Srbija

RAZLIKE U RAZVOJNIM PREDNOSTIMA KOD UČENIKA SA I BEZ TEŠKOĆA U SOCIJALNOM I EMOCIONALNOM RAZVOJU

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Model razvojnih prednosti predstavlja jedan od vodećih pristupa nastalih u okviru perspektive pozitivnog razvoja. Istraživački nalazi dosledno potvrđuju vezu između broja razvojnih prednosti koje mladi ostvaruju i pozitivnih razvojnih ishoda, odsustva različitih problema i jačanja rezilijentnosti. Imajući u vidu naučne nalaze o protektivnim efektima razvojnih prednosti sprovedeno je, tokom oktobra 2019. godine, istraživanje sa ciljem ispitivanja razvojnih prednosti kod učenika sa i bez teškoća u socijalnom i emocionalnom razvoju. Uzorak je činilo 785 učenika oba pola (51.3% dečaka) iz sedam osnovnih škola sa teritorije grada Beograda, uzrasta od 12 do 15 godina ($M = 13.4$). Prisustvo teškoća u emocionalnom i socijalnom razvoju ispitano je Upitnikom snaga i teškoća ($\alpha = .71$), dok su razvojne prednosti procenjene upitnikom Profil života učenika: stavovi i ponašanja ($\alpha = .93$). Dobijeni rezultati pokazuju da učenici sa teškoćama imaju ostvareno 16 razvojnih prednosti, dok učenici bez teškoća dostižu 22 prednosti ($t(677) = 11.39, p < .001$). Učenici sa teškoćama manje su zastupljeni u svim kategorijama razvojnih prednosti, a posebno izražene razlike su u pogledu postojanja pozitivnog ličnog identiteta (17.2% učenika sa teškoćama naspram 59.7% bez), jasnih granica i visokih očekivanja od strane porodičnog, školskog i vršnjačkog okruženja (26.6% naspram 54.3%), podrške socijalnog okruženja (18.1% naspram 53%) i vrednovanja od strane zajednice (18.6% naspram 38.4%). Od 40 razvojnih prednosti, postoje tri na kojima su učenici sa teškoćama neznatno zastupljeniji (učesće u umetničkim aktivnostima, izrada domaćih zadataka i čitanje iz zadovoljstva). U kategoriji učenika sa nisko razvijenim prednostima (do 10 prednosti) nalazi se 12.8% učenika sa teškoćama (naspram 3.9% učenika bez teškoća), a u kategoriji od 10 do 20 prednosti 61.7% (naspram 31.6%). Prosečno razvijene prednosti (od 20 do 30 prednosti) ima svega 25.2% učenika sa teškoćama (naspram 49.7%), dok u kategoriji visoko razvijenih prednosti nema nijednog učenika sa teškoćama (naspram 14.9% učenika bez teškoća). Na osnovu nalaza može se zaključiti da učenici sa teškoćama u socijalnom i emocionalnom razvoju ostvaruju manje značajnih odnosa, veština, mogućnosti i vrednosti koje im pomažu da izbegnu rizična ponašanja, ojačaju rezilijentost i unaprede svoj lični prosperitet u odnosu na svoje vršnjake bez teškoća, te da je potrebno kontinuirano raditi na unapređenju dostupnosti razvojnih prednosti ovim učenicima.

Ključne reči: razvojne prednosti, učenici, teškoće u socijalnom i emocionalnom razvoju

DEVELOPMENTAL ASSETS IN STUDENTS WITH AND WITHOUT SOCIAL AND EMOTIONAL DIFFICULTIES

Research findings consistently confirm the link between the number of developmental assets that young people achieve and positive developmental outcomes, absence of various problems and strengthening of resilience. Research was conducted in 2019 with the aim of examining the developmental assets of students with and without difficulties in social and emotional development. The sample consisted of 785 students (51.3% of boys) from primary

schools in the city of Belgrade, aged 12 to 15 ($M = 13.4$). Strengths and Difficulties Questionnaire ($\alpha = .71$) and Profiles of Student Life: Attitudes and Behaviors (A&B) questionnaire ($\alpha = .93$) were used. The results show that students with difficulties have 16 developmental assets, while students without difficulties have 22 assets ($t(677) = 11.39, p < .001$). Students with difficulties are less represented in all categories of developmental assets, have less significant relationships, skills, abilities and other assets compared to their peers without difficulties.

Keywords: developmental assets, students, difficulties in social and emotional development

STUDYING DURING THE COVID-19 LOCKDOWN – EXPERIENCES OF ROMA STUDENTS FROM SUB-STANDARDIZED SETTLEMENTS IN BELGRADE

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The Covid-19 pandemic, that “captured” the whole world during 2020, significantly impacted the process of education in various countries. Amassed bans and restrictions of movement dislocated the teaching process from classrooms to various online platforms. This has impacted the education of all students, and it would have been expected that students living under difficult circumstances (sub-standardized settlements) will be particularly affected. With that in mind, since we had already been conducting extensive research related to the education of Roma population living in the 5 sub-standardized settlements in Belgrade, we decided to ask the respondents (four short 5-point Likert scale questions) about their studying during the pandemic. A total number of 119 students (50.4% males) aged between 12 and 19 years ($M = 14.88$ years, $SD = 1.69$) participated in the survey. 68.9% of them were and are regular elementary school students, and 37.1% are tertiary-type (expedited education) elementary school students. Data were collected immediately after the end of the lockdown in Serbia (May 2020). The results showed that 83.3% of participants responded with 1 or 2 (“strongly disagree”, disagree”) to question “I was technically well prepared to follow the online classes” ($M = 1.86, SD = 0.51$), and no one gave the answer 4 or 5. Only 24.4% of respondents agreed (answer 4 - “agree”) with the statement “Teachers contacted us regularly during the lockdown / curfew regarding distance learning.” ($M = 2.68, SD = 0.84$). Similarly, only 29% of respondents gave answer 4 to the statement “When it comes to teaching, my school was well organized during the epidemiological measures” ($M = 2.72, SD = 0.89$). At the end, the average response to the question “I think I lost a lot when it comes to learning because of the epidemic” was $M = 3.25 (SD = 0.84)$. Non-repeated measures ANOVA showed that gender and type of school did not significantly affect the responses. The results indicated that the pandemic significantly impacted the process of education among Roma students of upper primary and secondary age who live in sub-standardized settlements in Belgrade. Apparently, poor living conditions, combined with bad teaching organization and poor technical equipment, significantly disrupted the learning process of these students during the lockdown.

Key words: Covid-19 pandemic, Roma students, sub-standardized settlements, studying

LEARNING DYNAMICS DURING COVID-19 PANDEMIC:
HIGH-SCHOOL STUDENTS IN SERBIA

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Paper describes the dynamics of the distance learning process caused by COVID-19 pandemic from a student's perspective. We explored some of the features of the learning process during long-distance learning: time learning, learning activities and school grades. Data were collected at three measurement points during the suspension of regular classes (March – end June 2020). A total sample of high school students who voluntarily participated in the survey was 159. The participants were 15-19 years old from all grades of gymnasias and vocational secondary schools. The average grade point assigned by the teachers in the 1. semester (end of 2019 year) was 4.64 (SD= .42) out of maximum 5. Three questionnaires (included open and closed questions) were distributed electronically at the end of the first week of long-distance learning, the second at the end of the fourth week and the third in the week when the classes ended. For the purpose of this study, we analysed questions referring to the number of learning hours, type of activities related to learning (for school or for out-of-school activities) and final average grade. The results show that students changed the number of hours they devoted to learning from week to week. In the first week they spent around 8h in total for learning, lower than in the fourth week when they learned 15h in total ($t(137) = -5.59, p < .05$). In the final week students reported that they spend approximately the similar time learning as in the first week. We identified a large number of student extracurricular or recreational activities (sports, art, technology). There is a significant difference between the cumulative grade average at the end of the first semester and at the end of the school year 2020 ($t(146) = -2.86, p < .05$). This finding does not differ from the empirical findings obtained on a sample of students before the pandemic period. Students had statistically higher average grades at the end of the school year ($M = 4.75$; $SD = 0.52$) compared to the winter semester ($M = 4.64$; $SD = 0.42$). The student assessment of the impact of the COVID-19 pandemic on the final average grade shows that a larger number of students (68%) believe that this crisis did not have a great impact. In other words, students thought they would have the same average grade, if the classes took place regularly. Results of the study provided partial insights in the learning process of high-school students during the first three months of Covid pandemic. The findings showed that learning could be continued even in extreme circumstances like lockdown, and that students gradually were capable of adapting to the changes, by adjusting dynamics of their learning to the dynamic of school demands.

Keywords: long distance learning, COVID-19, learning time, school grade, longitudinal study

IZAZOVI UČENJA U USLOVIMA COVID-19 PANDEMIJE - PERCEPCIJA STUDENATA

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COVID-19 pandemija zahteva značajno prilagođavanje procesa nastave i učenja. Cilj ovog rada je da istraži doživljaj studenata o promenama u procesu učenja u uslovima pandemije. Dva meseca nakon prelaska na onlajn nastavu, studenti ($N=60$) Fakulteta za specijalnu edukaciju i rehabilitaciju i Filozofskog fakulteta u Beogradu pozvani su da opišu vlastita iskustva i prakse u vezi sa učenjem u periodu pandemije. Tematskom analizom sadržaja narativa dobijenih elektronskom poštom, iskazi studenata su grupisani oko nekoliko ključnih tema: pristup planiranju učenja i odnos prema strategijama učenja, procena socijalne podrške, odnos prema promeni studentskih dnevnih rutina i motivaciji za učenje, a potom su kategorisani unutar svake od tema. Rezultati pokazuju da studenti opažaju promene vlastitog procesa učenja na sledeći način: isti procenat studenata (po 45%) izjavljuje da im je učenje teže, tj. lakše u odnosu na prethodni period; četvrtina (27%) opaža da primenjuje kvalitetnije strategije učenja nego ranije, trećina (32%) ima doživljaj da su im strategije učenja neefikasne, dok 42% smatra da i u izmenjenim uslovima efikasno primenjuju iste strategije. Najveći procenat studenata opaža pad u motivaciji za učenje (65%), dok svega petina (20%) ima doživljaj povećane motivacije u novim uslovima, što je u neskladu sa očekivanim efektima učenja u onlajn okruženju koji se pominju u literaturi. Porodično okruženje je podrška za trećinu studenata (32%), za drugu trećinu otežavajući faktor za učenje, dok se kod ostalih ovaj kontekst ne pominje (37%). Skoro polovina studenata (45%) ne pominje kolege u kontekstu podrške u učenju, petina (20%) izjavljuje da im ta razmena veoma nedostaje, a 35% smatra da je ova razmena intenzivna i stalna i u novim okolnostima. Trećina studenata (33%) opaža da je podrška nastavnika manje efikasna i slabija u novim okolnostima, za 23% je vidljivija, intenzivnija i bolja, dok 43% uopšte ne komentariše nastavnike u kontekstu svog procesa učenja. Na kraju, doživljaj uskraćenosti za rutine studentskog života pojavio se u iskazima 58% studenata, dok je 30% njih uspostavilo nove rutine koje pozitivno vrednuju. Može se pretpostaviti da će nastava i učenje u onlajn okruženju biti sve zastupljenije u visokom obrazovanju. Dobijeni nalazi mogu biti inspirativni za buduća istraživanja onlajn nastave/učenja koja uključuju i perspektivu studenata.

Ključne reči: COVID-19, percepcija učenja u onlajn okruženju, studenti, kvalitativna istraživanja, analiza narativa

CHALLENGES OF ONLINE LEARNING DURING THE FIRST WAVE OF COVID-19 PANDEMIC: STUDENTS' PERSPECTIVE

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The COVID-19 pandemic has brought about significant disruptions in young people's everyday functioning. One of the most detrimental effects on their life satisfaction and well-being has been attributed to the sudden and unexpected closure of academic institutions. In previous research, the shift to home-based e-learning has been linked to dissatisfaction with the educational process, the inability to spend time with peers, and the occurrence of stress-related symptoms and learning difficulties. This study explores the students' perspectives on online learning in Serbia during the first wave of the COVID-19 pandemic and its impact on their well-being. The qualitative research methodology was applied in the form of in-depth semi-structured interviews. The sample included 15 participants (6 male), both university and final-year high-school students, aged 18-26. Their answers were transcribed and thematically analyzed, generating five central themes: 1) inadequate organization of the education process, 2) lack of resources, 3) difficulties with self-organization, 4) loss of live contact with peers, and 5) uncertainties regarding the continuation of the studies. All students recognized online learning as a serious challenge, resulting in elevated stress levels. They viewed the education process as inadequately adapted to the new circumstances, while practical skills instruction (e.g., art, maths) arose as a particular issue. Moreover, some participants faced additional difficulties, such as the lack of technical means (e.g., internet connection) or personal space for studying. Due to the lack of information from academic institutions and the loss of an external structure, students found learning more difficult, often dealing with confusion, low motivation, poor focus, and procrastination. Home-based education led to dissatisfaction with social life, which was limited to online contacts. Finally, the uncertainties regarding the future organization of their studies increased anxiety levels, recurrently enhancing the mentioned challenges. The findings suggest that both high-school and university students included in this study perceived online learning during the first wave of the pandemic as stressful and insufficiently oriented towards their needs, thus negatively affecting their well-being. Subsequently, several practical guidelines for the organization of online learning are offered, which could prove beneficial for academic institutions and students alike.

Keywords: online learning, COVID-19, students, qualitative research, thematic analysis

LEARNING EXPERIENCES AND THE BIGGEST CHALLENGES OF SERBIAN STUDENTS DURING COVID-19 PANDEMIC

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During the past and the current school year, educational systems worldwide have faced the challenge of COVID-19 virus pandemic. Schools, their employees, students and parents had a common task adapting to the new situation. The main change that lockdown brought was the relocation of teaching from school buildings to student's homes. Our research aimed to examine how students' learning experiences have changed, and the most significant challenges they have faced. For that purpose, we adapted the OECD questionnaire from PISA 2022 Global Crises Module (OECD, 2020). The questionnaire contains 62 questions, and 8 of them are focusing on challenges and difficulties with distance learning in the lockdown situation. Students were asked to report how often they had specific problems with completing schoolwork (e.g., "Problems with Internet access"; "Problems with finding a quiet place to study") while the school building was closed due to COVID-19. The sample collected by the snowball method was convenient, comprising 192 primary school students - 5th to 8th grade (64% of girls; $M_{\text{age}} = 14$; $SD_{\text{age}} = 3.284$), and 152 high school students of all four grades from Serbia (70% of girls; $M_{\text{age}} = 17$; $SD_{\text{age}} = 4.444$), who took part in an online survey. Conducted ANOVA showed statistically significant differences between primary school and high school students regarding challenges in distance learning. High school students are reporting more problems in understanding school assignments ($F(1, 342) = 7.315$, $p = .007$; $M_{\text{ps}} = 2.48$, $SD_{\text{ps}} = .976$; $M_{\text{hs}} = 2.21$, $SD_{\text{hs}} = .251$) and low motivation to do schoolwork ($F(1, 342) = 9.860$, $p = .002$; $M_{\text{ps}} = 2.97$, $SD_{\text{ps}} = 1.067$; $M_{\text{hs}} = 2.60$, $SD_{\text{hs}} = 1.097$). Problem with motivation for distance learning have proved to be the biggest challenge for both groups of students. It suggests that students from all educational levels need help to raise learning motivation within an online learning context. The results are further discussed considering other scales and questions from the OECD questionnaire and compared with the results of the other research that examined this topic.

Keywords: learning experiences, COVID-19 pandemic, distance learning, motivation for learning

THE GOALS OF ACHIEVEMENT AND EXAM ANXIETY AS THE PREDICTORS OF HIGH SCHOOL SUCCESS

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With the development of the achievement goal theory, its relationship with school-related constructs and academic climate was often examined. One of its concepts assumes a 2×2 achievement goal framework that includes four goals of achievement: learning approach orientation, performance approach orientation, learning avoidance orientation and performance avoidance orientation. Given the results of previous research which indicated different correlations of school-related constructs and the mentioned orientations, the aim of this study was to determine the relationship between achievement goals, exam anxiety and school success, as well as the ability to predict students' school success using the same constructs. It was assumed that both approaching orientations would be the positive predictors and both avoidant orientations along with test anxiety would be the negative predictors of school success. The sample consisted of 46 male and 181 female high school students. The measurement was conducted online using the Achievement Objective Scale and Anxiety Test Questionnaire. In the first step of the hierarchical regression analysis, the basic personal data was introduced (gender, age and high school program), but only gender proved to be a significant school success predictor ($\beta = -.18, p < .05$), i.e. female gender predicted high school success to a greater extent. The variables of the first step explained 4 % of school success variance ($F(3, 221) = 2.72, p < .05$). In the second step, when added the achievement orientations, the proportion of the explained variance of school success increased to 23 % ($F(8, 216) = 8.15, p < .01$). Both the learning approach orientation ($\beta = .37, p < .01$) and the performance approach orientation ($\beta = .25, p < .01$) proved to be positive predictors of school success. The performance avoidance orientation appeared as a negative predictor ($\beta = -.19, p < .01$), while learning avoidance orientation did not predict school success ($\beta = -.04, p > .05$). As the exam anxiety did not show a correlation to school success, it was left out of the analysis. Considering the obtained results, it seems that the goals of achievement remain relevant in the domain of school success. These results suggest the necessity of their practical implementation in school environment, e.g. encouraging pupils to decrease the competitiveness, focus on their own success rather than else's and orient themselves to learning rather than solely collecting good grades.

Keywords: achievement goal orientations, exam anxiety, school success, hierarchical regression analysis

PARENTING STYLES AND LIFE STRESSORS AS PREDICTORS OF CYBER AGGRESSION AND CYBER VICTIMIZATION AMONG HIGH SCHOOL STUDENTS

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Cyberbullying, which refers to intentional aggression perpetrated using electronic devices, is becoming an increasingly common problem among youth. Previous research has identified several risk factors for cyberbullying, including parenting styles and adverse/stressful childhood life events. The aim of this study was to examine the relationships between parenting styles and life stressors with cyber aggression and cyber victimization on a sample of high school students from B&H ($N = 261$; age: $M = 16.44$, $SD = 1.03$ years; 83% girls). The prevalence of both cyber aggression ($M = 1.12$, $SD = 0.14$) and cyber victimization ($M = 1.32$, $SD = 0.32$) in the period of two months before data collection was low, suggesting less than one cyberbullying event on average, with no gender differences. The most common cyber aggression events were related to excluding/ignoring or gossiping about someone on social media, while the most common cyber victimization events included being ignored/excluded or being a target of gossiping or misinformation spreading on social media. The best supported Bayesian predictive model of cyber aggression ($R = .119$, $BF_{+} = 271.71$) included predictors: lower mother's authoritative parenting ($\beta = -.17$, $BF_{+} = 7.87$), being constantly misunderstood by teachers ($\beta = .18$, $BF_{+} = 17.78$), and parents having constant conflicts ($\beta = .17$, $BF_{+} = 5.57$). The best supported Bayesian predictive model of cyber victimization ($R = .203$, $BF_{+} = 961.66$) included predictors: being constantly misunderstood by teachers ($\beta = .18$, $BF_{+} = 41.24$) and peers ($\beta = .24$, $BF_{+} = 376.40$), being a victim of other types of violence ($\beta = .13$, $BF_{+} = 3.73$), and spending extended periods in hospitals ($\beta = .14$, $BF_{+} = 5.51$). These results suggest that a lack of adult support, reflected by both parenting styles and life stressor variables, modestly predict a higher likelihood of cyber aggression acts. Conversely, parenting styles are not needed for the explanation of cyber victimization, as life stressors alone (related to poor teacher and peer relationships and unsafe/violent life context) are moderately reliable predictors of this phenomenon. It is important to point out that there is a notable overlap between cyber aggression and victimization ($r = .41$, $BF_{+} > 100$) – and being constantly misunderstood by teachers is a predictor of both. This highlights a possible critical role that teachers could play in the prevention of cyberbullying.

Keywords: cyberbullying, cyber aggression, cyber victimization, parenting styles, student life stressors

GPA, PERSONALITY, AND ATTITUDES TOWARDS SCIENCE AS PREDICTORS OF
THE HIGH SCHOOL STUDENTS' FUNCTIONAL MATHEMATICS KNOWLEDGE

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Reputable international assessments (e.g., PISA) have shown that B&H students trail behind the students from other countries regarding functional mathematics knowledge (FMK). However, factors contributing to such poor achievement have not been properly explored. To better understand this conundrum, we examined how GPA, personality, and attitudes towards science (ATS) predict FMK. These predictors were selected due to their well-established associations with various academic and socio-economic outcomes. The sample comprised 114 conveniently selected high school students (59% females) from the Republic of Srpska (B&H). We measured their previous year GPA, Big Five personality traits, and three ATS dimensions: Antipathy Towards Science and Scientists (AS), Importance and Affinity Towards Science (IS), and Deficiency of Science (DS). FMK was measured via 11 PISA-inspired tasks which require the use of math to solve 'real life' problems, e.g. choosing the best deal when purchasing a mobile phone or a digital book storage, or deciding the most efficient driving path to a destination. FMK tasks conformed to a well-fitting single factor structure (CFI=.99, TLI=.98, RMSEA=.06, SRMR=.08; $M=.72$, $AVE=.53$, $\alpha=.92$, $\omega=.83$). The average FMK achievement score was modest, with 51% success rate. On a bivariate level, decisive evidence ($BF_{10}>100$) was observed for FMK score correlations with the AS ($r=-.44$) and GPA ($r=.37$), with strong evidence for a correlation with the IS ($r=.29$, $BF_{10}=13.48$), and anecdotal evidence for a correlation with Conscientiousness ($r=.25$, $BF_{10}=3.93$). Based on the Bayesian linear regression analysis, the strongest support was obtained for a model including the AS and GPA as predictors of the FMK score (posterior model odds of $BF_{10}=74.69$). These predictors explain 29.5% of the FMK score's variance, with posterior odds suggesting much stronger support for the importance of the AS as a

predictor ($BF_{10}=760.36$; model averaged posterior: $M=-4.77$, 95% CI $[-6.94, -2.27]$), than GPA ($BF_{10}=95.68$; model averaged posterior: $M=4.77$, 95% CI $[2.19, 7.67]$). These results confirm that B&H students indeed have a modest FMK, with their school achievement only partially reflecting that, personality having mostly a negligible effect, and negative ATS being the most important factor. This adds to the body of evidence suggesting that changing the attitudes towards science might potentially play a major role in improving scientific literacy among the B&H students.

Keywords: functional mathematics knowledge, attitudes towards science, grade point average (GPA), Big Five personality traits, high school

PERCEPTION

MAIN TITLE ATTRACTIVENESS OF MALE AND FEMALE BODY: THE EFFECT OF MODELING

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Physical attractiveness has been usually explored within the femininity-masculinity dimension. Generally, feminine bodies have an “hourglass” shape (larger breasts, narrower waist, wider hips and larger buttocks), while masculine bodies have an “inverted triangle” shape (wider shoulders and narrower hips). Some studies have suggested stronger preference for average appearance while some of the most recent studies indicate that prominent/supernormal secondary sexual characteristics are the most attractive. In addition, cross-cultural findings indicate that preference for larger or smaller size of different body parts depends on participants’ cultural background. With this in mind, this study was intended to examine whether this cultural influence also exists at the level of subcultures, i.e., whether the preference for physical appearance depends on professional “pressures” related to physical appearance.

More specifically, the purpose of this study was to specify the effect of modelling as possible sub-cultural/professional bias in preference for either average or supernormal feminine/masculine bodies, while wider cultural context (nationality/urban-rural environment) is controlled variable.

Two groups of participants from Serbian urban culture participated in the experiment (1) models ($n=15$, 7 females, av. 28 years) and (2) non-models ($n=23$, 13 females, av. 31 years).

Experiment was performed via Qualtrics platform. Two sets of body figures ‘female and male’ (were used as stimuli. Both sets consisted of panels, each with figures varied in size of particular body part (5 sizes i.e., average size (0 size) plus two equidistant larger sizes (+1 and +2) and two equidistant smaller sizes (-1 and -2). Female set included figures varied in size of breasts, waist, hips, buttocks, and legs. Male set included figures varied in shoulders, hips, buttocks, and legs.

Participants were asked to mark the most attractive figure in each panel within both female and male sets.

Two-way ANOVA for independent groups was performed: factors Modeling experience (models/non-models) and Gender (men/women). The main effect of Modelling was obtained for 3 characteristics: compared to non-models, models prefer smaller breasts ($F(1,37)=3.9$, $p=.05$), longer legs ($F(1,37)=6.5$, $p<.05$) and narrower hips ($F(1,37)=4.3$, $p<.05$). The main effects of both Modeling experience and Gender in male figures were obtained only in the preference for hips width: narrower hips were preferred by models ($F(1,37)=8.6$, $p<.01$) and men ($F(1,37)=4.9$, $p<.05$). No interactions have been detected.

Models prefer physical appearance that is in line with standards of modeling industry and “lean athletic imperative”. The findings reveal a complex status of super-normality in models’ preference. On one hand, they prefer supernormal masculinity (narrower hips in male figures) and some supernormal feminine characteristics (longer legs). On the other hand, models prefer some less feminine characteristics (smaller breasts and narrower hips in female body).

Keywords: Femininity, Masculinity, Models, Body attractiveness

WHEN THE HAPPY KRKS MET THE ANGRY MOVA – EFFECTS OF SHAPE AND EMOTION ON OBJECT NAMING

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The phenomenon of cross-modal matching represents an association between pseudo-word characteristics and the shape of a certain figure. Numerous studies indicate that respondents associate e.g., the word *takete* or *krks* with sharp, and *maluma* or *mova* with rounded figures. Also, earlier findings show that associations exist between pseudo-word characteristics and different moods. Thus, the respondents mark *takete* as "bad" and *maluma* as "good" mood. Based on these findings, it is not clear whether the connection between the shape of the figure and the pseudo-word characteristics is direct or perhaps mediated by the emotional state that the shape of the figure or pseudo-word provokes. The aim of the research was to examine whether the figure shape (sharp/round) or the emotion it depicts (happiness/anger) has a stronger effect on naming an object with pseudo-words (*krks*/*mova*). For the purpose of this research, we used a pair of pseudo-words *krks*/*mova*, which in previous research showed a strong effect of associating with sharp/round shapes. As stimuli, we used simplified representations of facial expressions of human faces (emoticons), in which the shape of the face (round/sharp) and the type of emotion (happiness/anger) were varied. Respondents were psychology students ($N = 30$), both genders (26 women), aged 18 to 20 years. The experiment was created in the program SuperLab 4.0, and the task of the respondents was to classify the emoticon they see on the screen as *krks* or *mova* by pressing a button. Two-factor analysis of variance for repeated measures showed that the effect of the interaction was not significant, but the main effects of both factors, face shape ($F(1,29)=14.5$, $p<0.01$, $\eta^2=0.33$) and emotion it shows ($F(1,29)=10.67$, $p<0.01$, $\eta^2=0.27$) were significant. Post-hoc Sidak tests indicated that respondents have most often chosen the pseudo-word *krks* for a sharp-shaped emoticon depicting anger ($p<0.05$) and the pseudo-word *mova* for a round emoticon depicting happiness ($p<0.01$). On the other hand, the probability of choosing the names *krks* and *mova* was at the chance level (0.5) for round emoticons that show anger and sharply shaped emoticons that show happiness. Thus, the preference of the name is clear for congruent stimuli (round/happy and sharp/angry) and completely disappears in incongruent (round/angry and sharp/happy). We can conclude that the shape of the figure and the emotion it depicts are equally important when choosing pseudo-word as a name, as well as that their effects are additive.

Keywords: sound symbolism, figure shape, facial expressions, congruence

ACCURACY OF RECOGNIZING SOME EMOTIONS AMONG CHILDREN

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Earlier research points out that certain basic emotions are recognized more accurately in comparison with the other ones, no matter whether they are shown within ecological valid stimuli, such as photographs of human's faces or on more simplified version of human's faces, such as drawings and emoticons. Since earlier research comprised older respondents, the issue of accuracy of the recognition of basic emotions among the children of pre-school age is raised concerning the simplified version of human's faces. Why emoticons? Because complex images of faces beside primary estimation of the expression of emotions cause estimation of gender, age, skin colour of face that would distract respondents. Moreover, former results point out that the accuracy of identification of emotions depends on the gender and age of respondents in the way that women of middle and old age are more successful in identifying emotions in comparison with men.

Twenty respondents (7 boys), 57–88 months old ($AS=75.95$, $SD=6.67$) participated in the research. Emoticons with the image of the emotion of happiness, sadness and anger (3 emotions x 6 emoticons) were used as stimuli. The respondents' task was to choose one, out of three simultaneously shown emoticons, where the previously named emotion was presented. The experiment was created within the Open Sesame program. The sequence of showing stimuli was random. The experiment included stimuli that the older respondents from the pilot study recognized within 99% of cases as assigned emotions.

The results of the research point out that there is an interaction of factors the type of emotion and respondents' gender ($F(2; 36) = 3.87$, $p < 0.05$, $\eta^2=.18$). Post-hoc Sidak tests confirm that respondents are more successful in recognizing facial expression of the emotion of happiness compared to the emotion of sadness. However, comparing the differences regarding the accuracy of recognizing facial expression of emotions concerning the respondents' gender, it is noticed that boys show significantly worse results in recognizing emoticons that point out the emotion of sadness compared to happiness and anger. Unlike boys, the girls show high accuracy in recognizing all three kinds of emotions. We can say that the final results are in accordance with the earlier findings which show that the emotion of sadness is recognized worse compared to the other emotions, as well as that the accuracy of recognizing emotions varies concerning gender and the early age.

Keywords: facial expression of emotions, emoticon, children

THE EFFECT OF FACIAL EXPRESSIONS ON ATTRACTIVENESS

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Facial expression may impact facial attractiveness. The most replicable finding is that happy (smiling) faces are perceived as the most attractive. However, there are mixed results regarding gender: one study showed that happy females' faces are rated higher than happy males' faces (although happy males' faces were still the most attractive compared to other males' faces) while in another study different pattern were observed: happy females' faces were the most attractive compared to other expressions, while happy males' faces were rated as the least attractive. Studies, which also included other basic emotions, reported that happy faces are rated as the most attractive, followed by neutral and other "negative" expressions. However, these studies did not control whether each stimulus adequately represented particular expression. Therefore, we aimed to examine how facial expressions of emotions affect the attractiveness while the representativeness of each expression is controlled. In order to do that, we choose only the stimuli that were correctly classified above 90% for portrayed expression.

A total of 61 students (41 females) participated in this study. Their task was to evaluate the attractiveness of each face presented separately, using a 7-point scale. Pictures of 10 males and 10 females from the FACES database with four expressions (angry, happy, neutral and sad) were used.

In line with some studies, happy faces were rated as the most attractive ($F(180) = 59.35, p < .001, d = 3$), followed by neutral, sad and angry faces. Gender difference was obtained only for sad faces. Females' sad faces were rated higher compared to males' sad faces. Furthermore, the attractiveness rating for faces with "negative" emotions (anger and sadness) did not differ for males' faces, while angry females' faces are considered significantly less attractive than sad female faces. Such results could be explained by social norms where girls are not encouraged to show anger, while boys should be "strong" and sadness is seen as weakness. Our study showed that it is important to control representativeness of expressions in order to avoid ambiguity and to get clearer results about their attractiveness.

Keywords: facial expressions, emotions, attractiveness, faces, gender

TASK DEPENDENT VISUAL STRATEGIES

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Our previous work showed that the colour-based visual interference disrupts colour discrimination in the simultaneous, but not in the delayed discrimination task, indicating the importance of the verbal strategy for the latter. Moreover, this type of visual interference even facilitated the delayed discrimination. We reasoned that in the first step of the delayed task, participants divided the stimuli-colour and the interference-colour into separate verbal categories enhancing the processing of the right answer in the second step. That is, we assumed that the facilitation in the delayed condition emerged from the usage of the verbal strategy.

To test our assumption, we empirically identified 16 colours that are difficult for naming in Serbian language. We used them in the present experiment hoping to prevent verbal strategies. A colour-based visual interference took form of a concentric ring placed around the target stimulus. The 2AFC task was to match the colour of the test or the distractor stimuli with the target. There were 4 experimental situations: congruent (ring colour matched the colours of the target and test stimuli), incongruent (ring colour matched the colour of the distractor stimulus), control (ring was achromatic), and neutral (without the ring). All of the stimuli were presented either at once (simultaneous, 18 participants) or test and distractor stimuli were presented 1s after the target (delayed, 18 new participants)

In the simultaneous condition, visual interference significantly disrupted discrimination - participants were slower when coloured rings did not match the target colour (incongruent and control; $F(3,51) = 4$; $p < .05$; $\eta^2 = 0.19$). For the delayed condition, the effect did not reach statistical significance ($F(3,51) = 2.42$; $p = .07$; $\eta^2 = 0.12$) showing that the visual interference neither facilitated nor slowed the discrimination.

Current results confirmed our previous findings that the simultaneous discrimination dominantly relies on the visual information, which in return renders it significantly more susceptible to visual interference. Additionally, findings confirm that the categorical information represents an optimal mechanism for the delayed colour discrimination task and that participants will use it whenever it is available. Together with our previous results, these findings show how participants modify their colour-discrimination strategies depending on the task.

Keywords: colour, discrimination task, visual interference

THE EFFECTS OF OBJECT DIMENSIONALITY & MODE OF PRESENTATION ON LIGHTNESS CONSTANCY

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Lightness (i.e., perceived reflectance) of an object remains roughly constant despite changes in viewing conditions, which is known as lightness constancy. Viewing conditions produce small but measurable and systematic effects that inform us about the functioning of visual system. Classical studies showed such effects using two-dimensional (2D) paper stimuli. On the other hand, contemporary studies dominantly use virtual three-dimensional (3D) stimuli in an attempt to emulate everyday objects. Given that there are two important stimuli differences (dimensionality & modality), generalization between classical and novel findings is not straight forward. Hence our main goal was to test between (1) 2D and 3D stimuli and (2) real and virtual objects.

Twenty naïve participants observed 18 stimuli, presented one at the time, in a dark chamber. Stimuli were either paper-made and illuminated (real) or presented on a CRT display (virtual), either as 2D (rectangle, circle, triangle) or 3D (cube, cylinder, pyramid) objects, in one of the 3 luminance levels (12.3, 22.7, 35.5 cd/m²). On the bottom of the chamber was 16-step Munsell scale used for lightness matches.

ANOVA for repeated measures revealed an interaction between the dimensionality and mode of presentation ($F(1,10)=20.106$, $p=.001$). Virtual 3D objects were perceived as having lower lightness than other three groups of objects (virtual 2D, real 2D and real 3D), while there were no differences in lightness between those three groups. In the case of our control factors, as expected, the main effect was obtained for luminance ($F(2,20)=858.384$, $p<.001$) but not for shape ($F(2,20)=0.788$, $p=.469$). That is, participants matched higher luminance with higher lightness while the shape did not alter perceived lightness.

To answer our main concern about the comparison of classical and contemporary findings, real 2D and virtual 3D stimuli provide different results, however, the classical approach with the real 2D stimuli seems to be a closer match for everyday real 3D objects. Not entirely though, since all the stimuli were also overestimated. On average, virtual 3D objects were perceived as 1 Munsell step lighter, while other objects were perceived even as 1.5 Munsell steps lighter. We do not expect such overestimation for everyday objects, and we assume this to be an artefact of the experimental conditions, most likely underarticulated chamber. Such observations further specify conditions that diminish lightness constancy.

Keywords: lightness constancy, object dimensionality, mode of presentation

VELIČINA ILUZORNIH KONTURA KAO FAKTOR EFIKASNOSTI PRETRAŽIVANJA

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Istraživanja u oblasti vizuelne percepcije pokazuju da je veličina stimulusa jedno od bazičnih vizuelnih svojstava koje vodi ka asimetričnosti pretrage u zadatku vizuelnog pretraživanja. Naime, veći stimulusi se pretražuju efikasnije u skupu manjih stimulusa, nego manji stimulusi u skupu većih.

U okviru serije istraživanja koja su se bavila ispitivanjem efikasnosti pretraživanja iluzornih kontura koje se međusobno razlikuju po veličini, jedno istraživačko pitanje se nametnulo kao sržno. Da li se, kao što je to slučaj i pri pretraživanju celovitih figura, iluzorne figure različitih veličina pretražuju različitom brzinom i kolika je to razlika u veličini stimulusa koja vodi ka stabilnom efektu veličine na efikasnost pretraživanja?

Oslanjajući se na količnike veličine korišćene u istraživanjima efekta veličine mete i distraktora u eksperimentima sa celovitim stimulusima, kontruani su manji i veći iluzorni stimulusi (iluzorni Kanicini trouglovi). Cilj istraživanja bilo je proveriti da li primenjeni racio dovodi do razlika u efikasnosti pretraživanja manje iluzorne mete među većim iluzornim distraktorima u odnosu na pretraživanje veće iluzorne mete među manjim iluzornim distraktorima.

Rezultati istraživanja potvrdili su da korišćena razlika u veličini stimulusa dovodi do stabilnog efekta na efikasnost pretraživanja iluzornih stimulusa koji prati trend ustanovljen pri pretraživanju celovitih stimulusa u ranijim istraživanjima. Veći iluzorni trouglovi se pretražuju efikasnije u skupu manjih iluzornih trouglova, nego obrnuto ($t(15) = 3.08$, $p = .008$).

Osetljivost efikasnosti pretraživanja stimulusa iluzornih i celovitih kontura na istu razliku u veličini mete i distraktora govori o zajedničkoj prirodi perceptivnog procesa opažanja ove dve vrste stimulacije i potencijalno sličnom mehanizmu angažovanja vizuelne pažnje u njihovoj perceptivnoj obradi.

Ključne reči: vizuelno pretraživanje, iluzorne konture, količnik veličine

TARGET/DISTRACTOR SIZE RATIO AND ILLUSORY CONTOURS VISUAL SEARCH EFFICIENCY

Stimulus size is one of the basic features leading to search asymmetry in visual search task: larger stimuli are being searched for more efficiently within the set of the smaller ones than vice versa. We conducted a series of experiments to test whether the size affects the search efficiency of illusory contours stimuli as well as it does for full contours stimuli. An underlying question has been addressed: will the size ratio between the target and distractors successfully used in experiments with full contours stimuli provoke the size effect when searching for illusory ones? Our experiment has revealed a significant size effect for illusory triangles ($t(15) = 3.08$, $p = .008$).

Keywords: visual search, illusory contours, size ratio

ORGANIZATIONAL PSYCHOLOGY

CAREER INTERESTS, CAREER RESOURCES AND PERCEIVED EMPLOYABILITY
AMONG PSYCHOLOGY STUDENTS

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Perceived employability, as a perception of an individual about his/her possibilities of gaining and upholding employment, is an important psychological as well as socioeconomic concept. Technology changes the labor market every day, so a successful start to a career requires much more knowledge and skills than ever before. Perceived employability is of a special importance in understanding students preparing for the working world. To better understand what perceived employability depends on, we linked it to the concepts of career resources and career interests. In this study, we attempted to determine the relationship between career resources, career interests, and perceived employability among psychology students. In total, the sample consisted of 150 psychology students from three state universities from Serbia (Belgrade, Novi Sad, and Niš). We have used *Interest scale for psychology*, *ISP* (Ferreira, Rodrigues & Ferreira), *Career resources questionnaire*, *CRQ* (Hirshi, Baumeler, Johnston & Spurk), and *Self-perceived employability scale for students* (Rothwell, Jewell & Hardie). The results showed a strong correlation between career resources and perceived employability ($r = .64$, $p < .01$), a moderate correlation between career interests and perceived employability ($r = .30$, $p < .01$), as well as a moderate correlation between career resources and career interests ($r = .37$, $p < .01$). The hierarchical multiple regression analysis showed that sociodemographic variables did not significantly predict perceived employability (*Step 1*), however, career interests (*Step 2*) did significantly predict perceived employability ($\beta = .30$, $t = 3.84$, $p < .01$) and accounted for 8% of the perceived employability variation. Adding career resources to the regression model (*Step 3*) explained additional 42% of perceived employability variation ($\beta = .61$, $t = 9.12$, $p < .01$). The results are discussed in the context of Hirschi's career resources model, the nature of psychology students' career interests, and possible implications for theory and practice. Perceived employability is a construct that connects educational, psychological, and socio-economic context of an individual with certain labor market trends. Importance of perceived employability at the level of the individual is unequivocal, but at the level of society is often imperceptible. Having higher or lower employability within some occupational group could have an impact not only on personal career decisions, but on a society as a whole.

Keywords: career resources, career interests, perceived employability, psychology students, Serbia

WHY DO HUMAN RESOURCE PRACTICES MATTER?
THE LINK BETWEEN HUMAN RESOURCE MANAGEMENT PRACTICES,
ORGANIZATIONAL COMMITMENT AND EMPLOYEE WITHDRAWAL
BEHAVIOUR

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Human resources management (HRM) practices have been proven to have positive effects on employee well-being and organizational commitment. The aim of this research was to explore the relationship between high involvement HRM practices (i.e. recognition, empowerment, competence development, fair rewards, information sharing; with addition of person–organization and person-job fit indicators), organizational commitment (affective, normative, continuance commitment) and employee withdrawal behaviors (potential turnover and absenteeism). The sample consisted of 214 ICT professionals (85%) from different organizations from Serbia. We have used *Organizational commitment questionnaire* by Meyer & Allen (affective commitment $\alpha = .87$; normative commitment $\alpha = .79$; continuance commitment, $\alpha = .75$); for *potential fluctuation* we have used seven different one-item indicators already used by Falkenburg & Schyns, and for measuring *high involvement HR practices*, we have used seven subscales from Paré & Tremblay (from $\alpha = .78$ for ‘fair rewards’ scale to $\alpha = .91$ for ‘information sharing’ scale). *Person–organization* and *person-job fit* were measured by two one item measures. The results has shown no significant relationship between different indicators of absenteeism and high involvement HR practices, as well as different indicators of absenteeism and organizational commitment. The hierarchical multiple regression analysis showed that sociodemographic variables did not significantly predict intention to leave (as one of the strongest indicators of potential fluctuation, taken as criterion variable) (Step 1), high involvement HR practices (Step 2), did significantly predict intention to leave ($R_{change} = .29$, $F = 12$, $p < .01$), and finally the organizational commitment (Step 3) explained additional variation of intention to leave ($R_{change} = .17$, $F = 21$, $p < .01$). It was also shown that affective organizational commitment has a mediating role in the relationship between ‘fair rewards’ and intention to leave $b = -.08$; *BCa CI* $[-.11, -.05]$. The results were discussed in the context of their potential implications for managing for employee retention in ICT sector.

Keywords: human resource management practices, organizational commitment, employee withdrawal behaviour, ICT sector, Serbia

THE RELATION OF AUTHENTIC LEADERSHIP AND PSYCHOLOGICAL CAPITAL WITH EMPLOYEE WELL-BEING DURING COVID-19 PANDEMIC

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Employee well-being has received increasing attention for its importance in explaining the factors and outcomes of employees' perception of their well-being. Most of the studies do not differentiate between *psychological* well-being, which implies better psychological functioning and realization of potential, and *subjective* well-being, which determines individual satisfaction. Furthermore, psychological, and subjective well-being are treated as equivalent to *employee* well-being, which refers to the well-being of an individual in a business context. The main aim of this study was to identify factors that are related to or contribute to the affective well-being of employees. The data were collected in an online survey during the COVID-19 pandemic (01 - 09.05.2020.). Respondents were 151 employees from different economic and organizational sectors in Serbia aged between 22 and 64 years. Instruments used in this study were: Job related Affective Well-Being Scale, Psychological Well-Being Scale, The satisfaction with life scale, Psychological Capital Questionnaire PCQ-24 and The Authentic Leadership Inventory. The analyses showed that the employees' experience of affective well-being was related to their psychological well-being ($r = .69; p < .001$) and that resilience (psychological capital dimension), predicted psychological well-being ($\beta = .46; p < .01$). The relationship between each subdomain of psychological capital and affective well-being was mediated through psychological well-being, with bootstrapped unstandardized indirect effects ranging from $b = 1.26$, BCa CI [.66 to 1.90] to $b = 1.71$, BCa CI [.98 to 2.56]. In addition to psychological well-being ($\beta = .36; p < .001$) and resilience ($\beta = .29; p < .01$), important predictors of affective well-being were life satisfaction ($\beta = .30; p < .001$), sense of self-efficiency ($\beta = .30; p < .01$) and employees' perceptions of a leader as a person of integrity and someone who makes impartial decisions is of crucial importance ($\beta = .36; p < .001$). The results indicate that employees' affective well-being could be flourished by developing personal resources and authentic leadership support.

Keywords: employee affective well-being, psychological well-being, resilience, authentic leadership

IN-CLASS AND AT-HOME WEB ADMINISTRATION MODE EQUIVALENCY OF VOCATIONAL GENDER STEREOTYPE ATTITUDES SCALE (VGSA)

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In recent years, large number of studies examined the measurement equivalency of paper and pencil and computer-based administration modes and demonstrated that majority of measures show equivalency. Despite that, researchers agree that comparability of measures derived from different administration modes cannot simply be assumed and that it needs to be tested

whenever new administration mode is introduced. In this unique and challenging times of global pandemic in which all contact between people is discouraged and minimised, computer-based testing is becoming more important than ever. However, there is lack of studies that examined measurement equivalence of different computer-based administration modes, i.e., in supervised and unsupervised online setting. This is especially important for gender stereotype attitude measures because they can yield socially desirable responses in supervised setting and confound the results.

The aim of this study was to determine if gender stereotype measure (VGSA scale; Vocational Gender Stereotype Attitudes Scale) is equivalent in two different computer-based administration modes: in-class web survey and at-home web survey. In-class web survey participants were 222 primary and 196 secondary school students that were surveyed in the group setting during a regular school day in their computer classrooms while the researcher was present in the room. At-home web survey participants were 166 primary and 229 secondary school students that were surveyed individually through the web link in their homes that was administered to them via school administration. All participants were from Croatia, ranging from 11-18 years old.

Results showed that VGSA scale demonstrated measurement equivalence across in-class and at-home web survey administration modes. It showed high reliability and expected bi-factor structure that is stable in boys and girls sample as well as in primary and secondary school samples in both administration modes. This means that VGSA scale captures the same construct of career gender stereotype attitudes across two methods and can be administered in either way and still yield valid and comparable results.

Keywords: career gender stereotypes, measurement equivalence, computer-based survey, online survey, adolescents

SAFETY CLIMATE DURING COVID-19 PANDEMIC: OPINIONS OF EMPLOYEES IN RELATION TO JOB'S SAFETY RISK AND HIERACHICAL POSITION

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Safety climate is a complex phenomenon based on the shared employees' perception of procedures, attitudes, beliefs and behaviours concerning workplace safety. The COVID-19 pandemic adds multiple challenges for the healthy and safe work environment. The aim of this research was to explore employees' perception of safety climate at workplace during the COVID-19 pandemic in relation to self-assessed safety risk at the workplace and hierarchical position in the organization (managerial vs. non-managerial positions). The sample included 179 employees from various organizations. One third of the sample were employees in jobs with self-assessed higher safety risk (31%), such as exposure to radiation energy, specific job demands, mechanical and microclimate conditions. Nordic Safety Climate Perception Scale (NOSACQ-50) was translated for the purposes of this research (50 items, 4-point Likert scale, seven dimensions, Cronbach's alpha ranging from .60 to .90). The main results indicate significant differences in the employees' perception of safety climate in relation to job risk and position in the organizational hierarchy. Employees in jobs with higher safety risk

compared to those without increased safety risk perceived the climate as more positive on four of the NOSACQ-50 dimensions (management related: safety priority $t(170) = 2.46, p < .02$; safety empowerment $t(176) = 2.21, p < .03$; safety justice $t(172) = 2.54, p < .01$; and workers related: safety commitment $t(172) = .15, p < .89$; safety priority $t(169) = 3.54, p < .001$; safety communication $t(173) = 1.36, p < .18$; and trust in safety system $t(171) = 1.33, p < .18$). In addition, employees in managerial positions compared to those in non-managerial positions perceived safety climate as more positive on most of the NOSAQ-50 dimensions (management related: safety priority $t(170) = 2.92, p < .004$; safety empowerment $t(176) = 2.14, p < .034$; safety justice $t(172) = 1.43, p < .15$; and workers related: safety commitment $t(172) = 2.19, p < .03$; safety priority $t(169) = 1.95, p < .05$; safety communication $t(173) = 2.19, p < .03$; and trust in safety system $t(171) = 2.51, p < 0.01$). There is a need for further examination of the impact of job risk factors as well as the hierarchical position on the perception of the safety climate. We will discuss the results and implications for further research in order to highlight the importance of understanding this phenomenon in both emergency and everyday circumstances.

Keywords: safety culture, safety climate perception, NOSAQ-50, COVID-19 pandemic, self-assessed safety risk at work

WHEN I GROW UP, I WANT TO BE... CAREER ASPIRATIONS OF ELEMENTARY SCHOOL STUDENTS FROM GENERAL AND ROMA POPULATION

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Research has shown that almost one quarter of adults made the decision about their current profession during their childhood. Aims of this research were threefold: a) to map career preferences of elementary school students, b) to examine age-related differences in career preferences, and c) to examine differences in career preferences between students from the general population and Roma students. An open-ended question about career preferences was answered by 514 students from the general population (132 fourth-, 112 fifth-, 134 sixth- and 136 seventh-graders, $M_w = 11.89$) and 28 Roma students ($M_w = 13.64$) from Belgrade. Thematic analysis yielded 21 categories of career preferences. Answers were also categorized according to the level of required education, relation with IT and likelihood of gender-stereotyping. In the entire sample, the most frequently listed occupational choices were health professionals (15.3%), sportspersons (13.8%), and engineers (10.1%). Analyses of the most frequent categories showed that girls opted more frequently for teaching ($X(1, 542) = 27.615, p < .01$), health-related occupations ($X(1, N = 542) = 17.840, p < .01$) and arts ($X(1, N = 542) = 9.189, p < .01$) than boys did, while boys preferred engineering ($X(1, N = 542) = 13.621, p = .000$) and sports ($X(1, N = 542) = 23.992, p < .01$) more than girls did. Occupations that require higher levels of education were listed more often by girls than by boys ($X(3, N = 477) = 27.518, p < .01$). Although boys mentioned occupations related to IT more often than girls ($X(1, N = 474) = 19.366, p < .01$), girls were in general more likely to prefer occupations that are usually perceived as “male” than were boys likely to choose

“female” occupations ($X(2, N = 474) = 50.056, p < .01$). Age-related differences in career aspirations were not significant. Although the number of Roma students was low, results suggested a tendency of these students to choose lower status occupations that require lower levels of education ($X(3, N = 477) = 23.413, p < .01$). The ranking of career preferences partially matches the one found in international studies. Girls’ and boys’ preferences showed a tendency for gender-typed choices; however, like in previous studies, girls proved to be more interested in male-dominated occupations than were boys interested in female-dominated occupations, probably due to lower status of “female” occupations. Roma students’ preferred occupations were less prestigious, possibly due to the lack of diverse role models.

Keywords: career aspirations, career preferences, occupations. elementary school students, Roma

MALADAPTIVE PERSONALITY TRAITS IN A PROFESSIONAL CONTEXT

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Organizational psychologists have a continuous interest in assessing maladaptive personality traits in professional settings. Guenole classified maladaptation models in work environments into four broad categories, and these frameworks have improved our understanding of personality at work. This research aims to adapt the instrument focused on maladaptive personality assessment in an organizational context because of its role in mitigating the risk of misconduct at work.

There were 321 respondents, of which 66.67% women, collected online. The age ranged from 19 to 69 years, with an average of 13.44 years of experience ($SD = 8.88$). Dark Triad questionnaire SD3 was used, consisting of 27 items and three factors - Machiavellianism, Narcissism, and Psychopathy. Goldsmiths 60 (G60) is 60 items inventory used to assess six maladaptive personality domains - Antagonism, Compulsiveness, Alienation, Disinhibition, Negative Affect, and Psychoticism. The inventory is based on the DSM5 model of the maladaptive personality. Reliability for each domain based on this research is respectively .78, .79, .78, .83, .88, and .89, and consistent with previous findings. Years of experience were significantly correlated with Negative affect $r(319) = -.19, p < .001$, as well as gender and Psychoticism $r(319) = -.15, p < .01$, indicating that women achieved lower scores. Factor analysis was performed using Maximum Likelihood extraction and Promax rotation. Six fixed factors explain 42.56% of the variance. The saturations on the factors showed a theoretical tendency. Canonical correlation analysis was conducted with SD3 as the second set and revealed three statistically significant pairs. The first SD3 component explains 62.3% of the variance, while the variance explained by the function from the second set is 30.9%. The first G60 canonical component explains 34.3%, and the function from the first set 17%, indicating the direction of influence goes from SD3 to the G60.

The adapted instrument represents an essential fusion of clinical and organizational psychology to develop a tool that would provide reliable results in practice. Limitations and recommendations are related to acquiring data in natural circumstances during the selection

process, considering shortening the scale by omitting items with unsatisfactory metrics, and considering the legal and social implications of maladaptive personality assessment at work.

Keywords: maladaptive, personality, organizational context, Dark Triade, Goldsmiths 60

CASE STUDY OF 2020 FESTIVE ADVERTISEMENT WITH A CHARITABLE CAUSE: WHAT WENT WRONG AND WHY?

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The new year's video-advertisement stated the funds will be donated to maternity hospitals in Serbia based on ad sharing and brand sales. After only 14 hours, it was announced the ad sharing part of donation was stopped. It was in a separate post, while the original one remained unchanged and the sharing continued. Subsequently, it was added that part of the funds would be donated in the company's products. The sample of 425 participants answered an on-line questionnaire, developed to gather information about customers' thoughts of this event. It combines open-ended questions and statements. The information about the affair, stated above, has been presented in the questionnaire. The respondents were asked about their attitude toward the brand and estimated purchase likelihood before and after the event. Results provide descriptive data on the campaign's effect. When asked about the nature of donation, no one stated the donation would partly be in the company's goods. When informed, 66% of respondents noted it was the first time they heard about it, 53% rated the information as unclear. It led to overall negative feelings towards the brand for 56% of respondents who felt cheated (33%) and disappointed (27%), but some were also confused (12%). The attitude towards the brand became more negative (from 2,1% rating as negative to 32,2%), with significant association between attitude towards the brand before and after the event ($X(1) = 44,4$, $p < .05$). Some 11% express contentment about the donation even though they resent the broken promise. Surprisingly, the estimated frequency of future purchase has increased slightly (from 17,6% likely to buy, to 24,5%). The association between purchase likelihood before and after the event was a significant ($X(2) = 176$, $p < .05$). After exploring data further, it showed that 51,3% of respondents estimated the same purchase likelihood as before the affair, while 29,6% are more likely but 19% are less likely to buy company's goods now. Out of those less likely to buy now, one third were company's regular customers. This may have seemed like success since overall estimated purchase likelihood increased, but the potential loss of the brand's regular customers could be damaging. Especially since the previous research on this matter suggests the key role of brand trust in customers' commitment. Somewhat small effect on total purchase likelihood, compared to the attitude change, thoughts, and feelings, could indicate an atmosphere that people's actions have no impact on the overall situation.

Keywords: marketing, case study, brand image, donation, advertisement

STRAH OD GUBITKA POSLA KAO PREDIKTOR DISTRESA TOKOM COVID-19 PANDEMIJE: ULOGA NETOLERANCIJE NA NEIZVESNOST KAO MEDIJATORA

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Početak pandemije koronavirusa u Srbiji su obeležile restriktivne mere koje su negativno uticale na privredu. Tokom marta 2020. godine uveden je karantin čime je otežano ili potpuno obustavljeno poslovanje u određenim delatnostima što je dovelo do povećanja nestabilnosti zaposlenja za znatan broj zaposlenih. Nekoliko istraživanja ispitivalo je odnos nestabilnosti zaposlenja i njenih posledica tokom COVID-19 pandemije. Strah od COVID-19 infekcije pokazao se kao značajan moderator u odnosu između straha od gubitka posla i mentalnog zdravlja. S druge strane, pokazalo se da je netolerancija na neizvesnost u značajnoj meri povezana sa doživljajem distresa tokom pandemije.

Ovim istraživanjem želeli smo da ispitamo kako je nestabilnost zaposlenja tokom prvog talasa pandemije uticala na doživljeni distres kod zaposlenih. Želeli smo da izmerimo direktan efekat pretnje od gubitka posla na doživljeni nivo distresa, kao i indirektni efekat koji se ostvaruje kroz netoleranciju na neizvesnost kao medijatora. Na kraju, želeli smo da ispitamo i moderirajući efekat straha od COVID-19 infekcije.

Ukupno 525 zaposlenih učestvovalo je u onlajn istraživanju. Za merenje straha od gubitka posla koristili smo supskalu Jačina pretnje iz Skale percepcije nestabilnosti zaposlenja (SPNZ), dok je distres meren istoimenom skalom iz upitnika 4DSQ. Strah od COVID-19 infekcije meren je preko 3 stavke koje smo konstruisali za potrebe istraživanja, a netolerancija na neizvesnost merena je skalom netolerancije na neizvesnost (IUS-11).

Rezultati su pokazali da 30.4% ispitanika smatra svoje zaposlenje umereno do veoma nestabilnim, a čak 15.1% njih je izvestilo da očekuje da ostane bez posla tokom krize. Gotovo dve trećine ispitanika (63,4%) imalo je povišen nivo distresa.

Iako je jačina pretnje od gubitka posla imala direktne efekte na distres, rezultati medijacione analize pokazali su da netolerancija na neizvesnost u značajnoj meri posreduje u ovom odnosu. Procenjena jačina pretnje ima direktan efekat na distres ($B = 0.11$, 95% CI [0.07, 0.16]), ali i indirektni preko netolerancije na neizvesnost ($B = 0.11$, 95% CI [0.08, 0.015]): ukoliko neko teško toleriše neizvesnost, procenjena pretnja od gubitka posla je veća – što je povezano sa povećanim distresom. Za razliku od prethodnih studija, strah od COVID-19 infekcije nije se pokazao kao značajan moderator u odnosu između jačine pretnje i distresa. Konačno, ovo istraživanje ukazuje na značaj opšte rezilijentnosti kao protektivnog faktora i u radnom okruženju tokom krize.

Ključne reči: strah, gubitak posla, netolerancija na neizvesnost, COVID-19, distres

PERCEIVED JOB INSECURITY AS PREDICTOR OF DISTRESS DURING COVID-19 PANDEMIC: INTOLERANCE OF UNCERTAINTY MEDIATING ROLE

Restrictive measures introduced during the coronavirus outbreak in Serbia negatively affected some industries, leading to an unstable employment situation. The main aim of this study was to measure the effect of job insecurity on distress during the first wave of COVID-19. Direct

relationship between these variables, and also indirect effect via intolerance of uncertainty were examined. The moderating role of fear of COVID-19 was also tested.

525 employed participants took part in an online study. Intensity of job threat subscale (from PJIS), distress (from 4DSQ), Intolerance of uncertainty (IUS-11) and Fear of COVID-19 scales were used.

Results showed that 30.4% of the participants felt insecurity regarding their employment, and 63,4% of participants express increased distress levels. Moderated mediation analysis revealed that perceived job threat affects distress, both directly and indirectly via intolerance of uncertainty. Fear of COVID-19 failed to be a significant moderator in this relationship.

Keywords: fear, job threat, intolerance of uncertainty, COVID-19, distress

MOTIVATING JOB CHARACTERISTICS AND HAPPINESS AT WORK AMONG ICT PROFESSIONALS

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Even though happiness was studied in many life contexts, the importance of studying happiness at work was underestimated until recently. Recent research indicated that happiness at work was positively associated with employee well-being, and with some positive organizational outcomes. The Self-determination theory (SDT) and the Job demands-resources model (JD-R) claim that motivating job characteristics could lead to happiness at work. The aim of this study was to examine the relationship between the motivating job characteristics and happiness at work. The sample consisted of 123 ICT (information and communications technology) professionals (71.5% men). We have used The Work Design Questionnaire (WDQ; Morgeson & Humphrey) (dimensions: work scheduling autonomy, decision-making autonomy, work methods autonomy, skill variety, social support), and The Happiness at Work Scale (HAW; Singh & Aggarwal) (dimensions: flow and intrinsic motivation, work repulsive feelings, supportive organizational experiences, unsupportive organizational experiences). The results showed that ICT professionals who had higher job autonomy experienced higher flow and intrinsic motivation ($r = .64, p < 0.01$), as well as higher supportive organizational experiences ($r = -.30, p < 0.01$). They experienced less repulsive work-related feelings ($r = .40, p < 0.01$) and they generally reported experiencing more happiness at work ($r = .47, p < 0.01$). ICT professionals who had social support experienced higher flow and intrinsic motivation ($r = .44; p < 0.01$), they had more supportive experiences in the organization ($r = .46; p < 0.01$), lower unsupportive experiences in their organization ($r = -.19; p < 0.05$) and higher general happiness at work ($r = .39; p < 0.01$). The hierarchical multiple regression analysis showed that sociodemographic variables did not significantly predict happiness at work (Step 1), except for 'flexible/fixed working hours' ($\beta = .18, t = 1.99, p < .05$). Motivating job characteristics (Step 2) did significantly predict happiness ($F(10,112) = 4.51, p < .001$) and accounted for 20% of the perceived happiness variation. The only particular, significant predictor of happiness was 'social support' ($\beta = .22, t = 2.27, p < .05$). The results were further discussed in context of JD-R model and SDT and specificities of ICT industry.

Keywords: motivating job characteristics, happiness at work, ICT professionals, Job demands-resources model (JD-R), Self-determination theory (SDT)

WORK INTERFERENCE WITH PERSONAL LIFE AND TURNOVER INTENTION: MEDIATING ROLE OF JOB SATISFACTION

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Turnover intention refers to an employee's intention to leave the current job he/she are doing. Previous studies show that the work-life balance is related to the employees turnover intention. Work interference with personal life (WIPL) was found to be positively related to employees turnover intentions. Also, studies show that job satisfaction is an important predictor of employees intentions to leave the job. When an employee perceives that its employer is supportive and helpful in integrating personal and work-related issues, it results in a higher level of job satisfaction. Accordingly, this study aimed to determine whether the relationship between WIPL and employees turnover intention is mediated by job satisfaction. The sample consisted of 182 employees (48,4% female), age 20 to 62 ($M=35.20$, $SD=9.93$), with a length of service from 1 to 41 years ($M=993.15$, $SD=8.47$). We used the Work Interference with Personal Life Scale, Turnover Intention Scale and Job Satisfaction Scale. On a bivariate level, the WIPL correlated significantly with job satisfaction ($r=-.47$, $p<.001$), the job satisfaction correlated significantly with turnover intention ($r=-.63$, $p<.001$), and the WIPL correlated significantly with turnover intention ($r=.33$, $p<.001$). The Hayes' PROCESS for SPSS was used for mediation analyse. By using simple mediation model (bootstrapping on 10 000 sub-samples), it was established that a total direct effect of the WIPL on the turnover intention is significant (c : $\beta_{WIPL \rightarrow TI} = .33$ *** [$.60$, 1.48]). When the job satisfaction variable is entered as a mediator, the effect of WIPL on the turnover intention becomes insignificant (c' : $\beta_{WIPL \rightarrow TI} = .04$ [$-.30$, $.53$]). There is a significant indirect effect of the WIPL on the turnover intention through the job satisfaction ($a*b$: $\beta_{WIPL \rightarrow JS \rightarrow TI} = .29$ *** [$.18$, $.40$]), such that the WIPL predicts a higher turnover intention through lower job satisfaction. It can be concluded that job satisfaction mediates the relation between WIPL and employees turnover intention. So, this study was revealed that one of the mechanisms by which WIPL can trigger employees turnover intention is trough reduces job satisfaction. In other words, WIPL evokes lower job satisfaction without which the employee's tendency for turnover intention would not be activated.

Keywords: work interference with personal life, turnover intention, job satisfaction, mediator

RELATIONSHIP BETWEEN SEXUAL BEHAVIOR AND PERSONALITY TRAITS IN EMERGING ADULTS

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When considering the process of development, it is essential to incorporate the aspect of sexual development and recognize various types of sexual relationships because of their different consequences. Friends with benefits (FWB) differ from other relationships regarding the frequency, intensity of non-genital and genital behaviors and are defined as a friendly relationship that includes a sexual rather than a romantic component (Lehmiller et al., 2011). This research aims to determine the antecedents of FWB originating from the personality and its relationship with early intercourse. The sample was convenient, consisting of 254 respondents (81.90% female) aged 18 to 25. The instruments used were HEXACO and questions related to the age of first sexual intercourse, the total number of partners, and the number of FWB. The correlation of previously mentioned variables and personality were significant and ranged up to .20. The number of FWB showed a significant association with the trait Honesty $r(252) = -.13, p < .05$. Moderation analysis was conducted between personality traits as predictors and the number of FWB as criteria, while the moderator was the age of first sexual intercourse. Only the model including Emotionality was significant $R^2 = .10, F(3, 250) = 9.28, p < .001$, and the significant interaction pointed out the existence of moderation. Introduction of the moderator explained a significant change in variance $\Delta R^2 = .02, F(1, 250) = 5.63, p < .01$. The effect was considered at three levels of the moderator and was significant at the lower variable level. The unstandardized simple slope was $-.42$, indicating a negative relationship between Emotionality and the number of FWB in persons who had intercourse at a younger age. Findings indicate that people who are less prone to fear, worry, need less emotional support, do not feel strong emotional bonds, and have sex earlier, have more FWB. Clarifying FWB's aspects has theoretical and practical implications for health care and protection of vulnerable groups. Regarding mental health, depression could not only be an antecedent but also an outcome of FWB behaviors. Some of the guidelines for further research are more in-depth consideration of gender differences in FWB assessing depression and including the younger population in the research.

Keywords: Friends with Benefits, sexual behavior, personality, first sexual experience, risky behaviors

KOCKICE VIGOTSKOG – STARA PITANJA I NOVI IZAZOVI

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“Kockice Vigotskog” su varijanta metode dvostruke stimulacije, modifikovane za potrebe istraživanja procesa razvoja pojmova. Malobrojna istraživanja u kojima je metoda korišćena pokazuju postojanje značajnih razlika u načinu interpretacije rezultata koje dovode

u pitanje neke od osnovnih pretpostavki Vigotskog o ovom procesu. Cilj ovog rada sastoji se u proveriti rezultata istraživanja koja ukazuju da “kockice” predstavljaju zadatak klasifikacije sa skrivenim normativom. Ispitano je 143 učenika prvog (N=83, uzrast: 6;11-7;11) i trećeg (N=60, uzrast: 8;11-9;11) razreda. U individualnim seansama dat im je “zadatak Vigotskog” po proceduri opisanoj u priručniku Ivića i saradnika. Traženo je da rasporede 25 različitih figura, 1 po 1, u 4 grupe prema obrascu, a posle svakog pokušaja rečeno im je da li je njihov izbor figure ispravan. Rezultati analize odgovora ispitanika pokazali su da nijedan protokol ne može u celosti biti interpretiran ni u skladu sa podacima iz priručnika ni u skladu sa opsima Vigotskog. Jedini stadijum koji je mogao biti izdvojen, ali ne u čistom vidu, je stadijum kompleksa-kolekcije. Ovakav rezultat delimično je posledica samog postupka primene metode, jer opis u priručniku ne odgovara opisima iz radova Vigotskog. Davanje povratne informacije nakon svakog odgovora ispitanika u stvari je suprotno idejama Vigotskog i umesto mehanizma formiranja pojma kod dece omogućava uvid u njihov način rešavanja zadatka klasifikacije sa polu-skrivenim normativom. Odgovori su zbog toga grupisani prema načinu na koji ispitanici pristupaju rešavanju zadatka. Poređenje ispitanika iz dve uzrasne grupe pokazalo je da su kategorije njihovih odgovora iste, ali da su različito zastupljene ($\chi^2(3) = 11.485$, $p = .009$, $d = .269$). Dobijene kategorije - isprobavanje različitih kriterijuma (68% vs. 88%), odustajanje od zadatka (27% vs. 7%) i prelazak na drugi zadatak (po 5%) u skladu su sa nalazima ranijih istraživanja. Razlika postoji jedino u tipu zadatka na koji prelaze ispitanici – u ovom istraživanju učenici su od figura pravili slikovne predstave, što nije dobijeno ni u jednom drugom istraživanju sa metodom dvostruke stimulacije. Najzad, rezultati pokazuju da uloga reči u procesu apstrahovanja i uopštavanja karakteristika figura nema onaj značaj koji joj je dao Vigotski. Svega 18% prvaka i 32% trećaka ($\chi^2(1) = 3.551$, $p = .060$), obraćao je pažnju na besmislene reči i na kraju ispitivanja mogli su da ih ponove i objasne. Ostali ih nisu uzimali u obzir i nisu ih ni zapamtili.

Keywords: metod dvostruke stimulacije, kockice Vigotskog, razvoj pojmova, klasifikacija

VYGOTSKY'S CUBES – OLD QUESTIONS AND NEW CHALLENGES

This work aimed to review results of those studies that indicate that the variant of the double stimulation method or “Vygotsky’s cubes” assesses solving the task of classification with hidden norm instead of concept development. Total of 143 students, first- and third-graders, were given the task described in the manual by Ivić. Protocols could not be fully interpreted using the data from the manual nor using Vygotsky's descriptions, partially because they don't match. The only recognized stage of concept development was complex-collection. After classifying the answers based on the subjects' approach, age groups comparison showed the same categories but different distributions of the answers. Response categories (different criteria, giving up, and another task) match those from previous studies, although the task subjects moved on to (“3D drawings”) were not obtained before. Results also showed that the role of words in abstracting and generalizing the figures' characteristics might not have significance Vygotsky proposed.

Keywords: double stimulation method, Vygotsky's cubes, concept development, classification

BITI IZMEĐU – ODRASLOST U NASTAJANJU I SEKUNDARNA SEPARACIJA I
INDIVIDUACIJA

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Usled društvenih i kulturalnih promena, poslednjih dvadeset godina neki autori ukazuju na javljanje dodatnog životnog razdoblja u životnom ciklusu čoveka. Ovo razdoblje nazivaju odraslost u nastajanju, i ono se pozicionira između perioda adolescencije i mladog odraslog doba i obuhvata mlade uzrasta od 18 do 25 godina. Odraslost u nastajanju je doba istraživanja identiteta, nestabilnosti, samofokusiranosti, doživljaja „biti između” i doba mogućnosti. Budući da mladi tokom ovog razvojnog perioda prolaze kroz proces sekundarne separacije i individuacije, ovo istraživanje ispituje na koji način mladi koji su u periodu odraslosti u nastajanju, razrešavaju zadatak separacije i individuacije. Dodatni cilj istraživanja je ispitivanje razlika u procesu separacije i individuacije između adolescenata i mladih odraslosti u nastajanju. Uzorak se sastojao iz dve grupe mladih: adolescenata, uzrasta od 15 do 17 godina ($N = 124$) i mladih u odraslosti u nastajanju, uzrasta od 18 do 25 godina ($N = 222$). Za procenu procesa separacije-individuacije korišćen je Test za procenu separacije-individuacije za adolescente u okviru koga se na našem uzorku izdvaja pet subskala: zdrava nezavisnost; negiranje potrebe za drugima; sputanost zbog roditeljske kontrole; čežnja za detinjstvom i separaciona anksioznost. Deskriptivni pokazatelji ispitivanih varijabli pokazuju da mladi koji su u odraslosti u nastajanju postižu skorove nešto iznad teorijski pretpostavljenog proseka na subskalama: separaciona anksioznost, sputanost zbog roditeljske kontrole, čežnja za detinjstvom i zdrava nezavisnost. Rezultati jednosmerne analize varijanse, pokazuju da se adolescenti i mladi odraslosti u nastajanju statistički značajno razlikuju u subskalama zdrava nezavisnost ($F(1,345) = 3.887, p = .049$) gde adolescenti postižu niže skorove; i sputanost zbog roditeljske kontrole ($F(1,345) = 5.586, p = .019$) gde adolescenti postižu više skorove u odnosu na mlade koji su u odraslosti u nastajanju. Dobijeni rezultati govore o razvojnim promenama unutar procesa sekundarne separacije i individuacije, gde se doživljaj sputanosti zbog roditeljske kontrole smanjuje, ali ne nestaje, prelaskom sa adolescencije na odraslost u nastajanju. Odraslost u nastajanju karakteriše upravo doživljaj „biti između”, gde mladi čine iskorak ka separaciji i zdravoj nezavisnosti, ali i dalje imaju doživljaj separacione anksioznosti, utisak roditeljske kontrole i čežnju za detinjstvom.

Keywords: sekundarna separacija i individuacija, odraslost u nastajanju, adolescencija

FEELING “IN BETWEEN” – EMERGING ADULTHOOD AND SECONDARY
SEPARATION AND INDIVIDUATION

This research examines how young people in emerging adulthood resolve the tasks of secondary separation and individuation and the differences in the process of separation and individuation between adolescents and young emerging adults. The sample consisted of two groups: adolescents, aged 15 to 17 years ($N = 124$) and emerging adults, aged 18 to 25 years ($N = 222$). To assess the process of separation-individuation, The Separation-Individuation

Test of Adolescence was used, (subscales: healthy separation; need denial; engulfment anxiety; nurturance-symbiosis and separation anxiety). The results of the ANOVA show that adolescents and emerging adults differ in: healthy separation ($F(1,345) = 3.887, p = .049$) adolescents achieve lower scores; and engulfment anxiety ($F(1,345) = 5.586, p = .019$) adolescents achieve higher scores. The obtained results speak of developmental changes within the process of secondary separation and individuation, where the experience of engulfment anxiety decreases with the transition from adolescence to emerging adulthood, but also does not disappear.

Keywords: secondary separation and individuation, emerging adulthood, adolescence

SEKUNDARNA SEPARACIJA I INDIVIDUACIJA I FORMIRANJE IDENTITETA U ADOLESCENCIJI

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Dva značajna procesa koja se odvijaju u adolescenciji jesu formiranje identiteta i sekundarna separacija i individuacija. Oba procesa predstavljaju razvojne zadatke čije je uspešno razrešenje deo optimalnog razvoja i dobra osnova za na naredne psihosocijalne stadijume. Preduslov postizanja formiranog identiteta jeste sposobnost osobe da organizuje iskustva i znanja o sebi i okolini, kao i prevladavanje kriza. Način na koji adolescent prolazi kroz sekundarnu separaciju i individuaciju u velikoj meri utiče upravo na ove sposobnosti. Sekundarna separacija i individuacija najpre podrazumevaju razvoj autonomije, ali i intrapsihičko odvajanje i redefinisane odnosa sa roditeljima što omogućava proces kreiranja sopstvenog identiteta. Uzimajući u obzir značaj oba navedena procesa, ovo istraživanje polazi od toga da ispita relacije procesa separacije i individuacije i formiranja identiteta u adolescenciji. Uzorak se sastojao od 343 ispitanika sa teritorije Republike Srbije (49 mladića i 294 devojaka), uzrasta od 15 do 25 godina ($M = 18.21$). Za procenu procesa separacije-individuacije korišćen je Test za procenu separacije-individuacije za adolescente u okviru koga se na našem uzorku izdaja pet subskala: zdrava nezavisnost; negiranje potrebe za drugima; sputanost zbog roditeljske kontrole; čežnja za detinjstvom i separaciona anksioznost. Za procenu procesa formiranja identiteta primenjena je subskala za period adolescencije iz Eriksonovog instrumenta The Modified Erikson Psychosocial Stage Inventory. Rezultati regresione analize pokazuju da je model u kome su subskale separacije-individuacije prediktori statistički značajan i objašnjava 29% varijanse procesa formiranja identiteta u adolescenciji ($F(5, 340) = 27.86, p = .00, R^2 = .29$). Četiri subskale separacije-individuacije izdvojile su se kao statistički značajni individualni prediktori ($p = .00$): zdrava nezavisnost ($\beta = .28$); negiranje potrebe za drugima ($\beta = -.32$); sputanost zbog roditeljske kontrole ($\beta = -.16$); i čežnja za detinjstvom ($\beta = -.17$). Adolescenti koji uspešno prevaziđu sekundarnu separaciju i individuaciju – kod kojih dođe do diferencijacije i intrapsihičke

autonomije, formiranja adaptivnih uverenje o bliskim odnosima – u većoj meri imaće formiran identitet koji predstavlja protektivni faktor mentalnog zdravlja i razvoja pojedinca.

Keywords: sekundarna separacija i individuacija, formiranje identiteta, adolescencija

SECONDARY SEPARATION AND INDIVIDUATION AND IDENTITY FORMATION IN ADOLESCENCE

This research examines the relations between the process of separation and individuation and the formation of identity in adolescence. The sample consisted of 343 participants from the territory of the Republic of Serbia (49 boys and 294 girls), aged 15 to 25 years ($M=18.21$). To assess the process of separation-individuation, the Separation-Individuation Test of Adolescence was used (five subscales: healthy separation; need denial; engulfment anxiety; nurturance-symbiosis and separation anxiety). To assess the process of identity formation subscale *adolescent phase* from The Modified Erikson Psychosocial Stage Inventory was used. The results of regression analysis show that the separation-individuation subscales represent a significant predictor model that explains 29% of the variance of the process of identity formation in adolescence ($F(5,340) = 27.86, p = .00, R^2 = .29$). Four subscales of separation-individuation stood out as statistically significant individual predictors ($p = .00$): healthy separation ($\beta = .28$); need denial ($\beta = -.32$); engulfment anxiety ($\beta = -.16$); and nurturance-symbiosis ($\beta = -.17$).

Keywords: secondary separation and individuation, identity formation, adolescence

"WHAT CAUSES FOUR BASIC EMOTIONS?" – UNDERSTANDING ELICITORS OF EMOTIONS AT DIFFERENT AGES

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Although it has been known for a long time that symbolic stimuli can be elicitors of emotions, the attention of researchers of social cognition (ie. theory of mind) so far has been focused almost exclusively on physical elicitors. Inspired by that, we decided to ask respondents at different ages what causes four basic (happiness, fear, anger, sadness) emotions, considering that the relative frequency of symbolic elicitors (symbols that cause emotions) will indicate the importance of such elicitors for participants in understanding the causation of their emotions. This study involved 20 participants per each age: 5 ($M = 5.6$; $SD = 0.34$), 9 ($M = 9.48$; $SD = 0.3$), 12-13 ($M = 12.9$; $SD = 0.27$), and 16-17 ($M = 16.67$; $SD = 0.54$) years, as well as students of psychology ($M = 23.84$; $SD = 1.72$) and other students ($M = 24.06$; $SD = 1.56$). Both genders were equally represented; all participants were from Belgrade. Responses were categorized by two independent coders; inter-rater reliability was 96%. The main finding was that symbolic stimuli were mentioned as elicitors of emotions by respondents at all ages (on average 63.13% of the total number of elicitors). Apparently, such elicitors are very important in understanding the causation of emotions, so a serious omission has been made in previous research in social cognition by neglecting them. Symbolic elicitors had the lowest relative frequency at the youngest (5 years) age - 46.4%, which is significantly ($\chi^2(1, N = 1565) = 31.126; p < .001$) less than at older ages (65.9% on average). We interpreted that due to the fact that children between the ages of 5 and 9 begin to participate more often in social institutions and become more exposed to symbolic stimuli; also, only 5-

y-olds are prelogic in their thought while all other respondents are logic, which could also have affected their responses. On the other hand, the absence of other age differences is probably because we asked the respondents only about the elicitors of basic emotions. The analysis by subcategories showed that children from the age of 5 mentioned symbolic media that imitate reality (picture books, movies, etc.) more often than older respondents ($\chi^2(1, N = 1565) = 48.971; p < .001$), which is in line with the importance of such media at the preschool age. Inversely, normative-symbolic elicitors were more frequent among older respondents ($\chi^2(1, N = 1565) = 87.854; p < .001$), which was interpreted in the same way as the main finding.

Keywords: causation of emotions, symbolic elicitors, basic emotions, age differences, social cognition

PSYCHOMETRIC CHARACTERISTICS OF THE TEST OF EMOTION
COMPREHENSION (TEC) IN SERBIAN-SPEAKING CHILDREN FROM BOSNIA AND
HERZEGOVINA

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Although child emotionality is a topic of particular professional and public interest in recent decades, there is still a lack of suitable instruments for assessing emotional competencies of preschool or school-age children. The aim of our study was to explore psychometric qualities of the Test of Emotion Comprehension on a sample of children from Bosnia and Herzegovina. The TEC consists solely of nonverbal items, and it is intended to assess nine hierarchically ranked domains of emotional understanding among children aged between 3 and 11 years. Our sample comprised 202 elementary school students (6 to 11 years) who were tested individually. In order to generate suitable variability the students were selected by their teachers based on the descriptions of typical profiles of the following categories: an emotionally stable child (2 students from a class), a child showing externalized behavior problems (1 student), and a socially withdrawn child (1 student). The results of the qualitative analysis of both items and children's responses indicate an adequate level of TEC's content validity overall; nevertheless, for a small number of items we suggest certain corrections. When it comes to quantitative analysis a significant majority of the participants had high scores indicating weak discriminatory power of the TEC for the considered age range. As a direct consequence coefficients of internal consistencies were low when they were calculated by using traditional formulas ($\alpha = .44$; $\omega_T = .46$), whereas they reached moderate values ($\alpha = .67$; $\omega_T = .73$) when they were calculated on the matrix of tetrachoric correlations. Furthermore, Mokken scaling did not provide evidence for the assumption that the test components are hierarchically ranked ($H = .11$). On the other hand, for some aspects of criterion validity we observed satisfactory results. The group labeled as emotionally stable students achieved the highest scores, whereas socially withdrawn students scored lowest

(Kruskal-Wallis test: $\chi^2(2) = 21.12$, $p < .01$). In addition, we observed a significant association with age, but we did not find any gender differences. To summarize, the results of our study are analogous to TEC adaptations conducted in other countries: the test has certain qualities, but it seems to be too easy for the large majority of school-aged children and it should be investigated whether it is more suitable for testing preschool children.

Keywords: TEC, test adaptation, emotional competence, children, elementary school students.

LEISURE TIME IN ADOLESCENCE: BEHAVIOURAL PATTERNS AND ADOLESCENTS' GROUPS

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Spare time is a significant social context that may promote adolescents' positive development and prevent risk behaviour. This research is aimed to identify patterns of adolescents' behaviour during spare time and groups of adolescents clustered by similar preferences related to their leisure activities and interests. The sample consisted of 1349 first and third grade secondary school students (56% female, 51% first grade) from 10 different cities in Serbia. The questionnaire was distributed to students in schools and included groups of closed-type questions, mainly with 5-point scale, related to: hobbies, different themes/shows in media, listening to music, going out, attending cultural and sports events, activities on Internet and social network usage. The Principal axis factoring with Varimax rotation was applied on 49 items and based on the extracted factors a Hierarchical cluster analysis (Ward's method) was conducted consequently. The KMO and Bartlett's test of sphericity verified the sampling adequacy ($KMO = .822$, $\chi^2(1176) = 18712$, $p = .001$). The ten factors solution explaining 54.5% of variance was chosen (according to eigenvalues, scree-plot and interpretability) including following factors: IT, Pop culture, Reflective & Complex music, Intense & rebellious music, Science and culture, Politics, Going out, Sports, Films and TV shows, Online communication. Obtained factor composite scores were generated and used in following cluster analysis, which revealed 5 groups of adolescents. The first Up to date cluster (13%) includes adolescents interested in science, culture and politics who prefer Reflective & Complex music. In the second cluster (21%) are adolescents prone to Mainstream culture following pop culture and watching films and TV shows. Sport fans are in the third cluster (25%). IT "nerds" is the fourth group (11%) which practices IT and listens to Intense & Rebellious music. The fifth and the largest group of adolescents (30%) are Typical adolescents, who do and like everything young people prefer, but nothing in particular. They follow pop culture, more than politics or science, prefer pop music than other genres, go out, watch films and series, and spend time on online communication. Similar to previous studies, fun, unstructured and passive activities are the most prominent in the leisure time of adolescents. The results are discussed in the light of possible consequences on adolescents' development and wellbeing.

Keywords: leisure time, adolescents, behavioural patterns, clusters

ADOLESCENTS' LEISURE TIME SATISFACTION AND BEHAVIORAL PATTERNS

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This study aims to provide an overview of adolescents' leisure time satisfaction and its relation to identified behavioural patterns. The sample consisted of 1358 Serbian secondary school students, 1- and 3- grade. Within the broader questionnaire about adolescents' everyday life, participants answered about the level of satisfaction with spending their leisure time (scale 1-5), their preferable activities, and what they need to be more satisfied. Results show that every second adolescent is mostly satisfied. Significant effects were found for gender ($t(1268) = 5.51, p < .00$) and age ($t(1342) = 2.81, p < .01$), in favour of boys and first graders. Furthermore, adolescents who attend 3-year vocational schools ($F(2, 1341) = 7.87, p < .00$) are significantly more satisfied than those in 4-year vocational and grammar schools. Those with the lowest SES are less satisfied than those from other SES categories ($F(5, 1331) = 4.59, p < .00$). About half of adolescents (53%) estimate they need additional free time to be more satisfied. They mostly spend their leisure time using mobile phones (70%) and socializing (63%). Seven behavioural patterns (Information Technologies (IT), Pop Culture, Culture/Art/Music, Films/TV-Shows/Internet, Science/Politics, Going Out, and Sports) were identified (PAF, Varimax) and saved as factor scores (Cronbach's Alpha $> .70$). Small but significant correlations were found between leisure time satisfaction and Culture/Art/Music ($r = .10, p < .00$), Science/Politics ($r = .07, p < .01$), Going Out ($r = .11, p < .00$) and Sports ($r = .14, p < .00$). Negative correlations only concern orientations towards IT ($r = -.12, p < .01$) and Films/TV-Shows/Internet ($r = -.08, p < .00$). In summary, younger and 3-year vocational male students, with higher SES display greater leisure time satisfaction. Fulfilment resulting from orientation towards culture, art, music, science, and politics seems connected to interests for acquiring knowledge and information. Moreover, Going Out and Sports are pleasant, socially engaging activities. Negative correlations with Films/TV-Shows/Internet could be explained by dissatisfaction from these activities' passiveness and solitary nature. Finally, negative correlations between satisfaction and IT pattern might appear due to skill-mastering (even professional) activity type, which surpasses the leisure time. These conclusions refer to the need for further research of leisure time satisfaction and behavioural patterns.

Keywords: adolescents, leisure time, leisure time satisfaction, behaviour patterns

ADOLESCENT RISK BEHAVIOURS AND RELATIONSHIP WITH PARENTS: TO DRINK OR TO SMOKE THAT IS THE QUESTION

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This research is a part of the larger study dealing with adolescents' everyday life and leisure time. The aim of the study was to investigate the association between risk-taking behaviour and relationship with parents. The survey included 1349 upper secondary school students (1st and 3rd grade) from 26 schools in 10 Serbian cities. Three scales were used to measure adolescents' relationship with parents: parents' cultural mediation, parental monitoring scale and emotional relationship with parents (satisfaction with the quality of their relationship, emotional exchange, frequency of quarrels and disagreements). The scale for investigating the frequency of different risk behaviours (smoking cigarettes, alcohol and psychoactive substances abuse, driving without a licence or while intoxicated, sports betting, unprotected sexual intercourse) was constructed. Cluster analysis (Ward's method) and follow-up discriminant analysis show that three adolescents' group could be defined according to the similarity in the frequencies of risk behaviours ($\chi^2(22, 1349) = 3430.19; p < .001$; $\chi^2(10, 1349) = 946.63; p < .001$). Group centroids show that the first group can be described as abstainers: they are not prone either to alcohol or cigarettes. The second group is related to alcohol abuse. Finally, the third group can be described as smokers – their main risk behaviour is related to cigarette use. Discriminant analysis correctly classified high percentages of the students (93.7%) into the predicted risk behaviours group. MANOVA was conducted to further understand the difference between described groups and relationships with their parents. There is a statistically significant difference in relationship with parents based on the belonging to the defined groups ($F(8, 2422) = 17.683; p < .001$; Wilk's $\Lambda = 0.893$, partial $\eta^2 = .055$) and that is applied to emotional relationship with parents ($F(2, 1214) = 18.893; p < .001$; partial $\eta^2 = .030$) and parental monitoring ($F(2, 1214) = 67.583; p < .001$; partial $\eta^2 = .100$), but not for parents' cultural mediation. Post-hoc tests revealed that, for both emotional relationship and monitoring, abstainers had the highest scores compared to drinkers and smokers. Analyses of differences between risk groups (smokers and drinkers) show that drinkers are better monitored and also had better emotional relationships with parents. Differences regarding gender will be further discussed. The obtained results indicate that a warm relationship with parents accompanied by parental knowledge about adolescents' life could be considered as a successful form of prevention from the participation in risk-taking behaviour. On the other hand parents' cultural mediation represents a parental practice that has had more impact on other areas of an adolescent's life.

Keywords: adolescence, parents, risk behaviours, emotions, monitoring

PREDICTION OF INTERNET ADDICTION IN ADOLESCENTS BASED ON
PARENTING STYLE AND FAMILY FUNCTIONING

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Internet addiction, as a type of behavioral addiction, is a growing problem in society. Research in Serbia shows that the highest percentage of Internet addicts is among the adolescent population. With this in mind, the aim of the study was to examine whether there is a possibility of prediction of Internet addiction in adolescents based on knowledge of parenting styles (acceptance by the mother, acceptance by the father, psychological control of the mother, psychological control of the father, behavioral control of the mother, behavioral father control) and family functioning (cohesiveness, adaptability, communication, satisfaction). The research was conducted online. The sample consisted of 171 respondents of both sexes ($M = 1.64$, $SD = .482$; 109 of them are female), aged 15 to 18 years ($M = 16.47$, $SD = 1.097$). The instruments we used were: IAT-questionnaire of Internet addiction, FACES IV-questionnaire of family functioning and CRPBI-57-questionnaire for measuring parental behavior. Multiple regression analysis was used for data analysis. The results show that there is a possibility of predicting Internet addiction based on parenting styles and family functioning ($F(10,160) = 4.02$, $p < .001$). This model explains the 15% variance of Internet addiction; where family satisfaction ($\beta = -0.45$) and psychological control by the father ($\beta = 0.21$) have a statistically significant individual contribution. Family adaptability, connectivity, communication, but also general family satisfaction are factors related to the development of Internet addiction, with the assessment of family satisfaction being a significant factor in the prediction model. Adolescents who are prone to developing Internet addiction rate their families as less cohesive, less adaptable, chaotic, with poor interpersonal communication. In addition, although parenting styles are one of the factors important for understanding the development of addiction in adolescents; it turned out that, unlike behavioral control, psychological control by the father was more important for understanding this addiction. The higher the degree of psychological control that the father shows towards the child, the higher the score on the scale of that child's Internet addiction. The results obtained in this way are in line with the hypothesis and indicate the importance of family functioning and parenting styles in understanding adolescent Internet addiction.

Keywords: Internet addiction, family functioning, parenting styles, adolescents

ADOLESCENTS' WELL-BEING AND TYPICAL PATTERNS OF THEIR LEISURE TIME BEHAVIORS

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The research is part of a broader study investigating the everyday life of adolescents in Serbia. Previous findings indicate that diverse leisure time activities are differentially related to adolescents' well-being. This work aims to determine if there are connections between identified patterns of leisure time behaviors and certain aspects of well-being. The sample included 1358 secondary school students (44% boys). 49 Likert-type items concerning the frequency of practicing certain leisure activities were selected out of the major questionnaire. Factor analysis (PAF, Varimax) provided the patterns, factor scores (Cronbach's Alpha > .70). The solution with seven factors was chosen, and latent variables interpreted as an orientation towards Information Technologies (IT), Pop Culture, Culture/Art/Music, Films/TV-Shows/Internet, Science/Politics, Going Out, and Sports. Adolescents answered about their well-being on the EPOCH scale (Likert-type, 1-5). Theoretically, it includes 20 items, 4 for each of the following aspects: Engagement (E), Perseverance (P), Optimism (O), Connectedness (C), and Happiness (H). This structure was confirmed with exploratory factor analysis (GLS, Promax), so the composite measures were created. The most significant ($p \leq .01$) but small correlations between factor scores and composite measures are: a) IT and P ($r = .21$), O ($r = .14$), C ($r = .28$), H ($r = .11$); b) Pop Culture and E ($r = .13$), C ($r = -.08$), H ($r = -.11$); c) Culture/Art/Music and E ($r = .10$); d) Films/TV-Shows/Internet and P ($r = .10$), O ($r = .08$); Science/Politics and E ($r = .13$), P ($r = .08$); Going Out and O ($r = .12$), C ($r = .11$), H ($r = .21$); Sports and E ($r = .17$), P ($r = .18$), O ($r = .16$), H ($r = .20$). The general well-being variance was significantly explained ($F(3, 1021) = 42.84$, $R^2 = .11$, $p < .00$) by three following unique patterns ($p < .00$): IT ($R^2 = .05$), Going Out ($R^2 = .02$), Sports ($R^2 = .04$). These are positively connected to more aspects of well-being and are considered overall beneficial. Unlike Sports, Going Out and IT patterns are associated with greater connectedness. Orientations towards science, politics, sports, culture, art, and music require higher engagement levels, and the first three involve perseverance over time. Pop Culture is the only pattern with negative correlations, indicating lower degrees of connectedness and happiness. In conclusion, certain leisure time behavior patterns are related to different aspects of adolescents' well-being.

Keywords: adolescents, well-being, EPOCH scale, leisure time, behavior patterns

ADOLESCENTS' LEISURE TIME AND SUBSTANCE CONSUMPTION

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The aim of research was to explore how substance consumption habits are connected to the way adolescents spend their leisure time. This research is a part of a larger study that deals with adolescent leisure and general behaviour. The sample consists of 1349 teenagers from 26 different high schools from 10 different cities in Serbia. Several closed-type questions were used to measure frequency and amount of alcohol and cigarette consumption. For leisure time, we chose 3 types of most prominent activities in the life of adolescents: Going out, Studying and Watching and/or playing sports. Students had to answer several closed-type questions for occurrence and frequency of each activity. After using cluster analysis via Ward's method and a first discriminant analysis we came to the conclusion that three groups of adolescents can be identified ($L = .07$, $\chi^2(22, 1349) = 3430.19$, $p = .00$; $L = .47$, $\chi^2(10, 1349) = 946.63$, $p = .00$). The first group can be depicted as abstainers: they report not to be prone to smoking cigarettes or drinking alcohol. The second group can best be described as drinkers but not smokers. The third group points to teenagers who are chain smokers and drinkers (they will be referred to as smokers). The follow up discriminant analysis correctly classified 93.7% of the students into the predicted risk behaviours group. The second discriminant analysis was conducted, with aim to examine if attitudes towards school, watching and/or playing sports and going out can discriminate between these three groups. The second discriminant analysis revealed two discriminant functions ($L = 0.70$, $\chi^2(10, 1349) = 399.170$, $p = .00$; $L = 0.96$, $\chi^2(4, 1349) = 42.171$, $p = .00$). The first explained 90.7% of the variance, canonical $R^2 = .27$, whereas the second explained 9.3%, canonical $R^2 = .04$. First discriminant function best differentiates smokers from abstainers. Structure matrix revealed that smokers more often go out ($r = .78$) and spend less time studying ($r = -.61$). Compared to smokers, drinkers stand out in participating in sports activities ($r = .79$), playing sports ($r = .62$) and have higher academic achievement ($r = .57$). While results show that smoking is a clear indicator of risk behaviour (lowest engagement in school and sports and greatest tendency for going out), it seems that drinking is a more complex phenomenon that is discussed in the light of previous studies.

Keywords: free time, sports, drinking, smoking, studying.

BODY IMAGE AND ITS CORRELATES: PISA 2018 STUDY IN SERBIA

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Body image refers to the perception of your own body and is a part of the set of variables that make up the concept of well-being. How students see their body affects their general experience of themselves and the perception of their well-being which could affect their perception of their achievement. The goal of this study was to examine the connection between body image and other well-being variables in adolescents in Serbia. The research was conducted on already collected PISA testing data in 2018. The sample contained 6609 high school students (49.5% women and 50.5% men) from over 200 schools in Serbia (age 14 to 15). As a part of the PISA study, students answered a series of questions about various aspects of their lives. The measure of body image was a linear composite of multiple variables, which tested how the participants perceived their bodies. Among students from Serbia, the correlation between achievement and body image was not confirmed. Three multiple linear regression analyses were performed, with the body image being the criterion variable. The first set of predictors included variables related to the relationship with other persons (parental emotional support perceived by the student, parental social connections, teacher support in test language lessons, and satisfaction with friends) ($R = .562$, $F(5, 6296) = 580.109$, $p < .001$), the second set included variables related to the academic self (competitiveness, work mastery, mastery goal orientation, resilience and general fear of failure) ($R = .319$, $F(5, 6603) = 149.979$, $p < .001$), the third set included variables related to subjective well-being (meaning in life, positive affect and sense of belonging to school) ($R = .316$, $F(3, 6605) = 243.681$, $p < .001$). Relationships with others explain a third of the body images' variation, which can be explained by the fact that we generally form an image of ourselves through social interaction. This leads us to the conclusion that if one wants to help students who have a negative body image one should work on their relationship with others. As we see the body image by itself is not a good predictor of achievement but is associated with several variables that generally relate to well-being, relationships with others, and the perception of their abilities and success (failure). Based on current results, in the future it is important to examine the model which suggests that the body image is affected by relationships with others, which further affects the well-being of an individual.

Keywords: PISA testing, body image, well-being, relationship with others

STILOVI HUMORA KOD SRPSKIH ADOLESCENATA

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Tokom perioda adolescencije, osobe se susreću sa različitim načinima prevladavanja stresa. Jedan od načina na koji se stres može prevazići jeste putem korišćenja humora. Stilovi humora se definišu kao različiti načini ispoljavanja humora. Fokus ove korelacione studije su stilovi humora Martina i saradnika (HSQ) kojih ima četiri. Po njima dve vrste humora se odnose na dobroćudni humor (Afilijativni i Humor u službi samopoboljšanja), dok su dve vrste humora opisane kao maligne (Agresivni i Samoporažavajući humor). Ova studija ima za cilj ispitivanje strukture testa prevedenog na srpski jezik (HSQ_{Srb}) na adolescentskoj populaciji u Srbiji, prediktivne moći testa uz pomoć bihevioralnih varijabli, kao i utvrđivanje povezanosti humora sa HEXACO inventarom ličnosti i skalom stresa kod adolescenata. Očekuje se da dobroćudni humor neće korelirati sa skalom stresa kod adolescenata, dok maligni hoće. Uzorak istraživanja je bio prigodan i činilo ga je 219 adolescenata (Ž:74%, 15-19 godina). Kod adolescenata u Srbiji se javlja četvorofaktorska struktura humora, koja odgovara već navedenim stilovima humora. Četvorofaktorska struktura objašnjava 30.73% varijanse testa. Test dobro predviđa ponašanja koja su povezana sa stilovima humora. Afilijativni stil humora ne korelira ni sa jednom crtom ličnosti, ni sa skalom stresa. Afilijativni humor, koji predstavlja zdrav humor usmeren ka drugima, adolescenti u Srbiji koriste bez obzira na faktore ličnosti. Skala Samopoboljšavajućeg humora je korelirala sa Emocionalnošću ($r = .16$, $p < .05$) i Ekstraverzijom ($r = .16$, $p < .05$), dok sa skalom stresa nije bilo korelacije u skladu sa očekivanjima. Agresivni humor korelira pozitivno sa Poštenjem ($r = .14$, $p < .05$) i negativno sa Emocionalnošću ($r = -.22$, $p < .001$), dok sa stresom nije bilo korelacije. Zbog nepostojeće korelacije Agresivnog stila sa skalom stresa potrebno je ispitati da li se Agresivni humor ispoljava kao maladaptivni na srpskoj populaciji adolescenata, jer je moguće da adolescenti taj humor koriste u svrhu socijalizacije, a ne napada na druge kako bi zaštitili sebe. Samoporažavajući humor korelira sa svim crtama, osim sa Emocionalnošću (Poštenje: $r = .35$, $p < .001$, Ekstraverzija: $r = .35$, $p < .001$, Saradljivost: $r = .31$, $p < .05$, Savesnost: $r = .37$, $p < .05$, Otvorenost: $r = .23$, $p < .05$), kao i sa skalom stresa ($r = .29$, $p < .05$), što je takođe očekivano. Potrebno je dalje ispitati humor kod adolescenata u Srbiji, radi boljeg razumevanja njegovog korišćenja.

Ključne reči: humor, adolescenti, stres, ličnost, hsq

HUMOR STYLES AMONG SERBIAN ADOLESCENTS

The aim of this research was to examine adolescent behavior concerning humor styles in Serbia, by using translated HSQ test. The HSQ differentiated four types: two benign – affiliative humor and self-enhancing humor, two malignant types – aggressive humor and self-defeating humor. The sample contained 219 participants (74% females, age 15-19). According to the factor analysis, four styles match the four-factor structure among Serbian adolescents. Styles were correlated with HEXACO-60 inventory and ASQ stress scale, as well as behavioral variables to predict certain behaviors. Affiliative humor did not correlate with HEXACO-60, adolescents were using affiliative humor no matter of the personality type they were. Aggressive humor did not correlate with ASQ scale, which indicates that among Serbian adolescents this type of humor is not malignant but rather used as an enhancement of social situations, which is topic for future research. It is necessary to further examine the humor among adolescents in Serbia.

Keywords: humor, adolescents, stress, personality, hsq

EMOTION REGULATION STRATEGIES AND SUBJECTIVE WELL-BEING: GENDER DIFFERENCES IN FLEXIBILITY

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Successful emotion regulation is important for various aspects of children's well-being. In middle childhood, children are starting to rely on different cognitive strategies to regulate their own emotions. The most studied regulatory strategies are cognitive reappraisal and expressive suppression which show different patterns of association with the subjective well-being of both children and adults. Although cognitive reappraisal is considered to be an adaptive strategy, and expressive suppression non-adaptive, recent research indicates the importance of studying the flexibility of using these strategies, i.e., their interaction. It has been shown that expressive suppression is not always a detrimental strategy for boys if it is used in combination with high cognitive reappraisal. The aim of this study is to investigate the role of cognitive reappraisal and expressive suppression and their interactions in predicting the subjective well-being of girls and boys in middle childhood. The study involved 165 children (44.8% girls, $M_{age} = 10.19$, $SD = 0.87$) from Osijek and Varaždin in Croatia. Participants completed an emotion regulation questionnaire and two measures of subjective well-being (global life satisfaction measure and satisfaction with life domains). Boys were more likely than girls to use expressive suppression ($F(1,163) = 4.156$, $p = .043$, $\eta^2 = 0.025$) in order to regulate their own emotions. Moderation hypotheses were tested by using hierarchical linear regression with age as a covariate. For boys only, it was shown that cognitive reappraisal moderates the effects of expressive suppression on both global life satisfaction ($F(1,86)_{interaction} = 3.91$, $p = .0512$, $\Delta R^2 = .04$), and satisfaction with life domains ($F(1,86)_{interaction} = 6.38$, $p = .0134$, $\Delta R^2 = .06$). Frequent usage of cognitive reappraisal decreases the negative link between expressive suppression and the two indicators of subjective well-being. For girls, the interaction of cognitive reappraisal and expressive suppression has not been demonstrated, but expressive suppression has been shown to be the only significant predictor of global life satisfaction measure ($F(1,71)_{change_suppression} = 11.683$, $p = .001$, $\Delta R^2 = .13$) and satisfaction with life domains ($F(1,71)_{change_suppression} = 5.756$, $p = .019$, $\Delta R^2 = .07$). Results are consistent with other research on adolescents and adults in different cultures and are interpreted in terms of gender socialization differences.

Keywords: emotion regulation, cognitive reappraisal, expressive suppression, subjective well-being, middle childhood

COMMUNICATION OF CIVIC INFORMATION PREDICTING CIVIC KNOWLEDGE AND PARTICIPATION IN YOUTH

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Civic knowledge is widely considered an important predictor of civic participation, and its promotion is one of the main policy and educational goals in many states. However, research on the role and efficiency of civic education in schools yielded ambiguous findings, and opportunities for civic learning in Slovenian curricula are limited beyond primary school. Moreover, schools are just one of the civic socialization agents, and may become less influential at secondary and tertiary education level. In a diverse sample of 217 Slovenian adolescents (vocational, professional and grammar school students) and emerging adults (students and employed; $M_{age}=19.0$, $SD=4.0$, 49% female) we explored the contribution of various socialization agents to young people's exposure to civic information, how such exposure predicts their civic knowledge, and how knowledge, in turn, influences civic and political participation. The participants reported how often they discuss civic and political topics with teachers, parents, friends, and partners, how often they search for civic topics in media, engage in civic (e.g., volunteering) and political behaviour (e.g., voting), assessed their general civic knowledge, and responded to 30 multiple-choice questions measuring different aspects of civic knowledge objectively. The proposed model of exposure to information predicting participation through civic knowledge was tested by multigroup path analysis across four education level groups and had acceptable fit to the data ($\chi^2=603.86$, $df=28$, $RMSEA=.088$ [.061-.116], $CFI=.95$, $SRMR=.059$). However, it was noninvariant and significant differences were observed between individuals of different education levels. The extent of exposure to civic information was linked to subjective, but not objective knowledge of vocational students, while in emerging adults, the exposure was predictive of both types of knowledge. Civic participation was unrelated to either kind of knowledge across groups, while the relation with political participation varied. Only subjective knowledge was a significant predictor in students of vocational ($R^2=.40$) and professional programmes ($R^2=.16$), while both measures of knowledge predicted political participation of emerging adults ($R^2=.46$). Civic education, it seems, is not a uniform solution to spurring participation, and the influence of knowledge is limited. Future policy interventions should thus make use of more nuanced approaches to promoting behavioural change.

Keywords: civic knowledge, civic participation, political participation, socialization agents, students

EMOTIONAL CLIMATE AMONG PRISONERS AND PRISON OFFICERS

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Emotional climate refers to predominant and relatively stable collective emotions generated through the social interaction of a social group's members in a particular milieu. Although important for organisation functioning and its members' wellbeing, it has been rarely studied in prisons. Thus, this study aims to compare how prisoners and prison officers perceive the feelings of their own group members in the situation constructed by the same organisation –

prison. It is assumed that due to the differences in status and power as well as different relationships between group members, prisoners will experience emotional climate within the prison as more negative than prison officers. Data were collected on a convenience sample of 653 (4.9% female) prisoners and 678 (46.9% female) prison officers in Croatia. Emotional climate scale assesses the perception of the emotional climate in the group and encompassed three dimensions: positive and negative emotional climate, and climate balance. While there was statistically significant effect of status (prisoner vs prison officers) on dimensions of emotional climate ($F(2,1326)=8.415$, $p<.001$; Wilks' $\Lambda=.987$), effects of gender ($F(2,1326)=0.577$; $p=.562$; Wilks' $\Lambda=.999$) and interaction of gender and status ($F(2,1326)=1.438$; $p=.238$; Wilks' $\Lambda=.998$) were not significant. Prisoners perceived more negative ($F(1,1327)=11.819$; $p<.001$, $\eta^2=.009$) and less positive emotions ($F(1,1327)=11.405$; $p<.001$; $\eta^2=.009$) in their group than prison officers. Also, more pronounced negative emotional balance was among prisoners than prison officers ($F(1,1327)=16.819$; $p<.001$; $\eta^2=.013$). Generally, both prisoners ($t(652)=17.610$; $p<.001$) and prison officers ($t(677)=7.471$; $p<.001$) perceived emotional climate in their groups as more negative than positive. When it comes to specific emotions, sadness was perceived as the most prominent among prisoners, and anger among prison officers. These results are discussed in terms of theories of adaptation to imprisonment and psychological wellbeing and could be used in promoting adaptive forms of coping within prison as well as building more constructive social relationships, and resilience among prisoners but also among prison officers.

Keywords: emotional climate, prison, prisoners, prison officers

VEZA DIMENZIJA RELIGIOZNOSTI I ZADOVOLJSTVA ŽIVOTOM

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Ispitivanje veze zadovoljstva životom i religioznosti je učestala tema naučnih istraživanja jer obe pojave predstavljaju važne aspekte čovjekovog života, a i njihov uzajaman odnos je kompleksan. U istraživanjima se religioznost najčešće operacionalizuje kroz različite religijske orijentacije kojima se definiše način na koji pojedinac prihvata (ili izbjegava) religiju. Inostrana istraživanja pokazuju konzistentne veze pojedinih religijskih orijentacija i zadovoljstva životom. Tako se npr. dobija da je intrinzička religioznost pozitivan prediktor dok su preispitujuća (engl. „quest”) i ekstrinzička religioznost često negativni prediktori zadovoljstvom životom. Imajući u vidu da u istraživanjima na našim prostorima ove veze nisu konzistentne, te da je mali broj studija koje su provjeravale novije modele religioznosti, u ovom radu cilj je bio kroz dvije studije provjeriti prediktivnost različitih dimenzija aktuelnih modela religioznosti sa stepenom zadovoljstva životom. U prvoj studiji na uzorku od 379 ispitanika ($N = 379$, 56.2% žena), ispitan je model „Post-kritičnih uvjerenja“, pri čemu je od četiri dimenzije koje se mjere, ortodoksna religioznost koja podrazumijeva prisustvo transcendentnih religijskih uvjerenja i literarnu interpretaciju religijskih sadržaja,

bila statistički značajan prediktor većeg stepena zadovoljstva životom ($B = 0.187$, $p = .003$) kao i dimenzija relativizam koja se odnosi na odsustvo transcendentnih uvjerenja i simboličku interpretaciju religijskih sadržaja ($B = 0.169$, $p = .004$). U drugoj studiji ispitana je veza „Posvećenost-reflektivnost cirkumpleks modela” (tzv. CRC model) te intrinzičke, ekstrinzičke i preispitujuće religioznosti sa varijablom zadovoljstva životom na uzorku od 404 ispitanika ($n = 404$; 57.9% žena). Dimenzija CRC modela radno nazvana religijsko proučavanje, koja opisuje vjernike koji su skloni proučavanju religijskih sadržaja, bila je značajan prediktor zadovoljstva životom ($B = 0.130$, $p = .05$) ali na granici statističke značajnosti dok se religijsko preispitivanje u koje se svrstavaju tzv. religijski skeptici pokazalo negativnim prediktorom zadovoljstva životom ($B = -0.179$; $p = .004$). Rezultati ove dvije studije djelimično repliciraju dobijane nalaze u domaćim istraživanjima ali i ukazuju na važnost višedimenzionalnog pristupa religioznosti u kontekstu zadovoljstva životom na šta se osvrće u diskusiji a pored toga se razmatra problem adaptacije instrumenata i modela religioznosti u našoj kulturi i govornom području.

Keywords: religioznost, dimenzije religioznosti, zadovoljstvo životom

RELATIONSHIP BETWEEN RELIGIOSITY DIMENSIONS AND SUBJECTIVE WELL-BEING

Examining the relationship between subjective well-being and religiosity is a frequent topic of scientific research. Foreign research shows consistent links between individual religious orientations and subjective well-being. In this paper we examine two studies in which we analyze the predictability of different popular models of religiosity for subjective well-being. In the first study, on a sample of 379 subjects ($n = 379$, 56.2% women) we analyzed the PBC model of religiosity in which subscale *orthodoxy* was statistically significant predictor of subjective well-being and subscale *relativism* too. The second study examines predictability of CRC model of religiosity and intrinsic, extrinsic and quest religiosity for subjective well-being on a sample of 404 subjects ($n = 404$; 57.9% women). The sub-dimensions dialog and interest of CRC model were statistically significant predictors of well-being. In the discussion we interpret the results and we consider if the translation and adaptation of the used instruments is adequate.

Keywords: religiosity, dimensions of religiosity, subjective well-being

STRUKTURA EMOCIJE GAĐENJA U HRVATSKOM GOVORNOM PROSTORU

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Dosadašnje provjere psihometrijskih svojstava skale gađenja u tri domene (Tybur i sur., 2009) na hrvatskom uzorku ispitanika, upućuju na potencijalno visoka zasićenja moralne i seksualne subskale drugim negativno valentnim emocijama (npr. odbojnost; Ćubela Adorić i Jakšić, 2020). Stoga se postavlja pitanje predstavljaju li procjene ispitanika zapravo procjene njihovog negativno valentnog stanja, a ne izraženost reakcije gađenja.

Kako bi se dobio bolji uvid u samu strukturu emocije gađenja na hrvatskom uzorku ispitanika, provedena je šira on-line kvalitativna studija dostupna na portalu „Istraži me“ u

periodu od 2016. do 2021. godine. Ispitanici su naveli vlastiti opis emocije gađenja te dali primjer situacije koja kod njih izaziva ovu emociju. Završni uzorak sačinjavalo je 116 ispitanika ($M = 29.30$, $SD = 10.03$), dominantno žena ($n = 100$).

Podaci su analizirani na način da su izračunate su frekvencije spominjanja pojedinih riječi (iz analize su isključene riječi koje ne nose značenje, npr. veznici). Prethodno su riječi lematizirane (svedene na njihov oblik u rječniku) putem ReLDI softwarea.

Ispitanici gađenje dominantno vezuju uz riječi (uključujući njihove druge gramatičke oblike i sinonime) kao što su emocija ($n = 32$), čovjek ($n = 33$), odbojnost ($n = 20$), (ne)ugoda ($n = 17$), povraćanje, izazivati (pojedinačni $n = 16$), vidjeti ($n = 14$), mučnina, smrad, hrana, odvratan, reakcija (pojedinačni $n = 13$), miris, prljavština (pojedinačni $n = 10$), fizički, (ne)higijena, buba (pojedinačni $n = 8$), rana, strah, ružnoća (pojedinačni $n = 7$), pokvariti, ponašanje, situacija (pojedinačni $n = 6$), stvar, osjetiti, bolest (pojedinačni $n = 5$), nos, životinja, tjelesno, negativan, pojava, željeti, jako (pojedinačni $n = 4$), zaraza, želudac, izmet, gnojan, zlo, intenzivno, velik, izraziti, izgledati, stvarati, jesti, pedofilija, ne(moral) (pojedinačni $n = 3$).

Emociju gađenja prate i druga negativno valentna stanja. Ispitanici dominantno navode ekscitatore iz patogene domene (npr. hrana), ali navode i ekscitatore iz seksualne (pedofilija) i moralne (zlo) domene. Navođenje fizioloških reakcija kao odrednice gađenja, sugerira da bi se prilikom kreiranja skale gađenja u obzir trebale uzeti čestice, koje osim opće nelagode, izazivaju navedene reakcije. Time bi se potencijalno mogla reducirati nestabilnost procjena koja proizlazi iz preklapanja valencije emocije gađenja i drugih emocija.

Ključne riječi: Emocija gađenja, struktura gađenja, skala gađenja u tri domene

STRUCTURE OF EMOTION OF DISGUST IN CROATIAN SPEAKING AREA

The aim of the study was to define the structure of the emotion of disgust in a Croatian sample in order to further test Tybur et al.'s (2009) assumptions about three domains of disgust. The online qualitative study was conducted with a sample of 116 participants. Participants were asked to provide their definition of the emotion of disgust and to provide an example of a situation in which this emotion is present. Word frequencies were calculated. Participants defined disgust as a complex negative valence state that can be triggered by various stimuli from three hypothesized domains (e.g., bugs, pedophilia, evil) and is followed by other negative emotions such as repulsion. However, the physiological response (e.g., the urge to vomit) to stimuli appears to be an important condition for its manifestation.

Key words: Emotion of disgust, structure of disgust, The Three Domains of Disgust Scale

WHO HELPS MORE? AGE AND GENDER AS DETERMINANTS OF HELPING
BEHAVIOUR IN A WALLET LOSS SITUATION

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Due to social desirability issues, observational studies are considered the gold standard for measuring altruistic behavior (assisting others against personal interest). We set up a situation in which a confederate seemingly accidentally dropped a wallet in front of a passerby. We observed whether people returned it to the owner and whether certain demographic groups (male, elderly) were more willing to do so. Another aim was to test whether people would underestimate the likelihood of altruistic behavior of others in such a situation and whether they would be prone to “above average effect”, i.e. to believe that they themselves were more altruistic than others. For that purpose, a short online survey was conducted in addition to the main experiment where we asked 100 respondents how they would behave if they noticed that a person had dropped a wallet and what they thought others would do in that situation. The main experiment consisted of 40 experimental situations, where upon making sure there was one passerby in the street in the right position, a male or female confederate dropped the wallet in front of both male and female passersby an equal amount of times. Two independent observers coded the passersby's gender and age (up to 30, between 31 and 60 and over 60 years old) as well as the type of reaction to the wallet drop (1. did not see, 2. saw what happened and ignored, 3. saw what happened and took it, 4. saw what happened and returned it). Structure of the sample was balanced in terms of gender (22 female and 18 male) and included 9, 20 and 11 persons in the younger, middle and older age categories, respectively. The wallet was returned in 34 experimental situations, ignored in 5 and taken in just one. As expected, respondents younger than 30 ignored the wallet more often and returned it less often than older respondents ($\chi^2=12.148$; $p=.016$). Contrary to expectations, males were not more altruistic than females ($\chi^2=1.878$; $p=.391$), nor were they more willing to return the wallet to a female confederate ($r=.120$; $\chi^2=0.486$; $p=.501$). Regarding the results of the online survey, as expected we observed a strong tendency to underestimate the actual rate of helping behavior in others ($\chi^2=23.133$; $p<.001$) and a tendency to rate oneself to be more prone to help than the average person ($\chi^2=92.442$; $p<.001$). The results are discussed in comparison to similar cross-cultural studies and their implications for future studies of altruistic behavior are articulated.

Keywords: helping, wallet loss situation, altruistic behavior predictors, age differences, gender differences, above average effect

JUDGING IDENTITIES BASED ON HISTORICITY: DISCRIMINATIVE VALIDITY OF ETHNIC IDENTITY DELEGITIMIZATION SCALE

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Ethnic identity delegitimization (EIDL) denotes a general tendency to question or even deny the existence of ethnic groups, based on historicity, i.e. on the length of its existence. It draws from a belief that ethnic identity derived from belonging to “recent” groups is fabricated and disputable. In (post-) conflict discourses, it is used to disprove ethnic identity of an outgroup, sometimes to assimilate it with the ingroup. Previous studies indicated that delegitimization tendency was positively related to essentialization of ethnic groups, conservative political orientation, and ethnic identification. Furthermore, it was negatively associated with outgroup attitudes. However, the position of the EIDL among other constructs that capture beliefs based on historicity, such as Autochthony (i.e. belief that a territory belongs to a group that inhabited it historically earlier), or Collective self-continuity (i.e. the feeling that one is a part of their nation’s shared history) has not been tested yet. In this study, we aimed to examine discriminative validity of EIDL, i.e. its distinctiveness from Autochthony beliefs and Collective self-continuity (CSC). A total of 143 psychology students (84% women), aged 18-45 ($M = 21.2$, $SD = 3.1$) participated in the study. They completed a short version of EIDL scale (four items, $\alpha = .94$) and the two scales typically used to measure Autochthony (four items, $\alpha = .83$) and CSC (two items, $r = .76$). We conducted a confirmatory factor analysis using Maximum likelihood estimation. Two models were tested: (a) three-factor model, where three constructs were correlated, but separate from each other, and (b) one-factor model, where all the items loaded on the same factor. CFA results indicated an excellent fit of the three-factor model ($\chi^2(32) = 49.495$, $p = .025$, SRMR = .032, RMSEA = .062, CFI = .982, TLI = .975). Estimated correlations between factors were positive, but moderate (.312 - .418), indicating that EIDL, Autochthony, and CSC are distinct from each other. Furthermore, the one-factor solution had suboptimal fit ($\chi^2(35) = 436.946$, $p < .001$, SRMR = .188, RMSEA = .283, CFI = .597, TLI = .482), which corroborates discriminant validity of EIDL. Our results confirm discriminative validity of EIDL. Future studies should explore its relation to prejudice and discriminatory behaviour, and experimentally examine its potential as a strategy of outgroup assimilation.

Keywords: Ethnic identity delegitimization, Ethnic identity, Autochthony beliefs, Collective self-continuity

BASIC VALUES AND LEISURE-TIME ACTIVITIES AMONG YOUTH

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The connection between leisure activities and values in adolescence is seldom investigated. Rare studies usually focus on particular leisure aspects and several related values. This paper aims at examining the link between these domains more systematically. Hence, the main goal is to analyse the relationship between various leisure activities and Schwartz’s 10 basic values in adolescents. The sample included 1,349 Serbian high-school students (44% boys;

62% vocational schools). The leisure-time questionnaire consisted of item groups related to hobbies, sports, following of different themes/shows in the media (TV, Internet, magazines), listening to music, going out, attending cultural and sports events, the Internet and social networking activities. Values were examined by the PVQ21 questionnaire. Factor analysis yielded 7 factors underlying 49 leisure activities (45.96% explained variance) defined by the following contents: pop culture; culture, art and music; movies, TV-shows and the Internet; science and politics; IT; going out; sports. A regression analysis including basic values as the predictors showed that different activities were significantly related to distinctive values sets. Activities related to pop culture are predicted by Power ($\beta = -.21$), Tradition ($\beta = -.19$), Conformity ($\beta = -.14$) and Self-direction ($\beta = -.10$). Universalism ($\beta = .22$) and Self-direction ($\beta = .21$) are the most important predictors of the activities in the field of culture, art and science, and Stimulation ($\beta = .13$) and Hedonism ($\beta = .12$) of those related to watching movies, TV-shows and online activities. Lower Hedonism ($\beta = -.16$) and higher Security ($\beta = .14$) predicts activities in the field of science and politics, and Self-direction ($\beta = .13$), Stimulation ($\beta = .12$) and Power ($\beta = .10$) in the field of IT. Students who find Hedonism ($\beta = .21$), Power ($\beta = .12$) and Stimulation ($\beta = .08$) important tend to go out more. Those who value Tradition ($\beta = -.13$) and downplay the importance of Universalism ($\beta = -.10$) follow sports. The analysis further showed that different leisure activities were differently predicted by Schwartz's higher-order values, Self-transcendence vs. Self-enhancement and Openness for change vs. Conservation values. The main conclusion is that values are important motivators of activities during free time and that different values are mostly expressed through different activities, but also that different activities can be motivated by the same basic values.

Keywords: basic values, leisure-time activities, PVQ21, youth, Serbia

POVEZANOST INDEKSA ZADOVOLJSTVA ŽIVOTOM STANOVNIKA BIVŠE
JUGOSLAVIJE I NEKIH SOCIODEMOGRAFSKIH VARIJABLI

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U proteklih trideset godina na prostoru bivše Jugoslavije desile su se radikalne društvene promjene koje su u velikoj mjeri uticale na blagostanje njenih stanovnika. Zbog toga je interesantno vidjeti koliko su te objektivne promjene uticale na subjektivni percepciju ličnog blagostanja njenih stanovnika, pogotovo što takvih istraživanja na ovim prostorima nema mnogo. 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. Osnovni cilj istraživanja je utvrditi da li postoji povezanost zadovoljstva životom i nekih sociodemografskih varijabli (starost, obrazovanje, veličina mjesta stanovanja i pol) kod 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. Za procjenu zadovoljstva životom je korišćen je Indeks zadovoljstva životom, koji je rezultat faktorske analize svih osam stavki iz skale Indeksa ličnog blagostanja. Istraživanje na građanima je sprovederijablino polovinom 2019. godine na uzorku od 4971 punoljetnih

građana metodom on line ankete. Prosječna starost ispitanika $M = 40$ godina, a $SD = 10,1$. Kada pogledamo korelacije po regionima i godinama starosti ispitanika nalazimo statistički značajne razlike koje su negativne i niske; BiH ($r = -.138$; $p < .01$), zemlje bivše Jugoslavije koje su u EU ($r = -.121$; $p < .05$), zemlje bivše Jugoslavije koje nisu u EU ($r = -.239$; $p < .01$) i dijaspora ($r = -.126$; $p < .01$). Korelacije između zadovoljstva životom i obrazovanja, po regionima, su niske i statistički značajne u BiH ($r = .148$; $p < .01$), zemeljama bivše Jugoslavije koje su u EU ($r = .112$; $p < .01$) i dijaspora ($r = .133$; $p < .01$). Korelacija između indeksa zadovoljstva životom i veličine mjesta u kojem žive nije statistički značajna ni za jedan region. Razlike između muškaraca i žena u zadovoljstvu životom nalazimo samo u BiH ($t = 3.101$; $df = 3104$; $p = 0.002$). Dobijeni rezultati pokazuju da zadovoljstvo životom opada sa godinama starosti i raste sa obrazovanjem ispitanika, dok veličina mjesta u kojem ispitanici žive ne utiče na zadovoljstvo životom. Samo u BiH nalazimo razlike po polu s obzirom na zadovoljstvo životom i tu su muškarci zadovoljniji životom od žena.

Ključne riječi: zadovoljstvo životom, BiH, SFRJ, dijaspora, sociodemografija

RELATIONSHIP BETWEEN THE INDEX OF LIFE SATISFACTION OF THE INHABITANTS OF THE FORMER SFRY AND SOME SOCIODEMOGRAPHIC VARIABLES

The main goal of this research is to determine whether there is a relationship between life satisfaction and some sociodemographic variables in four groups of respondents: residents of BiH, residents living in former SFRY non-EU countries, residents living in former SFRY countries that are part of the EU, and diaspora respondents. The Life Satisfaction Index was used to assess life satisfaction. The survey was conducted in mid-2019 on a sample of 4971 adults using the online survey method. The average age of the respondents is $M = 40$, $SD = 10,1$. The obtained results show us that life satisfaction decreases with age and increases with the education of the respondents, while the size of the place where the respondents live does not affect life satisfaction. Only in BiH do we find differences by gender with regard to life satisfaction, and here men are more satisfied with life than women.

Keywords: life satisfaction, BiH, SFRY, diaspora, sociodemographic

I KNOW, THEREFORE I DO: KNOWLEDGE ABOUT HPV AND WILLINGNESS TO VACCINATE

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Infection with genital high-risk types of human papilloma virus (HPV) can have several serious consequences, most notably cervical cancer. The appearance of the HPV vaccine was seen as a major public health breakthrough that would reduce the incidence of some types of cancers and genital warts along with the morbidity, mortality and costs associated with these diseases. In Serbia, vaccine against HPV is recommended by the Ministry of health, however,

vaccination coverage is generally low. There is a number of factors influencing the decision to take the HPV vaccine, such as knowledge, which can be divided into a) HPV knowledge and b) HPV vaccination knowledge. As previous research has shown, after being informed about HPV vaccine, more than 4 out of 5 of participants would accept HPV vaccination. In this study, we explored what effect both of these knowledge aspects had on willingness to take HPV vaccine, determined by the statement *I would vaccinate myself or my child*. A total of 734 women (M (age) = 40.4 year) completed an online survey and gave answers on two sets of true/false questions related to HPV (e.g. *I'm protected from HPV if I use a condom*) and HPV vaccine (e.g. *HPV vaccine can be applied to boys after the age of 9*). Percentage of correct answers ranged from 35% to 92%, while in general knowledge on the HPV was higher than the knowledge on the HPV vaccine. The results of multinomial logistic regression showed that knowledge about HPV increases willingness to vaccinate (pseudo $R^2 = .09$). Here, knowledge that HPV can induce cervical cancer was the best predictor, increasing the odds of expressing the willingness to vaccinate almost four times ($\text{Exp}(B) = 3.83$, $p < .001$). Knowledge about HPV vaccination was also related to willingness to vaccinate (pseudo $R^2 = .10$): not being informed that HPV vaccine was recommended in Serbia lowered the chances to vaccinate two times ($\text{Exp}(B) = 0.47$, $p = .006$), while knowledge that it is recommended for boys doubled the same chance ($\text{Exp}(B) = 2.112$, $p = .024$). Having in mind the variations in correct answer percentages, there is an open space for broadening the population's knowledge. Consequently, as results are indicating, filling up this gap by educating citizens not only about HPV but also about the vaccine itself, could condition the willingness for vaccine uptake.

Keywords: HPV, HPV vaccination, HPV knowledge, willingness to vaccinate

PROBLEMI U INSTITUCIONALIZACIJI SEĆANJA: ISTORIJSKI NARATIVI SREDNJOŠKOLACA O NATO BOMBARDOVANJU SRJ

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NATO bombardovanje SR Jugoslavije 1999. god. je istorijski događaj koji je predmet brojnih kontroverzi i čije se posledice osećaju do danas. Želeli smo da istražimo na koji način mladi razmišljaju o ovoj istorijskoj epizodi kroz poređenje zvaničnih istorijskih narativa prisutnih u udžbenicima istorije i ličnih tumačenja srednjoškolaca. Kroz tematsku analizu aktuelnih udžbenika istorije za gimnazije, istorijske aktere smo svrstali u matricu *a priori* uloga kao što su počinilac, žrtva, pasivni posmatrač i slično (uloge su imale status teme u analizi), čiju je validnost procenio nezavisni istraživač. Opisani ključ smo uporedili sa odgovorima srednjoškolaca kroz anketno istraživanje jedne beogradske gimnazije: ocenjivali smo slaganje odgovora ispitanika sa ulogama koje su, po ključu, dodeljene istorijskim akterima. U zavisnosti od poklapanja individualnog odgovora i zvaničnog ključa, odgovore smo ocenili kao usklađene ili neusklađene sa zvaničnim istorijskim narativom, pri čemu je zastupljenost jednih i drugih procenjena χ^2 testom, za svaku ulogu. Učenici su, pored svrstavanja istorijskih aktera u zadate uloge, izveštavali o svojoj upoznatosti sa NATO bombardovanjem SRJ i oslanjanjem na izvore informacija poput školskih udžbenika, interneta, neposrednih svedoka itd. Takođe, ocenili su značaj ovog događaja za njih i društvo u celini. Rezultati ukazuju da ispitanici imaju rudimentirano formiran istorijski narativ: odgovori su često neprecizni i stereotipni (npr. narod kao žrtva) ili pak preterano suženi (npr. Francuska kao počinilac).

Istovremeno, sebe smatraju nedovoljno informisanim i izveštavaju da sistem obrazovanja nije njihov glavni kanal informisanja. Takođe, NATO bombardovanje SRJ ne posmatraju kao događaj značajan za njih same, ali uviđaju njegovu društvenu relevantnost. Nalazi ukazuju da sistem obrazovanja, iako najvažniji društveni mehanizam za negovanje istorijskih reprezentacija, može imati ograničen uticaj na mlade. Ne samo što ispitanici izveštavaju o slaboj usvojenosti zvaničnih istorijskih narativa i nedovoljnom oslanjanju na udžbenike istorije prilikom razumevanja skorašnje prošlosti svoje nacije, već jasno prave razliku između relevantnosti istorijske epizode za njih i društvo u celini. Podvojenost između ličnog i socijalnog govori u prilog zaključku da zvanični istorijski narativi o NATO bombardovanju SRJ nisu afektivno šaržirani tj. doživljeni kao sopstveno iskustvo i da proces obrazovne institucionalizacije sećanja ima ograničen uticaj.

Ključne reči: NATO bombardovanje SRJ, istorijski narativi, institucionalizacija sećanja.

PROBLEMS IN MEMORY INSTITUTIONALISATION: HIGH SCHOOL STUDENTS' HISTORICAL NARRATIVES REGARDING NATO BOMBING OF FRY

In order to explore high school students' understanding the NATO bombing of FRY, we compared official historical narratives from history textbooks with their personal interpretations. Role matrix (attacker, defender, passive observer, etc.) was created from content analysis of the textbooks and individual responses were coded as discrepant or in accordance with official historical narrative (chi-square test was performed for each role). Students also reported on their general familiarity with this historical episode, reliance on different sources of information (school textbooks, the Internet, witnesses, etc.) and they assessed the significance of this event for them and society as a whole. The results indicate that the respondents have rudimentarily formed historical narratives (answers were frequently either too broad or too specific) and that they consider themselves insufficiently informed. In the end, they do not see the NATO bombing of the FRY as a personally significant event, but they recognize its social relevance.

Keywords: NATO bombing of Yugoslavia, historical narratives, memory institutionalisation

UTICAJ VREDNOSNIH ORIJENTACIJA MLADIH NA ZADOVOLJSTVO SADRŽAJIMA INFORMISANJA

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Vrednosti usmeravaju izbor i kasniju evaluaciju medijskih sadržaja. Istraživanjem smo proverili vezu vrednosti i zadovoljstva sopstvenom informisanošću o relevantnim temama kao i medijskom slikom mladih na prigodnom uzorku od 308 ispitanika (56% devojaka), prosečnog uzrasta 18,44 godina. Eksploratornom faktorskom analizom novokonstruisane Skale zadovoljstva sopstvenom informisanošću utvrđeni su faktori (53% ukupne varijanse) Sociopolitičke teme (podrška osetljivim grupama, aktivizam, prava mladih,...), Lične teme (zdravlje, religija, kultura,...), Profesionalni razvoj (konkursi za projekte, mogućnosti zaposlenja,...) i Učešće u zajednici (rad udruženja za mlade, volontiranje, mobilnost). Pouzdanost supskala je bila zadovoljavajuća ($\alpha > 0.7$). Zadovoljstvo medijskom slikom

mladih je jednoajtemski operacionalizovano petostepenom skalom. Struktura vrednosti potvrđena je multidimenzionalnim skaliranjem na sumama skala Švarcovog portreta vrednosti (PVQ) uobičajene pouzdanosti ($\alpha_c > 0.67$). Kanoničkom korelacionom analizom utvrđena je značajna povezanost ($\lambda_w = .88$, $F(16, 923.26) = 2.37$, $p < .01$) samo prvog para kanoničkih faktora Orijentacija prema rastu (Samoprevazilaženje = .80 i Otvorenost za promene = .57) i Zadovoljstvo opštom društvenom informisanošću (Profesionalni razvoj = .66, Učešće u zajednici = .56 i Sociopolitičke teme = .40). Struktura veza ukazuje da orijentacija prema razvoju rezultira zadovoljstvom informisanošću temama važnim za proaktivno i prosocijalno delovanje u društvu. Ordinalnom regresijom se pokazalo da izrazitija težnja ka Samoprevazilaženju ($OR = .74$, (95% CI, .61-.89), Wald $\chi^2(1) = 10.12$, $p < .01$), a niža Konzervativizmu ($OR = 1.21$, (95% CI, 1.10-1.34), Wald $\chi^2(1) = 13.57$, $p < .01$) vode nezadovoljstvu medijskom slikom mladih ($\chi^2(4) = 17.06$, $p < .01$) što dalje indikuje da mediji ne prepoznaju u dovoljnoj meri progresivnu snagu mladih.

Ključne reči: mladi, lične vrednosti, vrednosne orijentacije, zadovoljstvo informisanošću, medijska slika mladih

VALUE ORIENTATIONS AFFECT SATISFACTION WITH AVAILABLE INFORMATION

In order to determine if values affect satisfaction with available information, we surveyed the sample of 308 respondents (55% girls), with an average age of 18.53 years. EFA of the Satisfaction with the Information Scale identified factors named Socio-political Topics, Health and Leisure, Professional Development and Community Participation. MDS justified the usage of PVQ for operationalization of value orientation. The reliability of PVQ subscales was above .67. Canonical correlational analysis indicated that Growth oriented values (Self-transcendence and Openness to change) led to Satisfaction with information concerning society (Professional Development, Community Participation, and Socio-political Topics). The finding reveal that growth-oriented individuals find needed information about the social reality helping them to be proactive and prosocial in it. Ordinal regression showed that lower Self-transcendence but higher Conservation led to satisfaction with the media's portrayal of young people reveal that actual portrayal is more conservative.

Keywords: youth, personal values, value orientations, satisfaction with information about relevant topics, media's portrayal

ODNOS POTREBE SA PRIPADANJEM, VEŠTINA GRUPNOG RADA I KOLEKTIVNOG SAMOPOŠTOVANJA U PERIODU STUDIRANJA

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Potreba za pripadanjem nas pokreće na uključivanje u grupe, ali pitanje je koji faktori pomažu da osoba zaista ostvari odnos sa grupom koji će zadovoljiti ovu potrebu. U radu istražujemo da li posredovanje veština grupnog rada pomaže u zadovoljenju potrebe za pripadanjem ili razvoju kolektivnog identiteta kod studenata. Istraživanjem je proveren odnos potrebe za pripadanjem, veština grupnog rada i kolektivnog samopoštovanja. Prigodnim

uzorkovanjem prikupljeni su odgovori 232 studenta (85% žena) pretežno društvenih nauka (87%) prosečne starosti 22.48 godina ($SD=5.34$). Njih 87% je navelo da se najviše identifikuje sa svojom studijskom grupom. U istraživanju su korišćene Skala potrebe za pripadanjem (NTBS), Skala kolektivnog samopoštovanja (CSEC) i Upitnik veština grupnog rada (GSQ). Sve tri skale uspešno su faktorski validirane. Pouzdanost je bila zadovoljavajuća za svaku od subskala. Najniža je pouzdanost subskale CSEC-a Članstvo ($\alpha=.76$), a najviša za NTBS ($\alpha=.81$). Eksploratorna faktorska analiza korišćenjem metoda maksimalne verodostojnosti uz Promaks rotaciju izvršena je na faktorskim skorovima istraživanih varijabli. Paralelnom analizom utvrđena je značajnost prva dva faktora koji su zajedno obuhvatili 56% ukupne varijanse. KMO mera reprezentativnosti je .69, a Bartletov test sferičnosti je značajan ($\chi^2(21)=318.72$, $p<.01$). Prvi faktor je nazvan Uspešno funkcionisanje u grupi, a faktorska zasićenja iz matrice sklopa iznosila su za Članstvo .81, Veštine upravljanja zadacima .58, Interpersonalne grupne veštine .57, zatim -.55 za Privatno kolektivno samopoštovanje (-) i .52 za Javno kolektivno samopoštovanje. Drugi je nazvan Poistovećivanje s grupom sa zasićenjima .98 za Identitet i .46 za Potrebu za pripadanjem. Korelacija između faktora je .31. Rezultati pokazuju da je umešnost u grupnom radu praćena izraženijim grupnim samopoštovanjem u vidu pozitivnije lične i javne evaluacije grupnog članstva. Odsustvo potrebe za pripadanjem u ovom faktoru, vodilo nas je zaključku da je za razvoj grupnog samopoštovanja važnija umešnost funkcionisanja u grupi. S druge strane, nalaz da je izraženija potreba za pripadanjem praćena većim poistovećivanjem s grupom, ukazuje da povećanje lične ocene važnosti grupe za samopoimanje ne smanjuje potrebu za pripadanjem. Ovaj potonji nalaz ukazuje da grupizam ili preterana identifikacija s grupom ne zadovoljava potrebu za pripadanjem.

Ključne reči: potreba za pripadanjem, veštine grupnog rada, kolektivno samopoštovanje

CAN GROUP WORK SKILLS HELP STUDENT TO SATISFY NEED TO BELONG BY IDENTIFICATION WITH STUDENT GROUP?

We examined the relationship among belonging need, group work skills and collective self-esteem. Sample of 232 students (85% females Mage = 22.48 years) was convenient. The following validated scales were used NTBS, CSEC and GSQ. The Membership subscale of CSEC had lowest ($\alpha=.76$) and NTBS the highest ($\alpha=.81$) reliability. Structure of variables' relations was explored with EFA (ML method), Promax rotation. Parallel analysis indicates the significance of the two factors explaining 56% of the total variance. The first factor named *Successful functioning* in a group was loaded by Membership, Task Management Skills, Interpersonal Group Skills, Private Collective Self-Esteem, and Public Collective Self-Esteem, and the second *Group Identification* by Identity and Need to Belong. The results show that the collaborative skills enhance the collective self-esteem while the need to belong to a group leads to stronger group identification. The latter finding implies that very high group identification does satisfy belonging need.

Keywords: need to belong, groupwork skills, collective self-esteem, groupism

VEGETARIANISM AND RELIGIOUS FASTING – MORE SIMILAR THAN WE
THOUGHT: IMPROVING ATTITUDES TO VEGETARIANS BY EMPHASIZING
SIMILARITY WITH TRADITIONAL FASTING

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In the field of social perception is pointed out that it is possible to perceive identical behavior differently depending on the attributed name and interpretation manner. We aimed to test this idea experimentally on the example of vegetarianism. Vegetarians refrain from consuming meat products and are often perceived as a threat to a valued identity in societies in which meat-eating is an integral part of the ethno-religious identity. We hypothesized that if the eating habits of vegetarians were related to religious fasting they would be perceived in more positive terms. Representing them this way they wouldn't be seen as a threat, rather as an ingroup members leading to more positive attitudes. We expected the experimental effects to be lower for participants high in social dominance orientation and authoritarianism which represent variables of individual differences that best predict the existence of prejudices and stereotypes towards minority groups, including vegetarians. Participants ($N = 246$) were randomly divided into three groups. Each group read a short text about traditional birthday celebration in the village Tršić in Serbia. The control group read about a birthday celebration with meat-based meals. One experimental group read about the birthday celebration with meatless dishes, where the host converted to vegetarians after years of fasting. The second experimental group read about a vegetarian celebration, although in all other aspects adhering to the tradition, without mentioning religious fasting. Respondents had moderately positive attitude towards vegetarians in each of the three groups. The most positive attitude had respondents from the group reading about converting to vegetarians after fasting ($M_c = 4.79$, $SD = .88$; $M_f = 5.01$, $SD = .55$; $M_v = 4.93$, $SD = .65$, higher means represent more positive attitude). Contrast analyses showed a significant difference in attitudes between control and two experimental groups ($F(1, 119) = 3.13$, $p = .04$), but there was not significant difference in attitudes between two experimental groups ($F(1, 243) = 4.33$, $p = .63$). Only social dominance orientation proved to be a significant moderator ($\beta = -.55$, $SE = .14$, 95% CI: $-.82$, $-.28$), with significant effect at higher levels of SDO ($\beta = .25$, $SE = .11$, 95% CI: $.04$, $.46$). Findings contribute to research of intergroup relations and the guidelines about public communications related to vegetarianism and reducing meat consumption.

Keywords: vegetarianism, SDO, RWA, attitude towards vegetarians, fasting tradition

UTICAJ EFEKTA OKVIRA I DESKRIPTIVNIH NORMI NA DONATORSKO PONAŠANJE

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Humanitarne organizacije neretko nailaze na probleme prilikom prikupljanja sredstava, a u pokušaju navođenja ljudi na prosocijalno ponašanje (volontiranje ili doniranje materijalnih sredstava), često koriste dve strategije. Jedna od njih, uokviravanje, govori da su uspešnije poruke koje ističu negativne posledice nedoniranja nego pozitivne posledice doniranja; druga, pozivanje na deskriptivne norme, govori da su uspešnije poruke koje ističu da i drugi ljudi doniraju od onih koje ističu da drugi ne doniraju. U ovom istraživanju se, za razliku od prethodnih, efekti porede u jedinstvenom dizajnu i meri se stvarno ponašanje u realnom okruženju. Ispituje se kako okvir poruke koja se poziva na deskriptivne norme utiče na spremnost za doniranje. Humanitarna akcija uzeta za predmet ovog istraživanja je „Čep za hednike“, a slogan koji je trebalo da podstakne ispitanike da doniraju konstruisan je kao kombinacija tri informacije: (1) deskriptivne norme, (2) statističkog podatka i (3) tipa okvira („Prosečno domaćinstvo u Srbiji dnevno sačuva/baci bar 5 čepova od proizvoda koji se svakodnevno koriste. Sačuvajte čepove!/Ne bacajte čepove!"). Istraživanje je sprovedeno tokom pet dana tako što su četiri identiče kutije postavljene u četiri stambene zgrade na teritoriji Beograda koje su približno ujednačene po broju stanova, pri čemu su dve postavljene uz propratni slogan sa pozitivnim i dve sa negativnim okvirom. Zavisna varijabla, donatorsko ponašanje, operacionalizovana je preko broja prikupljenih čepova koji je proveravan svakog dana, a nezavisna varijabla bila je tip poruke (pozitivna i negativna). U skladu sa polaznom hipotezom, više je čepova prikupljeno kada je poruka formulisana u negativnom ($f=487$) nego u pozitivnom ($f=161$) okviru ($\chi^2 = 164.006$, $df = 1$, $p < .001$). Ovo istovremeno znači da deskriptivna norma koja je bila sadržana u negativnoj poruci (da drugi ljudi bacaju čepove) nije navela učesnike da se ponašaju na isti način. Drugim rečima, efekat okvira ima veći uticaj na donatorsko ponašanje od deskriptivnih normi, odnosno deskriptivne norme se mogu uokviravati. Zabeležena asimetrija u korist negativnog okvira može biti posledica toga što se negativnim okvirom naglašavaju negativne posledice ne-doniranja, što može izazvati negativne emocije koje se otklanjaju doniranjem. Rezultati ove studije mogu da pomognu pri kreiranju kampanja koje imaju za cilj da podstaknu prosocijalno ponašanje.

Ključne reči: donatorsko ponašanje, efekat okvira, deskriptivne norme

THE EFFECTS OF FRAMING AND DESCRIPTIVE NORMS ON DONATING BEHAVIOR

In persuading people to behave prosocially (volunteer or donate material resources), humanitarian organizations often resort to two strategies - framing and referring to descriptive norms. In a single design, we contrasted the effects of message framing and descriptive norms on people's willingness to donate bottle caps. We put a sign with a positively or negatively framed message (An average Serbian household keeps/throws away

at least five caps of daily products. Keep the caps!/Don't throw the caps away!) in four Belgrade buildings, and observed the numbers of caps donated for five days. As hypothesized, more bottle caps were collected when the message was formulated in a negative ($f=487$) than in a positive ($f=161$) frame ($\chi^2 = 164.006$, $df = 1$, $p < .001$). This also means that the descriptive norm contained in the negative frame did not decrease donating. The results can inform the campaigns aiming to encourage prosocial behavior.

Keywords: donor behavior, framing effect, descriptive norms

SOCIAL MEDIA AND VOTING: UNDERSTANDING THE RELATIONSHIP BETWEEN EXPOSURE TO POLITICAL CONTENT ON SOCIAL MEDIA AND VOTING BEHAVIOR IN YOUTH

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It is widely accepted that voting behavior is connected with the level of exposure to political mobilization in one's surroundings. Moreover, the connection between political behavior on- and off-line is well researched, suggesting that there is a persistent, albeit weak, relationship. The present research examines the connection between exposure to political mobilization via social networks and actual voting behavior. The research was conducted during the election held in Serbia in June 2020, where certain political options were advocating for the boycott. Having that in mind, the present research examines the connection between social media content advocating for voting (mobilizing content), social media content advocating for a boycott (demobilizing content), and actual voting behavior (voted, boycotted, abstained). Additionally, moderating role of intention to vote is examined. The data was collected in two phases. The first phase was conducted 3 weeks prior to the election day and encompassed the collection of (1) demographic data, (2) measure of intention to vote, (3) frequency of use of social media, (4) interest in politics, and (5) exposure to political content on social media. The second phase was conducted after the election day and encompassed the collection of (1) exposure to mobilizing and demobilizing content, and (2) self-report of actual voting behavior. The study focused on young voters (aged 18-30) as they are more likely to extensively use social media. A total of 659 unique participants took part in the study, out of which 192 completed both research phases. After controlling for interest in politics and exposure to political content on social media, it was observed that exposure to mobilizing content isn't a significant predictor of voting behavior, while exposure to demobilizing content has a significant role (canonical discriminant function, $\chi^2(4) = 14.9$, $p < 0.01$). Intention to vote didn't prove as a significant moderator of the observed relationship (95% bootstrapped CI for B [-2.18, .89]). In conclusion, more exposure to social media content advocating for boycott was connected with the higher probability of actually boycotting the elections, while no connections between exposure to mobilizing content on social media and voting behavior was found.

Keywords: voting, social media, political participation

CONTENT ANALYSIS OF NEWSPAPER HEADLINES RELATED TO THE
CORONAVIRUS EPIDEMIC IN THE PERIOD BEFORE AND AFTER THE 2020
PARLIAMENTARY ELECTIONS IN SERBIA

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The media plays a powerful role in shaping our perceptions and behaviours in a crisis, such as the coronavirus pandemic. The way messages about the crisis are framed (e.g. inducing fear or hope) can sway public opinion and serve specific political goals – in this case, to hold elections without people fearing the possibility of getting infected when voting by presenting the pandemic as less dire than it actually was. We investigated whether, and in what way, the presentation of the coronavirus epidemic was different in the media before and after the parliamentary elections in Serbia in June 2020. We analyzed the content of headlines of the seven newspapers with the largest circulation in Serbia – Blic, Vecernje Novosti, Kurir, Informer, Politika, Alo and 24 Casa – two weeks both before and after the elections. The unit of analysis was the main title on the title page and there were 196 units of analysis in total. The headlines were evaluated by three independent coders with regards to two variables: 1) Hope (optimistic message regarding the epidemic and its consequences) – with categories Presence of Hope (subcategories Solution and Consolation) and Absence of Hope; 2) Fear (pessimistic, intimidating message) – with categories Presence of Fear (subcategories Direct and Indirect intimidation) and Absence of fear. Krippendorff's alpha showed full agreement between coders. We observed a significant concordance of time and the presence of coronavirus ($r=.343$; $\chi^2=23.059$; $p<.001$), i.e. more had been written about the coronavirus after than before the elections. Fear was more intensely induced after the election than before the election ($r=.324$; $\chi^2=7.145$; $p=.007$), while we did not observe a change in inducing hope in relation to the election ($r=.058$; $\chi^2=.227$; $p=.640$). Additionally, the headlines contained little factual information and were largely reduced to sensationalist intimidation or mere consolation. The results suggest that by treating the pandemic in a less threatening way and by mentioning it less, the government, which has a substantial influence on the major newspapers, could have attempted to justify the decision to hold the elections by presenting the situation as less dire than it actually was and by alleviating the general public's fears of the dangers associated with voting. Our design did not allow us to conclude whether this was due solely to political goals or due to the factual severity of the epidemiological situation.

Keywords: coronavirus pandemic, newspaper headlines, fear, hope

PREDICTORS OF COVID-19 PROTECTIVE BEHAVIORS DURING PANDEMICS

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Successful coping of a society struck by pandemics depends on citizens' adequate perception of the situation and readiness to take protective measures. In mid-September 2020, *Demostat* conducted a public opinion poll on a representative sample of 1,200 Serbian citizens (53% M, aged 18-91, $M = 46.15$, $SD = 16.95$) through a face-to-face interview, focusing on the perceptions, opinions and protective behaviors related to the COVID-19 epidemic. The results showed that willingness to follow recommended protective behaviors was not overwhelming: 44% of respondents stated that they consistently adhered to prescribed preventive measures, and 31% that they would not vaccinate under no circumstances. We aimed to examine what demographic groups are prone to neglect protective measures, and to help identifying the factors whose change by public actions can raise citizens' protective behavior. In order to examine factors that contribute to protective behavior, we build a multiple mediation model. The dependent variable was measured through agreement with three statements ($\alpha = .70$). The exogenous variables were age, gender, and education level. The mediating variables were trust in institutions (measured by reported trust in six institutions, $\alpha = .90$), false protection-related beliefs (three items, $\alpha = .59$), fear of COVID-19 (two indicators), and support for the ruling party (dichotomized variable). The path model showed very good fit ($RMSEA = .023$, $NFI = .991$, $CFI = .996$). Analysis of direct effects showed that protective behavior was characteristic for more educated ($\beta = .151$, $p = .001$) and older citizens ($\beta = .103$, $p = .001$), while gender didn't play significant role. Adherence to protective measures was positively related to fear of the COVID-19 ($\beta = .327$, $p = .001$) and trust in the institutions ($\beta = .271$, $p = .001$), and negatively related to acceptance of false beliefs ($\beta = -.161$, $p = .001$) and support for the ruling party ($\beta = .138$, $p = .001$). The link between demographic variables and protective behavior was partly mediated by trust in the authorities, support to the ruling party, fear of the COVID-19, and acceptance of false beliefs – all of them modifiable by media and campaigns. More educated respondents were more respectful of the measures, partly because of greater trust in institutions, less support for the ruling party and less acceptance of misconceptions. The influence of age was mediated by positive correlations with trust in the authorities and support to ruling party.

Keywords: COVID-19, protective behavior, false protection-related beliefs, fear of COVID-19, Serbia

IS PATERNALISTIC MODEL OF PHYSICIAN-PATIENT RELATIONSHIP REALLY IN THE PAST: THE ROLE OF TRUST IN PASSIVITY NORMALIZATION

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Trust in physicians and health care system is paramount to delivering quality healthcare and crucial for maintaining favorable physician-patient relationship. There are multiple models of physician-patient relationship that differ by patients' role in his/her health-related decision-making. Although legislation has changed towards deliberative model, in practice, the paternalistic model of relationship might still be widespread in Serbian healthcare system. If this is true, trust in physicians and healthcare system should be positively correlated to passivity normalization. Conversely, if the model that best describes real patient-physician relationship in Serbia is deliberative, trust should be negatively correlated to patients' passivity normalization. Women who gave birth at least once ($N = 274$, $M_{age} = 42.4$) completed two sets of items: (a) 24 about their relationship with physicians and attitudes toward healthcare system in general, and (b) seven regarding normalization of passivity during childbirth. Canonical correlational analysis on the two sets of items revealed two significant pairs of canonical functions. The first pair ($Rho = .62$, $\chi^2(168) = 316.73$, $p < .001$) captured the positive relation between trust in physicians (13 items, e.g., *I believe that physicians and healthcare workers care about me as a person*) and all seven items from passivity normalization set. Here, trust in physicians explained 12.6% of the variance of passivity normalization. The second pair of functions ($Rho = .48$, $\chi^2(138) = 192.71$, $p = .001$) pointed to the negative relation between trust in public healthcare system (5 items, e.g., *If I could afford it, I would always choose a private hospital*) and three items from passivity normalization set that indicate full submissiveness during childbirth (e.g., *During a childbirth, a woman must do whatever the physician tells her*). This function accounted for only 2.9% of the variance. Our results indicate that trust in healthcare providers and system reflects on women's passivity normalization, that is – paternalistic physician-patient relationship is present, accepted and supported by patients. This is reflected in positive relation between trust in physicians and passivity normalization. However, negative relation between trust in public healthcare system and full submissiveness during childbirth indicates that, alongside the existing paternalistic model, there is slight but far from comprehensive shift to the deliberative model.

Keywords: trust in healthcare system, physician-patient relationship, passivity normalization

BIG SUPPLA: OSPORAVANJE UOBIČAJENOG VIĐENJA
DODATAKA ISHRANI I BILJNIH PREPARATA

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Uprkos činjenici da ne postoje čvrsti dokazi koji govore u prilog efektivnosti praksi komplementarne i alternativne medicine (CAM), učestalost njihovog korišćenja nastavlja da raste. Ovo se delimično može pripisati činjenici da potrošači opažaju CAM industriju kao manje orijentisanu na profit od farmaceutske, i samim tim kao benevolentniju. Da bi se suprotstavilo ovom gledištu, u oblasti zdravstvene komunikacije osmišljen je termin „Big Suppla“. Mi smo eksperimentalno testirali efekte prezentovanja industrija dodataka ishrani i biljnih preparata kao moćnih i orijentisanih na profit („Big Suppla“) nasuprot nemoćnim i neorijentisanim na profit („Baby Suppla“) na evaluaciju (koliko su efikasni, poželjni, zdravi) CAM produkata od strane potrošača, kao i na njihovu spremnost da probaju i preporuče ove proizvode.

Trima grupama ispitanika (N=242) smo prezentovali fiktivne novinske članke koji predstavljaju CAM industriju kao uticajnu ili neuticajnu, kao i članak koji se bavi poreklom termina vezanih za ovu industriju (kontrolna grupa). Kako se radi o mešovitom dizajnu, ispitanici su odgovarali na pitanja o probanju, preporučivanju i evaluaciji biljnih preparata i dodataka ishrani pre i posle čitanja. Tri grupe se nisu statistički značajno razlikovale međusobno po pitanju promene stavova o CAM produktima u pretestu i postestu. Na nivou pojedinačnih grupa, manipulacija je imala očekivane efekte u „Big Suppla“ grupi: nakon čitanja članaka, ispitanici su bili manje skloni da probaju ($F=17.92$; $p<.001$) i preporuče ($F=32.66$; $p<.001$) dodatke ishrani, kao i da probaju ($F=9.81$; $p=.002$), preporuče ($F=13.96$; $p<.001$) i pozitivno evaluiraju ($F=11.38$; $p=.001$) biljne preparate. „Baby Suppla“ manipulacija, s druge strane, nije imala očekivane efekte – zapravo, ispitanici su bili manje skloni da pozitivno evaluiraju ($F=11.901$, $p=.001$) biljne preparate, dok se ostali efekti nisu pokazali statistički značajnim.

Ovi rezultati sugerišu da ima prostora za promenu percepcije CAM industrije, ali samo u jednom smeru – smeru uviđanja profitnih ciljeva i jake pozicije na tržištu; potrošači nisu spremni da promene svoje mišljenje u suprotnom smeru uprkos pokušajima ubeđivanja. Obezbeđivanje ispravnih informacija potrošačima kada je reč o CAM industriji dovodi u pitanje mit o njenoj benevolentnosti, čime čini ispitanike više kritički nastrojenim po pitanju njenih produkata i manje spremnim da je podrže. Ovi rezultati mogu da pomognu u uobličavanju važnih javnih poruka koje se tiču zdravlja.

Ključne reči: komplementarna i alternativna medicina, dodaci ishrani, biljni preparati, profitabilnost, zdravstvene prakse

BIG SUPPLA: CHALLENGING THE COMMON VIEW OF THE SUPPLEMENTS AND HERBS INDUSTRY

Even though there's no strong evidence base for the effectiveness of complementary and alternative medicine (CAM) practices, their use is on the rise, which can be the side effect of perceiving this industry as powerless. We experimentally tested the effects of reading a fictional article that presents CAM industry as powerful and profit oriented ("Big Suppla") vs lacking power and not profit oriented ("Baby Suppla") on consumers' willingness to endorse CAM products. The manipulation had the expected effect in the "Big Suppla": the respondents were less likely to try and recommend dietary supplements, and to try, recommend and positively evaluate herbal products; the "Baby Suppla" manipulation backfired, leaving the respondents less likely to positively evaluate herbal products. The results suggest that providing the consumers with correct information about CAM can make them less likely to endorse its products. These results can help in tailoring important public health messages.

Keywords: complementary and alternative medicine, dietary supplements, herbal products, profitability, health practices

DETERMINANTS OF DEPRESSIVE AFFECT IN SERBIA

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Considerable social difficulties during recent decades have left a significant effect on the mental disabilities of the Serbian population, with depressive disorders among the first. Although depression is ranked as the single largest contributor to global disability and the major contributor to suicide deaths, with a globally rising prevalence, analysis of determinants of depression in Serbia on a nationally representative sample is non-existent. Our aim to fill this gap.

We used a merged Serbian sample within the European Quality of Life Survey (EQLS) from 2012 and 2016, consisted of 2058 respondents (51.9% of females, $M_{age} = 48.37$, $SD_{age} = 17.58$). In EQLS, depressive affect is measured by respondent's assessment of how much they felt downhearted and depressed during the previous two weeks. Answers are given on a six-point single-item scale (1 – all the time; 6 – at no time). We carried out a multiple regression analysis with enter method. We selected eighteen independent variables and a total sample of 1856 respondents (that had no missing values on all of them).

Our selected independent variables collectively explained about 38% of the variance in depressive feelings, $F(18, 1837) = 63.012$, $p < .001$, $R^2 = .382$. Social exclusion is shown to be the most important determinant in our model ($\beta = .289$, $t = 12.898$, $p < .001$). Subjective health ($\beta = -.233$, $t = -9.053$, $p < .001$), satisfaction with family life ($\beta = -.205$, $t = -9.847$, $p < .001$), and feeling worthwhile ($\beta = -.087$, $t = -3.949$, $p < .001$) come next. Other significant determinants are attending religious services ($\beta = -.080$, $t = -4.250$, $p < .001$), being female ($\beta = .077$, $t = 3.969$, $p < .001$), feeling free to decide how to live ($\beta = -.073$, $t = -3.379$, $p < .01$), being retired ($\beta = .065$, $t = 2.274$, $p < .05$), and being widowed ($\beta = .046$, $t = 2.349$, $p < .05$). Age, size of locality, having time to do the enjoyable things, being divorced, being unemployed, being unable to work due to illness or disability, satisfaction with standard of

living, trust in people, and taking part in sports or physical exercise are shown to be not significant determinants.

Results generally indicate non-material domains of life, such as personal connections, general health, and feelings of worthiness, as essential protective factors of depressive affect. This is consistent with the prior findings indicating the essential importance of non-material domains of life for mental health.

Keywords: depressive affect, Serbia, European Quality of Life Survey

PROCJENA AFEKTIVNOG DOŽIVLJAJA U ODNOSU NA BOJU I POZNATOST STIMULUSA

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Ovo istraživanje se bavi ispitivanjem afektivnog značenja boja za stimulse koji se razlikuju po stepenu poznatosti. Emocije su često povezane sa određenim bojama, pa se tako crvena povezuje sa doživljajem topline, ljutnjom i uzbuđenošću, zelena sa opuštenošću, žuta sa srećom, a plava boja sa hladnoćom i smirenošću. Međutim, nije potpuno jasno koji su mehanizmi stvaranja tih asocijacija. Taj odnos može biti determinisan bazičnim senzornim procesima, evolucijom, socijalizacijom, ali i ličnim iskustvima (Cuykendall & Hoffman, 2008; Palmer & Schloss, 2010). Cilj ovog istraživanja je utvrđivanje razlika u procjeni afektivnog doživljaja stimulusa u odnosu na boju i poznatost, odnosno postojanje prethodnog iskustva. Istraživanje je realizovano na uzorku od 102 studentkinje. Stimulusi su bili poznati i konkretni objekti poput auta i lopte, te apstraktni stimulusi u vidu zatvorenih kontura koje nemaju značenje. Ispitanicima je na ekranu računara prikazan svaki stimulus pojedinačno pri čemu su ispitanici procjenjivali svoja osjećanja prema datom stimulusu. Varirana su dva faktora-poznatost stimulusa (sa dva nivoa-poznati i apstraktni), neponovljen po ispitanicima i boja stimulusa (sa četiri nivoa-crveni, zeleni, žuti, plavi), ponovljen po ispitanicima. Za procjenu afektivnog značenja je korištena skala konotativnog diferencijala koja se odnosi na emotivno-evaluativni faktor (Janković, 1999; 2000) i sadrži pet parova pridjeva: neprijatno-prijatno, nepoželjno-poželjno, mrsko-dobro, loše-dobro, odbojno-privlačno. Ispitanici su procjenjivali intenzitet svog afektivnog doživljaja na sedmostepenoj bipolarnoj skali. Rezultati pokazuju da postoji glavni efekat poznatosti ($F(1) = 9.222, p < .01$) i boje stimulusa ($F(3) = 42.993, p < .001$) na procjenu afektivnog značenja. Utvrđen je i značajan efekat oba faktora na pojedinačnim pridjevskim parovima. Takođe je utvrđena statistički značajna interakcija između variranih faktora ($F(3) = 32.470, p < .001$). Post hoc testovi su pokazali da postoje tri grupe procjena. Za poznate stimulse su na svim pridjevskim parovima najniže procjene (usmjerene ka negativnom polu) dobijene za stimulse zelene boje, zatim slijede stimulusi crvene i žute boje (na pozitivnoj strani skale, u granicama srednjim vrijednosti), dok su najviše procjene (usmjerene ka pozitivnom polu) dobijene za stimulse plave boje. S druge strane, kod apstraktnih stimulusa su najniže (negativne) procjene dobijene za stimulse crvene boje, najviše (pozitivne) procjene za stimulse žute boje, dok su procjene plavih i zelenih usmjerene ka pozitivnom polu pridjeva, ali u granicama srednjih vrijednosti skale.

Ključne reči: emocije, boja, afektivno značenje

ASSESSMENT OF AFFECTIVE EXPERIENCE IN RELATION TO COLOR AND FAMILIARITY OF STIMULUS

This study examines the affective meaning of colors for stimuli that differ according to the degree of familiarity. Relationship between emotions and colors can be determined by basic sensory processes, evolution, socialization, but also personal experiences. The aim of this research is to determine the differences in the assessment of the affective experience of stimuli in relation to color and familiarity. The research was conducted on a sample of 102 female subjects. Two factors were varied - stimulus familiarity (with two levels - known and

abstract) and stimulus color (with four levels - red, green, yellow, blue). The connotative differential scale related to the emotional-evaluative factor was used to assess the affective meaning. The results show that there is a main effect of familiarity and color on the assessment of affective meaning. A significant effect of both factors on individual adjective pairs was also found. A statistically significant interaction was also found between the varied factors.

SUBJEKTIVNI DOŽIVLJAJ UMETNIČKIH SLIKA RAZLIČITIH PRAVACA

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U modelu estetske procene Ladera i saradnika obrada umetničkog stila je predložena kao centralna za estetski doživljaj umetničkog dela. U našem istraživanju želeli smo proveriti ovu pretpostavku kroz dva cilja. Primarni cilj istraživanja bio je utvrđivanje kvaliteta estetskog doživljaja umetničkih slika različitih pravaca, a sekundarni utvrđivanje da li i po kojim kvalitetima postoji razlika u estetskom doživljaju slika različitih pravaca. Estetski doživljaj je bio reprezentovan preko afektivne, konativne i kognitivne dimenzija.

U istraživanju je korišćen prigodan uzorak naivnih posmatrača (srednjoškolci). Uzorak se sastojao od 88 ispitanika u uzrastu od 15 do 19 godina. Oni su procenjivali slike iz četiri umetnička pravca (renesansa, impresionizam, nadrealizam i kubizam). Iz svakog pravca bila su izdvojena po tri najistaknutija slikara i po jedno njihovo poznato delo, ukupno 12 slika. Ispitanici su slike procenjivali putem onlajn ankete, koristeći bipolarne sedmostepene skale procene na čijim krajevima su se nalazili opozitni pridevi. Za procenu afektivne dimenzije korišćene su skale (navedeni samo pozitivni polovi): prijatno, privlačno, drago, lepo i dobro, za konativnu skale: upečatljivo, podsticajno, zanimljivo, aktivno i jako, i za kognitivnu skale: smisleno, konkretno, logično, poznato i jasno.

Rezultati su pokazali da postoji statistički značajna interakcija umetničkih pravaca i skala estetske procene $F(6, 522) = 5.66, p < .001$. Na afektivnoj dimenziji sve razlike su značajne, osim između kubizma i nadrealizma. Impresionizam je procenjen najpozitivnije, pa zatim renesansni stil. Na konativnoj dimenziji impresionističke i renesanse slike su pozitivnije procenjene od nadrealističkih. Na kognitivnoj dimenziji renesansne i impresionističke slike su procenjene pozitivnije od nadrealističkih i kubističkih.

Rezultati ukazuju da postoje razlike u kvalitetu estetskog doživljaja slika različitih pravaca - impresionističke i renesanse slike se pozitivnije procenjuju na sve tri dimenzije estetskog doživljaja u odnosu na kubističke i nadrealističke slike. Pretpostavljamo da su jasnoća i razumljivost sadržaja slika ova dva umetnička pravca uticali na generalnu preferenciju ovih stilova kod naivnih posmatrača, što je u skladu sa prethodnim istraživanjima koja govore u prilog tome da se naivni posmatrači u svojoj proceni rukovode jasnoćom predstavljenog na slici.

Ključne reči: subjektivni doživljaj, umetnički pravci, umetničke slike

SUBJECTIVE EXPERIENCE OF ARTISTIC PAINTINGS OF DIFFERENT ARTISTIC STYLES

In Leder et al. model of aesthetic evaluation, the processing of style is proposed as central to the aesthetic experience. The aim of our research was to determine the quality of the aesthetic experience of paintings of different styles and possible differences in the experiences between styles.

A convenient sample of 88 naive observers was used in the research. They evaluated 12 paintings from four artistic styles (Renaissance, Impressionism, Surrealism and Cubism) using online form. Three dimensions of aesthetic experience (affective, conative, and cognitive) were evaluated using seven-points scales with opposite adjectives.

The results showed that there is statistically significant interaction of style and aesthetic experience $F(6,522)=5.66$, $p<.001$ and indicate that impressionist and renaissance paintings are more positively assessed comparing to cubist and surrealist paintings. We assume that comprehensibility of the content of the paintings of these two artistic directions influences the general preference of these styles among naive observers.

Key words: subjective experience, artistic directions, artistic paintings

AGGRESSIVENESS, PERSONALITY TRAITS AND MODES OF AESTHETIC PROCESSING AS PREDICTORS OF TATTOO PREFERENCE

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The aim of this research was to examine possibility of predicting tattoo preferences on the basis of aggression, personality traits and modes of aesthetic processing (H-harmony, R-redundancy, D-distance). Stimuli selection was done on the convenience sample ($N=93$; $F=87.1\%$), mean age 22.73 ($SD=3.08$), which assessed the likeability of 53 tattoo motifs. Then, four factors were extracted through EFA: motifs with personal and romantic meaning, unrealistic and violent, natural and realistic, and religious motifs. For each factor, six tattoos were selected, three in color and three in black and white, which were then presented to the respondents for evaluation in the second phase. The convenience sample ($N=66$; $F=83.3\%$) was used in the second phase, with average age of 27.05 ($SD=8.33$). Following instruments were used: BODH questionnaire for measuring aggression (Dinić, Mitrović & Smederevac, 2014), BFI (John & Srivastava, 1999), semantic differential scales which operationalize H, R and D (Pejić & Milićević, 2007), and the one semantic differential scale for assessment of tattoo likeability. Hierarchical linear regression was used for data analysis, where the criterion variable was likeability, while the predictors were aggressiveness (1st step), personality traits (2nd step) and modes of aesthetic processing (3rd step). The results regarding preference of *motifs with personal and romantic meaning* (Model 1 and 2: $p>.05$; Model 3: $R^2=.84$, $F=5.72$, $p=.00$) showed that significant predictors were Hostility ($\beta=.39$) and D level ($\beta=.70$). Significant predictors of *unrealistic and violent motives* (Model 1, 2 and 3: $p>.05$) were Openness ($\beta=.54$), Conscientiousness ($\beta=-.61$), and Rage becomes significant

in the second model ($\beta = .64$). A significant predictor of preferences of *natural and realistic motifs* (Model 1, 2 and 3: $p > .05$) was D ($\beta = 1.03$). Significant predictors of *religious motifs* (Model 1 and 2: $p > .05$; Model 3: $R^2 = .57$, $F = 2.57$, $p = .05$) was Rage, in the first two models, while in the third it ceases to be significant ($\beta = .73$), and Extraversion, which in the third model stops being significant ($\beta = .56$). We can conclude that higher levels of Hostility and Distance predict liking tattoos with personal and romantic meaning, higher levels of Openness and Rage, and lower levels of Conscientiousness, predict preference for unrealistic and violent motives, Rage and Extraversion predict preference for religious motives, while higher levels of Distance predict realistic motives.

Key words: aggression, personality traits, H, R, D, tattoo preference

COMPLEXITY AND AESTHETIC APPRECIATION OF MUSIC

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In this paper relation between complexity and aesthetic appreciation of musical compositions has been observed. Birkhoff's model predicts negative linear relation between complexity and the level of appreciation. Eysenck's hypothesis suggests linear relation between complexity and level of. Berlyne believes that relation between complexity and appreciation is linear but could be active only within the interval of medium level of complexity. Research shows that complexity and aesthetic appreciation depend on the type of the stimuli, subjective complexity, criteria for defining complexity and aesthetic appreciation. The aim of this research was to test the correlation between complexity and aesthetic appreciation of musical composition, depending on the criteria for defining complexity and aesthetic appreciation. The stimuli were 11 short musical compositions of various styles, genres and epochs. The sample were 40 students of psychology. The instrument included 9 seven-point scales (complex, ambiguous, lavish, decorated, rich, diverse, beautiful, attractive and likable). After listening, subjects have been asked to evaluate each musical composition on 9 seven-point scales. Correlation analysis shown that all variable are on significant positive correlation. Beautiful correlate with scales: complexity ($r = .200$, $p < .01$); ambiguous ($r = .466$, $p < .01$); lavish ($r = .398$, $p < .01$); decorated ($r = .365$, $p < .01$); rich ($r = .477$, $p < .01$) and diverse ($r = .573$, $p < .01$). Attractive correlate with scales: complexity ($r = .236$, $p < .01$); ambiguous ($r = .499$, $p < .01$); lavish ($r = .404$, $p < .01$); decorated ($r = .372$, $p < .01$); rich ($r = .491$, $p < .01$) and diverse ($r = .582$, $p < .01$). Likable correlate with scales: complexity ($r = .228$, $p < .01$); ambiguous ($r = .434$, $p < .01$); lavish ($r = .377$, $p < .01$); decorated ($r = .396$, $p < .01$); rich ($r = .511$, $p < .01$) and diverse ($r = .613$, $p < .01$). The results show that aesthetic appreciation positively correlates with the subjective complexity of musical compositions. The intensity of the correlation varies depending on the criteria for defining complexity and aesthetic appreciation. The correlations are less intense when the aesthetic appreciation is defined as beautiful. Also, correlation are weaker when the subjective complexity is defined like complexity, lavish and decorated, and stronger when is defined as diverse, rich and ambiguous. The findings support Eysenck's hypothesis. Also, they confirm that differences exist between beautiful, attractive and likable on a subjective level.

Keywords: complexity, aesthetic appreciation, music

AFEKTIVNI DOŽIVLJAJ KOMPOZICIJA RAZLIČITIH ISTORIJSKO-STILSKIH EPOHA KLASIČNE MUZIKE

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Istraživanje je imalo za cilj da utvrdi da li se kompozicije koje pripadaju različitim epohama klasične muzike (Andreis, 1966; Burkholder, Grout, & Palisca, 2019) međusobno različito i doživljavaju na bazičnim dimenzijama afektivnog doživljaja. To su dimenzije valence, pobuđenosti i kognitivne evaluacije, a u istraživanju su merene instrumentom proizašlim iz rada Trkulje i Jankovića (2012) kojim je utvrđena trofaktorska struktura afektivnog doživljaja muzičkih stimulusa. Ispitanici (N=77) bez formalnog muzičkog obrazovanja su procenjivali 24 stimulusa, reprezentativna za određenu epohu, na devet bipolarnih skala procene koje mere date dimenzije. Utvrđena je prosečna vrednost svakog stimulusa na svakoj od dimenzija, a njihovom klaster analizom (K-means) stimulusi su grupisani u pet klastera. Radikalni klaster, sastavljen od ekspresionističke i avangardne muzike XX veka, koja krši većinu kanona muzike prethodnih epoha, doživljava se kao nepoznat, neprivlačan i relativno nepobuđujuć. Ritmični klaster sastavljen je od kompozicija srednjeg veka, baroka, neoklasicizma i ekspresionizma. U muzičkom smislu ove kompozicije odstupaju od tonalnog jezika, te imaju pokretljiv tempo i motoričan ritam, a procenjene su kao visoke na dimenziji pobuđenosti i neutralne na dimenzijama valence i poznatosti. Srednjovekovne, renesansne, impresionističke i jedna barokna kompozicija iz uzorka čine Statični klaster, koga muzički odlikuje statičko muzičko dešavanje, bez kontrastnih delova i lagan tempo, a doživljene su kao relativno lepe, umereno poznate i umereno pobuđujuće. Klasični klaster koji sadrži kompozicije iz perioda klasicizma i po jednu iz baroka i romantizma visoko je procenjen na sve tri dimenzije. U muzičkom smislu odlikuje ga brz i pokretljiv muzički ritam, čvrst odnos melodije i ritma i visok stepen simetrije muzičkog toka. Kompozicije melodičnog klastera, sastavljenog od dve romantičarske i po jedne renesansne i minimalističke kompozicije procenjen je kao najviši na dimenziji valence i poznatosti, ali umerenije na dimenziji pobuđenosti. Rezultati pokazuju da klasteri ekstrahovani na nivou afektivnog doživljaja slušalaca ne reprodukuju verno stilske podele muzikologa, već se kompozicije slične po doživljaju grupišu na osnovu muzičkih karakteristika poput tonaliteta, tempa, složenosti i predvidivosti ritma, harmonske teksture i akustičke dinamike.

Ključne reči: afektivni doživljaj, klasična muzika, istorijsko-stilske epohe, valenca, pobuđenost, kognitivna evaluacija

We aimed to determine whether compositions belonging to different historical-stylistic periods of classical music (Andreis, 1966; Burkholder, Grout, & Palisca, 2019) are perceived as different on the basic dimensions of affective experience: valence, arousal and cognitive evaluation. These dimensions were measured by an instrument derived from the work of Trkulja and Janković (2012) which established the three-factor structure of the affective experience of musical stimuli. Participants (77 non-musicians) assessed 24 stimuli, representative of a particular epoch, on nine 7-point scales that measure given dimensions. We determined the average value of stimuli on each dimension, and conducted cluster analysis (K-means) that resulted in five clusters. The radical cluster, composed of expressionist and avant-garde music of the 20th century that violates most of the musical canons of previous epochs, is perceived as unknown, unpleasant and relatively unarousing. The rhythmical cluster contains compositions of the Middle Ages, Baroque, Neoclassicism

and Expressionism. In the musical sense, they deviate from the Western tonal system and all have a moving tempo and motoric rhythm. These compositions are perceived as high on arousal and neutral on the valence and familiarity. Medieval, Renaissance, Impressionist and one Baroque composition make the Static Cluster, characterized by statically musical events, without contrasting parts. These compositions are perceived as relatively pleasant, moderately familiar and moderately arousing. The classical cluster contains compositions highly valued on all three dimensions, from the period of classicism and one from the period of baroque and romanticism. These compositions have fast tempo, moving musical rhythm, a solid relationship between melody and rhythm and a highly symmetrical music flow. The melodic cluster, composed of two romantic, a renaissance and a minimalist composition, was assessed as the highest on valence and cognitive evaluation, but moderately on the arousal. The results show that listeners affective experience do not plausibly reproduce musicologists' stylistic divisions, and similar musical characteristics such as tonality, tempo, complexity and predictability of rhythm, harmonic texture and acoustic dynamics makes similar affective experience of listeners.

KATARINA MARIĆ FOUNDATION

EKSPERIMENTALNA PROMENA STAVOVA PREMA VEGETARIJANCIMA KROZ NAGLAŠAVANJE SLIČNOSTI VEGETARIJANSTVA I TRADICIONALNOG POSTA

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Oslanjajući se na socijalnu percepciju, iste kategorije možemo opažati na različite načine, zavisno od njihove interpretacije i dodeljenog im naziva. Cilj istraživanja bio je da eksperimentalnim putem proverimo ovu ideju na primeru vegetarijanstva. Vegetarijanci su manjinska grupa, u našoj kulturi, koja se suzdržava od konzumiranja mesa i mesnih proizvoda. Ispitivali smo mogućnost eksperimentalnog uticaja na stavove prema vegetarijancima, ukoliko bi se oni predstavili kao pripadnici naše kulture i tradicije. Ispitanici ($N = 246$) su putem randomizacije podeljeni u tri grupe. Sve tri grupe čitale su tekst o domaćinu koji proslavlja imendan. Kontrolna grupa čitala je tekst o tradicionalnoj mrsnoj proslavi imendana, jedna eksperimentalna je čitala o posnoj proslavi imendana gde je domaćin nakon godina pridržavanja posta prešao u vegetarijance, dok je druga eksperimentalna grupa čitala o vegetarijanskoj proslavi. Dobijeni rezultati pokazali su da postoji efekat eksperimentalnih indukcija u odnosu na kontrolnu grupu što i pokazuje razlika u stavovima između kontrolne i dve eksperimentalne grupe, koja je bila značajna ($F(1, 119) = 3.13, p = .04$). Prema drugoj hipotezi, očekivali smo da efekti indukcije budu moderirani nivoom posedovanja orijentacije ka socijalnoj dominaciji (SDO) i sklonosti konzervativnoj autoritarnosti (RWA), pri čemu bi viši nivoi pomenutih orijentacija vodili manjoj otvorenosti ka promeni pozitivnosti stava. SDO se pokazao kao značajni moderator ($\beta = -.55, SE = .14, 95\% CI: -.82, -.28$), pri čemu je, suprotno hipotezi, indukcija imala najviše efekta na osobe sa visokim nivoom SDO ($\beta = .25, SE = .11, 95\% CI: .04, .46$). RWA se nije pokazao značajnim. Nalazi pružaju doprinos daljim istraživanjima u pogledu međugrupnih relacija i formiranju smernica za razvoj javnih komunikacija u vezi sa vegetarijanstvom i smanjenjem konzumacije mesa.

Ključne reči: vegetarijanstvo, stav prema vegetarijancima, SDO, RWA, tradicija posta

DONOŠENJE ODLUKE O PRENATALNOM TESTIRANJU: BEZBEDNOST NASPRAM TAČNOSTI TESTA

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Prenatalni testovi rade se kako bi se ustanovilo da li je sa fetusom sve u redu, ili postoji neka hromozomska anomalija, poput Daunovog sindroma. Postoje skrining testovi koji mogu da pokažu samo verovatnoću za postojanje nekog oboljenja i mogu da pogreše, ali zahvat nije rizičan, kao i dijagnostički (npr. amniocenteza) koji daju tačnu informaciju o tome da li ima ili nema oboljenja, ali je procedura rizična. Pojava novog skrining testa, naziva neinvazivni prenatalni test (NIPT), koji je skup, ali pravi manji broj grešaka, promenila je paradigmu prenatalnog testiranja, jer se sada sa većom tačnošću, a bez rizika od pobačaja mogu dobiti informacije o zdravlju fetusa. Dosadašnja istraživanja pokazala su da je uvođenje ovog testa u kliničku praksu smanjilo broj invazivnog dijagnostičkog testiranja i povećalo ukupan broj

prenatalnih testova. Ipak, ranije studije koje su ispitivale koji su kriterijumi važni u odabiru prenatalnog testa koristile su se podacima iz prakse, upitnicima i intervjuima, a ne eksperimentalnim metodom. Za razliku od prethodnih istraživanja, ovaj rad fenomenu prenatalnog testiranja pristupao je polazeći iz paradigme suđenja i odlučivanja. Kako bi se ispitalo kako promene određenih karakteristika testova utiču na to da li će se raditi prenatalni test, a ako da, koji, sprovedene su tri studije. U prvoj studiji ispitivan je efekat cene testa, u drugoj efekat broja ponuđenih testova, a u trećoj efekat informacije o lažnim pozitivima neinvazivnog testa. Rezultati su pokazali da postoji generalna preferencija ka opciji da se radi prvo NIPT pa po potrebi invazivna dijagnostika, kao i da se samo NIPT bira više od samostalnog invazivnog testa. Prikazivanje realne cene NIPT-a ne dovodi do odlučivanja za invazivni test, već do odustajanja od testiranja, dok prikazivanje informacije da NIPT daje lažne pozitivne dovodi do većeg biranja invazivnog testa, čak i kada je NIPT prikazan kao besplatan. I neinvazivni i invazivni test u većoj meri se biraju kada su ponuđeni samostalno, nego kada su predstavljeni zajedno. Kako bi se obezbedilo da se iskoriste dobre strane neinvazivnog testa, kao što je zamena rizične procedure nerizičnom, a opet ne doći do rutinizacije prenatalnog testiranja usled lakoće procedure, treba dodatno obratiti pažnju na to kako i kojim grupacijama trudnica će lekari preporučivati ove testove.

Ključne reči: prenatalno testiranje, neinvazivni i invazivni testovi, cena testa, rizičnost procedure, lažni pozitivni

SUROGAT MATERINSTVO: PERSPEKTIVE ŽENA SUOČENIH SA NEPLODNOŠĆU U KONTEKSTU JAVNIH DISKURSA

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Surogat materinstvo je oblik asistiranе reprodukcije koji predstavlja aktuelno društveno pitanje u Srbiji usled pokretanja inicijative za njegovu legalizaciju, nakon čega će postati dostupna alternativa za ostvarenje potomstva ženama koje su suočene sa neplodnošću. Surogat materinstvo je kontroverzan fenomen okružen kako legitimisućim, tako i kritičkim diskursima, i fenomen koji vodi fragmentaciji biološkog materinstva. Cilj ovog rada bio je da se utvrdi na koji način u (lokalnom) kontekstu javnih diskursa potencijalne korisnice formiraju svoja značenja o ovoj alternativi, legitimisuje je (ili ne) i u okviru nje pregovaraju materinstvo. Stoga je u prvoj fazi istraživanja radi detaljnijeg određenja konteksta, izvršena analiza diskursa na prednacrtu građanskog zakonika, kao i TV emisijama u kojima se diskutuje o legalizaciji surogat materinstva. Surogat materinstvo se dominantno legitimizuje, oslanjanjem na biomedicinski diskurs (lečenje), neoliberalni diskurs (pravo na roditeljstvo, lični izbor), i reprezentacijom surogat majke kao altruistične. Istovremeno, okružuju ga i kritički diskursi – diskurs eksploatacije, interesa za dete, kao i patrijahalni diskurs koji reprezentuje surogat majku kao ili dobru majku deteta (koja oseća tugu kada da dete) ili lošu majku deteta (koja je vođena ekonomskim interesima), pri čemu obe reprezentacije mogu pretiti legitimnosti surogat materinstva, što je razmatrano u radu. Diskurs tradicionalne porodice problematizuje potencijal surogat materinstva za nastajanje nepoželjnih porodičnih struktura, mada se taj potencijal u praksi ne ostvaruje, te se surogat materinstvo legitimizuje time što za svoju krajnju tačku ima nuklearnu, heteroseksualnu porodicu. Roditeljski legitimitet se daje nameravanim roditeljima, a oduzima surogat majci, kroz reprodukovanje

biogenetičkog modela roditeljstva, kao i kroz neoliberalni diskurs (roditeljstvo kao izbor), kao i spremnost nameravane majke da o detetu brine, dok se gestacijska veza između surogat majke i deteta denaturalizuje.

U glavnom delu istraživanja, cilj je bio utvrditi kakva značenja potencijalne korisnice pripisuju surogat materinstvu, uzimajući u obzir prethodnu analizu, kao i koje reprezentacije proizilaze iz njihove specifične pozicije potencijalnih korisnica. Obavljeni su polustrukturisani intervjui sa 8 žena koje su suočene sa neplodnošću. Legitimizovanje ulaska u surogat materinstvo se postiže pre svega naglašavanjem lične patnje usled neplodnosti, naglašavanjem da je reč o lečenju, kao i pozivanjem na opravdanost i poželjnost materinstva kao cilja kojim su vođene. Surogat materinstvo njima se pojavljuje kao lakši put u odnosu na usvajanje, pre svega jer omogućuje da se uspostavi veća kontrola nad roditeljstvom, a i u odnosu na transplantaciju materice jer se pojavljuje kao bezbednija i izvesnija procedura. Roditeljski legitimitet u sklopu procesa surogat materinstva sebi osiguravaju isticanjem namere da će brinuti o detetu (roditeljstvo kao socijalno) i naglašavanjem genetičke veze sa detetom (iako to ne mora biti razlog ulaska u proces). Prisustvo surogat majke u reprodukciji se doživljava kao problematično, pre svega s obzirom na potencijal da ona ugrozi poziciju nameravane majke kao jedine majke deteta, uz to ih osujećuje i za trudničko iskustvo i oduzima im kontrolu i agensnost, što ima implikacije po njihove preferencije i ponašanja, što je detaljno razmatrano u radu. One se dominantno oslanjaju na reprezentaciju surogat majke kao humane, čime poništavaju nepoželjne reprezentacije surogat majke kao eksploatisane ili kao "loše majke" (vođene ineteresima). Povremeno su prisutne i reprezentacije surogat majke kao loše majke, kao i žene sa emotivnim odnosom sa detetom koje rađa, pa su razmatrani i efekti tih reprezentacija i kako se one koriste ili odbacuju. Surogat majka se dominantno pojavljuje kao objekt putem kojeg (potencijalne) korisnice ostvaruju svoj cilj, ali istovremeno i subjekt za sebe, koji je za njih od značaja i sa kojim imaju lični odnos.

Ključne reči: surogat materinstvo, asistirana reprodukcija, materinstvo, analiza diskursa

APOFENIJA: KROVNI FENOMEN TENDENCIJE KA GREŠCI TIP A I

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Apofenija predstavlja pervazivnu tendenciju perceptualno-informacionog sistema da uočava značenja tamo gde ih nema. Pojedinačne fenomene ovih lažno pozitivnih grešaka možemo definisati kao različite oblike iste generalne apofenične tendencije u okviru zasebnih sadržajnih domena. Cilj ovog istraživanja bio je da se utvrdi veza između dve različite mere apofenije operacionalizovane kroz lažne pozitive. Uz to, ispitivali smo i odnos ovih apofeničnih fenomena sa dezintegracijom i drugim crtama ličnosti. U istraživanju je učestvovalo 278 ispitanika, dok je njih 256 završilo testiranje u celini. Ispitanici su najpre popunjavali Test sa snežnim slikama na osnovu kojeg je kreirana mera apofenije. Nakon toga, usledio je kratki upitnik za procenu crte dezintegracija. Potom je zadat Frith-Happe test teorije uma sa trouglovima, odakle je registrovana druga mera apofenije – hipermentalizacija. Na kraju su ispitanici popunili HEXACO-60 inventar ličnosti. Rezultati pokazuju da postoji niska pozitivna korelacija između mere apofenije iz testa sa snežnim slikama i mere hipermentalizacije iz testa sa trouglovima ($r=.23$, $p<.001$), a crte dezintegracija i ekstraverzija doprinose objašnjenju skora generalne apofenične tendencije.

Dezintegracija je nisko pozitivno povezana sa merama apofenije i hipermentalizacije, i sa i bez kontrole uticaja ostalih crta ličnosti. U diskusiji je razmotren odnos dve mere apofenične tendencije koje smo nazivali apofenija i hipermentalizacija, kao i odnos generalne apofenične tendencije sa ostalim crtama ličnosti. Dobijena veza između generalne apofenične tendencije i crta dezintegracije i ekstraverzije se razmatra u kontekstu zajedničkih aspekata ove dve crte – prevashodno uvećanog kognitivnog aktiviteta, perceptivne senzitivnosti i oslabljenosti mehanizama za testiranje stvarnosti – koji bi mogli da reprezentuju apofenične fenomene.

Ključne reči: generalna apofenična tendencija, apofenija, hipermentalizacija, dezintegracija, tendencija ka psihoticizmu

GENSKI I SREDINSKI ČINIOCI EMOCIONALNE REGULACIJE I PERCEPCIJE PORODIČNOG OKRUŽENJA

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Psihologija

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Bihevioralna genetika nastoji da utvrdi doprinose genskih i sredinskih činilaca koji učestvuju u formiranju različitih karakteristika ljudskog ponašanja. Dosadašnje studije pružile su značajne informacije za razumevanje delovanja bioloških faktora i njihovog odnosa sa sredinom za neke od konstrukata koji su predmet proučavanja psihologije. Ova studija ima za cilj da ispita genske i sredinske faktore koji utiču na ispoljavanje percepcije porodičnog okruženja i strategija emocionalne regulacije (emocionalna supresija i preformulacija pozitivnih i negativnih događaja). U istraživanju je učestvovalo 188 parova blizanaca (118 monozigotnih i 70 dizigotnih), oba pola, starosti između 18 i 48 godina. Za procenu percepcije porodičnog okruženja korišćen je Blok upitnik za procenu okruženja (BEQ), a za procenu emocionalne regulacije ERQ upitnik. Udeo doprinosa genskih i sredinskih činilaca testiran je multivarijatom biometrijskom metodom. Rezultati multivarijatne analize pokazali su da zadovoljavajuće mere fita, kada je u pitanju majka, ima AE model, a kada je u pitanju otac ACE model. Kod sve tri strategije emocionalne regulacije udeo nedeljene sredine je veći u odnosu na udeo deljene sredine i naslednih činilaca, osim u slučaju negativne kognitivne preformulacije u odnosu na percipirane karakteristike oca, kod koje je udeo najveći za varijansu naslednih činilaca. Detaljnije, najveći specifični roditeljski doprinos zapažamo u slučaju Kognitivne preformulacije. Naime, percepcija očevih karakteristika najveću ulogu ima u slučaju strategije negativne kognitivne preformulacije – procenat sredinske varijanse iznosi 16%, a genske varijanse 4%. U vezi sa percepcijom majčinih karakteristika, najveći procenat objašnjene varijanse dobijen je za strategiju negativne kognitivne preformulacije (10% objašnjene varijanse genskih činilaca) i pozitivne kognitivne preformulacije (70% objašnjene varijanse činilaca nedeljene sredine).

Ključne reči: Bihevioralna genetika, blizanci, multivarijatan biometrijski model, emocionalna regulacija, percepcija porodičnog okruženja

DISTINKTIVNE KARAKTERISTIKE VERBALIZAMA I NJIHOV DOPRINOS EFEKTU POUZDANOSTI IZVORA NA PROCENE DUBOKOUMNOSTI ISKAZA

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Izvedene su dve studije sa ciljem empirijske potvrde predloženih distinktivnih karakteristika pseudo-dubokoumnih verbalizama i testiranja generalizabilnosti efekta pripisanog autorstva različitog stepena pouzdanosti koji je prethodno registrovan na pseudo-dubokoumnim verbalizmima na iskaze koji se sistematski razlikuju od njih. Pseudo-dubokoumni verbalizmi predstavljaju besmislene iskaze sa ispravnom sintaksičkom i gramatičkom strukturom koji su dizajnirani da impresioniraju, a ne da informišu slušaoca. Na osnovu ove definicije i filozofske analize verbalizama uopšte u Studiji 1 je preložena klasifikacija četiri kategorije iskaza koji se međusobno sistematski razlikuju po smislenosti i nameri da se iskazom impresionira slušalac. U klasifikaciju spadaju, osim pseudo-dubokoumnih verbalizama, i motivacioni citati, zdravorazumski istiniti zaključci i besmisleni iskazi kreirani bez namere da se slušalac impresionira. Nalazi potvrđuju predloženu klasifikaciju te samim tim i ranije podrazumevanu pretpostavku da se verbalizmi opažaju kao iskazi kreirani sa namerom da se slušalac impresionira, kao i da zaista, iz ugla ispitanika, predstavljaju relativno besmislene iskaze. Iskazi koji su najbolje preslikavali predloženu klasifikaciju ispitanicima su u Studiji 2 prikazani sa i bez pripisanih autora različitog stepena pouzdanosti, pri čemu su ispitanici sami operacionalizovali nivoe visoke i niske pouzdanosti izvora. Procene dubokoumnosti četiri kategorije iskaza bez pripisanih autora ukazuju na to da da bi se iskaz doživeo kao nešto što je dubokoumno dovoljno je da bude izrečen sa namerom da se neko impresionira, a poželjno je, ali nije nužno, da ima značenje. Procene dubokoumnosti iskaza sa pripisanim autorima u poređenju sa procenama dubokoumnosti istih iskaza ali bez autora pokazuju da kada sudimo o tome da li je nešto mudro, značajno i reflektuje visok stepen znanja i uvida, uvek je važnije ko je nešto rekao, nego šta je rekao ili rekla, čak i ako je smisao iskaza potpuno nedvosmislen, pri čemu pol autora nema sistematski uticaj na procene dubokoumnosti. Manipulacija pouzdanošću izvora koja podrazumeva pristup vođen podacima pokazala se kao neuporedivo bolji način ispitivanja efekta pouzdanosti izvora od unapred, i od strane istraživača, definisanih nivoa ove varijable.

Ključne reči: Pseudo-dubokoumni verbalizmi, receptivnost na verbalizme, distinktivne karakteristike verbalizama, namera da se iskazom impresionira, efekat pripisanog autora

EUTANAZIJA – STRAH ILI HRABROST? STAVOVI ZDRAVSTVENIH RADNIKA I OPŠTE POPULACIJE

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Problem ovog rada bavi se odnosom prema eutanaziji i pitanjem povezanosti stava prema eutanaziji sa profilom stavova prema smrti i drugim ličnim, sociodemografskim i situacionim faktorima. Cilj rada bio je ispitati stavove prema eutanaziji uopšte, njenoj legalizaciji, izboru za sebe i svog bližnjeg člana porodice u zamišljenoj situaciji teške bolesti i utvrditi korelate, prediktore i zastupljenost tih stavova. Uzorku od 318 ispitanika (109 sa Kosova i Metohije,

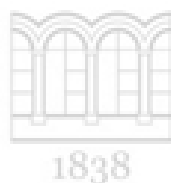
209 iz Centralne Srbije), koji je činilo 126 zdravstvenih radnika zadati su upitnici za procenu eutanazijskog stava (EAS), stava prema smrti (DAP-R), religioznog identiteta (indikator precizne religijske samodeklaracije), empatije (EQ8), lokusa kontrole (IE-4) i pitanja o iskustvu sa umirućim osobama, legalizaciji i nameravanim ponašanjima. Rezultati pokazuju da 66.4% ispitanih građana smatra da bi trebalo legalizovati aktivnu dobrovoljnu eutanaziju dok je opšti eutanazijski stav u rangu prosečnih vrednosti. Nađeno je da su prihvatanju eutanazije skloniji ljudi iz Centralne Srbije, van zdravstva, od 20 do 35 godina starosti, fakultetskog obrazovanja, nereligiozni, nezainteresovani za religiju i protivnici religije. Stav prema eutanaziji statistički značajno na nivou $p < .01$ korelira sa prihvatanjem smrti kao pristupa zagrobnom životu ($r = -.347$), izbegavanjem smrti ($r = -.279$), prihvatanjem smrti neutralno ($r = .154$), empatijom ($r = .156$). Nije potvrđeno da iskustvo sa umirućom bližnjom osobom samostalno utiče na eutanazijski stav ni značajna povezanost stava sa lokusom kontrole. Prediktivni model kojim je obuhvaćeno pet profila stavova prema smrti - religiozni identitet, dva pravca lokusa kontrole, empatija i iskustvo, objasnio je 31% varijanse eutanazijskog stava. Od njih, statistički značajan na nivou $p < .001$, najveći jedinstveni doprinos predikciji ($\beta = .297$) daje religiozni identitet, a potom izbegavanje smrti ($\beta = -.221$). Manji, ali značajan doprinos daju prihvatanje smrti kao pristupa zagrobnom životu ($\beta = -.200$), kao bega ($\beta = .125$) i strah od smrti ($\beta = .183$). Teorijske i praktične implikacije rezultata i preporuke za buduća istraživanja raspravljane su u radu.

Ključne reči: eutanazija, stav prema smrti, religiozni identitet, empatija, lokus kontrole, iskustva sa umirućima, zdravstveni radnici.

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