



SAVREMENI
TRENDVI U
PSIHOLOGIJI
2017

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TRENDS IN
PSYCHOLOGY
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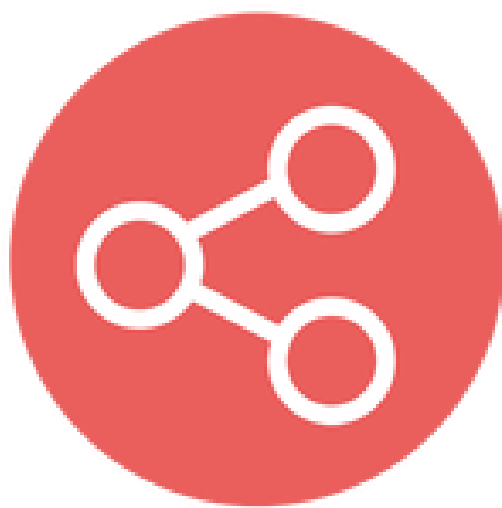


KNJIGA SAŽETAKA
BOOK OF ABSTRACTS





Pripremu i izdavanje ove knjige sažetaka omogućilo je
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PLENARNA PREDAVANJA
PLENARY LECTURES

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Prof. Dr. Boele De Raad
emeritus

Department of Psychometrics & Statistics, Faculty of Behavioural and Social Science, University of Groningen, Netherlands

Cultural and cross-cultural personality psychology

I review psycho-lexically based personality research within and across cultural borders. More than half a century ago, the Big Five personality factors emerged from working with the lexical hypothesis in mind. All personality traits available in a dictionary of the English language were summarized in some five factors (Big Five). In the decades after, more and more trait-taxonomic studies were done in a great variety of languages. In western languages not all of the Big Five were clearly replicated. This lack of replication is possibly related to difference in method and difference in language and culture. In relatively few non-western languages trait-taxonomies were performed, and when they took place, it was often with even less similarity to the Big Five. With growing numbers of trait-taxonomic studies, such work took place roughly according to two lines each with its own emphasis. One is to optimize the representation of traits in a model, with the result that also structures with 6, 7, and even 8 factors have seen the light. The other is to optimize cross-cultural validity, resulting in emphases on a smaller number of factors (1, 2, and 3). The various trait models are discussed in relation to the type of approach that was taken. The presentation ends with a brief description of a new project of broad cross-cultural proportions, suggested as a next step on the route towards a broadly applicable, valid cross-cultural model. The project is figured under the name of “consensual model of personality traits” to emphasize that a canonical structure of traits is not to be expected, and that certain decisions need to be taken on the basis of consensus.

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Prof. Dr. Gareth Gaskell

Department of Psychology, University of York, UK

The role of sleep in language learning

While sleep remains in many ways deeply mysterious, researchers are now beginning to recognise the importance of sleep for memory and learning. In this talk I will describe research carried out in our laboratory in York that has identified a crucial role for sleep in language acquisition, including ways in which both adults' and children's sleep can improve through consolidation of language knowledge. As a test case, I will discuss the involvement of sleep in the integration of new word

forms in to the mental lexicon. Such effects can be seen in both perception and production, and can be explained by a recent model of language learning and processing in which sleep facilitates systems consolidation of the representations of new language. I will also talk about the brain mechanisms underlying language learning, and discuss the proposal that all language perception involves learning and consolidation.

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Dr. Jelena Mirkovic

Department of Psychology, School of Psychological and Social Sciences, University of York, UK

What's special about language? The mental machinery supporting language learning and language use

Language has long been considered a uniquely human faculty which requires special mental machinery to be learned and used. More recent research, however, suggests that language learning and use might be underpinned by mechanisms shared with other psychological faculties, and with other species. In this talk I will present computational and behavioral studies addressing this long standing debate, including how the sleeping brain may help shed light on the issue. Together, the results of these studies suggest that language has much more in common with other psychological faculties than commonly thought.

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Prof. Dr. Richard Bentall

Department of Psychology, Sheffield University, UK

The social origins of psychosis

It has commonly been assumed that the psychotic disorders (conditions that involve hallucinations and delusions, and which usually lead to diagnoses such as 'schizophrenia' or 'bipolar disorder') are largely genetic in origin. This assumption is usually justified by referring to heritability estimates that exceed 80%. However, these estimates are not measures of causation and their misinterpretation is an example of one of the most common mistakes in statistics – assuming that correlation proves causality. In fact, major environmental influences are possible even if heritability approaches 100%. The only way of assessing these influences is to look for them. In recent years, considerable evidence had accumulated on a range of environmental risk factors for psychosis, including urban

environments, poverty, migration and trauma. In each of these cases, the effects are particularly strong when these exposures occur in childhood.

In this talk I will focus particularly on the effects of childhood trauma which, in a meta-analysis, raises the risk of adult psychosis by a factor of 3. In three epidemiological datasets, specific patterns of association were found, with childhood sexual abuse being a particular risk factor for hallucinations and disruption of attachment bonds a particular risk factor for paranoid beliefs. These findings point to psychological mechanisms that explain these associations: dissociative states in the case of hallucinations and insecure attachment styles in the case of paranoia. Implications for the treatment and prevention of severe mental illness will be discussed.



OKRUGLI STO

ROUND TABLE

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Problemi naučnog publikovanja u psihologiji Challenges of scientific publication in psychology

Učesnici:

Prof. dr Goran Knežević, *glavni urednik časopisa Psihologija*

Prof. dr Ljiljana Mihić, *glavni urednik časopisa Primijenjena Psihologija*

dr Darinka Anđelković, *glavni urednik časopisa Psihološka istraživanja*

Milica Ševkušić, *bibliotekar Instituta tehničkih nauka SANU i nacionalni koordinator za otvoreni pristup pri EIFL-u*

Moderator: Sunčica Zdravković

Naučno publikovanje postaje dominantan cilj za sve one koji napreduju u naučnoj i akademskoj karijeri ali takođe i za kolege koje rade u praksi. Stoga su gosti ovog okruglog stola urednici vodećih domaćih periodika iz oblasti psihologije. Svaki od časopisa ima nešto različit fokus pa ćemo okrugli sto početi tako što će svako od urednika ukratko predstaviti svoj časopis i njegovu istoriju. Dodatno biće izneti i relevantni podaci (bibliometrijski i statistički) kao i tekuća politika i planovi razvoja. O svim ovim i drugim pitanjima publika je dobrodošla da postavlja urednicima dodatna pitanja. Takođe želimo da se osvrnemo i na bitna pitanja kao što su impact faktor, dileme vezane za publikovanje na engleskom nasuprot srpskom, kao i najnovije probleme vezane za Open Access članke, podatke i najave istraživanja.



RADIONICA
WORKSHOP

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Prof. Dr. Noellie Brockdorff

Department of Cognitive Science Faculty of Media & Knowledge Sciences, University of Malta

Finding the needle in the haystack: A personal view of applying for EU funding

The seven years that have elapsed since the Department of Cognitive Science at the University of Malta were awarded the first EU FP7 grant (CONSENT) in 2010 have been exciting, maddening, fruitful, frustrating, and rewarding in about equal measures. A further five successful grant applications have followed (SMART, RESPECT, CITYCoP, CARISMAND, ESSENTIAL) that together have been awarded more than Euro 22 million of EU funding and have directly contributed more than Euro 1.2 million of research funds to the faculty. All of these projects are collaborative projects undertaken as part of large consortia of researchers and practitioners from diverse disciplines, and this is one part of the story. A glance at the names of some of the calls under which these projects were funded tells another part of the story: “Surveillance and the challenges for the security of the citizen”, “Disaster-resilience: safeguarding and securing society, including adapting to climate change”, and “Enhancing cooperation between law enforcement agencies and citizens - community policing”. Why did a department of Cognitive Science apply for funding from such calls? How and why were the applications for funds successful? These are some of the questions that will be addressed during the Workshop.



POZVANI SIMPOZIJUMI

INVITED SYMPOSIA



Afektivno i kognitivno funkcionisanje obolelih od hroničnih bolesti

**Affective and cognitive functioning in patients with chronical
diseass**

Moderator: Alessandra Pokrajac Bulian

Odsjek za psihologiju, Filozofski fakultet, Sveučilište u Rijeci, Hrvatska

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Željka Nikolašević^a, Tijana Vujanić Stankov^b, Marija Semnic^b, Vojislava Bugarski Ignjatović^b

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Afektivna i psihopatološka obeležja blagog kognitivnog poremećaja i Alchajmerove bolesti

Blagi kognitivni poremećaj predstavlja stanje u kojem je prisutno kognitivno oštećenje koje može biti amnestičko ili neamnestičko, uz očuvanu funkcionalnost u svakodnevnom životu, u odsustvu kriterijuma za dijagnozu demenciju. Od neposrednog značaja za Alchajmerovu bolest (AB) je amnestički blagi kognitivni poremećaj (aBKP), s obzirom na veći rizik za progresiju u Alchajmerovu bolest. Većina dosadašnjih istraživanja je bila usmerena na procenu vrste i stepena mnestičkog deficita, dok su depresivnost i psihopatološka obeležja bili nepravedno zanemareni kod pacijenata ove grupe poremećaja. Rezultati malobrojnih istraživanja sugerišu o postojanju značajne veze depresivnosti kod amnestičkog blagog kognitivnog poremećaja i veće stope progresije date grupe pacijenata u Alchajmerovu bolest. Prisustvo depresivnih obeležja je zastupljenije u odnosu na psihopatološka obeležja kod aBKP, dok se kod Alchajmerove bolesti pored prisustva depresivnih obeležja registruje i izražena učestalost psihopatoloških karakteristika. Cilj ovog istraživanja je bio da se utvrdi razlika u zastupljenosti depresivnih simptoma i psihopatoloških obeležja u grupi pacijenata sa amnestičkim blagim kognitivnim poremećajem i Alchajmerovom bolešću. Istraživanje je sprovedeno na uzorku od 84 ispitanika, oba pola, starosti od 57-85 godina ($M = 71.05$, $SD = 6.41$), pri čemu je grupa sa amnestičkim blagim kognitivnim poremećajem obuhvatila 28 ispitanika, grupa s Alchajmerovom bolešću 29 ispitanika, a kontrolnu grupu zdravih ispitanika je činilo 27 ispitanika. Grupe su međusobno ujednačene po osnovnim sociodemografskim obeležjima. Za procenu depresivnih simptoma je korišćena Bekova skala depresivnosti II (BDI II), a za procenu psihopatoloških obeležja je korišćen Neuropsihijatrijski inventar (NPI). Razlika između grupa u pogledu ispitivanih obeležja analizirana je Kruskal-Volisovim testom. Dobijeni rezultati pokazuju da se ispitivane grupe statistički značajno razlikuju u zastupljenosti depresivnih obeležja ($\chi^2(2) = 7.87$, $p = .020$), pri čemu se grupa zdravih ispitanika razlikuje od grupe sa aBKP i AB, dok se grupe aBKP i AB međusobno statistički značajno ne razlikuju. Najniži skor na skali depresivnosti beleži grupa zdravih, dok najviši skor beleži grupa s aBKP. Kada su u pitanju psihopatološka obeležja merena NPI, dobijeni rezultati ukazuju na postojanje statistički značajnih razlika između sve tri ispitivane grupe u ukupnom skor na NPI ($\chi^2(2) = 16.04$, $p = .000$). U slučaju pojedinačnih skala beleži se razlika na skali sumanute ideje ($\chi^2(2) = 14.28$, $p = .001$), agitacija/agresija ($\chi^2(2) = 10.55$, $p = .005$) i skali iritabilnost/labilnost ($\chi^2(2) = 6.48$, $p = .039$). Grupa sa AB beleži izraženije prisustvo navedenih psihopatoloških obeležja u

odnosu na preostale dve ispitivane grupe. Dobijeni rezultati idu u prilog ranijim nalazima koji sugerisu da AB karakteriše izraženije prisustvo psihopatskih obeležja, dok se u grupi s aBKP beleži izraženije prisustvo depresivnih obeležja.

Ključne reči: amnestički blagi kognitivni poremećaj (aBKP), Alchajmerova bolest, depresivnost, psihopatološka obeležja

Affective and psychopathological characteristics of mild cognitive impairment and Alzheimer's diseases

Mild cognitive impairment is a condition accompanied with cognitive damage. It may be amnesic or nonamnesic, with preserved daily functioning, without diagnostic criteria for dementia. Amnesic mild cognitive impairment (aMCI) is of direct relevance to Alzheimer's disease (AD), due to the higher risk of progression to Alzheimer's disease. Most of the previous studies have focused on assessing the type and degree of amnesic deficit, while depression and psychopathological traits have been unjustly neglected in patients suffering from this group of disorders. Few studies have suggested the existence of significant correlation between depression in aMCI and higher rate of progression to Alzheimer's disease in that group of patients. In aMCI, depressive symptoms are more prevalent than pathological hallmarks, whereas Alzheimer's disease presents with both depression symptoms and pronounced prevalence of psychopathological characteristics. The aim of the study was to determine the difference in the prevalence of depressive symptoms and psychopathological characteristics in the groups of patients with aMCI and Alzheimer's disease. The research was conducted on a sample of 84 respondents of both sexes, aged 57-85 ($M = 71.05$; $SD = 6.41$); namely, 28 respondents with aMCI, 29 with Alzheimer's disease, and 27 healthy respondents. The groups were matched by main sociodemographic characteristics. Depressive symptoms and psychopathological characteristics were assessed using Beck's Depression Inventory II and Neuropsychiatric Inventory (NPI), respectively. The Kruskal-Wallis H test was used to analyse the difference between groups in terms of the studied characteristics. The obtained results indicate statistically significant difference between groups in terms of presence of depressive symptoms ($\chi^2(2) = 7.868$; $p = 0.020$); namely, the control group differs from aMCI and AD groups, whereas aMCI and AD groups show no statistically significant difference between themselves. The control group recorded the lowest score on the depression scale, and the aMCI group the highest. Regarding psychopathological characteristics measured with NPI, the obtained results indicate statistically significant differences between all three groups in the total NPI score ($\chi^2(2) = 16.037$; $p = .000$). In respective scales, the difference is recorded in delusions ($\chi^2(2) = 14.276$; $p = .001$), agitation/aggression ($\chi^2(2) = 10.551$; $p = .005$) and irritability/lability ($\chi^2(2) = 6.478$; $p = .039$) scales. The AD group recorded pronounced presence of specified psychopathological characteristics relative to the other two groups. The results speak in favour of earlier findings that suggest that AD is characterized by more pronounced presence of psychopathological characteristics, whereas the aMCI group recorded a more pronounced presence of depressive symptoms.

Keywords: amnesic mild cognitive impairment (aMCI), Alzheimer's disease, depression, psychopathological characteristics

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Determinante prihvatanja hroničnih tegoba kod osoba sa multiplom sklerozom i hroničnim bolom

Jedan od ciljeva istraživanja, prema pretpostavkama Kashdana i Rottenberga, bilo je ispitivanje kognitivnih i personoloških determinanti prihvatanja tegoba u sklopu osnovne hronične bolesti, kao specifičnog konteksta psihološke fleksibilnosti, osnove terapije prihvatanjem i posvećenošću. Drugi cilj odnosio se na ispitivanje medijacione uloge dva aspekta prihvatanja tegoba između opšte psihološke nefleksibilnosti i pokazatelja distresa. Uzorak je činilo 113 osoba sa relapsno-remitentnom multiplom sklerozom (RRMS) i 116 osoba sa hroničnim bolom (HB) različite lokalizacije. Upotrebljeni su upitnici kojima su operacionalizovani opšta psihološka nefleksibilnost, prihvatanje tegoba, intenzitet tegoba, osobine ličnosti, simptomi depresivnosti i anksioznosti, kao i test koji predstavlja meru brzine jednostavnog i kompleksnog konceptualnog praćenja - dela egzekutivnog kontrolnog sistema. Prilikom primene hijerarhijske višestruke regresione analize, model sa kovarijatom intenzitet tegoba bio je statistički značajan, $\Delta F(1,227) = 51.20$, $p < .001$, što je manji intenzitet tegoba veće je njihovo prihvatanje, $\beta = -.43$, $t = -7.16$, $p < .001$. Bio je značajan i naredni model, gde su uneti brzina jednostavnog i kompleksnog konceptualnog praćenja, Neuroticizam, Pozitivan afektivitet - PA, Otvorenost, Savesnost, Rigidnost i bolest (RRMS/HB) kao prediktori prihvatanja tegoba, $\Delta F(8,219) = 9.96$, $p < .001$. Ovde se po značajnom doprinosu ističu Neuroticizam, $\beta = -.33$, $t = -5.42$, $p < .001$, PA, $\beta = .21$, $t = 2.96$, $p < .01$, i brzina jednostavnog konceptualnog praćenja, $\beta = -.21$, $t = -2.57$, $p < .05$. Osobe sa manje izraženim Neuroticizmom, a povišenim PA i smanjenom brzinom jednostavnog konceptualnog praćenja, više prihvataju svoje tegobe. Model sa uvrštenim interaktivnim efektima bolesti i dve vrste brzine procesiranja informacija nije se prikazao značajnim, dok je poslednji model u kome su uvedene interakcije bolesti i osobina ličnosti bio značajan, $\Delta F(5,212) = 2.33$, $p < .05$, pri čemu se istakao interaktivni efekat bolesti i Savesnosti, $\beta = -.20$, $t = -2.13$, $p < .05$. Međutim, kada je proverena relacija Savesnosti i prihvatanja tegoba u svakoj grupi pacijenata, nisu dobijeni značajni modeli. Verovatno se o interaktivnom efektu može govoriti kao o statističkom artefaktu. Provera paralelnih višestrukih medijacionih modela ukazuje na značajan direktan efekat opšte psihološke nefleksibilnosti na simptome depresivnosti ($B = .32$, $SE = .05$, 95% CI: .21 – .42) i anksioznosti ($B = .31$, $SE = .04$, 95% CI: .21 –

.41), kao i na značaj indirektni efekat, ali samo na simptome depresivnosti ($B = .09$, $SE = .03$, 95% CI: $.04 - .16$), gde su kao medijatori bili aktivno angažovanje ($B = .04$, $SE = .02$, 95% CI: $.00 - .08$) i voljnost da se iskuse tegobe ($B = .05$, $SE = .02$, 95% CI: $.01 - .11$). Dobijen je uvid u nove značajne relacije među ispitivanim pojavama. Veruje se da će istraživanje skrenuti pažnju naučne/kliničke javnosti na tzv. sekundarnu patnju kod pacijenata sa hroničnim bolestima.

Ključne reči: psihološka (ne)fleksibilnost, prihvatanje tegoba, multipla skleroza, hroničan bol, pokazatelji distresa

Determinants of chronic illnesses acceptance in people with multiple sclerosis and chronic pain

One of the aims of this study, according to the assumptions Kashdan and Rottenberg, was to explore cognition and personality traits as potential determinants of chronic illness acceptance, as specific context of psychological flexibility, the basis of Acceptance and Commitment Therapy. The second aim was to investigate mediation of two aspects of chronic illness acceptance between general psychological inflexibility and distress. The sample comprised 113 persons with relapsing-remitting multiple sclerosis and 116 persons with chronic pain various locations. A battery of self-report questionnaires were used to assess general psychological inflexibility, illness acceptance, the intensity of symptoms, personality traits, depression and anxiety, and also test as measure of simple and complex conceptual monitoring speed – a part of executive control system. Hierarchical multiple regression analysis showed that model with covariate intensity of symptoms was significant, $\Delta F(1,227) = 51.20$, $p < .001$, smaller the intensity of symptoms, greater their acceptance, $\beta = -.43$, $t = -7.16$, $p < .001$. The following model was significant, where simple and complex conceptual monitoring speed, Neuroticism, Positive affectivity (PA), Openness, Conscientiousness, Rigidity and illness (RRMS/CP) were entered as predictors of illness acceptance, $\Delta F(8,219) = 9.96$, $p < .001$. Significant contribution had Neuroticism, $\beta = -.33$, $t = -5.42$, $p < .001$, PA, $\beta = .21$, $t = 2.96$, $p < .01$, and speed of simple conceptual monitoring, $\beta = -.21$, $t = -2.57$, $p < .05$. Persons with decreased Neuroticism, increased PA and low speed of simple conceptual monitoring had increased illness acceptance. The model of interactive effects of illness and two information speed was no significant. The last model, with interactions of illness and personality traits, was significant, $\Delta F(5,212) = 2.33$, $p < .05$, especially interactive effect of illness and Conscientiousness, $\beta = -.20$, $t = -2.13$, $p < .05$. However, when relation between Conscientiousness and illness acceptance in each group of patients was tested, there were no significant models. Probably, the interactive effect might be referred to as a statistical artifact. Testing of multiple parallel mediation models indicates a significant direct effect of general psychological inflexibility on the symptoms of depression ($B = .32$, $SE = .05$, 95% CI: $.21 - .42$) and anxiety ($B = .31$, $SE = .04$, 95% CI: $.21 - .41$), and also indirect effect, but only on depression symptoms ($B = .09$, $SE = .03$, 95% CI: $.04 - .16$), where mediators were activities engagement ($B = .04$, $SE = .02$, 95% CI: $.00 - .08$) and willingness to experience symptoms of chronic disease ($B = .05$, $SE = .02$, 95% CI: $.00 - .08$).

.01 – .11). The study provided a new insight into the significant relations between the studied phenomena. It is believed that this study is brought to the attention of scientific/clinical public on the so-called secondary distress to chronic illness.

Keywords: psychological (in)flexibility, illness acceptance, multiple sclerosis, chronic pain, distress

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Emocionalna regulacija i kvalitet života pacijentkinja sa karcinomom dojke

Maligna bolest dojke je oboljenje koje se sve uspešnije leči, ali i unosi značajne promene u životni tok obolele osobe, provocira različite vrste gubitaka, reorganizaciju porodičnih uloga, stoga su često pod uticajem bolesti pogođeni najznačajniji aspekti života obolelog. Kako se neprijatna emocionalna stanja i emocionalni distress često viđaju u okviru kliničke slike onkoloških pacijenata, te značajno utiču na kvalitet života, pretpostavka je da se upotrebom adaptivnih strategija emocionalne regulacije ovaj uticaj može umanjiti, odnosno korišćenjem neadaptivnih strategija intenzivirati, što dalje pruža uvid i otvara različite mogućnosti u psihoonkološkoj praksi. Cilj istraživanja bio je da se ispita medijaciona uloga strategija kognitivne emocionalne regulacije u relaciji između emocionalnog distresa i različitih aspekata kvaliteta života obolelih od karcinoma dojke. Uzorak je činilo 97 ispitanica, prosečne starosti 57,43 godine (SD = 9.75). Za meru emocionalnog distresa uzet je ukupan skor DASS-21 skale, strategije kognitivne emocionalne regulacije merene su CERQ-36 upitnikom, dok je kvalitet života ispitan FACT-B upitnikom. Za utvrđivanje multiple simultane medijacije između varijabli korišćen je makro INDIRECT za SPSS. U relaciji između distresa i telesnog blagostanja značajni su bili totalni efekat (SE = .30; LCI95% = .14, HCI95% = 1.06) i indirektan efekat pozitivnog refokusiranja (SE = .14; LCI95% = .17, HCI95% = .83), u odnosu distresa i socijalnog blagostanja totalni efekat (SE = .12; LCI95% = -.52, HCI95% = -.03) i indirektan efekat katastrofiziranja (SE = .13; LCI95% = -.33, HCI95% = -.13), a između distresa i funkcionalnog blagostanja totalni efekat (SE = .27; LCI95% = -.73, HCI95% = -.33) i indirektan efekat katastrofiziranja (SE = .09; LCI95% = -.32, HCI95% = -.01), odnosno u sve tri relacije ostvarena je potpuna medijacija. Kada je reč o vezi između distresa i emocionalnog

blagostanja, značajni su i direktan ($SE = .27$; $LCI95\% = .01$, $HCI95\% = 1.06$) i totalni efekat ($SE = .20$; $LCI95\% = .07$, $HCI95\% = .72$), kao i indirektni efekti ruminacija ($SE = .16$; $LCI95\% = -.71$, $HCI95\% = -.01$) i pozitivnog refokusiranja ($SE = .13$; $LCI95\% = -.01$, $HCI95\% = .58$), odnosno dobijena medijacija je parcijalna. Rezultati istraživanja ukazuju na medijacionu ulogu tri strategije koje u potpunosti ili delimično menjaju odnos negativnog emocionalnog iskustva i različitih aspekata kvaliteta života. Pozitivno refokusiranje pokazalo se značajnim za telesno i emocionalno blagostanje, ruminacije za emocionalno blagostanje, a katastrofiziranje za socijalno i funkcionalno blagostanje. Navedeno implicira potencijalne benefite od uvođenja KBT treninga i intervencija usmerenih na usvajanje adekvatnih strategija regulacije emocija kod obolelih od karcinoma dojke.

Ključne reči: emocionalna regulacija, distres, kvalitet života, karcinom dojke, psihoonkologija

Emotion regulation and quality of life of breast cancer patients

Eventhough breast cancer has recently been more successfully treated it also brings many changes, provokes different types of losses, reorganizes family roles, therefore, it often affects the most important aspects of life of the patients. As the experience of negative emotions is common in cancer patients and it can significantly affect the patients' quality of life, it is assumed that by using adaptive strategies of emotional regulation there is a certain reduction of its impact, and the use of maladaptive strategies can intensify it, which further provides the insight and opens up possibilities in psycho-oncological practise. The aim of this study is to examine the mediating role of cognitive emotion regulation strategies in the relationship between emotional distress and the various aspects of the quality of life of breast cancer patients. The sample consists of 97 patients with average age of 57.43 years ($SD = 9.75$). Total score of the DASS-21 scale is used to measure distress, cognitive emotion regulation strategies are measured by the CERQ-36 questionnaire, while the quality of life is examined by the FACT-B questionnaire. Multiple simultaneous mediation between the variables is established using the macro INDIRECT for SPSS. In the relation between the distress and physical well-being, significant are total effect ($SE = .30$; $LCI95\% = .14$, $HCI95\% = 1.06$) and indirect effect of a positive refocusing ($SE = .14$; $LCI95\% = .17$, $HCI95\% = .83$), in the relation between distress and social well-being, total effect ($SE = .12$; $LCI95\% = -.52$, $HCI95\% = -.03$) and indirect effect of catastrophizing ($SE = .13$; $LCI95\% = -.33$, $HCI95\% = -.13$), and between distress and functional well-being, total effect ($SE = .27$; $LCI95\% = -.73$, $HCI95\% = -.33$), and indirect effect of catastrophizing ($SE = .09$; $LCI95\% = -.32$, $HCI95\% = -.01$), that is, complete mediation is realized in all three relations. In the relation between distress and emotional well-being, significant are direct ($SE = .27$; $LCI95\% = .01$, $HCI95\% = 1.06$) and total effect ($SE = .20$; $LCI95\% = .07$, $HCI95\% = .72$), as well as indirect effect of rumination ($SE = .16$; $LCI95\% = -.71$, $HCI95\% = -.01$) and effect of positive refocusing ($SE = .13$; $LCI95\% = -.01$, $HCI95\% = .58$), where we can see that mediation is partial. The results indicate the mediating role of three cognitive emotion regulation strategies which completely or partially change the relation of negative emotional experience and various aspects of quality of life. Positive refocusing proves to be important for physical and emotional well-being, rumination for emotional well-being, and

catastrophizing for social and functional well-being. The above mentioned implies the potential benefits of implementation of CBT trainings and interventions directed towards acquiring appropriate emotion regulation strategies in breast cancer patients.

Keywords: emotion regulation, distress, quality of life, breast cancer, psycho-oncology

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Percepcija bolesti i afektivne smetnje kod oboljelih od kardiovaskularnih bolesti i dijabetesa tipa 2

U području zdravstvene psihologije, u cilju promocije zdravlja i različitih oblika tretmana, razvijeni su brojni teorijski modeli kao naprimjer model zdravstvenoga ponašanja, razložne akcije, transteorijski i socijalno kognitivni model. Jedan od najčešće korištenih modela u zdravstvenome kontekstu jest Leventhalov model samoregulacije, poznat i kao model percepcije ili reprezentacije bolesti (Leventhal i sur, 1984). Autori smatraju da bolest ili simptom može generirati kognitivnu i emocionalnu reprezentaciju. Percepcija bolesti uključuje pet različitih dimenzija kognitivne reprezentacije bolesti: identitet bolesti ili broj simptoma koji se bolesti pripisuju, posljedice, uzroke, kroničnost bolesti, mogućnost kontrole, dok emocionalni aspekti uključuju osjećaje poput straha, ljutnje i nelagode. Cilj je ovoga istraživanja provjeriti neke aspekte kognitivne reprezentacije bolesti i njihov odnos s anksioznošću i depresivnošću kod preuhranjenih i pretilih pacijenata oboljelih od dijabetesa i kardiovaskularnih bolesti.

U istraživanju je sudjelovalo 265 pacijenata od čega 35.5% žena i 64.5% muškaraca, prosječne dobi 62.25 godina, te prosječnog indeksa tjelesne mase (ITM) od 29.10 (prekomjerna težina). U uzorku je 33% oboljelih od dijabetesa tipa 2, dok je 67% oboljelih od kardiovaskularnih bolesti (KVB). Analizom razlika između dviju skupina pacijenata, utvrđeno je da oboljeli od KVB pripisuju više simptoma svojoj bolesti ($M = 4.92$) u usporedbi s oboljelima od dijabetesa tipa 2 ($M = 3.44$), te su anksiozniji i depresivniji, ali imaju pozitivnije vjerovanje o kontrolabilnosti svoje bolesti. Oboljeli od dijabetesa vjeruju u većoj mjeri u kronični tijek svoje bolesti. Veći broj simptoma koje pacijenti pripisuju bolesti, slabije razumijevanje bolesti i doživljaj više negativnih posljedica iste, zajedno s manjim osjećajem kontrolabilnosti bolesti tretmanom, objašnjavaju statistički značajan dio varijance anksioznosti kod dijabetesa tipa 2 (50%). Viši ITM, ženski spol, više negativnih posljedica bolesti, manje razumijevanje bolesti i pripisivanje manjeg broja simptoma istoj, objašnjavaju značajan dio varijance anksioznosti kod KVB-i (31.5%). Značajni prediktori depresivnosti u oboljelih od dijabetesa su percepcija većega broja simptoma i osjećaj da se tretmanom bolest ne može kontrolirati koji objašnjavaju 32% varijance,

dok su viši ITM i manje razumijevanje bolesti značajni prediktori depresivnosti u KVB pacijenata, objašnjavajući značajnih 27.4% varijance. Rezultati pokazuju da postoji snažna povezanost vjerovanja o bolesti te anksioznosti i depresivnosti u oboljelih od dijabetesa i kardioloških bolesnika. Psihoedukativni kao i kognitivno-bihevioralni tretmani u kojima bi se s pacijentima radilo na promjeni neadaptivnih vjerovanja o bolesti svakako bi mogli u prevenciji simptoma depresivnosti i anksioznosti.

Ključne reči: Leventhalov model samoregulacije, anksioznost, depresivnost, dijabetes tipa 2, kardiovaskularne bolesti

Illness perception and affective disorders in patients with cardiovascular disease and type 2 diabetes

In the area of health psychology, different theoretical models have been developed (e.g. health behaviour, reasoned action, transtheoretical and social cognitive models) to improve the promotion of health and treatment. One of the most used models in this context is Leventhal's self-regulatory model, which is also known as the illness perception, or illness representation model (Leventhal et al, 1984). The authors proposed that an illness or its symptoms can generate both cognitive and emotional representations. Perceptual domains included five dimensions of cognitive representations of illness: identity, consequences, cause, timeline and control/cure, while the emotional aspects included negative reactions such as fear, anger and distress. The aim of this study is to examine some aspects of the cognitive representation of illness and its relationship with anxiety and depression in overweight and obese patients with diabetes and cardiovascular disease (CVD).

The study included 265 patients, 35.5% were women and 64.5% men, the average age was 62.25 years and the average body mass index (BMI) was 29.10 (excessive weight). In the sample, 33% of the patients had type 2 diabetes, and 67% had CVD. The analysis of the difference between the two groups of patients showed that CVD patients attributed more symptoms to their disease ($M = 4.92$) compared to patients with type 2 diabetes ($M = 3.44$), and were more anxious and depressed, but also had more positive beliefs about the controllability of the illness. Patients with diabetes believe to a greater extent in the chronic course of their illness. The greater the number of symptoms that patients attribute to the disease, the lower the understanding of the disease and the higher the experience of multiple negative consequences. This, together with a lower sense of control of the illness, explains the statistically significant part of the anxiety variance in type 2 diabetes (50%). Higher BMI, female gender, the perception of more negative consequences of the illness, a less personal understanding of the condition, and lower levels of symptom attribution, explain a significant part of the anxiety variance in CVD (31.5%). Significant predictors of depression in patients with diabetes are perception of a greater number of symptoms and a feeling that treatment cannot control the disease, which explains 32% of the variance, while higher BMI and lower understanding of the disease are significant predictors of depression in CVD patients, explaining 27.4% of variance. The results show a strong relationship between cognitive representation of illness, anxiety and

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depression in patients with diabetes type 2 and CVD. Psycho-educational interventions, as well as cognitive-behavioural treatments in which patients would change their non-adaptive beliefs about their illness, could certainly prevent the symptoms of depression and anxiety.

Keywords: Leventhal's self-regulatory model, anxiety, depression, type 2 diabetes, cardiovascular disease

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Povezanost neurokognitivnog postignuća i afektivnog statusa sa neurobiohemijskim profilom kod HIV+ osoba

Uvođenje kombinovane antiretroviralne terapije (cART) je značajno produžilo životni vek osoba zaraženih virusom humane imunodeficijencije (HIV). Međutim, i pored brojnih pozitivnih posledica koje je uvođenje cARTa donelo, različite afektivne, bihevioralne i neurokognitivne smetnje su česti pratioci prisustva HIV infekcije. Potencijalni razlozi se nalaze u tumačenju da uspešnost cARTa u kontroli virusa i sniženju viremije u perifernoj krvi nije nužno praćena redukcijom aktivacije imunološkog sistema u centralnom nervnom sistemu, pa se kao posledica javlja veća stopa zastupljenosti afektivnih, bihevioralnih i neurokognitivnih smetnji. Ovakvi simptomi se mogu odraziti na pad kvaliteta života, slabiju adherencu i lošiju prognozu bolesti. Cilj istraživanja je bio da se ustanovi da li postoji povezanost između neurobiohemijskog profila HIV+ osoba dobijenog magnetno-rezonantnom spektroskopijom (MRS) i afektivnog, bihevioralnog i kognitivnog statusa ovih osoba. U istraživanju je učestvovalo 39 HIV+ osoba, muškog pola, prosečnog uzrasta 42.18 godina (SD = 11.37), na cARTu. Putem MRS praćene su vrednosti N-acetilaspargata (NAA) na šest različitih lokacija u obe moždane hemisfere: frontalna supkortikalna bela masa, siva masa ventralnog dela prednjeg cingularnog girusa, frontalna duboka bela masa, siva masa dorzalnog dela prednjeg

cingularnog girusa, parijetalna supkortikalna bela masa, siva masa zadnjeg cingularnog girusa. Afektivni status, odnosno depresivnost procenjavana je Bekovom skalom depresivnosti, a anksioznost Spielbergerovim upitnikom za procenu anksioznosti kao stanja. Bihevioralno i kognitivno postignuće je procenjavano uz pomoć upitnika za procenu bihevioralnih aspekata egzekutivnih funkcija (BRIEF-A), koji se sastoji od devet supskala: samopraćenje, emocionalna kontrola, mentalni "šifting", inhibicija, inicijacija, radna memorija, planiranje/organizacija, nadgledanje zadataka, organizacija materijala. Primenjen je niz regresionih analiza. Ustanovljeno je da se pad NAA u sivoj masi dorzalnog dela prednjeg cingularnog girusa izdvaja kao pojedinačan prediktor depresivnosti ($\beta = -.444$, $p = .006$) i anksioznosti ($\beta = -.351$, $p = .031$). Kao značajni pojedinačni prediktori supskale Samopraćenje izdvojili su se pad vrednosti NAA u sivoj masi dorzalnog dela prednjeg cingularnog girusa ($\beta = -.474$, $p = .015$) i frontalnoj supkortikalnoj belo masi ($\beta = -.426$, $p = .041$); za supskalu Mentalni "šifting" ($\beta = -.507$, $p = .017$) siva masa dorzalnog dela prednjeg cingularnog girusa; za supskalu Inhibicija izdvojili su se siva masa ventralnog dela prednjeg cingularnog girusa ($\beta = -.362$, $p = .028$) i dorzalnog dela prednjeg cingularnog girusa ($\beta = -.424$, $p = .037$). Rezultati ukazuju da je pad metabolita NAA u određenim moždanim zonama povezan sa prisustvom depresivnih i anksioznih obeležja, kao i teškoćama u pojedinačnim aspektima egzekutivnih funkcija, koje se direktno odražavaju na ponašanje HIV+ osoba.

Ključne reči: HIV, depresivnost, anksioznost, egzekutivne funkcije, MR spektroskopija

Correlation of neurocognitive performance and affective status with neurobiochemical profile in HIV-positive subjects

Introduction of combination antiretroviral therapy (cART) has significantly extended life expectancy in people with human immunodeficiency virus (HIV). Nevertheless, although cART has brought a number of positive consequences, different affective, behavioral and neurocognitive disorders persist in chronic HIV infection. Current theories stand for the fact that success of cART in control of viral load in peripheral compartment is not necessarily followed by reduction of immune activation in central nervous system, which leads to higher prevalence of affective, behavioral and neurocognitive disorders. These symptoms negatively influence the overall quality of life, lead to poorer adherence and disease prognosis. The aim of this study was to test correlations between neurobiochemical profile obtained on magnetic resonance spectroscopy (MRS) and affective, behavioral and cognitive status of these patients. In this study we recruited 39 HIV+, male subjects, average age 42.18 years ($SD = 11.37$), on cART. We analyzed the level of N-acetylcysteine obtained on multivoxel MRS in six different locations of both cerebral hemispheres: frontal subcortical white matter, grey matter of ventral anterior cingulate gyrus, deep frontal white matter, grey matter of dorsal anterior cingulate gyrus, subcortical parietal white matter and grey matter of posterior cingulate gyrus. Affective status, i.e. depressiveness was assessed using Beck's depression inventory scale, and anxiety by Spielberger's state anxiety inventory test. Behavioral and cognitive status was assessed using Behavior rating inventory of executive function (BRIEF-A), comprised of nine subscales:

selfmonitoring, emotional control, mental shifting, inhibition, initiation, working memory, plan/organization, monitoring and organization of material. We used several regression analyses and confirmed that drop of NAA in grey matter of dorsal anterior cingulate gyrus is a single predictor of depressiveness ($\beta = -.444$, $p = .006$) and anxiety ($\beta = -.351$, $p = .031$). Significant single predictors for subscale selfmonitoring are drop of NAA level in grey matter of dorsal anterior cingulate gyrus ($\beta = -.474$, $p = .015$) and frontal subcortical white matter ($\beta = -.426$, $p = .041$); for mental shifting ($\beta = -.507$, $p = .017$) grey matter of dorsal anterior cingulate gyrus; for subscale inhibition in grey matter of ventral ($\beta = -.362$, $p = .028$) and dorsal anterior cingulate gyrus ($\beta = -.424$, $p = .037$). Results showed that there is a certain correlation between the drop of neuronal marker (NAA) in specific cerebral regions with the presence of depression and anxiety, as well as with disorders in some aspects of executive functions, all of which directly influence behavior in HIV+ subjects.

Keywords: HIV, depression, anxiety, executive functions, MR spectroscopy



Approaches to the research of language function

Moderator: **Dušica Filipović Đurđević**

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Heterogeneity of language abilities in ASD: More evidence for the ALI/ALN distinction from an investigation of finiteness

It is widely known that linguistic and cognitive abilities in ASD are extremely heterogeneous, ranging from severely impaired to intact. Studies often include participants with a range of abilities, or concentrate on higher-functioning individuals with ASD; however, such results are difficult to interpret or are not representative of all the population with ASD. One way of controlling for this heterogeneity is to distinguish between individuals who have relatively spared language ('autism language normal', ALN) and those with an established language impairment ('autism language impaired', ALI) (Kjelgaard and Tager-Flusberg, 2001). In this talk we review our research showing clear differences in the linguistic profiles of the population with ALN and that with ALI on several aspects of grammar, with children with ALI showing severe deficits in binding, passives and most recently, production of finiteness marking.

Keywords: autism spectrum disorders, autism with impaired language, autism with normal language, finiteness, tense marking

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Neurodynamical Models of Embodied Cognition

Research on grounded cognition suggests that the processing of a word or concept reactivates the perceptual and/or motor representations associated with the referent object. Such reactivation then

interacts with the ongoing cognitive computation. It is interesting to note that the effects of motor or online grounding are generally stronger and more robust when compared to perceptual or offline grounding. The aim of this study is to show how the theory of complementary brain processes explains differences between online and offline grounding as manifestations of different cortical circuits designed to solve complementary tasks (Grossberg, 2000; 2009). We suggest that perceptual grounding arise from the neural network designed to achieve stable category learning as elaborated in the adaptive resonance theory (ART). It affords fast learning without catastrophic forgetting by comparing sensory (bottom-up) data with learned (top-down) expectations. If the input pattern matches with one of the previously learned codes (categories) it is recognized as a familiar pattern. On the other hand, if there is a mismatch between the input pattern and the learned code, a reset signal is triggered that removes the currently active category representation and initiates a search for another category that may provide better match with the input. Previously, we suggested that the same top-down pathway that is needed to stabilize learning is also used during conceptual processing to reactivate perceptual patterns associated with concept (Domijan & Šetić, 2016). We showed that a mismatch between top-down expectation and bottom-up sensory data activates a reset signal that slows execution of the current cognitive task thus producing interference effect in incongruent condition (i.e., in condition where sensory data such as perception of blue color do not agree with the expectation produced by the concept such as word RED). Also, we showed that congruent condition does not produce any effect because top-down pathway is modulatory and cannot directly activate sensory nodes without direct sensory stimulation. Here, we demonstrated that online or motor grounding arises from the neural circuit designed to control arm movement. Such circuit does not need reset signal to correct its errors and top-down pathway to its nodes does not need to be modulatory. Therefore, words and concepts that activate motor plans will produce interference in incongruent as well as facilitation in congruent experimental condition. Consequently, online grounding will be more robust and stronger when compared to offline grounding which exhibits only interference. We conclude with the suggestion that further progress in studying grounded cognition will benefit from considering established neurocomputational mechanisms that can support such complex cognitive phenomena.

Keywords: grounded cognition, perception, motor control, neural model

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Laura Winther Balling*Department of Management, Society and Communication, Copenhagen Business School, Denmark**Email: lwb.msc@cbs.dk***Text and sentence processing in the lab and in the wild**

I will present my work on sentence and text processing, two lines of research which are at the same time closely related and fundamentally different. The close relation lies, among other things, in the fact that sentence and text processing are adjacent levels of processing, with particular impact of sentence level phenomena on text processing. The fundamental difference is in the approach: I study sentence processing in strictly controlled experiments and text comprehension using a more naturalistic setup.

My sentence processing research uses relatively strictly controlled and hence rather artificial sets of sentences to compare models based on different operationalisations of predictability – lexicalised and syntactic surprisal – with models based on locality, which predict that sentences where syntactic heads occur more closely together will be easier to process. In an eye-tracking experiment with Danish double-object constructions, we find clear effects of locality and much more marginal effects of lexicalised surprisal.

Some operationalisation of predictability is also necessary in the more naturalistic approach I use to study text comprehension. This involves eye tracking of participants reading texts which are largely authentic but where certain constructions have been manipulated. I will outline this approach and briefly describe experiments that compare the processing of typically recommended constructions such as actives and sentential constructions, with parallel, supposedly more problematic constructions like passives and nominalisations. My experiments show no difference in reading time between recommended and problem constructions, and I hypothesise that this is because differences between constructions in themselves matter less than whether the chosen construction fits the information structure of the sentence in its context. However, the lack of experimental control in the text comprehension experiments may also be contributing to the absence of effects, so I am currently working on a more controlled approach that still retains some level of ecological validity. I will present initial results of an experiment that uses sentence-by-sentence reading of short texts where target sentences fit into a 2*2 design of givenness of agent/theme and active/passive construction, thus testing the hypothesis that information structure matters more than type of construction.

The main focus of my talk will be on discussing and comparing the methods and their pros and cons, also considering particularly challenging issues such as how to foster and measure an appropriate level of text comprehension and how to work with text predictability.

Keywords: text comprehension, sentence processing, predictability

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What can we learn from children's "mistakes"?

Experimental paradigms impose certain pragmatic demands on the participants in a way that they have to understand and follow the experimenter's instructions and behave accordingly.

During the experiment participants' mistakes are expected and treated either as random and excluded from further analysis, or as revealing of the phenomenon that is investigated. Although prepared for the former, experimenters working with pre-schoolers are also often faced with mistakes of different nature.

Because of their intensive cognitive and language development, pre-schoolers are a very interesting population for psycholinguistic researchers, but also require careful preparation of the experimental procedure. It includes taking into account the children's comprehension of the instructions and the situation in a way that is different from that of adults, in a way that is communicatively and pragmatically more relevant to them. As long as the experimenter is capable of predicting pre-schoolers' understanding of the task and adapting it accordingly, the experimental procedure will work. However, sometimes their different perception of the task and its pragmatic characteristics becomes obvious only during, or even after the experiment, when the responses are analysed. If left undetected, these mistakes may influence the results and lead to wrong conclusions about the investigated phenomenon.

We will illustrate the influence of pre-schoolers understanding of the pragmatics of a task on their performance through the "mistakes" they made in three different experimental procedures we have used: the non-word repetition task in estimation of phonological abilities, the naming task in the human body parts vocabulary assessment, and the choice task in testing verbal aspect comprehension. In the non-word repetition and naming task, the original instructions created for adults were partly adapted for pre-schoolers, but nevertheless some children understood the task in an unexpected way. In the choice task, the experimental procedure and instructions were the same as for adults, and it seemed that children followed them successfully. However, the qualitative analysis revealed that some of children's mistakes were probably the result of their susceptibility to pragmatic characteristics of the task, instead of insufficient comprehension of the verbal aspect semantics.

We will argue that any task with complex pragmatic properties and metalinguistic use of language is a prolific ground for children's mistakes and that the following questions should be considered: are we as experimenters always sensitive to pre-schoolers' understanding of the pragmatics of our tasks, and to what extent is it allowed to adapt the task instructions and the procedure while ensuring that we are targeting the same phenomenon in pre-schoolers and adults.

Keywords: preschool children, experimental procedure, pragmatics, mistakes



Cognitive control and its measurement

Moderator: **Cirila Peklaj**

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Sonja Pečjak, Anka Slana, Grega Repovš*Faculty of Arts, University of Ljubljana, Slovenia**Email: sonja.pecjak@ff.uni-lj.si***A new battery of cognitive tests for measuring executive functions in primary school students**

The aim of our contribution is to present a new battery of cognitive tests for measuring executive functions (EF) for primary school students. Processes of EF are key components of self-regulation and have an important impact on students' achievement. Among EF processes, authors most often write about working memory (WM), inhibition, control of attention, processing of information (fluency, efficiency and speed of output) and cognitive flexibility (switching in simultaneously processing information from different sources) (Anderson, 2002; Myake & Friedman, 2012). The academic context in our study was reading ability in primary school students, because reading is one of the key competences in the beginning of schooling. The development of reading competence has two steps: the development of the ability of decoding and the development of different reading strategies for understanding the reading material. We assumed that executive processes have an important role in the development of fluent reading with comprehension - with reading speed (RS), reading comprehension (RC), vocabulary (V) and strategy of summarization (SS).

The battery we designed for testing EF comprises of modified version of 7 frequently used cognitive tests and 1 new working memory test. The novelty of the battery is that individual tests are adjusted to be used for primary school students, enable group application and paper-pencil form of responding and can therefore be used in a classroom setting. The test battery contains three WM tests (digit span forward, digit span backward and a novel Sentence span test) and five tests for evaluating other EF: Test of verbal fluency (with lexical, semantic and switching fluency); Trail making test for measuring visual attention and task switching; Lexical decision task for measuring speed and efficiency of word recognition; conjunctive visual search test for measuring speed and efficiency of top-down processing in visual attention; and Eriksen flanker test for assessing inhibition abilities. We carried out the testing in groups of students in a sample of 189 4th grade students from primary schools. The first examination of correlations between measures of executive functions and reading competency showed the highest correlations in cases of individual processing of verbal information. Among WM measures, Sentence span test has the strongest – moderate correlations with reading dimensions (0.33 - 0.43). Among other EF measures, the highest correlations were found between reading competency and Lexical decision test (speed of word recognition: 0.30 - 0.60; efficiency of words recognition: 0.23 – 0.49) and Test of fluency by switching between words (0.28 - 0.46). In the end we'll discuss the possibilities for test battery improvement.

Keywords: executive functions, reading, measurement, test battery

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CCRacer – a driving game for measuring cognitive control

Cognitive control is usually measured by presenting the participants with different tasks that require the use of specific executive functions. Situations in such tasks often lack a strong resemblance with real-life situations. We wanted to develop a more ecologically valid procedure for measuring cognitive control. CCRacer is a serious computer game in which the participants need to perform different tasks during simulated car driving. Visual stimuli are presented on a 2D computer screen and a gaming steering wheel and pedals are used for regulating the direction and velocity of driving. In task A, participants simply drive through the track and their total driving time and driving accuracy are recorded. Task B aims to measure the ability to update relevant and inhibit irrelevant information and requires the participants to count stimuli with specific properties while driving. Total driving time and accuracy of responses are recorded. In task C which aims to measure inhibition, the participants need to react to certain stimuli appearing on the road and inhibit reactions to others. Reaction times and accuracy of response inhibition are recorded. In task D which primarily measures cognitive flexibility, the participants drive through crossroads and make turns according to the solution of the task which is continually changing. Total driving time and accuracy of responses are recorded. In task E, the participants drive through the task A track but the functioning of the wheel is reversed and the ability to inhibit automatic driving behaviour is reflected in the decreased driving speed and accuracy. Finally, task A is repeated to monitor possible changes in the driving ability through the game. In a preliminary validation study with 41 participants (10 men) aged 19 to 35 years, the CCRacer measures were correlated with scores on tests regularly used for measuring the switching and inhibition abilities: the PEBL's Stroop Colour-Word Test, Berg's Card Sorting Test, Trail Making Test and Switcher Task, and the newly developed Cognitive Control Challenge Task. Correlations in the expected direction were found between the CCRacer measures and measures from different cognitive tests, but they were mostly low to moderate. We will discuss the shortcomings of the developed computer game and sketch its further development and potentials.

Keywords: cognitive control, executive functions, switching, inhibition, computer game

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Cognitive Control Challenge Task - improved (simplified) version

Every day we are faced with a myriad of small and not so small challenges that require appropriate organization and coordination of our cognitive abilities to be able to respond in a effective, goal directed manner. Some of the challenges are well known and responses well practiced and automatized, many, however, require purposeful, explicit control over the coordinated use of the available cognitive resources. Dynamic shifting in flexible cognitive control engages processes like attention focusing and sustaining, inhibiting distracting effects, monitoring and correction of behavior and goal-directed behavior. Cognitive control is domain-general and presents coordination and flexible switching between a wide range of operations in a constantly changing environment, enabling efficient and flexible processing of information and appropriate behavior.

The purpose of our study was to develop a new, improved (simplified) version of the Cognitive Control Challenge Task (CCCT) that requires shifting between different cognitive processes and integration of available information and is suitable also for application in clinical populations. The task's psychometric properties were investigated and results correlated with other behavioral cognitive measures.

A shortened version of the task was applied to a sample of 195 participants (67 male; 9-86 years). Cognitive control challenge task consists of auditory and visual stimuli of different modalities and cognitive abilities (selective attention, working memory, deduction, behavioural inhibition, shifting, decision-making) that follow four different rules in stable and flexible mode. While the rules are changing from trial to trial in flexible mode, they remain the same for 16 trials in stable mode. Reaction times and accuracy of participants' responses were measured. In addition, participants also performed a standard battery of cognitive tests.

The results of the analysis are expected to show similar psychometric properties as the previous version of the task but easier for use in children and older population. Additionally, we expect the results to significantly correlate with results from other cognitive control tasks indicating that the engagement of flexible and coordinated functioning of different executive functions is necessary for successful performance.

Keywords: stable cognitive control, flexible cognitive control, Cognitive Control Challenge Task

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Relationship between executive functions and students intelligence in students with dyslexia

Different studies showed that students with specific learning disabilities also have difficulties with executive functions (EF) that help them plan and organize activities, sustain attention and persist in completing tasks. EF help students to regulate their cognition and behaviour. Psychological diagnosis of specific learning disabilities is based on classical tests of intelligence, which measure only some of executive functions (e.g. fluency, working memory, attention). Thus, the aim of our study was to investigate the relationships between measures of intelligence and measures of EF. 97 students (67 boys and 30 girls, average age 10 years, SD = 0.66) with dyslexia from 4th and 5th grades in 27 Slovene primary schools participated in the study. They were individually assessed with WISC-III, NEPSY-II and their parents and teachers completed BRIEF questionnaire. WISC-III includes 13 subtests measuring Verbal IQ, Performance IQ, Full Scale IQ and four other factors (Verbal comprehension, Perceptual organization, Freedom from distractibility and Processing speed). NEPSY II is a neuropsychological battery comprised from 33 subtests. In our study, auditory attention and executive functions were measured with subtests: Animal Sorting, Auditory attention, Clocks, Design fluency and Inhibition & statue. BRIEF includes Behaviour regulation index (subscales: Inhibit, Shift, Emotional control), Metacognition (subscales: Initiate, Working Memory, Plan & organize, Organization of materials, Monitor) and Global executive composite. In Results showed low to moderate correlations between inhibition, shifting and nonverbal IQ, perceptual organization factor, low distractibility and speed of information processing when EF were measured with the neuropsychological test NEPSY II. Only one moderate significant correlation was found between speed of processing and organization, when teachers assessed executive functions. When parents assessed executive functions, moderate significant correlation was found between organization and verbal IQ, as well as between organization and low distractibility. Implications of the results for assessment of executive functions in students with dyslexia are discussed.

Keywords: executive functions, intelligence, students with dyslexia, measurement



Dakt Tetrad: Measurement, correlates, and outcomes

Moderator: **Bojana Dinić**

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Anja Wertag*Institute of Social Sciences Ivo Pilar, Zagreb, Croatia**Email: Anja.Wertag@pilar.hr***Bad meets Evil: Relations of psychopathy and sadism to two forms of empathy**

Empathy, in the most general sense, refers to the ability to understand and share the feelings of others, and comprises of an emotional and a cognitive component. The most severe deficits in empathy are linked to psychopathic and sadistic personality traits. Psychopathy represents a complex construct that includes a set of related personality characteristics and behavior, including interpersonal manipulation, affective callousness, erratic lifestyle and tendency towards antisocial behavior, and its relations to different forms of empathy are well established: most of the previous studies suggest that psychopathic traits, especially affective callousness, are negatively related to emotional empathy, with no deficits in cognitive empathy. However, this is not the case with sadism, which refers to enjoyment of other people sufferings and predicts antisocial behavior beyond psychopathy. Therefore, the aim of this study was to investigate relations between two forms of empathy and psychopathic and sadistic traits in offender's sample. Data was collected on 238 male prisoners from two prisons in Croatia (Mage was 42 years, with $SD = 11.82$). All variables were assessed with self-reports, using short form of Empathy Quotient which measures cognitive and emotional empathy, short form of Self-report psychopathy scale (SRP-29), and Varieties of Sadistic Tendencies (VAST), that makes a distinction between direct sadism (enjoyment of harming others physically or verbally) and vicarious sadism (enjoyment of observing others being harmed). The results of hierarchical regression analyses showed that psychopathic traits do not have a contribution in predicting cognitive empathy ($F(4,140) = 0.48, p = .75$), while sadism explained 6% of the variance above psychopathy ($F(2,138) = 4.36, p = .01$), with only vicarious sadism having a significant contribution ($\beta = -.38, p < .01$). On the other hand, psychopathic traits accounted for 15% of emotional empathy variance ($F(4,135) = 6.19, p < .01$), where affective callousness was the only significant predictor ($\beta = -.48, p < .01$), while sadism had only a marginal contribution above psychopathy ($F(2,133) = 3.01, p = .05$). Taken together, these results reflect theoretically meaningful relations and highlight the importance of distinguishing between different forms of empathy.

Keywords: psychopathy, sadism, cognitive empathy, emotional empathy

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Siniša Subotić*University of Banja Luka, Bosnia and Herzegovina**Email: sinisa.subotic@pmf.unibl.org***Dark Tetrad vs. trait aggressiveness as predictors of the support for corporal punishment of children**

Corporal punishment of children (CP) is a highly prevalent practice, despite research evidence overwhelmingly pointing to its inefficacy and links to harmful and undesirable outcomes. Recently, it was proposed that “layperson” attitudes and arguments, which are used to (dis)approve the use of CP, can be generalized into three highly correlated factors: intergenerational support for harsh CP, rationalizations for CP, and peaceful parenting. It was also demonstrated that aggressiveness can explain much of the CP factors’ variances, which implies that attitudes towards CP have a strong root in trait aggressiveness. The goal of this study was to determine if the parents’ attitudes towards the CP can be better explained in terms of trait aggressiveness (anger, vengefulness, dominance, and hostility) or the so called Dark Tetrad of personality – DT (Machiavellianism, narcissism, psychopathy, and sadism). The DT is a construct conceptually similar to aggressiveness. It includes tendencies such as exploitation, manipulation and deriving joy from the pain and suffering of others, which should hypothetically be highly predictive of the CP. The research was conducted on a sample of 483 participants (51.6% males) of the average age of 34.68 (SD = 6.26) years. All participants were parents of at least one child. The CFA confirmed that the best fitting latent structure of the attitudes towards CP was a correlated three-factor solution: $\chi^2(776) = 2263.92$, $p < .001$; CFI = .939, TLI = .935, RMSEA = .063, 90% CI [.060, .066], with this model fitting better than a one-factor model: $\Delta CFI = .047$, and a bifactor model: $\Delta CFI = .041$. Aggressiveness explained more of the first two CP factors’ variances over and above the DT (additional 9.0% and 11.3%, respectively), in contrast to the variance explained by the DT over and above aggressiveness (additional 3.8% and 0.6%, respectively). The best predictors of Intergenerational support for harsh CP were vengefulness ($\beta = .181$) and psychopathy ($\beta = .179$), with aggressiveness and the DT in combination explaining 39.0% of its variance. The best predictor of rationalizations for CP dimension was hostility ($\beta = .167$), with aggressiveness and the DT together explaining 25.6% of its variance. For peaceful parenting, the DT had better explanatory power than aggressiveness: aggressiveness explained 1.6% of this factor’s variance over and above the DT, while DT explained 5.1% variance over and above the trait aggressiveness. The best predictors of peaceful parenting were psychopathy ($\beta = -.257$) and anger ($\beta = -.192$), with aggressiveness and the DT in combination explaining 13.6% of its variance. It can be concluded that both aggressiveness and DT are useful predictors of the attitudes towards the CP, with trait aggressiveness being more useful for explaining the intergenerational support for harsh CP and rationalizations for corporal punishment dimensions, while the DT is better for explaining the peaceful parenting dimension.

Keywords: corporal punishment of children, aggressiveness, Dark Tetrad, “layperson” attitudes

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Exploring the role of Dark Tetrad of personality and political ideology in prediction of Ethos of conflict beliefs

Almost fifteen years after finishing the armed conflicts in the former Yugoslavia countries, tensions between ethnicities still exist. Previous research showed that psychological dispositions, conceptualized as Ethos of conflict (EOC) beliefs, might have an important role in intergroup conflict prolongation and escalation. The current study is the first attempt to examine the association between the Dark Tetrad personality traits (i.e., Machiavellianism, narcissism, psychopathy, and sadism) and EOC beliefs through a mediator - political ideology. Following previous studies, positive relations of Dark Tetrad traits and preferences of conservative ideology and the negative relation of preferences of liberal ideology with EOC beliefs are expected. We also hypothesized that political ideologies can be mediators of the links between Dark Tetrad traits and EOC beliefs. Short Dark Triad (SD3) and Short Sadistic Impulse Scale (SSIS) as measures of Dark Tetrad traits: Machiavellianism, narcissism, psychopathy and sadism, EOC scale as the measure of conflict beliefs and evaluation of the Serbian political parties as measure of political ideologies were administered online to the convenient sample of 540 Serbian citizens. Previous factor-analytical studies showed that evaluation of political parties constitutes two ideological factors: national-conservative (NCP) and socio-liberal parties (SLP). Factor analysis of the conflict beliefs also resulted with one general EOC factor. These variables were included in the analyses as ideology and EOC measures. Results of the hierarchical linear regression analysis showed that this model is statistically significant ($R^2 = .34$, $p \leq .01$; 29% of criterion variance is explained by political ideology and additional 5% by Dark Tetrad traits). Preferences of the political parties were the best predictors of the general EOC belief on the both levels: preferences of the NCPs contributed positively ($\beta = .71$, $p \leq .01$) but preferences of the SLPs negatively ($\beta_1 = -.56$, $\beta_2 = -.54$, $p \leq .01$) to the regression function. From the Dark Tetrad traits, Machiavellianism ($\beta = .11$, $p \leq .01$) and psychopathy ($\beta = .12$, $p \leq .01$) have significant role in prediction of the EOC belief. These results are supported by proposed structural equation model, which fit the data very well ($\chi^2(1) = 5.142$, $p \leq .05$; NFI = .995, CFI = .996; RMSEA = .088). Machiavellianism, psychopathy, and preferences of the political parties have independent effects on the EOC. Only relation between sadism and EOC is fully mediated by preferences of the SLPs ($\beta_{\text{sadism-SLP}} = -.13$, $p \leq .01$, $\beta_{\text{SLP-EOC}} = -.57$, $p \leq .01$). These results indicate the importance of the Dark Tetrad traits, political ideologies and their inter-relations in understanding the formation of EOC beliefs, which is of great importance in the context of one post-conflict society that is characterized by prolonged intergroup tensions.

Keywords: Dark Tetrad, political ideology, Ethos of conflict

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Uroš Kovačević^a, Janko Mededović^b^a *Department for Psychology, Faculty of Media and Communication, University Singidunum, Serbia*^b *Institute of Criminological and Sociological Research, Belgrade, Serbia**Email: janko.medjedovic@fmk.edu.rs***The Dark Tetrad traits in football supporters: Prediction of criminal attitudes**

The association between supporters, violence and crime is common phenomenon in modern sport, and it requires empirical research. Dark personality traits are distinguished as good predictors of violence and criminal behavior. The purpose of the present study is to determine the presence of the Dark Tetrad traits in football supporters sample and examine their association with criminal attitudes. Criminal attitudes were assessed with abbreviated version of MCAA (Measures of Criminal Attitudes and Associates), which consists of 4 subscales: attitudes towards violence, sentiments of entitlement, antisocial Intent and attitudes towards antisocial associates. The Dark Tetrad traits were measured with the Dirty Dozen and Varieties of Sadistic Tendencies inventory (VAST). We expected that supporters will differ significantly from the control group on the dark traits of sadism and psychopathy, as well as on all MCAA subscales, in such a way that supporters will have a more pronounced score on these measures. In addition, we expect that the sadism and psychopathy will be the dark traits which have the highest contribution to the prediction of MCAA total score. The data was gathered using a convenience sample which consisted of two groups. The subjects ($n = 129$) in first group were selected at the stadiums of Belgrade's football clubs. The control group ($n = 120$) consisted of participants from the general population.

Two multivariate analyses of variance were performed. Group membership was set as a factor in the analysis, while MCAA subscales and the Dark Tetrad traits were dependent variables. Statistically significant differences on violence, entitlement, antisocial Intent, associates and sadism are found. All these traits are more highly pronounced in supporters. Multiple regression analysis with total MCAA score as criterion variable ($R^2 = .45$) was performed afterwards. Predictors were dimensions of the Dark Tetrad, group membership, age and education. Group membership ($\beta = .42$, $p < .001$) and all 4 dimensions of the Dark Tetrad had independent contribution to the prediction: sadism ($\beta = .26$, $p < .001$), Machiavellianism ($\beta = .15$, $p < .05$), narcissism ($\beta = .12$, $p < .05$) and psychopathy ($\beta = .11$, $p < .05$). We calculated interactions between Dark Tetrad traits and group membership in the prediction of total MCAA score as well. Only one statistically significant interaction was detected ($\Delta R^2 = .01$; $\Delta F(1,209) = 4.32$; $\beta = .11$, $p < .05$): it showed that individuals with the lowest scores on criminal attitudes are the ones who are not football supporters and they have low psychopathy features. Results confirmed our hypothesis to a certain extent, because there were no significant differences in psychopathy between the groups. Also, psychopathy has not distinguished itself as the best predictor of criminal attitudes, along with sadism. The obtained data provide a deeper understanding of the origins of violent and criminal behavior in football supporters.

Keywords: football supporters, Dark Tetrad, criminal attitudes

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Bojana Dinić, Mina Velimirović*Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia**Email: bojana.dinic@ff.uns.ac.rs***The Dark Tetrad traits profiles in the community sample**

The aim of this study was to identify a latent profiles based on the Dark Tetrad traits in a non-clinical sample and to examine whether these profiles differ on behaviors known to be associated with Dark Tetrad traits. On a sample of 624 participants (47.8% of males), Short Dark Triad and Varieties of Sadistic Tendencies (which measures vicarious and direct sadism) were applied along with questions about alcohol use and Reactive Proactive Aggression Questionnaire. Analysis of latent profile yielded three groups: a low dark traits group (33.3%), a narcissistic group (23.7%), and a psychopathic-sadistic group (42.9%). As it could be expected, low dark traits group mostly consisted of females, while psychopathic-sadistic group mostly consisted of males ($\chi^2(2) = 60.30, p < .001$). Although the Dark Tetrad traits were low related, except for psychopathy and Machiavellianism ($r = .53$), latent profile analysis revealed that these traits could co-occur in a large proportion in community sample. Results of ANOVA confirmed the differences between three groups (all Fs were significant at $p < .001$). Psychopathic-sadistic group was characterized by high alcohol use and binge drinking behavior, compared to other two groups, and all groups were differ in aggressive behavior. Moreover, the highest tendency toward both reactive and proactive aggression had psychopathic-sadistic group, followed by narcissistic group and than by low dark traits group. This study suggested that in community sample malevolent group could be identified and that this group is characterized by higher psychopathy and sadism, which both include antagonistic and callous-unemotional characteristics.

This study was supported by Ministry of Education, Science and Technological Development, Republic of Serbia (ON179006).

Keywords: Dark Triad, Dark Tetrad, latent profile analysis, aggression, alcohol use



**Emotional intelligence from A to Z:
Concept, measurement, and practical issues**

Moderator: **Zorana Jolić Marjanović**

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Ana Altaras Dimitrijević*Department of psychology, Faculty of Philosophy, University of Belgrade, Serbia**Email: aaltaras@f.bg.ac.rs***A few existential questions on emotional intelligence (EI): Where did it come from, what is it, and where is it going?**

The purpose of this presentation is to introduce the construct of emotional intelligence (EI) based on the 25 years of research now behind it, and to establish the conceptual common ground on which the remaining four contributions within this symposium can build. In line with this task and the above title, the presentation starts with a brief explanation about how the notion of an “emotional intelligence” took shape during the 1990s. It continues with an overview of the dominant models which outlived this „trial period“, focusing particularly on the conceptions put forth by Mayer & Salovey and Petrides as the two building blocks of our current scientific understanding of EI. Particular attention is also paid to the distinction between ability EI and trait EI which had a major clarifying impact on the field and endowed it with two new constructs instead of one: the construct of ability EI refers to a new cognitive ability, specialized for the processing of emotional information, whereas the construct of trait EI pertains to “emotional self-efficacy”, i.e., the self-perceived competence in handling emotional input and situations. The next section of the presentation deals with the place of the two EIs within the framework of differential psychology. It primarily draws on empirical data on the relationship of ability EI and trait EI with traditionally conceived, academic intelligence (a.k.a. IQ or g) and the basic personality traits (i.e., the Big Five and their facets). However, the relationship between the two EIs and cognate constructs, such as attachment, mentalization, and empathy is also considered. The presentation ends with an outline of the current directions in assessing and applying EI in particular contexts (educational, organizational, clinical) – issues which are then further elaborated in the rest of the symposium.

Keywords: emotional intelligence, intelligence, personality, attachment, mentalization, empathy

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Assessment of emotional intelligence: Current practices and trends

Although relatively new, both ability and trait emotional intelligence (EI) assessment traditions are well established and solutions for their current limitations, as well as the alternative approaches are actively introduced. This presentation will give an overview of common practices and outline future directions in EI assessment. The ability EI paradigm relies on maximum performance measures, with omnibus EI tests (such as the MEIS and the MSCEIT for adults and the EKT for children) among the most frequently used. These omnibus measures encompass all theoretically proposed EI branches: perception, facilitation, understanding, and management of emotions. However, the current trends additionally support the use of divers instruments that assess singular EI components, including information processing measures (e.g., inspection time and implicit association tests), perceptual tests (e.g., emotion recognition tasks), situational judgment tests (e.g., STEM), as well as measures derived from the conditional reasoning, principal-agent, and affective forecasting paradigms. Available data indicate that maximum performance measures generally demonstrate satisfactory reliability, as well as translation and criterion-related validity. Early representatives of the typical performance, (self-) report measures are the EQ-i and the ECI, while the second wave of trait EI measurement includes more than fifty questionnaires and is commonly represented by various versions of the TEIQue and the SEI. The second generation of instruments was designed to resolve earlier problems concerning compromised convergent and discriminant validity, along with rare good face and content validity. Even though improvements have been made in many aspects, construct and discriminant validity of these instruments still remain questionable. Considering theories of emotion (regulation) as constitute part of EI is one of the most promising trends. Derived measures may enable authors to focus on the EI primer mental abilities level and investigate emotion-related processes that involve EI. Concerning future directions, main recommendations of various authors can be summarized as follows: 1. inclusion of multiple measures and alternative test development procedures; 2. further integration of emotion (regulation) and social intelligence perspective; 3. exploration of EI underlying processes; and 4. focus on ecological validity and predictive utility of EI measures.

Keywords: EI assessment, maximum performance tests, typical performance measures, future directions

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Aleksandar Dimitrijević*International Psychoanalytic University, Berlin, Germany**Email: a.dimitrijevic@ipu-berlin.de***Emotional intelligence and mental health**

The construct of emotional intelligence (EI) has from the very beginning been applied to the field of health care. Since Freudian times, it has been widely accepted that insight into one's emotional states is a curative force, so that improving it is an important task of psychological treatments. At the same time, mental health care practitioners use EI constantly, both to understand their clients and to prevent burn-out in themselves. In this presentation, the following data will be reviewed: a) the relationship of ability and trait EI to mental health; b) the relationship of EI and psychosomatics; c) relationship between EI and somatic health; d) the importance of EI in the work of (mental) health professionals. Excluding here the overlapping concepts like empathy or mentalization, we can summarise that 1) EI is moderately correlated with various aspects of health, with 2) trait EI having been more strongly associated with mental health than ability EI, that it 3) moderates the relationship between stress and mental health, as well as that it 4) predicts mental health above and beyond the Big Five and cognitive ability. Although EI is very important for (mental) health practitioners, many have never had any training related to it. As new meta-analytic studies show that EI can be improved, it would be very important to develop large scale preventive programs, for general public and professionals alike, which would, through improvements in understanding and managing emotions, indirectly help better stress management and foster well-being in clients, as well as prevent burn out in a potentially emotionally draining profession.

Keywords: emotional intelligence, mental health, psychosomatics, somatic health

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Emotional intelligence in the work context: Wandering between anecdotal promises, theory and research

As a relatively novel construct, emotional intelligence (EI) has gained much attention in work-related popular writings, consulting and scientific research over the past years. There is a range of intuitively appealing claims about the EI strongly contributing to work performance, teamwork, career, leadership, selling, coping with stress at work, etc. From the scholarly perspective, the EI conceptualization and assessment issues are crucial for its application in the field of work and organizational psychology.

A number of various definitions, models and operationalizations of EI applied in empirical research limit the generalizability of findings and actually limit the body of usable research. Among the organizational psychology scholars there are strong advocates both for the ability and the trait model. A number of studies reported considerable overlap between EI and either cognitive ability measures or personality measures. On the other side, proving that EI had incremental validity above cognitive ability and the big five model in predicting job performance, some meta-analytic studies supported its overall validity. In addition, research suggests that EI is a stronger predictor of work performance in situations that involve social interaction or significant levels of stress. As the scope of research broadens, recent meta-analysis found, for example, effects of EI on organizational citizenship behaviour and counterproductive work behaviour.

Contrary to the raised attention, EI is still under-explored in the field of work and organizational psychology. Available body of empirical evidence is fragmented and inconclusive. The field lacks comprehensive meta-analytic and longitudinal studies. We are in need of systematic review of application and value of the concept of EI in the work setting, measurement instruments and role of emotional intelligence in wide array of work-related behaviours and its individual and organizational outcomes. For the practice to be able to answer the promise, future empirical research should not only broaden and deepen our understanding of EI in the work context, but also further theoretical conceptualization of EI and its unique contribution to different aspects of work-related functioning across various roles, contexts and industries.

Support: Ministry of Education, Science and Technological Development of the Republic of Serbia, grant number 179018.

Keywords: emotional intelligence, work, job performance

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Zorana Jolić Marjanović*Faculty of Philosophy, University of Belgrade, Serbia**Email: zjolic@f.bg.ac.rs***Fostering emotionally intelligent schools: The role of students, teachers, and intervention programs**

The teaching-learning process is of a vastly social nature: it includes teacher-student collaboration and learning in presence of peers, takes place in group settings, and is supported by parents and other school personnel. Thus, it heavily relies on noncognitive skills, such as emotional intelligence (EI). It is presumed that schools ought to attend to these skills and actively support their development to assure knowledge attainment and positive educational outcomes. To assess if this presumption is rooted in empirical data this presentation will provide a) an in-depth analysis of findings on EI's relation to academic and professional outcomes in student and teacher samples, and b) a review of school based programs designed to promote social and emotional learning (SEL) and their effects. To begin with, results of studies relating EI to students' academic performance are often characterized as mixed and inconclusive. However, a careful analysis of available data spotlights the more important finding – that the relation in question is most likely mediated by other variables. For example, EI has proven predictive of different characteristics normally tied to school achievement: students' EI scores are associated positively with prosocial behavior, positive attitudes towards school, and study skills, while negatively with antisocial behavior, mood disorders, and learning problems. Therefore, rather than being directly responsible for school grades, EI might work indirectly by supporting behaviors and skills that aid learning, while at the same time reducing those that impede it. To continue, research findings suggest that high EI skills in teachers might prevent or buffer effects of what appear to be occupational hazards: work-related stress, burnout, and poor emotion management; all are less pronounced in teachers with developed EI skills. Adverse implications of such states on the classroom climate and educational outcomes are more than apparent. For example, students of teachers who experience difficulties in regulating their own emotions, as well as their classroom, report more negative feelings in the class (e.g., sadness, guilt), which in turn affect knowledge acquisition. Lastly, over the last 25 years, numerous intervention programs were designed and implemented in order to promote SEL in schools. Major benefits of such programs are reflected in increased academic success, improved quality of student-teacher interactions, and enhanced behavioral adjustment of students. To conclude, empirical findings indicate that EI skills of students and teachers, backed by well designed and conducted SEL programs, can foster emotionally intelligent schools that promote social adjustment and educational attainments.

Keywords: emotional intelligence, students, teachers, SEL programs



Psychobiological paradigm in psychology of individual differences

Moderators: **Petar Čolović^a & Kristina Randelović^b**

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Dino Krupić*Department of Psychology, Faculty of Philosophy, J. J. Strossmayer University of Osijek, Croatia**Email: dino.krupic@gmail.com***How many BAS scales do we need to explain approach motivation?**

One of the biggest challenges for the psychobiological approach in individual differences is to define approach motivation. Different authors have provided a number of definitions of approach motivation. This overly broad term represents many things – persistence in attaining resources, impulsivity, sociability, entrepreneurship tendency, positive emotionality, approach goal-orientation, etc. This presentation reviews several operational definitions of behavioural approach motivation (BAS) within reinforcement sensitivity theory (RST), which is one of many constructs representing approach motivation. Recent developments in neuroscience of reward system and studies focusing on validity of the BAS scales suggest four distinct operational definitions of approach motivation. The first component of approach motivation, wanting represents the level of ambitiousness. It reflects a personal wish list of evolutionary relevant resources that one wants to possess. The second component, incentive motivation represents individual differences in curiosity and exploration. It reflects the openness to new experience and planning how to attain desired resources. The third component, striving reflects persistence in attaining desired resources, and the fourth component, liking reflects the intensity of emotional reactions on attaining resources. Different neurobiology is proposed to underlie these four components of approach motivation. In short, behavioural correlates of testosterone, dopamine, serotonin and endogenous opioids correspond to operational definitions of wanting, incentive motivation, striving and liking, respectively. In addition, a theoretical framework of workings of these four components is presented. The framework proposes that the four components act in concordance. The unbalance among these four components may result in different psychological problems ranging from amotivation to workaholism. This framework highlights the importance of the study of interactions among approach motivation or the BAS components. Thus, this presentation introduces the framework to study the BAS within dimensional and categorical approaches. Practical implications of this framework are discussed.

Keywords: approach motivation, wanting, incentive motivation, striving, liking

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Kristina Randelović^a, Snežana Smederevac^b, Petar Čolović^b^a*Departman za psihologiju, Filozofski fakultet, Univerzitet u Nišu, Srbija*^b*Odsek za psihologiju, Filozofski fakultet, Univerzitet u Novom Sadu, Srbija**Email: kristina.kasic@yahoo.com***Pristrasnosti u prosuđivanju kao medijatori efekata osobina ličnosti na stanje socijalne anksioznosti u situacijama potencijalne i aktuelne društvene pretnje**

Imajući u vidu aktuelnost i relevantnost Kimbrelovog Medijacionog modela socijalne anksioznosti (MMSA), kao i njegovu nedovoljnu empirijsku proveru, osnovna namena ovog rada je testiranje pojedinih aspekata modela uz primenu eksperimentalnog istraživačkog dizajna. Kimbrel pretpostavlja da će negativne pristrasnosti u prosuđivanju i doživljaj društvene nelagodnosti biti izraženiji u okolnostima socijalne pretnje, kao i da negativne kognitivne pristrasnosti imaju ulogu medijatora u odnosu između osobina ličnosti i doživljaja socijalne anksioznosti u situacijama društvene opasnosti. U prvom eksperimentu (N = 78 studenata I i II godine psihologije sa Filozofskog fakulteta u Novom Sadu; 85.9% devojaka) indukovana je potencijalna socijalna pretnja. U drugom eksperimentu (N = 121 studenti I i II godine psihologije sa Filozofskog fakulteta u Nišu; 85.1% devojaka) izazvana je aktuelna društvena opasnost kombinovana sa tri vrste neverbalnih povratnih informacija (negativna, pozitivna i neutralna). Pre glavnog dela eksperimenta procenjene su osobine ličnosti Upitnikom za procenu osetljivosti na potkrepljenje (UOP), kao i socijalna anksioznost (Skala straha od negativne evaluacije – kraća forma; FNE-B). Po završetku eksperimentalnih manipulacija, merene su pristrasnosti u prosuđivanju Upitnikom za procenu verovatnoće pojave i posledica socijalnih događaja (SPCQ), kao i stanje anksioznosti Upitnikom anksioznosti kao stanja (STAI-S).

Rezultati ukazuju na efikasno isprovociranu potencijalnu društvenu opasnost, koja je bila primetna na nivou prosuđivanja i doživljaja društvene nelagodnosti. Iako se u drugom eksperimentu ne beleži značajna samostalna uloga situacije ni na jedan od ispitivanih kognitivno-afektivnih aspekata ličnosti, ipak se može govoriti o uspešno izazvanoj realnoj socijalnoj pretnji, jer su u prvom redu aktivirani sistemi odbrane od opasnosti (BIS, Blokiranje i Bežanje). U prvom eksperimentu detektovani su zajednički nezavisni korelati oba aspekta negativnih pristrasnosti u prosuđivanju, s tim što se BIS, Blokiranje i situacija izdvajaju kao najvažniji prediktori procene verovatnoće javljanja neugodnih iskustava, dok je to BIS za određenje uznemirenosti, a slede ga Blokiranje i situacija. BIS i BAS, kao i društveni seting značajni su za određenje stanja društvene nelagodnosti. Izostala je potvrda očekivanja da su pristrasnosti u prosuđivanju medijatori u odnosu između osobina ličnosti i doživljaja anksioznosti u okolnostima potencijalne društvene pretnje. U drugom eksperimentu rezultati pokazuju da BIS, Blokiranje i Bežanje predstavljaju ličnosnu osnovu za javljanje specifične kognitivno-afektivne reakcije na socijalne stimulse straha bez obzira na situacioni kontekst. Rezultati medijacione analize idu u prilog potpunom posredničkom efektu procene verovatnoće pojave

nepoželjnih društvenih dešavanja u relaciji BIS-a, Bežanja i Blokiranja, s jedne strane, i stanja socijalne anksioznosti, s druge, ali samo u uslovu sa pozitivnim i neutralnim socijalnim evaluacijama. Dobijeni nalazi jednim delom potvrđuju pretpostavke MMSA.

Ključne reči: Medijacioni model socijalne anksioznosti, osobine ličnosti, potencijalna i aktuelna socijalna pretnja, pristrasnost u prosuđivanju, stanje socijalne anksioznosti

Judgmental biases as mediators between the effects of personality traits and social anxiety in situations of potential and actual social threat

Bearing in mind the current status and relevance of Kimbrel's Mediated Model of Social Anxiety (MMSA), as well as the lack of its empirical verification, the main goal of this paper is to check certain aspects of this model using the experimental research design. Kimbrel assumes that negative judgmental biases and social anxiety will be more pronounced when experiencing a social threat, and that negative cognitive biases will serve as mediators between the personality traits and the feeling of social anxiety when confronted with a social threat. During the first experiment (N = 78, 1st and 2nd year students from the Department of Psychology, Faculty of Philosophy Novi Sad; 85.9% were girls) a potential social threat was induced. During the second experiment (N = 121, 1st and 2nd year students from the Department of Psychology, Faculty of Philosophy Niš; 85.1% were girls), an actual social threat was induced and combined with three types of non-verbal feedback (negative, positive, and neutral). Before the main stage of the experiment, the Reinforcement Sensitivity Questionnaire (RST) was used to measure the personality traits, while the Fear of Negative Evaluation Scale – Brief form (FNE-B) was used to measure social anxiety. Following the experimental manipulation, biases in judgment were measured using the Social Probability Cost Questionnaire (SPCQ), while The State-Trait Anxiety Inventory (STAI-S) was used to measure anxiety.

The results indicate an effectively provoked potential social threat, which was noticed at the level of judgment and the feeling of social anxiety. Although the second experiment did not show a significant independent influence of the situation to any of the examined cognitive-affective personality aspects, one can still speak of a successfully provoked actual, social threat, because the defence system was activated (BIS, Freeze and Flight). In the first experiment, the common independent correlates of both aspects of negative biases in judgment were detected, while BIS, Freeze and situation were considered to be the most important predictors of the unpleasant experiences, while BIS was the best predictor of anxiety, followed by Freeze and situation. BIS and BAS, as well as the social setting, were important for determining social anxiety. However, there was no confirmation that the biases in judgment were the mediators between the personality traits and the experience of anxiety under a potential social threat. In the second experiment, the results showed that BIS, Freeze and Flight were the personality traits which served as a foundation for specific cognitive-affective reactions to social fear stimuli regardless of the situational context. The results of the mediated analysis support the full mediator effect for the probability estimates of undesirable events in relation to BIS, Flight and Freeze on one hand, and social anxiety on the other

hand, but only in the case of positive and neutral social evaluations. The obtained findings partially confirm the MMSA assumptions.

Keywords: Mediation model of social anxiety, personality traits, potential versus real threat, judgmental bias, state of social anxiety

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Egzekutivne funkcije i ličnost: bihevioralno-genetička perspektiva

Rezultati dosadašnjih istraživanja povezanosti između egzekutivnih funkcija i osobina ličnosti ukazuju na relativno niske, ali značajne korelacije. Kao značajni korelati egzekutivnih funkcija izdvajaju se gotovo sve dimenzije petofaktorskog modela ličnosti – otvorenost prema iskustvu, prijetnost, neuroticizam, ekstraverzija i savesnost. Iako postoje, relativno su malobrojna istraživanja relacija između egzekutivnih funkcija i dimenzija psihobioloških modela ličnosti, dok studija koje se bave bihevioralno genetičkim aspektima ovih relacija praktično nema. Ovakav nesklad posebno je uočljiv kada je reč o revidiranoj teoriji osetljivosti na potkrepljenje (rRST), koja ukazuje na izražene veze između osobina ličnosti i kognitivnih procesa. Ovo istraživanje predstavlja bihevioralno - genetičku studiju relacija između egzekutivnih funkcija i dimenzija revidiranog Grejovog modela ličnosti, kroz analizu njihovih genetičkih i sredinskih korelacija. Istraživanje je sprovedeno na uzorku od 202 blizanačka para (130 monozigotnih i 72 dizigotna), oba pola, prosečne starosti 24,76 (SD = 7,79). Egzekutivne funkcije su procenjene Testom verbalne fluentnosti, koji obuhvata tri zadatka fonemske (navođenje reči koje počinju slovima S, K i L tokom 1 minuta) i jedan zadatak kategorijalne fluentnosti (navođenje što većeg broja različitih životinja tokom 1 minuta), i Testom pravljenja traga-forma B. Primenjen je Upitnik osetljivosti na potkrepljenje, koji sadrži 29 stavki, namenjenih proceni Sistema bihevioralne inhibicije (BIS), Sistema bihevioralne aktivacije (BAS), Borba, Bežanje i Blokiranje sistema. Genetičke i sredinske korelacije izračunate su primenom multivarijantnih Cholesky modela, pri čemu je svaki model obuhvatao šest varijabli. U svim analizama, redukovani AE modeli pokazivali su bolji fit od punih ACE modela. Analiza genetičkih i sredinskih korelacija ukazuje na relativno slabe, ali značajne genetičke veze između Kategorijalne fluentnosti i sistema bihevioralne inhibicije ($r = -.25$), te sistema Borba ($r = -.28$) i Blokiranje ($-.20$). Fonemska fluentnost ima najveću genetičku korelaciju sa Borbom ($r = -.26$), a koeficijenti genetičke korelacije TMT-B sa dimenzijama revidirane RST veoma su niski ($-.16$ sa BAS sistemom i $.17$ sa Blokiranjem). Efekat sredinskih činilaca na

relacije između egzekutivnih funkcija i dimenzija ličnosti je skroman (apsolutne vrednosti koeficijenata korelacije uglavnom su niže od .10).

Ključne reči: egzekutivne funkcije, osobine ličnosti, bihevioralna genetika

Executive functions and personality: A behavioral genetic perspective

The results of the previous studies of the relations between executive functions and personality traits suggest that the two classes of phenomena are modestly, but significantly correlated. Almost all dimensions of the Five-factor model of personality (Openness to experience, Agreeableness Neuroticism, Extraversion and Conscientiousness) have been pointed to as the most stable correlates of executive functions. However, the studies of the relations between biologically based personality traits and executive functions are rare, while behavioral genetic studies virtually do not exist. Such a discrepancy is particularly striking when the revised Reinforcement Sensitivity Theory (rRST) is concerned, taking into account that the rRST highlights the importance of the relations between traits and cognitive functions. The present study is a behavioral – genetic study of the relations between rRST personality traits and executive functions, through the analysis of their genetic and environmental correlations. The study was conducted on a sample of 202 twin pairs of both sexes (130 monozygotic and 72 dizygotic), with a mean age of 24.76 (SD = 7.79) years. Executive functions was assessed by using The test of verbal fluency, consisting of 3 tasks for testing letter fluency (listing of words beginning with the letters S, K and L in one minute) and one task for testing categorical fluency (naming as many different animals in one minute's time as possible). Reinforcement Sensitivity Questionnaire (29 items), measuring 5 rRST constructs (BIS, BAS, Fight, Flight, and Freezing), was applied in the study. Genetic and environmental correlations were calculated using multivariate Cholesky models, whereby each model comprised 6 variables. AE models fitted better than full ACE models in all analyses. The results point to relatively modest, but significant genetic relations between categorical fluency and BIS ($r = -.25$) Fight ($r = -.28$) and Freezing ($-.20$). Letter fluency has the largest genetic correlation with Fight, while genetic correlations of TMT-B with the rRST dimensions are low ($-.16$ with BAS sistemom i $.17$ with Freezing). The effects of environmental factors on the relations between executive functions and personality traits are modest, with no correlation coefficients exceeding .10.

Keywords: executive functions, personality traits, behavioural genetics

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U okviru psihologije individualnih razlika, psihobiološka paradigma, ili “psihobiologija ličnosti”, ppredstavlja jedan od dominantnih konceptualnih okvira, usmeren na opis i objašnjenje bioloških osnova osobina ličnosti i kognitivnih sposobnosti. Tokom poslednjih decenija, primetan je veliki napredak u ovoj oblasti, zahvaljujući umnogome primeni naprednih tehnologija u istraživanjima. Ipak, empirijski zasnovan uvid u konceptualnu strukturu psihobiološke paradigme je po svemu sudeći neophodan, naročito ukoliko se ima u vidu da ova oblast obuhvata nekoliko uticajnih modela ličnosti, koji su slični po osnovnim postavkama, ali među kojima ima značajnih konceptualnih razlika. Stoga je osnovni cilj ovog rada ispitivanje konceptualne strukture psihobiološke paradigme u psihologiji individualnih razlika, iz scijentometrijske perspektive. Analize zajedničkog javljanja autorskih ključnih reči i kocitatna analiza sprovedene su na uzorku od 2736 naučnih članaka i poglavlja u knjigama, objavljenih u poslednjih deset godina (2007-2017). Članci su izabrani iz Scopus baze podataka prema kriterijumu ključnih reči. Primenjena je analiza grupisanja, pri čemu je korišćena aplikacija “VOSviewer”. Kao metod brojanja korišćeno je kompletno brojanje, a autor je uzet kao jedinica analize. U slučaju pojavljivanja koautora u ključnim rečima, izabrane su ključne reči autora koji se pojavljuju najmanje 15 puta (ukupno 64 reči). Ova analiza izdvojila je 7 klastera, pri čemu su ključni termini: ličnost/temperament, depresija/anksioznost, neuroticizam/ekstraverzija/traženje senzacija, pozitivni afekat, agresija, seksualna orijentacija i psihopatologija. Kocitatna autorska analiza je obuhvatila citirane autore koji se pojavljuju u bazi najmanje 30 puta (500 autora). Rezultat analize je 8 klastera koji pokazuju da se grupisanje autora unutar paradigme uglavnom bazira na preferiranim teorijskim referentnim okvirima – preciznije, na modelima ličnosti na koje su se autori dominantno pozivali. Istovremeno, uticaj autora izvan psihobiološke paradigme je primetan. Rezultati ukazuju na ključne koncepte unutar psihobiološke paradigme, ali i na još uvek prisutne konceptualne razlike među dominantnim modelima ličnosti.

Ključne reči: ličnost, psihobiologija, scijentometrijska perspektiva

Conceptual mapping of the psychobiological paradigm in the psychology of individual differences - a scientometric perspective

Within psychology of individual differences, the psychobiological paradigm, or “psychobiology of personality”, is one of the dominant conceptual frameworks, aimed at describing and explaining the biological foundations of personality dimensions and cognitive abilities. In the last decades, the field has progressed substantially, owing largely to the use of advanced technologies in research. Nevertheless, an empirically-driven insight into the conceptual structure of the psychobiological paradigm appears to be necessary, particularly due to the fact that the field comprises several influential models of personality, which share their core assumptions, but have substantial conceptual differences. Therefore the aim of this paper is to examine the conceptual structure of the psychobiological paradigm in the psychology of individual differences from a scientometric perspective. Author keywords co-occurrence analysis and author co-citation analysis were performed on a set of 2736 scientific articles and book chapters published in the last ten years (2007-2017), extracted from the SCOPUS database according to the keywords criterion. Cluster analyses were applied, using the “VOSviewer” software. Full counting as a counting method and authors as units of analysis were used. In the author keywords co-occurrence analysis author keywords with at least 15 occurrences were selected for analysis (total 64 words). The analysis of author keywords pointed to a 7- cluster solution, whereby the key terms were personality/temperament, depression/anxiety, neuroticism/extraversion/sensation seeking, positive affect, aggression, sexual orientation and psychopathology. The author co-citation analysis included the cited authors whose references appeared in the database at least 30 times (500 authors). The analysis yielded 8 clusters, suggesting that the authors’ grouping was based primarily on their preferred theoretical frameworks – namely, on personality models which they primarily referred to. At the same time, the impact of the authors outside the psychobiological paradigm is evident. The results point to the key concepts within the psychobiological paradigm, as well as to slight, but still pertaining conceptual differences among the dominant models of personality.

Keywords: personality, psychobiology, scientometric perspective



Social identities in South-Eastern Europe

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Potential of dual identity groups to foster acceptance of the outgroup: The case of Bosniaks in Serbia

In this research we test if a dual identity group, i.e. a group with two possibly conflicting group memberships has potential to act as a gateway between the two groups they belong to. We tested this in an experimental study ($N = 223$), with ethnic Serbian participants. We reminded half of the participants of the existence of a dual identity (gateway) group: Bosniaks who are citizens of Serbia. In a mock-up article they argued that they can feel attachment to both their ethnic group and to the country of Serbia. The experimental induction proved effective in improving perceptions of the gateway group, that is perceiving the Bosniaks living in Serbia as a group with dual attachment ($F(1,201) = 8.32, p = .004, \eta^2 = .04$), as well as perceiving them as ingroupers (citizens of Serbia) ($F(1,201) = 11.66, p = .001, \eta^2 = .05$) and a bridge between Serbs and Bosniaks in general ($F(1,201) = 13.24, p = .000, \eta^2 = .06$). Importantly, we observed that more favorable perceptions of the gateway group mediated experimental effects on the acceptance of this group, but also the acceptance of Bosniaks in general (outgroup in this case). Perceiving Bosniaks who live in Serbia as ingroupers mediated the effects of experimental inductions on espousing supportive policy directed at the group ($\beta = .23, SE = .07, 95\% CI: .09, .39$). Also, perception of Bosniaks who live in Serbia as a bridge between Bosniaks and Serbs mediated the effect of experimental inductions on reduced social distance towards Bosniaks in general ($\beta = .07, SE = .03, 95\% CI: .03, .16$). Thus, experimental inductions most strongly affected the perception of the gateway group itself (Bosniaks living in Serbia) but also generalized to more positive attitudes towards ethnic Bosniaks. The findings imply that mere reminders of the existence of a group with a dual identity and of the fact that they can perceive their identities as non-conflicting has potential for improving outgroup outcomes.

Keywords: intergroup relations, dual identities, gateway groups, Serbs, Bosniaks

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Sandra Obradovic*London School of Economics and Political Science, United Kingdom**Email: s.obradovic@lse.ac.uk***Self and Other: National identity, recognition and supranational belonging**

The present paper, drawing on both qualitative and quantitative data, discusses the ways in which social identities (in this case, national identities) becomes constructed through a dynamic process where both in-group representations and meta-representations (perceived out-group representations) of the social group interact and shape the meaning given to a shared identity.

Drawing on data from 9 focus groups conducted in 8 cities in Serbia between 2015-2016 (N = 67) the present paper discusses the ways in which meta-representations (what we think others think) become important components in shaping understandings of national identity. In turn, it will be argued that national identity plays a crucial role in informing political attitudes, and links are drawn between national identity, meta-representations and the topic of integration into the European Union (EU).

The findings from a thematic analysis indicate that themes of lack of recognition of a positive Serbian identity and a perceived power-hierarchy within the EU (where Serbia's position is closer to the bottom than top) underline the extent to which individuals feel that their identities are both recognized and respected within the larger context of the EU. This further has consequences for the extent to which participants feel a sense of compatibility between the national and supranational, and that joining the EU means 'becoming less Serbian'. This research thus emphasizes the importance of considering how power-relations and the role of 'others' are at the fore of social identity processes, and in turn has implications for inter-group relations, even on a global scale.

These findings are discussed in relation to preliminary survey data gathered in Serbia, Turkey and Romania on the correlations between national identity, meta-representations and supranational belonging, unpacking the extent to which these issues of recognition and compatibility extend to other countries that have experienced a substantial amount of 'Othering' within European history and politics.

It will be argued that we need to develop further our theoretical understandings, and empirical models to account for not only how we identify, but also the consequences of how we are identified by relevant others. As identities become mobilized and used to further different political agendas, it is important that scholars not only limit their focus on the role of the Self in shaping identities, but also the role of the Other, whether as a source of support or point of resistance.

Keywords: national identity, EU, social representations, qualitative data, superordinate union

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Sociodemographic predictors of attitudes towards the European integration in Serbia and Croatia

The issue of European integration is one of the main issues in politics, but also in social sciences for the past several decades. This issue becomes even more important when research takes place in the countries ambivalent in their support for the EU and European integration itself, such as SEE countries. The main aim of the study presented in this paper is to determine the level of support for the European integration in Serbia and Croatia, but also main factors of the attitudes towards European integration. To answer this question, we conducted a study with a sample stratified by the age, education and gender of the respondents ($N = 967$) and applied the Attitudes towards European Integration Scale, which consists of three scales: Pro-European Orientation (PEO), Conative Component (CC) and Perception of the United Europe as a Threat (UET). In Serbia, when it comes to gender, women are generally more pro-European ($F(1,477) = 6.53$; $p < .05$) and have higher conative component ($F(1,477) = 5.07$; $p < .05$) while men perceive united Europe as a threat ($F(1,477) = 4.40$; $p < .05$). Age and education were not significant predictors of any of the components of the attitudes toward European integration.

As for Croatia, similar to Serbia, women were more pro European ($F(1,377) = 6.53$; $p < .05$) and have higher conative component ($F(1,377) = 4.77$; $p < .05$), but there were no differences in the perception of the united Europe as a threat. On the other hand, older respondents from Croatia perceive the EU as a threat more than their younger compatriots ($F(3,477) = 4.01$; $p < .05$). Education, as in Serbia, was not the significant predictor of any of the components of the attitudes toward European integration.

Finally, we wanted to determine whether the importance of religion is correlated to the attitudes toward European integration, and the results show that importance of religion is negatively correlated with PEO ($r = -.20$; $p < .01$) and CC ($r = -.10$; $p < .05$) in Serbia and positively correlated with UET in both countries, with correlations somewhat higher for Croatia ($r = .15$; $p < .01$ in Serbia and $r = .23$; $p < .01$ in Croatia).

Keywords: European identity, Pro European orientation, attitudes toward EU

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Conspiracy theories as a tool for minority groups: Mapping the social identity and managing intergroup threat

Conspiratorial worldview can impact intergroup relations in several important ways: it can help set boundaries between an ingroup and outgroup, i.e. map social identity; it can also serve to justify hostility in conflicts (Bilewitz & Sedek, 2015; Kreko, 2015). If defined this way, conspiracy theories (CTs) can be seen as a tool for vulnerable/low status/minority groups to manage the threat they feel from the groups in power. In other words, when there is a power asymmetry, CTs help less powerful groups explain the perceived inequality within the society; one of the most important functions of CTs is to detect a threat towards own group, and therefore the groups with more perceived power (be it political, economic or cultural) are more often seen as the actors in CTs (Kofta & Sedek, 2005; Uscinski & Parent, 2014). However, there is another line of thought that expects minorities, not majorities to be seen as the actors in CTs (Moscovici, 1987), as these groups are often seen as an obstacle to harmonious living, as the ones challenging the status quo, therefore threatening the established order and ways of life of the majority. Minorities are prone to being considered collective conspirators, since the minority, by its very existence, can be perceived as a threat and capable of plotting against the established order and way of life of the majority.

To test these conflicting hypothesis, on a representative probability sample of adult Serbian citizens (N = 1194) we investigated whether different minority groups (women, religious minorities, people of low socioeconomic/educational status) have a more conspiratorial worldview, embrace specific CTs or anti-elitist CTs more or less than majority groups. In anti-elitist CTs we included those assuming that there is a worldwide plot by powerful actors.

Differences between some groups pointed to the first hypothesis: minorities were more prone to CTs than majorities. People of the lowest socioeconomic status embraced more concrete CTs than people of the highest status, $F(1,141) = 6.294$, $p = .014$; people of lower education embraced more concrete CTs and more anti-elitist CTs than people of higher, $F(1,400) = 13.354$, $p < .001$; $F(1,400) = 6.897$, $p < .001$. However, we also registered the opposite pattern of differences in favor of majority groups being more conspiratorial: in comparison to women, men tended to have more of a conspiratorial worldview, $F(1,1035) = 6.076$, $p = .002$, and embrace elitist CTs more, marginally significant $F(1,1035) = 2.378$, $p = .093$. Religious majorities had more conspiratorial worldview, $F(1,1035) = 25.909$, $p < .001$, believed in specific CTs more, $F(1,1035) = 49.232$, $p < .001$, and embraced elitist CTs more than religious minorities, $F(1,1035) = 71.276$, $p < .001$.

Pozvani simpozijumi**Invited symposia**

These results point out that perceived threat does not exclusively arise from majority to minority nor vice versa. They clearly illustrate the importance of nature of low status and the specific content of conspiracy theories for the registered differences between groups that differ in power.

Keywords: conspiracy theories, conspiracy mentality, minority groups, social identities



Slika tela, problemi u ishrani i debljina

Body image, eating disturbances, and obesity

Moderator: **Alessandra Pokrajac Bulian**

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Alessandra Pokrajac Bulian*Odsjek za psihologiju, Filozofski fakultet, Sveučilište u Rijeci, Hrvatska**Email: pokrajac@ffri.hr***Nezadovoljstvo tijelom i prejedanje u prekomjerno teških i pretilih odraslih**

U kontroli tjelesne težine samoefikasnost se odnosi na percepciju pojedinca o vlastitoj učinkovitosti u ponašanjima koja dovode do gubitka ili održavanja težine. Pretile osobe niske samoefikasnosti osjećaju prestrašenost i obeshrabrenost zbog percipirane diskrepancije između sadašnje i željene težine dok su one visoke samoefikasnosti ustrajnije u postizanju ciljne težine. Cilj je ovoga istraživanja provjeriti povezanost između samoefikasnosti, prejedanja, nezadovoljstva tijelom, simptoma anksioznosti i ljutnje na skupini od 100 pacijenata s kardiovaskularnim smetnjama različitoga stupnja uhranjenosti (68 muškaraca; prosječne dobi 55.6 godina). Pretpostavka je da prejedanje posreduje u odnosu između samoefikasnosti s jedne strane te anksioznosti i ljutnje s druge strane. U istraživanju su korišteni upitnici za mjerenje učinkovitosti kontrole težine, prejedanja, nezadovoljstva tijelom, anksioznosti te izražavanja i kontrole ljutnje.

Rezultati ukazuju na postojanje značajne negativne povezanost između samoefikasnosti, prejedanja i anksioznosti. Pretile osobe koje sebe procjenjuju efikasnijima u kontroli težine rjeđe se prejedaju i imaju nižu razinu anksioznosti. Samoefikasnost je pozitivno povezana s kontrolom, ali ne i izražavanjem ljutnje što pokazuje da osobe efikasnije u kontroli težine više kontroliraju ljutnju. Nezadovoljstvo tijelom pozitivno je povezano s prejedanjem i višim ITM-om. Žene se češće prejedaju i anksioznije su u odnosu na muškarce. Općenito, rezultati govore u prilog tome da su pretili pacijenti, niže samoefikasnosti, skloniji prejedanju, a prejedanje posreduje u povećavanju anksioznost i slabijoj kontroli ljutnje. Rezultati sugeriraju da je u tretmanu s pretilim pacijentima koji moraju smanjiti tjelesnu težinu potrebno voditi računa o spolnoj specifičnosti te navedenim psihološkim i ponašajnim varijablama.

Ključne reči: pretilost, prejedanje, nezadovoljstvo tijelom, samoefikasnost, anksioznost, ljutnja

Body dissatisfaction and binge eating among overweight and obese adults

Weight control self-efficacy refers to one's perception that she or he can effectively engage in behaviors that will result in weight loss or maintenance. Obese persons with low weight control self-efficacy may feel frightened and discouraged by perceived discrepancies between actual and desired weight, while those with high self-efficacy intensify perseverance in achieving intended weight. The aim of the current study is to investigate correlations among self-efficacy, binge eating, body dissatisfaction, anxiety and anger in 100 patients with cardiovascular disorder and with different BMI

(68 male; mean age 55.6 years). The assumption was that binge eating mediated the relationship between self-efficacy on one side, and anxiety and anger on the other side. The self-report questionnaires designated to measure the weight-control self-efficacy, binge eating, body dissatisfaction, anxiety, and anger were applied.

Results indicated a significant negative correlation between self-efficacy, binge eating and anxiety. Obese persons with high self-efficacy expressed fewer binge-eating episodes and had lower anxiety level. Self-efficacy was positively correlated with weight control but not with anger expression. It means that those with higher weight control self-efficacy control better their anger. Body dissatisfaction was related to binge eating and higher BMI. Women engaged more often in binge eating behavior and they reported higher anxiety level compared with men. In general, results showed that obese patients with low self-efficacy were more prone to binge eating, and binge eating mediated anxiety and anger control. Results suggest that mentioned psychological and behavioral variables as well as gender peculiarity must be considered while applying treatment directed to weight loss.

Keywords: obesity, binge eating, body dissatisfaction, self-efficacy, anxiety, anger

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Ogledalce, ogledalce, čiji je nos najlepši?

Dismorfofobični telesni poremećaj predstavlja psihijatrijski poremećaj koji predstavlja opsesiju određenim fizičkim izgledom koji ukoliko se ne ostvari može da dovede do društvene, profesionalne i lične disfunkcije. Cilj rada je procena karakteristika ličnosti dve grupe pacijenata koji su podvrgnuti rinoplastici (operaciji nosa) – jedne koja se toj operaciji podvrgava iz estetskih razloga i druge koja se operiše zbog funkcionalnih teškoća. Svi pacijenti su ispitani upitnicima VP+2-70 (koji meri sedam osobina ličnosti: ekstraverziju, neuroticizam, pozitivnu i negativnu valencu, savesnost, agresivnost i otvorenost) i DMT (koji meri dizmorfofobične tendencije). Rezultati pokazuju značajne razlike između grupa u odnosu na prosečne rangove (utvrđene Mann-Whitney U testom), tako što grupa koja se operiše iz estetskih razloga ispoljava više agresivnosti (AR:14.57; FR:8.00), pozitivne valence (AR:14.61; FR:7.94) i dizmorfofobičnih tendencija (AR:12.96; FR:7.07). Autori stoje na stanovištu da je,

obzirom na značajno prisustvo dizmorfofobičnih karakteristika kod pacijenata koji se podvrgavaju estetskim operacijama nosa, neophodno psihološko ispitivanje ovih pacijenata, pre operacije.

Ključne reči: rinoplastika, dismorfofobija, karakteristike ličnosti

Mirror, mirror on the wall, who has the most beautiful nose of them all?

Body Dysmorphic Disorder (BDD) is a psychiatric disorder defined as obsessive ideas about distorted physical appearance, leading to social, professional and personal dysfunction. The research is part of a study which objective is the assessment of personality traits of two groups of patients who are undergoing rhinoplasty. The patients were divided in two groups depending on the cause of rhinoplasty. The first group included patients who were undergoing the surgery because of aesthetic reasons, while the second group included patients undergoing the operation because of breathing problems. All participants completed following questionnaires before the surgery: Personality questionnaire VP+2-70 (measuring following seven traits: extraversion, neuroticism, positive and negative valence, conscientiousness, aggressiveness, openness) and DMT, a questionnaire for the evaluation of dysmorphophobic tendencies. Results showed a highly significant difference between two groups according to the rank means (Mann-Whitney U test), showing higher aggressiveness, positive valence (narcissism) and dysmorphophobic tendencies in the aesthetic rhinoplasty group (aggressiveness - AR:14.57; FR:8.00; narcissism - AR:14.61; FR:7.94; DMT- AR:12.96; FR:7.07). Bearing in mind that dysmorphophobic tendencies are more distinct among patients undergoing aesthetic rhinoplasty, a psychological assessment before the surgery is advisable to avoid patient dissatisfaction or unnecessary operations.

Keywords: rhinoplasty, dysmorphophobia, personality characteristics

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Online programi za regulaciju telesne mase i spremnost za njihovu upotrebu

Prekomerna telesna težina predstavlja problem koji se u dokumentima Svetske Zdravstvene Organizacije opisuje kao hronično stanje sa tako visokom incidencom da dobija karakteristike epidemije. Dosadašnja istraživanja pokazuju da, nažalost, uspešna i dugotrajna regulacija telesne težine predstavlja pre izuzetak nego pravilo i da dugotrajna rešenja podrazumevaju trajnu promenu

većeg broja ponašanja vezanog za ishranu i fizičku aktivnost, odnosno stil života, što je povezano sa smanjenom spremnošću prekomerno uhranjenih osoba da započnu rešavanje problema i da u tome istraju. U skladu sa ovim, razumljivi su nalazi da osobe uključene u neki vid psihološke podrške tokom redukcije težine postižu veće i dugotrajnije efekte od onih koji su uključeni u standardni medicinski tretman. Poslednjih godina sve je češća upotreba internet programa regulacije težine i rezultati ukazuju da su ovi programi slične efikasnosti kao i drugi psihološki programi. Osnovne prednosti su dostupnost, očuvanje privatnosti, mogućnost osobe da sama kreira vreme kad koristi program i sl. Međutim, istraživanja ukazuju i na ozbiljan problem osipanja, odnosno na smanjenu spremnost osoba da istrajno koriste ovakve programe što umanjuje njihove terapijske potencijale. Cilj ovog istraživanja je procena spremnosti klijenata da se odazovu da učestvuju u prvom domaćem online programu za regulaciju telesne težine konstruisanom od strane stručnog tima Odseka za psihologiju u Novom Sadu kao i da kontinuirano u njemu učestvuju. Ispitanici su putem javnih medija i društvenih mreža obaveštavani o programu i pozivani da u njemu učestvuju. Na poziv se odazvalo 1005 ispitanika deklarativno spremnih da se uključe u program. Skoro 87% su bile osobe ženskog pola. Najmladji ispitanik je imao 14 a najstariji 69 godina ($M = 34.51$; $SD = 10.81$). U program se zaista uključilo 525 ispitanika. Prosečan BMI osoba koje su ostale u programu nakon prvog korišćenja je 27,47 i značajno je viši od onih koji se više nisu uključivali ($t = -.2008$, $p \leq .001$). Najveći procenat ispitanika (42.7) je bio u stadijumu pripreme a najmanji (2.2%) u stadijumu održavanje. U proseku, po ispitaniku, program je korišćen pet puta ($SD = 7.47$). 35% ispitanika je program koristilo samo jednom. Skoro 90% ispitanika je koristilo program 10 puta ili manje. U proseku dužina korišćenja programa je 75 dana ($SD = 148$) sa raspodelom jako desno zakrivljenom. Dobijeni su rezultati u skladu sa pretpostavkama transteorijskog modela o "levku odustajanja" koji ukazuje na razliku između deklarativno iskazane spremnosti da se učestvuje i stvarnog uključivanja u program i stepena njegovog korišćenja. U radu će biti diskutovane praktične i teorijske implikacije rezultata.

Ključne reči: online tretmansi programi, regulacija telesne težine, transteorijski model promene, spremnost na promenu, levak odustajanja

Web-based weight management programs and the readiness to use them

The World Health Organization describes overweight as a chronic condition whose incidence takes on epidemic proportions. Previous studies have shown that successful long-term weight control is an exception rather than the rule and that long-term solutions imply a permanent lifestyle and behavioral change (e.g. physical activity, eating behavior, body image perception etc.). This is related to reduced willingness of overweight people to start weight management and to persevere in it. In accordance with this we can understand the findings in which the people involved in some form of psychological support during weight reduction achieved greater and more sustained results than those involved in a standard medical treatment. The use of the web-based weight management programs has been more and more frequent in recent years. The evaluation results of such programs indicate that they are of similar efficacy as face-to-face psychological weight management programs.

The main advantages of web-based weight management programs include greater availability, privacy, time flexibility, etc. However, research results also point to a serious problem of attrition or reduced willingness to persistently use these programs, which reduces their therapeutic potential. The aim of this study is to assess the readiness of clients to participate in the first Serbian web-based weight management program constructed by an expert team of the Department of Psychology in Novi Sad. Respondents were informed about the program and invited to participate through public media and social networks. 1,005 respondents agreed to participate and declared they wanted to use the program. 87% of respondents were female. The youngest respondent was 14 and the oldest 69 years old ($M = 34.51$, $SD = 10.81$). 525 respondents were actually involved in the program. The average body mass index of people who stayed in the program after the first use is 27.47 and is significantly higher than of those who no longer used the program ($t = -.2008$ $p \leq .001$). The highest percentage of respondents (42.7%) was in the preparation stage, and the smallest (2.2%) in the stage of the maintenance. On average, per respondent, the program was used five times ($SD = 7.47$). 35% of the respondents used the program only once. Almost 90% of respondents used the program 10 times or less. The average duration of the use of the program was 75 days ($SD = 148$) with distribution highly skewed to the right. The obtained results are consistent with the assumptions of the Transtheoretical Model concerning the "funnel of attrition" which indicates the difference between the declarative willingness to participate, and the actual involvement in the program and the extent of its use. It will be discussing the practical and theoretical implications of the results.

Keywords: web-based treatment programs, weight management, Transtheoretical Model of Change, willingness to change, funnel of attrition

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Sportsko-specifični činitelji rizika za razvoj poremećaja hranjenja: uloga perfekcionizma i negativnoga ponašanja trenera

Sportašice i sportaši imaju povećani rizik za razvoj poremećaja hranjenja (Sundgot-Borgen & Torstveit, 2004). U sportsko specifične činitelje koji su povezani s razvojem ovih poremećaja ubrajamo i težnju za smanjenjem tjelesne težine u funkciji ostvarenja što boljih sportskih rezultata (Hinton i Kubas, 2005), ali i obilježja tzv. „sportskog načina života“ kojega karakteriziraju iscrpljujući treninzi, posebni režimi prehrane, a nerijetko i nagle promjene u tjelesnoj težini. Stoga, spoznaje o etiologiji poremećaja hranjenja dobivene na općem uzorku nije opravdano generalizirati na

populaciju sportaša. Cilj provedenoga istraživanja bio je ispitati spolne razlike te utvrditi obilježja povezanosti perfekcionizma sportaša i negativnoga stila rukovođenja trenera s težnjom za smanjenjem tjelesne težine. U istraživanju je sudjelovalo 608 sportaša (67.4% mladića) koji su u prosjeku bili stari 21 godinu ($SD = 2.32$). Analizom spolnih razlika utvrđeno je da, u odnosu na sportašice, sportaši postižu statistički značajno viši rezultat na ljestvici neadaptivnog perfekcionizma te svoje trenere češće opisuju u terminima negativnoga stila rukovođenja. Perfekcionističke težnje i trenerovo ponašanje objašnjavaju statistički značajan dio varijance težnje za smanjenjem tjelesne težine kod sportaša (16%) i sportašica (14%). Dobiveni rezultati upućuju na potrebu za dodatnom edukacijom trenera i sportaša o činiteljima rizika za razvoj poremećaja hranjenja.

Ključne reči: poremećaji hranjenja, perfekcionizam, ponašanje trenera, sportaši, sport

Sport-related factors associated with risk for development of eating disorders: The role of athletes' perfectionism and negative coaching behaviours

Athletes are at higher risk for developing eating disorders (Sundgot-Borgen & Torstveit, 2004). Sports-specific eating disorder risks include beliefs about low body weight and improved performance (Hinton & Kubas, 2005), as well as "sports lifestyle" which is characterised by exhausting trainings, special diets, and abrupt weight change. Thus, generalisation of the findings about the factors that contribute to the onset of eating disorders in general population may lead to unjustified conclusions about the etiology of eating disorders among athletes. The aim of the study was to explore gender differences in sport-related factors associated with the risk for development of eating disorders and to determine how athletes' tendency to lose body weight is related to athletes' perfectionism and perceived negative coaching behaviour. The sample consisted of 608 athletes (67.4% male; $M = 21.31$ yrs, $SD = 2.32$). The results showed that male athletes achieve significantly higher scores on maladaptive perfectionism and are more prone to describe their coaches in terms of negative coaching behaviour. Perfectionistic tendencies and perceived coach behaviour explained 16% (male) and 14% (female) of variance of athletes' tendency to lose body weight. The findings will be discussed in the context of need for specific education about eating disorders in the sport field.

Keywords: eating disorders, perfectionism, coach behaviour, athletes, sport



**Vulnerability to psychopathology:
Its nature and mechanism of action**

Moderator: **Ljiljana Mlhić**

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Jelena Sokić, Ivana Milinković, Mikloš Biro*Department of psychology, Faculty of Philosophy, University of Novi Sad, Serbia**Email: sokic.jelena@gmail.com***I think, therefore I feel - or the other way round?**

Cognitive models of psychopathology emphasize the primacy of affective processes, even of mild or low intensity, over cognition, in the onset and recurrence of depression. However, recent neurocognitive investigations of resting state – that is, when subjects receive none or minimal external stimulation, oppose this traditional perspective, suggesting cognitive processes as predecessor of affect. Specifically, prolonged activation of internal (i.e. self-related thoughts) and impaired activation of external (i.e. environment perception through senses) focus orientation are considered to account for cognitive and, consequently, affective changes in depression. Using the behavioral resting state paradigm and standard negative mood induction procedure, in both remitted and non-clinical samples, we tested predictions addressing the dynamic interplay of affect and cognition, that is, the temporal primacy of affective versus cognitive changes in this interdependent process. A sample consisted of 57 remitted individuals (72% female) and 49 individuals without the history of depression (81% female). In both remitted and non-clinical sample, half of the participants were under resting state and half were exposed to musical mood induction. All participants rated the intensity and valence of mood and thoughts, and internal/external attention focus, during 40 minutes of the procedure. Prior to the experimental procedure, vulnerability (ruminative thinking, cognitive reactivity, automatic thoughts) and symptom measures were assessed. In total, 37 probes of state measures were analyzed with the latent profile analysis (LPA) for each group, and were related to vulnerability measures. LPA extracted a 2-profile solution in the non-clinical sample. The first pattern showed a large sudden decrease in positive and increase in negative affect followed by negative thoughts and prolonged focus on self-related thoughts. Although characteristic for the resting state group, it also accounted for 70% of participants in overall sample, who scored higher on vulnerability measures. The second profile, observed in the induction group, showed a small gradual decrease in mood, more variability in thought valence and stable oscillations between internal and external focus. In the clinical sample, a more unstable pattern was observed, including larger oscillations in focus and valence of both affect and cognition in the induction group, while the resting state group showed bigger decrease in thought and affect valence together with stable internal focus. The profiles observed across groups suggest different patterns of cognitive and affective changes related to the experimental condition, but also to the vulnerability levels (in the non-clinical sample). Results support both theoretical perspectives, and will be discussed from an integrated framework.

Keywords: cognition-emotion interplay, behavioral resting state paradigm, depression, latent profile analysis

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Ljiljana Mihić, Marija Volarov*Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia**Email: lmihic@ff.uns.ac.rs***Is there a common core etiological process for emotional disorders?**

Until recently etiology of emotional disorders has been considered from a disorder-specific perspective according to which certain cognitive factors represent specific vulnerabilities for particular emotional disorders. However, a body of research has demonstrated that each cognitive vulnerability contributes to various psychopathologies, which raises a question about their specificity. This study explored whether negative affectivity, positive affectivity, dysfunctional attitudes, anxiety sensitivity, and intolerance of uncertainty can be regarded as related but separate entities. Also, it examined whether a structural model of these vulnerabilities corresponds to the structural model of emotional disorders. It was expected that cognitive vulnerabilities would form a two-factor structure corresponding to the fear and distress disorders. 1439 (67% females) students (Mage = 19.71, SD = 1.13) filled out the following questionnaires assessing cognitive vulnerabilities: the Intolerance of Uncertainty Scale-short form, the Anxiety Sensitivity Index-3, the Dysfunctional Attitudes Scale (Form A)-Revised, and the Positive and Negative Affect Schedule-short form. 372 students were followed up, and they provided information about their psychopathological symptoms, 6 months later. The initial sample was split randomly. Exploratory factor analysis (EFA) including all vulnerability items was performed on one subsample, whereas the second subsample was used for a confirmatory factor analysis (CFA) which tested whether one- versus two-factor model provides better fit to the data. Finally, regression analyses were used to predict prospectively psychopathological symptoms from the vulnerability composites. EFA demonstrated the existence of 5 related but separate factors with correlations ranging from .26 to .60. CFA demonstrated that the two-factor model ($\chi^2(4) = 22.795$, $p = .000$, CFI = .979, TLI = .946, RMSEA = .082 (CI .051-.116), SRMR = .030) provided better fit compared to one-factor model ($\Delta\chi^2(1) = 19.9$, $p < .001$). According to the two-factor model, negative affectivity, positive affectivity, and dysfunctional attitudes defined Distress factor, whereas anxiety sensitivity and intolerance of uncertainty defined the Uncertainty factor. However, the Uncertainty factor was the sole predictor of the symptoms of emotional disorders. Structure of cognitive vulnerabilities seems to conform to the two-factor structure, previously reported for emotional disorders. The Distress vulnerability reflects one's tendency to experience negative affect, low positive affect, and contingent self-worth. The Uncertainty factor is defined by low tolerance of uncertainty in life in general and uncertainty surrounding potential negative consequences of anxiety symptoms. The lack of predictive value of the Distress factor was due probably to its low variance. Our results question that there is a common core etiology of emotional disorders.

Keywords: cognitive vulnerabilities, emotional disorders, structure

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Ivana Novakov, Zdenka Novović, Ljiljana Mihić*Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia**Email: ivannaanovakov@yahoo.com***Looking for healthy schizotypy: Psycho-social aspects of different schizotypal clusters**

Schizotypy is frequently defined in terms of vulnerability to schizophrenia spectrum disorders. Yet, some evidence suggests that there may also be a healthy form of schizotypy, which implies good psychological functioning in spite of some unusual experiences. However, there is still a lack of systematic empirical validation of this construct. Hence, the aim of our study was to examine whether various schizotypy clusters, including healthy schizotypy, can be found in nonclinical population, and to validate them by exploring the differences on some relevant variables.

Initially 775 participants (female = 83.9%; Mage = 20.49, SD = 2.35) completed the Schizotypal Personality Questionnaire - Brief Revised (SPQ-BR) which measures three dimensions of schizotypy: Cognitive-Perceptual, Interpersonal, and Disorganized. Two stage cross-validation cluster analysis procedure resulted in 4 clusters: social withdrawal (SW - high interpersonal withdrawal), low schizotypy (LS - all dimensions below the average), unusual experiences (UE - cognitive-perceptual factor above the average) and mixed schizotypy (MS - all dimensions above the average). Participants who scored highly on social desirability, psychotic symptoms, and random responding scales were excluded from further research. Within every cluster, participants were randomly invited for individual testing, which resulted in a total of 181 individuals (female = 87.3%; Mage = 20.09, SD = 2.19) who were willing to participate. ANOVA and MANOVA were performed using cluster membership as a grouping variable, whereas mental health (MHC-SF), personality traits (BFI) and socio-demographic variables (substance use, heredity, attachment style, and peer acceptance in childhood) were dependent variables.

Results showed that 4 groups differed significantly on mental health ($F(3,177) = 7.05$; $p < .001$); UE cluster had significantly better wellbeing than both SW and MS clusters. Furthermore, MANOVA, $F(15,477.98) = 6.23$, $p < .001$, Wilk's $\Lambda = .61$, $\eta^2 = .15$, revealed that LS and UE clusters showed significantly more "favorable" personality profiles (E+, N-, A+, C+), while SW and MS clusters seemed to have more "vulnerable" personality dispositions (E-, N+, A-, C-). Finally, χ^2 test demonstrated that LS and UE clusters had higher tendency toward secure attachment style, $\chi^2(9) = 36.01$, $p < .001$. MS cluster showed the most prominent hereditary disposition compared to the other three groups, $\chi^2(3) = 20.34$, $p < .001$. There were no significant differences on drug/alcohol use, while participants from MS cluster showed significantly higher tendency toward cigarette consumption, $\chi^2(3) = 8.34$, $p < .05$, and reported being less accepted in larger peer groups, $\chi^2(6) = 16.51$, $p < .05$.

Our research supports the concept of healthy schizotypy - some individuals, in spite of certain unusual experiences, may in fact demonstrate good wellbeing, adaptive personality dispositions, and some favorable socio-demographic factors, which sheds additional light on the nature of schizotypy.

Keywords: benign schizotypy, healthy schizotypy, mental health, wellbeing

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Relation between paranoid and dysphoria symptoms from a network perspective in low versus high self-esteem group

Close relation between paranoia and depression has been assumed by some theorists and supported by some research. Also, it has been proposed that self-esteem is important in this relation. The aim of this study was to explore differences in network structures which include both paranoid and dysphoric symptoms in people with low and high self-esteem (LSE and HSE). Network models present an alternative approach to psychological phenomena, within which constructs are observed as dynamical systems of variables rather than latent variables assessed using static observable indicators.

In this study, 164 participants ($M_{age} = 20.93$, $SD = 1.98$) filled the following self-report questionnaires: the Fenigstein Paranoia Scale, the Depression subscale of the Depression, Anxiety and Stress Scale and the Rosenberg Self-Esteem Scale (RSES). Participants were allocated into two groups. The HSE group represented people who scored above average on the RSES, whereas the LSE group scored below average. Simple and partial correlations between the symptoms of paranoia and depression were calculated, based on which the association and concentration networks were plotted for both groups, respectively.

In the HSE group, the symptoms of paranoia were better clustered, with fewer central symptoms, whilst clusters of the depressive symptoms were weakly connected, and more distant to the paranoia symptoms. In the LSE group, the symptoms of depression seem to be more integrated and clustered than the symptoms of paranoia. Also, the symptoms of paranoia were less clearly clustered, but better connected with the symptoms of depression as indicated by positive low to medium correlations. Moreover, different groups had different symptoms that played a role in transferring activation from one cluster of symptoms to another (bridge symptoms).

Different characteristics of two networks suggest that self-esteem can be a moderator of the interplay of paranoid and dysphoric indicators. This finding can have important theoretical implications about the role of self-esteem in the genesis of some mental disturbances.

One of a few interpretations of the greater density of the paranoia symptoms in the HSE group could be that they keep dysphoric symptoms sequestered, acting as a defence mechanism from depression and low self-esteem. In the same vein, in the LSE group, this mechanism does not operate so that in this group the depressive symptoms can be more easily activated by one another and can more easily trigger interpersonally sensitive interpretations. Practical implications can also be foretold regarding different therapeutic approaches with persons with HSE and LSE and mixed dysphoric and paranoid symptoms.

Keywords: paranoia, depression, self-esteem, network approach

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When anxiety sensitivity and health anxiety meet Dr. Google frequently: The pathogenesis of cyberchondria

Seeking health information on-line has become an increasingly common behaviour. Despite the many benefits of easily accessible health information on the Internet, a growing number of studies have begun to shed light on the phenomenon of anxious reactions after searching for health information on the Internet, popularly known as cyberchondria. Recent research has also attempted to identify risk factors for developing such reactions. The aim of this study was to explore the relationship between anxiety sensitivity, health anxiety and the frequency of on-line information seeking with negative emotional reactions to on-line health information. For this purpose, 1084 participants aged 18-71 years completed an on-line survey consisting of demographic data, the Health Anxiety Questionnaire (HAQ; Luckok & Morley, 1996), the Anxiety Sensitivity Index (ASI; Reiss & al, 1987) and The Scale of Negative Emotional Outcomes to Internet use for Health information (Jokić-Begić et al., 2016). The results demonstrate that individuals who often seek health information on the Internet have higher levels of anxiety sensitivity and health anxiety, and experience more unpleasant emotional reactions to on-line health information. Health anxiety and anxiety sensitivity are also related to the use of specialized health portals, forums and health related groups. The results of the current study suggest that the frequency of information seeking, anxiety sensitivity and health

Pozvani simpozijumi**Invited symposia**

anxiety have significant predictive value in explaining negative emotional reactions to on-line health information. The implications of these findings will be discussed.

Keywords: cyberchondria, anxiety sensitivity, health anxiety



SEKCIJE

ORAL SESSIONS

Industrijska psihologija i psihologija potrošačkog ponašanja / Industrial psychology and psychology of consuming behavior

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The attitude towards conspicuous consumption in the integrated personality structural model

Conspicuous consumption is commonly defined as a form of behaviour characterized by purchase and accumulation of luxury products as a proof of material prosperity and an affiliation with privileged social groups. Previous research demonstrated that the attitude towards conspicuous consumption was statistically significantly related to conformism, narcissism, Machiavellianism, authoritarianism, sensation seeking, ruthless self-advancement, certain interpersonal values and lifestyles. On the other hand, research demonstrates that the attitude towards conspicuous consumption is conceptually significantly different from related similar concepts, such as materialism, compulsive spending and consumerism in the broadest sense. This research focused on the association and predictive relationship between the attitude towards the conspicuous consumption, social competition styles, big five inventory facets and the dimensions of the so called Dark Triad. This was approached by building a predictive structural model that includes the collective effect of these variables. In the integral structural equation model, the attitude towards the conspicuous consumption behaves as a mediator between personality traits and social competition styles. All parameters of fitness for this model are excellent. The value of the chi-square ($\chi^2 = 39.13$, $df = 32$, $\chi^2/df = 1.22$, $p = .180$) indicates that the model corresponds to the data structure, there is no significant difference between the population covariances predicted by model and empirical sample covariances. Bentler's Comparative fit index - CFI is .996, and the Goodness-of-Fit - GFI is close to this value (.985). Root-mean-square error of approximation - RMSE is 0.02, a standardised root mean squared residual - SRMR is also .02. The model was tested on a sample of 400 respondents, students from Novi Sad, average age 22.3. Subsample of males counted 178 respondents (44.5%) and subsample of female 222 respondents (55.5%). The key epistemic contribution of this research reflects in the adequate hierarchical positioning of traits, styles and behaviours included in the predictive model. Disclosure of conspicuous consumption origins has multiple implications, both for the modern theoretical development, as well as for practical applications in the fields of economics, marketing, consumer psychology, sociobiology. This sheds light on a different picture of human nature and its role in the modern world.

Keywords: attitude towards conspicuous consumption, personality structural model

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Jelena Matanović, Nebojša Majstorović, Vanja Slijepčević, Boris Popov*Odsek za psihologiju, Filozofski fakultet, Univerzitet u Novom Sadu, Srbija**Email: jelena.matanovic@ff.uns.ac.rs***Involviranost u proizvod kao kriterijum za segmentaciju tržišta**

Osnovni cilj ovog istraživanja odnosi se na kreiranje tipologije kupaca automobila na teritoriji Republike Srbije, kao i utvrđivanje specifičnosti segmenata prema ispitivanim psihografskim karakteristikama, a sve u svrhu razvijanja posebne marketing strategije za svaki od segmenata. Osnovni kriterijum segmentacije bila je involviranost u proizvod, definisana kao stanje u kojem su proizvod ili usluga važni potrošaču, kada ga zanimaju i kada potrošač preduzima akcije kako bi saznao više o proizvodu ili usluzi za koju je zainteresovan.

Istraživanje je sprovedeno na prigodnom uzorku od 222 osobe (57% žena, starost ispitanika se kretala između 18 i 66 godina), koje su u poslednjih šest meseci kupile automobil ili planiraju da ga kupe u narednih šest meseci, ali su u trenutku istraživanja već započele proces donošenja odluke o kupovini. Ispitanici su regrutovani u auto salonima, kao i putem ličnih kontakata autora. Ispitanici su birali da li će bateriju popunjavati u formi papir-olovka ili on-line. Instrumenti korišćeni u istraživanju su: skala Profil involviranosti, (Laurent & Kapferer, 1985), skala Generalnih kauzalnih orijentacija (Deci & Ryan, 1985), Upitnik Univerzalnih vrednosti Šaloma Švarca (Schwartz, 1992) i Skala samosvesti (Scheier & Carver, 1985).

Tržište kupaca i potencijalnih kupaca segmentirano je prema involviranosti koju su potrošači razvili. Tržište čine četiri homogena segmenta koji se razlikuju prema nivou i tipu dominantne involviranosti. Segmenti su imenovani kao Visoka, Niska, Rizična i Ekspertska involviranost. Utvrđene su značajne razlike segmenata po vrednostima, samosvesti i kauzalnim orijentacijama čime su dodatno potvrđene razlike među segmentima, sa ciljem mogućnosti kreiranja posebne marketing strategije za svaki od segmenata. Svi nalazi su diskutovani u kontekstu prethodnih rezultata istraživanja u ovoj oblasti, navedene su njihove implikacije i ograničenja, kao i preporuke za marketinšku praksu.

Ključne reči: involviranost potrošača, kupovno ponašanje, vrednosti, teorija self-determinacije, kupovina automobila

Product involvement as a criterion for market segmentation

In order to create a typology of car buyers in Serbia and develop specific marketing strategies for each of the segments, it is necessary to know psychological and demographic characteristics of consumers. The basic segmentation criterion was product involvement, defined as the perceived

relevance of a product and service, based on the consumer's inherent needs, interests and values, when consumers take action to find out more about the subject of interest.

The research was conducted on a sample of 222 persons (57% of women, age 18 to 66) who had either bought a car in the last six months or planned to buy a car and at the moment of the study have already begun the decision-making process. Data was collected using: Consumer Profile Involvement (Laurent & Kapferer, 1985), General Causality Orientation Scale (Deci & Ryan, 1985), The Schwartz Value Survey (Schwartz, 1992), Self-Consciousness Scale (Scheier & Carver, 1985).

Market consisted of four homogeneous segments which varied according to the level and type of dominant involvement. The segments were named as High, Low, Risk and Expert Involvement. Significant differences were established in segments based on values, self-awareness and causal orientations. All the findings have been discussed in the context of previous results in this research field, as well as their implications, limitations and recommendations for marketing practice.

Keywords: consumer involvement, consumer behavior, universal human values, self-determination theory, buying a car

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Ličnost menadžera: Razlikuju li se bankari od trgovaca i direktora škola?

Radno okruženje u određenoj mjeri determiniše karakteristike usposlenika koji će biti zainteresovani za rad u specifičnim okolnostima određenog okruženja. Vodeći se Hollandovom pretpostavkom o usklađenosti karakteristika pojedinca i radnog okruženja kao preduslova zapažene radne produktivnosti, možemo reći da je očekivano da se u tu vrstu usklađenosti mogu uvrstiti i menadžeri. S druge strane, radna uloga menadžera je definisana kroz već poznate funkcije (planiranje, organizovanje, upravljanje ljudskim potencijalima, kontrolu i vođenje) pa smo smatrali zanimljivim ispitati postojanje eventualnih razlika u pogledu osobina ličnosti menadžera obzirom na djelatnost organizacija iz kojih dolaze. Istraživanje je provedeno na prigodnom uzorku menadžera iz Bosne i Hercegovine, koji dolaze iz sektora usluga (banke, osiguravajuća društva i mikrokreditne organizacije; N = 50), trgovine (N = 49) i obrazovanja (direktori osnovnih i srednjih škola; N = 50). Za ispitivanje dimenzija ličnosti koristili smo prilagođeni Petofaktorski inventar ličnosti (BFI-Big Five Inventory, John i sar. 1991), a rezultati analize varijance govore da postoje uočljive razlike u pogledu izraženosti dimenzije Neuroticizma ($F = 3.33$; $df = 2$; $p < .05$). Deskriptivni podaci i naknadni testovi ispitivanja razlika su utvrdili da menadžeri koji dolaze iz finansijskog sektora ispoljavaju više nivoe Neuroticizma

u odnosu na preostale dvije grupe ispitanika. Razloge takvih rezultata možemo tražiti u specifičnosti radnog okruženja ovih menadžera kao i u kontekstu vremena (ekonomska kriza) u kojem su prikupljeni podaci za istraživanje.

Ključne reči: dimenzije ličnosti, djelatnost organizacije, menadžeri

Managerial personality: Is there a difference between bankers, traders and directors of schools?

Operating environment to some extent determines the characteristics of an employee who will be interested in working in the specific circumstances of a particular environment. Guided by Holland's assumption about compliance of the characteristics of the individual and the work environment as a precondition of the remarkable labor productivity, we can say that it is expected that managers can be included in this type of compliance. On the other hand, working role of managers is defined by the known functions (planning, organization, human resources management, control and management) so we thought it is interesting to examine the existence of possible differences in terms of personality of managers due to the activities of the organization from which they come. The study was conducted on a sample of managers from Bosnia and Herzegovina, who come from the services sector (banks, insurance companies and microcredit organizations; $N = 50$), trade ($N = 49$) and education (directors of primary and secondary schools; $N = 50$). To test the personality dimension we used custom Five-factor Personality Inventory (BFI-Big Five Inventory, John et al. 1991), and the results of analysis of variance show that there are obvious differences in terms of severity in Neuroticism dimension ($F = 3.33$, $df = 2$; $p < .05$). The descriptive data and subsequent tests of differences examination found that managers who come from the financial sector exhibit higher levels of Neuroticism in relation to the remaining two groups. The reasons for these results, we can look at the specifics of the working environment of these managers as well as in the context of time (economic crisis) in which we collected data for this research.

Keywords: personality traits, the activity of the organization, managers

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Ivana Kovačević, Ivana Milinković*Fakultet organizacionih nauka, Univerzitet u Beogradu, Srbija**Email: milinkovic.ivana@fon.bg.ac.rs***Potreba za autonomijom i povezanošću u virtuelnim i tradicionalnim timovima**

Rad u virtuelnim timovima se razlikuje od rada u tradicionalnim, jer se, zbog geografske udaljenosti i nedostatka neporednog kontakta, menja način komunikacije i proces donošenja odluka, a može uticati i na zadovoljenje osnovnih psiholoških potreba. Prema teoriji samodeterminacije, kao osnovne psihološke potrebe navode se potrebe za autonomijom, kompetentnošću i povezanošću. Osnovni cilj ovog rada je ispitivanje razlika u zadovoljenju potreba za autonomijom i povezanošću u kontekstu radnog okruženja, kada se radi u tradicionalnom i kada se radi u virtuelnom timu. Potreba za kompetencijom nije uzeta u obzir jer se očekivalo da je to omogućeno u oba slučaja. Pošli smo od pretpostavke da oba konteksta mogu imati prednosti i nedostatke u pogledu zadovoljavanja potreba. S jedne strane, izostanak neposrednog kontakta može ograničiti neke aspekte bliskosti među saradnicima, ali platforma za timski rad može omogućiti konstantnu komunikaciju u realnom vremenu i eventualno veću autonomiju u radu. Kako postoji veliki broj faktora koji utiču na zadovoljenje potreba u poslovnom kontekstu, neke od njih smo držali konstantnim zahvaljujući uzorku sa ponovljenim grupama. Uzorak je činilo 120 ispitanika koji imaju iskustvo rada i u virtuelnim i u tradicionalnim timovima. U pitanju su mahom mlađi zaposleni od 19 do 47 godina starosti sa preko 72% onih sa visokom stručnom spremom, a od toga je 58% bilo ženskog pola. Prilikom istraživanja korišćen je modifikovan upitnik osnovnih psiholoških potreba (Deci & Ryan, 2000) koji je sveden na 15 pitanja o autonomiji i povezanosti u dve uporedo date verzije (za realni i tradicionalni tim). Rezultati istraživanja pokazuju tendenciju većeg zadovoljenja potrebe za autonomijom i povezanošću kada se radi u tradicionalnom, nego kada se radi u virtuelnom timu. T test značajnosti razlika (sa ponovljenim grupama) za autonomiju je iznosio $t(119) = 6.63$, $p < .01$, dok je za doživljaj zadovoljenja povezanosti dobijen pokazatelj od $t(119) = 8.95$, $p < .01$. Kada posmatramo potrebe za autonomijom i povezanošću u tradicionalnom timu, potreba za povezanošću je više zadovoljena od potrebe za autonomijom ($t(119) = -2.42$, $p < .05$), dok se u virtuelnom timu primećuje obrnuta tendencija ($t(119) = 2.75$, $p < .05$). Iako je istraživanje pokazalo da tradicionalni timovi omogućavaju veće zadovoljenje potreba za autonomijom i povezanošću, nego što je to slučaj u virtuelnom timu, značaj virtuelnih timova se ne može zanemariti. Ovakav način rada postaje sve zastupljeniji i ima svoje prednosti i ulogu u savremenom poslovanju, te je korisno istraživanja usmeriti u pravcu boljeg prilagođavanja virtuelnog okruženja individualno-psihološkim potrebama zaposlenih.

Ključne reči: timski rad, potreba za autonomijom, potreba za povezanošću, virtuelni timovi, tradicionalni timovi

Need for autonomy and relatedness in virtual and traditional teams

Work in virtual teams, where members are geographically distant and with no direct communication, differ from traditional teamwork because it changes the way of communication between members, the decision-making process, and it can also affect the satisfaction of basic psychological needs. According to the theory of self-determination, the basic psychological needs are those for autonomy, competence and relatedness. The main goal of this study was to examine differences in meeting the need for autonomy and relatedness in the context of the work environment, when it comes to traditional teamwork and virtual teamwork. The need for competence is not taken into explanation because it was expected that the need is satisfied in both cases. Our assumption was that both contexts can have advantages and disadvantages of satisfaction the basic psychological needs. From one point of view, lack of face-to face communication might diminish and restrain some aspects of interaction and relatedness with coworkers, but on the other side platforms can provide possibility for constantly being in touch in real time. As there are a number of factors affecting the need satisfaction in a work context, some of them were kept constant thanks to a sample with repeated groups. The sample consisted of 120 respondents who have experience of working in the virtual and the real teams. These are mostly younger employees, from 19 to 47 years, with more than 72% of those with higher education, and 58% are female. During the research, we used a modified questionnaire of basic psychological needs (Deci & Ryan, 2000), which was reduced to 15 questions of autonomy and relatedness in two parallel versions (for the real and virtual team). The study results show a tendency to greater satisfaction of needs for autonomy and relatedness in traditional than working in virtual team. Paired-samples t-test for significance difference for the autonomy was $t(119) = 6.63$, $p < .01$, while satisfying experience for relatedness show indicator $t(119) = 8.95$, $p < .01$. When observing the needs for autonomy and relatedness in traditional team, the need for relatedness is more satisfied than the need for autonomy ($t(119) = -2.42$, $p < .05$), while in a virtual team there is the opposite tendency ($t(119) = 2.75$, $p < .05$). Although this study has shown that the traditional team provides a greater satisfaction of the needs for autonomy and relatedness, the importance of virtual teams should not be ignored. This way of working is becoming more common and has its own advantages and role in modern business, so it is useful to direct future studies toward better adjustment of the virtual environment to individual psychological needs of employees.

Keywords: teamwork, need for autonomy, need for relatedness, virtual teams, traditional teams

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Marija Mladenovska Dimitrovska*SOU "Taki Daskalo", Bitola, Makedonija**Email: m.dimitrovska@yahoo.com***Povezanost između sindroma profesionalnog izgaranja i strategije za spravljanje sa stresom**

Cilj istraživanja je utvrđivanje stepena izraženosti burn-out sindroma i povezanost između profesionalnog izgaranja i strategija za spravljanje sa stresom, tj. dali ispitanici koji koriste tzv. proaktivne strategije za upravljanje sa stresom su manje izloženi burn-out sindroma. Istraživanje je sprovedeno na uzorku od 110 ispitanika. Za merenje burn-out sindroma korišćen je Maslach Burnout Inventory (Maslach et al., 1996), koji se sastoji od 3 subskala: emocionalna iscrpljenost, depersonalizacija i profesionalno postignuće, dok za utvrđivanje strategija za spravljanje sa stresom korišćen je Ways of Coping Questionnaire (Folkman, Lazarus, et al. 1986), koji meri 8 strategija za spravljanje sa stresom: konfrontacija, distanciranje, samokontrola, traženje socijalne podrške, prihvatanje odgovornosti, izbegavanje, plansko rešavanje problema, pozitivno preocenjivanje. Rezultati pokazuju značajne negativne korelacije između emocionalne iscrpljenosti (EI) i konfrontacije ($r = -.65, p < .01$), između EI i traženje socijalne podrške ($r = -.52, p < .01$), EI i prihvatanje odgovornosti ($r = -.48, p < .01$), EI i plansko rešavanje problema ($r = -.68, p < .01$), EI i pozitivno preocenjivanje ($r = -.62, p < .01$), što ukazuje na to da je emocionalna iscrpljenost na poslu manja kod onih ispitanika koji koriste proaktivne strategije za spravljanje sa stresom, koji se suočavaju sa stresom i sa problemima, nego kog onih koji koriste strategije izbegavanja suočavanja sa stresom. Što se tiče depersonalizacije (D) utvrđene su značajne korelacije: D i konfrontacije ($r = .58, p < .01$), D i prihvatanje odgovornosti ($r = -.54, p < .01$), D i plansko rešavanje problema ($r = -.62, p < .01$), D i pozitivno preocenjivanje ($r = -.64, p < .01$). Veći stepen izgaranja na subskali depersonalizacija je pozitivno povezan sa korišćenjem strategija izbegavanja ($r = .58, p < .01$), distanciranje ($r = .48, p < .01$), traženje socijalne podrške ($r = .63, p < .01$), konfrontacija ($r = .51, p < .01$). U odnosu na povezanost između profesionalnog postignuća (PP) i pozitivno preocenjivanje dobijena je značajna korelacija ($r = .72, p < .01$), isto i između PP i plansko rešavanje problema ($r = .69, p < .01$), kao i između PP i prihvatanje odgovornosti ($r = .58, p < .01$), što ukazuje na viši nivo osobnog postignuća na poslu kod ispitanika koji koriste ove strategije, dok ispitanici koji više koriste strategije izbegavanja kao distanciranje ($r = -.43, p < .01$) i izbegavanje ($r = -.46, p < .01$), imaju manji osećaj osobnog postignuća u radu. Rezultati pokazuju da stepen profesionalnog izgaranja na poslu zavisi i od toga koje strategije se koriste za suočavanje sa stresom i da ispitanici koji koriste proaktivne strategije kao pozitivno preocenjivanje, plansko rešavanje problema, prihvatanje odgovornosti su manje izloženi burn-out sindroma, nego ispitanici koji više koriste strategije izbegavanja, konfrontacije i distanciranje. To ukazuje da je vrlo važan način kako se pojedinac suočava sa stresnim situacijama i koje strategije koristi.

Ključne reči: profesionalno izgaranje, strategije za suočavanje sa stresom, stres

The relationship between professional burn-out syndrome and strategies for dealing with stress

The aim of research is to determine the level of burn-out syndrome expression and the connection between the combustion and the strategies for dealing with stress, i.e. whether the respondents who use so called proactive strategies for managing the stress are less exposed to burn-out syndrome. The survey was conducted on a sample of 110 respondents. We used Maslach Burnout Inventory (Maslach et al., 1996), for measuring the burn-out, which consists of 3 sub-scales: emotional exhaustion, depersonalization and professional achievement, while for the determination of strategies for dealing with stress we used Ways of Coping Questionnaire (Folkman, Lazarus, at al. 1986), which measures 8 strategies: confrontation, distancing, self-control, seeking for social support, acceptance of responsibility, avoidance, planning problem solving, positive reevaluation. The results showed a significant negative correlation between emotional exhaustion (EE) and confrontation ($r = -.65, p < .01$), between EE and seeking for social support ($r = -.52, p < .01$), EE and the acceptance of responsibility ($r = -.48, p < .01$), EE and planned problem solving ($r = -.68, p < .01$), EE and positive reevaluation ($r = -.62, p < .01$), which indicates that the emotional exhaustion in the workplace is lower in those respondents who use proactive strategies for dealing with the stress, than among the respondents who use the strategies of avoidance in the situations of dealing with stress. We found significant correlations between depersonalization (D) and confrontation ($r = .58, p < .01$), D and acceptance of responsibility ($r = -.54, p < .01$), D and planned problem solving ($r = -.62, p < .01$), and D and positive reevaluation ($r = -.64, p < .01$). A greater degree of combustion in the depersonalization is positively connected with the use of strategies of avoidance ($r = .58, p < .01$), distancing ($r = .48, p < .01$), seeking for social support ($r = .63, p < .01$), confrontation ($r = .51, p < .01$). Compared to the correlation between the professional achievement (PA) and a positive reevaluation we found a significant correlation ($r = .72, p < .01$), and also between the PA and planned problem solving ($r = .69, p < .01$), as well as, between the PA and the acceptance of responsibility ($r = .58, p < .01$), which indicates that the respondents who use these strategies have a higher level of personal achievement at work, while those who have less feeling of personal achievement at work use the strategies of avoidance such as distancing ($r = -.43, p < .01$), and avoiding ($r = -.46, p < .01$). The results showed that the degree of professional burnout depends on the strategies used to cope with stress and those respondents who use proactive strategies as a positive reevaluation, planned problem solving, acceptance of responsibility are less exposed to burn-out syndrome, than those who more use the strategies of avoidance, such as confrontation and distancing. This indicates that it is very important the way in which the individual is facing with stress and the strategies he uses.

Keywords: professional burnout, strategies for dealing with stress, stress

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Aleksandar M. Stevanović, Anđela D. Keljanović*Filozofski fakultet Kosovska Mitrovica, Univerzitet u Prištini, Srbija**Email: stevanovic90@gmail.com***Stavovi mladih o uslugama psihologa i psihoterapeuta u savremenom društvu**

Predmet istraživanja su stavovi mladih o uslugama psihologa i psihoterapeuta u savremenom društvu. Ispitivanje je organizovano pomoću fokus grupa kako bismo ispitali iskustva mladih o psihološkim i psihoteraputskim uslugama. Pre svega, zanimalo nas je da li prave razliku između psihologa, psihoterapeuta i psihijatra, jesu li tražili pomoć, da li su dobili ono što su očekivali; u slučaju da se nisu obraćali za pomoć, pitali smo ih da li bi nakon fokus grupe promenili mišljenje i potražili pomoć ukoliko im je pomoć potrebna. Tema fokus grupe sadržana je u samom predmetu istraživanja. Uzorak je bio prigodan, sačinjen od 60 mladih u Vranju, starosti od 19 – 23 godina. Urađeno je 6 fokus grupa na istu temu sa po 10 članova. Urađeni su i audio zapisi svih fokus grupa. Podaci su dobijeni postavljenjem pitanja moderatora grupi. Za obradu podataka korišćena je kvalitativna analiza. Dobijeni rezultati kategorisani su prema: vrsti poslova i usluga koje pruža psiholog i psihoterapeut, traženje pomoći od psihologa i psihoterapeuta i dobijanja adekvatne pomoći od psihologa i psihoterapeuta. Dobijeni podaci su pokazali da mladi prave razliku između psihologa, psihijatra i psihoterapeuta. Mali broj njih se obratio za pomoć psihologu ili psihoterapeutu, dok se većina njih susrela sa psihologom u procesu školovanja, navodeći da su im školski psiholozi bili od pomoći u tom periodu. Dobijeni rezultati pokazuju da se na osnovu eksploracije može predvideti menjanje stavova i ponašanja mladih. U svrhu poboljšanja mentalnog zdravlja mladih, traženjem pomoći i podrške od strane psihologa ili psihoterapeuta.

Ključne reči: fokus grupa, stavovi mladih, psiholog, psihoterapeut.

The attitudes of the young towards psychologists and therapists in the modern society

This paper explores the attitudes of the young population towards psychologists and therapists. The study is based on interviewing focus groups on their experiences with the mental health services. We were primarily interested to learn whether the participants differentiate a psychologist from a psychiatrist, or a therapist; whether they have ever asked for their help and if so how they would rate their satisfaction; finally, whether the focus group sessions would change their mind about asking for help. The sample consists of 60 participants, age 19 to 23, from Vranje. We organized six sessions with groups of ten. The group discussions were recorded. The data was obtained by asking a moderator group question. We employed qualitative approach in analyzing the data. The obtained

results were categorized based on the type of services a psychologist and a therapist offer, and whether the participants asked for help and got adequate assistance.

The results of the study indicate that the participants make a clear distinction between various mental health workers. While few ever asked for their help, most encountered a psychologist in the school setting and expressed satisfaction with the assistance they got. The focus group sessions also indicated a change in attitude and behavior in terms of talking to a psychologist or a therapist as a way of preserving mental health.

Keywords: focus group, attitudes of the young, psychologist, therapist

Klinička psihologija / Clinical psychology

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Attitudes towards help-seeking and subjective well-being in adolescents

Subjective well-being does not imply a complete absence of psychological problems, but instead an active effort toward their solution. Professional help-seeking for psychological problems can be perceived as an active coping strategy and an active search for adequate social support. Research shows that active coping strategies as well as social support can contribute positively to subjective well-being. Therefore, a positive relationship between help-seeking attitudes and subjective well-being could be expected. The goal of this study was to explore how strongly and in what direction are subjective well-being of adolescents and their help-seeking attitudes associated? The study was conducted on a sample of 278 adolescents from nine Belgrade high schools. Subjective well-being was examined with Kern and Butler's PERMA Profiler. The following aspects of adolescents' help-seeking attitudes were explored: potential readiness for help seeking for professional psychological assistance for various problems (anxiety, depression, conflicts with parents, drug abuse, etc.), subjective norms (perceived relation of close persons towards help seeking for professional assistance), perceived public stigma towards help seeking for professional psychological assistance, anticipated risks and benefits from professional psychological assistance, distress disclosure openness, perception of usefulness of psychotherapy and willingness to seek professional psychological assistance on a recommendation from a friend or a public call from an expert. Results show that the multiple R-squared with all of the aspects of help-seeking taken together as predictors and subjective well-being as criterion variable is statistically significant but relatively low ($R^2 = 0.11$, adj. $R^2 = 0.08$, $F(10,254) = 3.13$, $p = .001$). The following aspects have the highest and statistically significant correlations to subjective well-being: distress disclosure openness, willingness to seek professional assistance as an answer to a public from an expert or on a recommendation from a friend as well as anticipated risk and benefit of help-seeking. Generally speaking, adolescents with higher subjective well-being have more positive attitudes towards all the aspects of professional help-seeking in comparison to adolescents with lower subjective well-being. Also, adolescents who feel the need for professional psychological assistance experience negative emotions more often and positive emotions less often than their peers who do not have a conscious need for such an assistance. The results support the theoretical expectations according to which help-seeking for professional psychological assistance could be considered as an active coping strategy. Results are important from a practical standpoint for they show that adolescents who need psychological assistance more have less positive attitudes towards help-seeking.

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Keywords: subjective well-being, help-seeking, professional psychological assistance, adolescents

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Effects of self-schema organization on dysphoria and anxiety symptoms - mediating role of global self-esteem and self-concept clarity

According to the diathesis-stress model, mental disorders are considered to be the result of interaction between cognitive vulnerability (diathesis) and negative life events (stress). A prominent model within this framework is cognitive model of depression proposed by Beck in which negative (depressive) self-schemas play an important role in onset, development, and maintenance of the disorder. These schemas are developed during the childhood and lay dormant until they are activated by negative life event. Once the schema becomes active, it leads to negative interpretation biases and symptoms of disorder. Even though research findings support the idea that structural aspects of self-schemas are linked to depression and anxiety symptoms, there is little evidence of mechanisms through which they lead to development and maintenance of depression and anxiety. The aim of this study was to explore if the relations between self-schema organisation (its structure), on one hand, and dysphoria and anxiety symptoms, on the other, are mediated through global self-esteem (GSE) and self-concept clarity (SCC).

The study involving 164 students had three phases. Students completed the Psychological Distances Scaling Task as a measure of self-schema organisation of positively and negatively valenced interpersonal and achievement content (phase I). Self-reported measures of GSE and SCC were completed two weeks after, at phase II, whereas the scores of depression and anxiety were registered at phase III, three weeks after the phase II.

Results from mediation analyses showed that high interconnectedness of positively valenced achievement and interpersonal content exercised negative effects on dysphoria by heightening GSE. High interconnectedness of negatively valenced achievement content had positive effect on dysphoria through lowering GSE, while negatively valenced interpersonal content had positive effect on dysphoria through lowering SCC. Regarding anxiety symptoms, only achievement content (both positive and negative) proved to be important with its effects mediated only by SCC.

Our study provides preliminary insights into differential pathways through which both positively and negatively valenced self-referent schema contents lead to depression and anxiety symptoms. Our results extend Beck's theory in at least two ways: a) not only organization of negative schema, as

suggested by Beck, is important in development of dysphoric symptoms but also organisation of positive schema content might play an important role, and b) self-referent content related to achievement and interpersonal aspects of functioning aren't just important in context of symptoms of dysphoria, as proposed by Beck, but in context of anxiety symptoms. In future studies, with longer periods between measurement occasions, history of mental disorder and negative life events should be taken into account.

Keywords: diathesis-stress model, self-schema structure, global self-esteem, self-concept clarity, Psychological Distances Scaling Task

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Personal characteristics and school climate as predictors of well-being in adolescence

The aim of the study was to explore relative importance of personal characteristics (self-worth, general self-efficiency, distress disclosure and autonomy) and school climate in predicting subjective well-being in adolescence. Kaplan's Self-Derogation Scale, Schwarzer's Scale of General Self-Efficiency and Kahn and Hessler's Distress Disclosure Index, Noom's Adolescent Autonomy Questionnaire-SF, School climate questionnaire and Kern and Butler's PERMA Profiler (instrument for measuring subjective well-being) were applied on the sample of 278 adolescents (64% females) from nine secondary schools in Belgrade region. The mean of overall well-being of adolescents on the scale from 0 to 10 was 7.24, which is in accordance with the results from other countries, with 3% of outliers whose score was lower than 3.5, and that were not specific in any significant way in terms of their socio-demographic background.

To examine unique predictive contribution of personal characteristics and school climate to adolescents' subjective well-being after controlling for the socio-demographic characteristics (gender, parent's education, financial family status and religiosity) a two-step sequential multiple linear regression was used.

The results show that personal characteristics and school climate account for 47.7% of total variance of adolescents' well-being. Specific contributions of all predictors are statistically significant (self-worth: $\beta = .31$, $t(254) = 5.87$, $p < .001$, general self-efficiency: $\beta = .28$, $t(254) = 4.98$, $p < .001$, autonomy: $\beta = .17$, $t(254) = 2.99$, $p = .03$, distress disclosure: $\beta = .14$, $t(254) = 3.02$, $p = .03$, school climate: $\beta = .18$, $t(254) = 3.93$, $p < .001$). Pratt's d indices show that almost all personal characteristics, except distress disclosure, are more important predictors of subjective well-being than school climate (self-worth: .33, general self-efficiency: .29, autonomy: .17, school climate: .10, distress disclosure: .06). To explore

the possibility that personal characteristics moderate the relationship between school climate and well-being separate regression analyses which included personal characteristics and school climate as well as their interaction were used. The results showed that self-worth, general self-efficiency and distress disclosure moderate this relationship. It is stronger in adolescents with these personal characteristics less pronounced. The results also suggest that there is an interactive influence of personal characteristics and school climate on the well-being of adolescents, suggesting that the work on improving school climate could be especially beneficial for adolescents with low self-worth, low general self-efficiency or distress disclosure openness.

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Keywords: personal characteristics, school climate, well-being, adolescents

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Psychological screening of refugees

The presence of refugees in Serbia has increased over the past couple of years. Refugees, by definition, have endured experiences of harm, persecution and loss of security, which present great challenges for mental health and make them highly vulnerable, especially when access to psychological support is limited. In order to provide preliminary data on the mental health of refugees in Serbia, we conducted a mental health screening using cross-culturally and cross-linguistically adapted questionnaire and norms i.e. cut-offs. The screening was conducted with 111 refugees age 12 to 45 ($M = 19.4$, $SD = 6.25$), predominantly male (96.4%) from Afghanistan (79.8%) at different locations in Serbia (Belgrade, Sjenica, Tutin, etc.) The Refugee Health Screener (RHS-15), assessing symptoms of depression, anxiety, PTSD, current distress and coping capacities, was used to assess overall mental health. The results have shown that 92.8% of refugees screened positive i.e. achieved a score above the cut off and should be referred to some sort of psychological support or counselling. Additionally, 78.4% of respondents scored above the cut-off in regards to current distress level, thus showing a need for psychological first aid. Regarding symptomatology, signs of depression (31.5%) are the most prominent, followed by of PTSD symptoms (25.2%), and signs of anxiety (13.5%). These results indicate that there is a need for establishing a systematic and continuous assessment of mental health among refugees and development of wider psychosocial support programs referral protocols.

Keywords: refugees, mental health screening

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Fokus rada usmjeren je na utvrđivanje relacija između patologije ličnosti mjerene putem upitnika Dimensional Assessment of Personality Pathology-Basic Questionnaire, (DAPP-BQ) i privrženosti u bliskim odnosima mjerene preko skraćene skale Iskustva u bliskim odnosima (ECR). Uzevši u obzir potrebu za sveobuhvatnom procjenom, ali i potrebu za kraćim inventarom koji bi mogao procijeniti ukupni prostor maladaptivne ličnosti, prvi cilj ove studije bio je evaluacija i skraćivanje DAPP-BQ.

Istraživanje je provedeno na slučajnom uzorku od 800 studenata ($M = 21.88$, $Sd = 2.35$). Skraćivanje upitnika zasnovano je dva kriterija: korelacijom stavki s pripadnom skalom te stepenom redundantnosti stavki. Faktorska validnost DAPP-BQ provjerena je preko pristupa parcijalne disagregacije. Upitnik je uspješno skraćen sa početnih 290 na 145 stavki. Skraćena forma DAPP-BQ ima izuzetne indekse fita ($RMSEA = .036$, $SRMR = .032$, $CFI = .99$, $TLI = .99$). Sve mjere interne konzistencije kreću se od zadovoljavajućih (Ograničena ekspresivnost $\alpha = .72$) do veoma dobrih (Samopovređivanje $\alpha = .87$). U cilju provjere odnosa patologije ličnosti i obrazaca privrženosti, kao prediktorske varijable iz modela patologije ličnosti izdvojena su četiri faktora višeg reda: emocionalna disregulacija, antisocijalno ponašanje, socijalno izbjegavanje i kompulsivnost. Pošto su interpersonalne teškoće u središtu patologije opažene kod poremećaja ličnosti, kao kriterijske varijable posmatrane su anksiozna i izbjegavajuća privrženost prema roditeljima i prema prijateljima. Kao model procjene korištena je standardna regresiona analiza. Analiza je rezultirala sa četiri statistički značajna regresiona modela, od kojih su "efikasniji" modeli bili kod prognoze anksiozne privrženosti prema prijateljima gdje je objašnjeno oko 41% varijanse ($R(4,803) = .646$, $p < .001$) i prema roditeljima gdje je obuhvaćeno oko 38% zajedničke varijanse ($R(4,803) = .619$, $p < .001$), a najbolji prediktor bila je emocionalna disregulacija. Značajno skromniji modeli su bili kod objašnjenja izbjegavajuće privrženosti prema prijateljima ($R(4,803) = .491$, $p < .001$) i prema roditeljima ($R(4,803) = .533$, $p < .001$), gdje je objašnjena tek četvrtina ukupne varijanse, a najkorisniji pojedinačni prediktor bilo je socijalno izbjegavanje.

U drugom dijelu ispitivanja provjeren je potencijal patoloških dimenzija u alokaciji ispitanika prema četiri teorijska tipa privrženosti: sigurna, zaokupljena, odbijajuća i plašljiva. Primijenjen je model polinomialne logističke regresije gdje su sve četiri prediktorske varijable iz prostora ličnosti standardizovane prije uključivanja u logistički model, a kao referentna grupa označena je sigurna privrženost. Oko 75% varijanse (Cox-Snell's $R = .746$) iz prostora "patološke" ličnosti povezano sa alokacijom ispitanika prema tipovima privrženosti. Dobiveni rezultati pokazali su da kratka forma DAPP-BQ može biti korisna kao screening alat u procjeni, te se ista pokazala kao korisna u predikciji obrazaca u bliskim odnosima.

Ključne reči: patologija ličnosti, privrženost, DAPP-BQ

Personality pathology and experience in close relationships

This paper focuses on the relations between personality pathology measured by Dimensional Assessment of Personality Pathology Questionnaire (DAPP-BQ) and the attachment styles, measured by short form of Experience in Close Relationships Inventory (ECR). Admitting the need for comprehensive assessment, but also recognizing the need for concise inventory that screen the total field of maladaptive personality, the first aim of present study is to develop and evaluate a short form of the DAPP-BQ. The study was conducted on a random sample of 800 students ($M = 21.88$, $Sd = 2.35$). The shortening of the DAPP-BQ was based on two criteria: the correlation of the items with the corresponding scale and the degree of redundancy of the items. The factor validity of the DAPP-BQ was verified through a partial disaggregation approach. The questionnaire was successfully shortened from the initial 290 to 145 items. The shortened model of the DAPP-BQ has exceptional fit indices ($RMSE = .036$, $SRMR = .032$, $CFI = .99$, $TLI = .99$). All internal consistency measures range from satisfactory (Restricted Expression $\alpha = .72$) to very good (Self Harm $\alpha = .87$). In order to check relations between personality pathology and attachment, 4 higher order factors were identified as predictors from the Personality Pathology model: Emotional dysregulation, Antisocial behavior, Social avoidance, and Compulsiveness. Since interpersonal difficulties are central to the pathology observed in personality disorders, as the criterion variables we used Anxious and Avoidant attachment to parents and friends. The standard regression analysis was used for estimation. The analysis resulted in 4 statistically significant regression models, of which the "more efficient" models were in the prognosis of Anxious attachment to friends where 41% of variance ($R(4.803) = .646, p < .001$) was explained, and Anxious attachment to parents with 38% of the explained variance ($R(4.803) = .619, p < .001$), and the best predictor was Emotional dysregulation. Significantly modest models were found in the explanation of Avoidant attachment to friends ($R(4.803) = .491, p < .001$) and to parents ($R(4.803) = .533, p < .001$), where only 25% of the total variance was explained, and the best single predictor was Social avoidance. The potential of the pathology dimensions in the allocation of respondents to the 4 attachment types (secure, preoccupied, dismissing and fearful) was verified in the second part of the study. A model of polynomial logistic regression was applied, where all 4 predictors from the Personality dimensions were standardized prior to inclusion in the logistic model, and a secure attachment was indicated as a reference group. About 75% of variance (Cox-Snell's $R = .746$) from the personality pathology was associated with the allocation of respondents by attachment types. The results showed that the short form of DAPP-BQ can be useful as a screening tool, and also useful in prediction of perceived patterns in close relationships.

Keywords: personality pathology, attachment, DAPP-BQ

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Za ispitivanje eudemonističkog blagostanja jedan od najkorišćenijih instrumenata je Upitnik psihološkog blagostanja (Ryff, 1989). Analizirajući postojeće stanje u ovoj oblasti, Waterman je zaključio da taj konstrukt obuhvata samo objektivne pokazatelje dobrog funkcionisanja, dok se u savremenoj filozofiji eudemonije subjektivni elementi smatraju jednako važnim. Oslanjajući se na takvo gledište, on je sa saradnicima (Waterman et al., 2010) razvio Upitnik eudemonističkog blagostanja (UEB), sastavljen od 21. ajtema. Osnovni cilj ovog istraživanja je bio ispitati da li je UEB validan instrument za upotrebu u našoj populaciji. Konstrukt valjanost ispitana je konfirmativnom faktorskom analizom (u programu AMOS 6), a konvergentna proverom povezanosti (Pirsonov r koeficijent) sa pozitivnim (emocionalno, socijalno, psihičko i ukupno blagostanje) i negativnim indikatorima mentalnog zdravlja (depresivnost, anksioznost i stres). Upitnik je preveden metodom povratnog prevođenja od strane dva nezavisna prevodioca psihologa. Prevod na engleski je upoređen sa originalom i pretrpeo je minimalne korekcije. Pored UEB-a, korišćeni su i sledeći instrumenti: MHC-SF (Keyes et al., 2008) i DASS-21 (Lovibond & Lovibond, 1995). Uzorak je činilo 530 ispitanika, prosečnog uzrasta $M = 46.83$ ($SD = 13.22$); 49.4% je bilo muškaraca. Prateći proceduru koju su koristili autori u originalnoj validacionoj studiji, izvršena je parcelizacija ajtema sabiranjem skorova susednih ajtema. Tako je dobijeno 5 parcela (prve 4 od po 4, a poslednja od 5 ajtema) i potom je sproveden postupak CFA metodom maksimalne verodostojnosti. Testiran je model po kome svi indikatori zasićuju jedan latentni faktor, u skladu sa teorijskom postavkom i empirijskim istraživanjima. Dobijeni su sledeći indeksi fita: $\chi^2/df = 3.04$, $GFI = .99$, $AGFI = .97$, $CFI = .98$ i $RMSEA = .06$. Pouzdanost upitnika je zadovoljavajuća, $\alpha = .78$. Aritmetička sredina iznosi $M = 54.54$ ($SD = 8.71$). Ispitivanje polnih razlika u izraženosti eudemonističkog blagostanja pokazalo je da one nisu značajne ($t = 1.32$, $df = 519$, $p = .187$). Potom je ispitana povezanost između skorova eudemonističkog blagostanja i drugih indikatora mentalnog zdravlja ispitanika. Rezultati su pokazali da je eudemonističko blagostanje pozitivno povezano sa ukupnim skorom pozitivnog mentalnog zdravlja ($r = .38$, $p < .001$), kao i sa njegovim komponentama: emocionalnim ($r = .39$, $p < .001$), socijalnim ($r = .22$, $p < .001$) i psihičkim ($r = .38$, $p < .001$). Negativna povezanost dobijena je sa depresivnošću ($r = -.39$, $p < .001$), anksioznošću ($r = -.32$, $p < .001$) i stresom ($r = -.24$, $p < .001$). Iako je povezanost sa drugim pokazateljima mentalnog zdravlja nešto niža nego u drugim validacionim studijama, ona je značajna i kreće se u opsegu niskih do umerenih korelacija. Rezultati ovog istraživanja pokazuju da UEB predstavlja pouzdanu i relativno validnu meru eudemonističkog blagostanja u populaciji odraslih u Srbiji. Ovo istraživanje nam ne može reći da li je UEB bolja skala od PWB; to može biti cilj nekog budućeg istraživanja.

Ključne reči: eudemonističko blagostanje, UEB, validacija

Validation of Serbian translation of the Questionnaire for Eudaimonic Well-being

One of most commonly used measure of eudaimonic well-being is the questionnaire Psychological Well-being (PWB; Ryff, 1989). Analyzing the current situation in this area, Waterman concluded that the construct of PWB comprises only objective measures of good functioning, while in contemporary philosophy of eudaimonia subjective elements are considered equally important. Relying on such consideration, Waterman et al. (2010) developed the Questionnaire for Eudaimonic Well-being (QEWB) composed of the 21 items. The main objective of this study was to examine whether the QEWB represents valid instrument for use in Serbian population. Construct validity was tested by CFA (in the program AMOS 6), and convergent by testing the Pearson correlations with the positive (emotional, social, psychological, and total positive mental health) and negative indicators of mental health (depression, anxiety and stress). QEWB was translated using the back-translation method with two independent translator's psychologists. The English translation was compared with the original and suffered minimal corrections. In addition to the QEWB, we used the following instruments: MHC-SF (Keyes et al., 2008) and DASS-21 (Lovibond & Lovibond, 1995). The sample consisted of 530 participants, mean age $M = 46.83$ ($SD = 13.22$); 49.4% were men. Following the procedure used by the authors of the original validation study, we created five parcelled indicators by summing responses to adjacent items (first 4 parcels were created using 4 items apiece and the 5th parcel was created using the remaining 5 adjacent items). These parcels then were entered into a CFA model with maximum likelihood method. Unifactorial structure was tested, in accordance with the theoretical assumptions and empirical research. We obtained the following fit indexes: $\chi^2/df = 3.04$, $GFI = .99$, $AGFI = .97$, $CFI = .98$, and $RMSEA = .06$. Reliability of the questionnaire was satisfactory, $\alpha = .78$. The mean of the QEWB scores was $M = 54.54$ ($SD = 8.71$). The gender differences were not significant ($t = 1.32$, $df = 519$, $p = .187$). Then, we examined the correlations between scores of the QEWB and other indicators of mental health. The results showed that eudaimonic well-being was positively correlated with the total positive mental health ($r = .38$, $p < .001$), and its components as well: the emotional ($r = .39$, $p < .001$), social ($r = .22$, $p < .001$) and psychological well-being ($r = .38$, $p < .001$). Negative correlations were obtained with a depression ($r = -.39$, $p < .001$), anxiety ($r = -.32$, $p < .001$) and stress ($r = -.24$, $p < .001$). Although the correlations with other indicators of mental health were somewhat lower than in other validation studies, they were significant and varied in the range of low to moderate correlation. The results of this study show that QEWB represents a reliable and relatively valid measure of eudaimonic well-being for the adult population in Serbia. Finally, this research cannot answer if QEWB is better measure than PWB; it can be the aim of future research.

Keywords: eudaimonic well-being, QEWB, validation

Kognitivna psihologija / Cognitive psychology

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Analytic thinking and the endorsement of psychological misconceptions

Analytic thinking style is related to various beliefs and attitudes, including religious disbelief and scepticism toward paranormal and pseudoscientific beliefs (Pennycook, Fugelsang& Koehler, 2015). In this study we examined the relationship between analytic (vs. intuitive) thinking style and the endorsement of psychological misconceptions among psychology students. A total of 365 undergraduate and graduate psychology students from four universities participated in the study. Actively Open-minded Thinking scale, Need for Cognition scale and Epistemic Preference Indicator were used as measures of thinking styles. Students also completed a 64-item questionnaire about psychological misconceptions and rated their confidence for each answer. Finally, the Paranormal Belief Scale was used. It included three subscales: superstitious beliefs, religious beliefs and paranormal beliefs. The results revealed that graduate students endorsed less misconceptions than undergraduate students ($t(327) = 12.68, p < .01$), and that they were less overconfident ($t(323) = 5.88, p < .01$). However, students were generally overconfident about their performance on the misconceptions questionnaire. The endorsement of psychological misconceptions was strongly related to overconfidence ($r = .80, p < .01$ for undergraduate students, $r = .78, p < .01$ for graduate students). This result provides a clear evidence for Dunning-Kruger effect in this domain: the less students know about psychological misconceptions, the more they overestimate their knowledge. Three measures of analytic style were negatively correlated with the endorsement of psychological misconceptions in both undergraduate and graduate students (correlations coefficients ranged from $-.20$ to $-.47$). Paranormal beliefs were positively correlated with the endorsement of misconceptions, and negatively to analytic thinking style. The possible sources of the relationship between thinking styles and the endorsement of psychological misconceptions were discussed, as well as the theoretical and practical implications of the obtained results.

Keywords: analytic thinking, overconfidence, psychological misconceptions

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We aim to evaluate the common practice of aggregating databases of word concreteness ratings collected in separate norming studies. Word concreteness is one of the fundamental variables in lexical recognition research that has been both investigated in itself for its theoretical importance and used as a control variable. It is operationalized as the extent of possibility to perceptually experience the object denoted by the word, typically obtained through subjective ratings. This variable has been known to influence both lexical recognition and memory performance. Recently, large databases (30 000 – 40 000 words) have been constructed through crowdsourcing. However, not many languages have been subjected to this process, and many researchers are prone to combining several smaller databases in the process of obtaining concreteness ratings for their stimuli set. In this research we aim to explicitly test whether such practice is justified, by investigating whether the stimulus context in which the words are presented influences concreteness ratings.

We presented 56 native speakers with 75 concrete and 75 abstract words. The participants were randomly assigned to one of the three groups: one group was presented with a list of both concrete and abstract words in a random order (joint list condition), another group was presented only with a list of concrete words, and the third group was presented only with a list of abstract words (separate lists condition). Words were presented on a computer screen and ratings on a seven-point scale were collected, along with reaction times. Split-plot analysis of variance applied to concreteness ratings revealed significant effect of word concreteness (by-participant: $F(1,70) = 85.933$, $p < .001$, by-item: $F(1,148) = 205.76$, $p < .001$) and a significant concreteness by list interaction (by-participant: $F(1,70) = 13.524$, $p < .001$, by-item: $F(1,148) = 259.96$, $p < .001$). Concrete words were always rated higher on a rating scale, regardless of the list condition. However, the differences between ratings for concrete and abstract words were larger when these words were presented in a joint list, compared to separate lists presentation. These results were mirrored in the rating time, as well.

Our results clearly indicate that concreteness ratings are influenced by the context in which a word is presented, thus questioning the practice of combining word ratings from different sources. This finding justifies the process of obtaining large databases of concreteness ratings, as has been done lately through the process of crowdsourcing. Alternatively, if the researcher is not able to achieve this, the problem could be attenuated by presenting full abstract-concrete range of words in the practice session.

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Keywords: word concreteness, norming studies, stimulus context, databases

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The effect of working memory on (non)emotionally framed deductive reasoning

The aim of the research was to assess the effect of working memory on deductive reasoning framed with non-emotional and emotional content. Working memory was assumed to have indirect effect on non-emotional reasoning through general ability. On the contrary, the effect of working memory on emotional reasoning was expected to remain significant after controlling for intelligence. Two separate studies were conducted. The first study included $N = 233$ psychology students. The average age of participants was 20.6 years ($SD = 2.15$). Working memory was measured as the standardized mean total of the three span tasks (operation, reading, and symmetry task). Advanced Raven Progressive Matrices were used to assess general ability. Deductive reasoning was assessed through 10 tasks of four types: modus ponens, modus tollens, affirming the consequent, and denying the antecedent. All measures had acceptable reliabilities (Cronbach's alpha range .65 - .82). There was a significant indirect effect of working memory on deductive reasoning through intelligence $ab = .20$, $BCa\ CI = [.05, .37]$. Working memory was positively correlated with intelligence, which in turn positively predicted disengagement of task content from general rules in reasoning on non-emotional content. The prior effect of WM on reasoning became nonsignificant ($b = .17$, $p = .33$). General ability accounted for more than a half of the total effect, $PM = .53$. The second study was of the preliminary kind and included 70 psychology students (approx. age 24 years). The same working memory and general ability tests were administered as in previous study. In addition to that, specially designed tasks were used to assess reasoning on emotionally framed content. These tasks contained emotional content from the HEXACO-PI-R Emotionality scale converted into premises and conclusion. Unlike the previous study, only 15 modus ponens tasks were used (Cronbach's alpha .85), since working memory significantly correlated with their total score ($r = .27$, $p < .05$). The HEXACO Emotionality scale was also included as a control variable, but its effect was nonsignificant. As hypothesized, working memory did not have a significant indirect effect on reasoning on emotional content through general ability, $ab = .02$, $BCa\ CI = [.00, .05]$. General ability accounted for about a quarter of the total effect, $PM = .26$. Besides, the direct effect of working memory on emotionally framed reasoning, though small, remained significant ($b = .04$, $p = .038$). Deductive reasoning seems to be dependent on general ability. In contrast, deduction on emotionally framed content appears to require working memory as an asset. Working memory is considered to prevent emotional content

from interfering with proper reasoning in keeping with the theory of executive processing based on inhibitory control. All analyses should be replicated on one sample in the future studies.

Keywords: working memory, deductive reasoning, emotional content, mediation

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The effects of believability and validity on accuracy and metacognitive judgments in syllogistic reasoning

Dual process theories of reasoning make a distinction between intuitive Type 1 processes, which are fast, automatic, heuristic, and unconscious, and reflective Type 2 processes, which are slow, deliberative, analytic, and conscious. The Metacognitive Reasoning Theory proposes that metacognitive judgment that accompany initial Type 1 answers influence the extent of Type 2 analytic engagement. In this study we examined the effects of believability and validity on response accuracy, response times and metacognitive judgments in syllogistic problems, when participants were prompted to give intuitive responses, and when they were allowed to reconsider their initial answers. 42 psychology students participated in the study. They evaluated 20 syllogisms that differed in validity (valid or invalid) and believability (believable or unbelievable). Two-response paradigm was used. First, participants gave quick intuitive responses and rated their feeling-of-rightness. Second, after the first response, they were asked to rethink about it, to give the second response, and to make confidence judgment. We collected the data about the accuracy of responses, response times, and metacognitive judgments (feeling-of-rightness and confidence). We analysed the accuracy of responses. Reflective responses were more accurate than intuitive responses, $F(1,41) = 13.44$, $p < .01$. Furthermore, responses to valid syllogisms were more accurate than responses to invalid syllogisms, $F(1,41) = 55.62$, $p < .01$. The significant main effect of believability was also obtained, $F(1,41) = 44.97$, $p < .01$, as well as significant interaction between believability and validity ($F(1,41) = 78.24$, $p < .01$): the accuracy of believable invalid conclusions was lower than accuracy of all other types of syllogisms. Metacognitive judgments were higher for reflective than for intuitive answers ($F(1,41) = 41.32$, $p < .01$), for valid than for invalid syllogisms ($F(1,41) = 35.70$, $p < .01$, and for believable than for unbelievable conclusions ($F(1,41) = 9.48$, $p < .01$). Therefore, differences in accuracy related to believability were not associated with differences in metacognitive judgments. The analysis by items revealed the negative correlation between response times of intuitive responses and feeling-of rightness, $r = -.66$. Feeling-of-rightness was also strongly negatively

correlated with rethinking time, $r = -.75$. The obtained results supported the assumptions of Metacognitive Reasoning Theory.

Keywords: believability, meta-reasoning, syllogistic reasoning

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Fenomen naglašavanja kod učenja polisemije i reči "lažnih prijatelja"

U diskriminativnom učenju možemo razlikovati dve vrste znakova: savršene i nesavršene. Prvi predviđaju samo jedan ishod, dok drugi ukazuju na više ishoda, te imaju nižu prediktivnu vrednost. Novije studije pokazuju da i fenomen naglašavanja (eng. Highlighting) pripada opštoj klasi diskriminativnih oblika učenja. Pomenuti fenomen podrazumeva dve faze u učenju. Najpre se uči veza između kombinacije znakova i jednog ishoda, a potom veza između nove kombinacije znakova i novog ishoda. Znakovi koji ukazuju samo na jedan ishod nazivaju se savršeni. Nasuprot tome, nesavršeni znakovi ukazuju na oba ishoda. Prilikom izlaganja nesavršenih znakova u test fazi, iako su uparivani jednak broj puta s oba ishoda, preferiraju se ranije naučeni ishodi. U slučaju savršenih znakova, iako je polovina uparivana s jednim, a polovina s drugim ishodom, preferiraju se kasnije naučeni ishodi.

Nijedna od brojnih eksperimentalnih studija naglašavanja nije testirala ovaj fenomen u kontekstu učenja jezika, iako je naglašavanje pretežno demonstrirano na jezičkom materijalu. Povrh toga, čini se da prirodni jezici spontano stvaraju uslove za pojavu naglašavanja. Na primer, polisemične reči i tzv. "lažni prijatelji" (reči koje su ortografski iste, ali ukazuju na dva različita značenja u dva jezika) mogu biti nesavršeni, a njihovi sinonimi savršeni znakovi za dati pojam. Ova činjenica predstavlja direktnu motivaciju za ovu studiju: ako je ispunjen uslov o redosledu učenja i o postojanju savršenih i nesavršenih znakova, očekujemo efekat naglašavanja u učenju jezika i, posebno, u učenju polisemičnih reči, lažnih prijatelja i njihovih sinonima.

U dva eksperimenta ispitivana je pojava naglašavanja: unutar jednog jezika i između dva jezika. U prvom eksperimentu testirano je prisustvo naglašavanja pri učenju polisemičnih reči i njihovih sinonima (jedan jezik). U drugom, korišćeni su "lažni prijatelji" i njihovi sinonimi (dva jezika). U oba eksperimenta korišćene su nepoznate reči kao znakovi i slike objekata kao ishodi. Dodatno, u drugom eksperimentu prilikom svakog izlaganja, ispitanicima je označavano da li reči potiču iz jednog ili drugog jezika. Zadatak ispitanika u oba eksperimenta je bio da nauče koje nepoznate reči imenuju koji objekat. U test fazi, ispitanicima su prikazivane nove kombinacije reči koje su prethodno učili, a

oni su birali objekat za koji smatraju da im odgovara. Za proveru fenomena naglašavanja kreiran je Bejzov hijerarhijski model, koji uzima u obzir ponovljena merenja i slučajne razlike između ispitanika. Model se sastojao iz tri nivoa, pri čemu je prior generisan putem Gamma, Dirichletove i multinomijalne distribucije. Poređenjem relevantnih odgovora i izračunavanjem 95% intervala verodostojnosti, rezultati su pokazali efekat naglašavanja u oba eksperimenta.

Nalazi sugerišu da naglašavanje može imati značajnu ulogu prilikom učenja kompleksnog i kontinuiranog sistema znakova kao što je jezik, jer obezbeđuje zadržavanje starog znanja i ubrzava usvajanje novog.

Ključne reči: fenomen naglašavanja, diskriminativno učenje, učenje jezika, polisemija, "lažni prijatelji"

Highlighting phenomenon in learning polysemy and "false friends" words

Within the domain of discriminative learning, a distinction is made between two types of cues: perfect and imperfect. Perfect cues unambiguously predict only one outcome, while imperfect cues are ambiguous because they predict more than one possible outcome, which attenuates their predictive potential. Recent studies show that highlighting phenomenon also belongs to the general class of discriminative learning. It assumes two learning phases. Firstly, association between one combination of cues and one outcome is learned, and then association between new cue combination and new outcome. During the test, when only imperfect cues are presented early learned outcome is preferred, although it was associated with its cue equal number of times as the late outcome. When two perfect cues are presented, one early and one late, despite matched number of expositions during learning late learned outcome is preferred.

Most of the highlighting studies use verbal material (i.e., words) but that phenomenon is never tested explicitly as language learning phenomenon. What is more, it seems that natural languages provide setting for highlighting to occur by default. For instance, polysemic words and so-called "false friends" (words with different meanings in two languages that are identical orthographically) could be seen as imperfect cues, while their synonyms are then perfect cues for a given meaning. Taken together, aforementioned facts offer a direct motivation for the current study: if conditions about learning phases and presence of imperfect and perfect cues are met, we expect highlighting to occur during learning polysemic words, "false friends" and their matching synonyms.

With two experiments we examined the role of highlighting. The first experiment was set to examine highlighting during learning polysemic words and their synonyms (one language), while the second used "false friends" and their synonyms (two languages). Both experiments used unknown words as cues and images of objects as outcomes. Additionally, in the second experiment explicit signal was given on each trial to mark that words are in one or the other language. In both experiments participants' task was to learn which words refer to which object. In the test, new combinations of learned words were presented and participants' task was to choose object, which they believe is correct. In order to test highlighting three level Bayesian model was created, which prior was generated using Gamma, Dirichlet and multinomial distributions. Such model takes into

account individual differences and dependency in the data due to repeated trials. Credible intervals (95%) were computed and results showed highlighting effect in both experiments.

Findings of this study suggest that highlighting could have an important role in language learning, co-affecting learning of complex and continuous system of cues. In that, it ensures that old knowledge is retained, while acquisition of new is facilitated.

Keywords: highlighting phenomenon, discriminative learning, language learning, polysemy, "false friends"

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Uloga radnog pamćenja u zadatku taktičkog odlučivanja – ekspertnost kao moderator?

Vješta sportska ne bi bila moguća bez predane vježbe i ekstenzivnog rada. Kao rezultat uključenosti u takav trening eksperti stječu specifične kognitivne vještine koje prema teoriji dugoročnog radnog pamćenja (Ericsson & Kintsch, 1995) sportašima omogućuju svladavanje ograničenog kapaciteta radnog pamćenja. Sukladno klasičnim modelima stjecanja vještina (npr. Anderson, 1982), teorijski okvir ističe da stečeni mehanizmi postepeno dovode do automatskih procesa umanjujući ili eliminirajući ulogu temeljnih kognitivnih sposobnosti, čime podupire hipotezu svladavanja ograničenja (eng. circumvention-of-limit hypothesis). Ipak, recentne spoznaje upućuju na ulogu radnog pamćenja u sportskoj izvedbi na različitim razinama specifičnog znanja govoreći u prilog hipotezi nezavisnog utjecaja (eng. independent influences hypothesis) i otvarajući prostor teorijama radnog pamćenja koje za objašnjenje kognitivnog funkcioniranja u domenama svojstvenim situacijama, naglašavaju kapacitet radnog pamćenja, odnosno svjesnu kontrolu pažnje (Baddeley, 1986; 2007; Engle, Kane, & Tuholski, 1999). Cilj ovog istraživanja je bio ispitati ulogu kapaciteta radnog pamćenja u taktičkom odlučivanju na različitim razinama ekspertnosti.

U istraživanju je sudjelovalo 82 nogometaša različite razine ekspertnosti; rekreativni nogometaši, amaterski nogometaši i profesionalni nogometaši. Sudionici su u laboratorijskim uvjetima rješavali zadatke taktičkog odlučivanja i dva zadatka raspona radnog pamćenja (Foster & el., 2015): skraćenu verziju testa raspona pamćenja Operation span i skraćenu verziju testa raspona pamćenja Symmetry Span. Moderatorskom analizom s kategorijalnim moderatorom, koristeći PROCESS makro za SPSS (Hayes, 2013), utvrđena je statistički značajna uloga kapaciteta radnog pamćenja u taktičkom odlučivanju kod sportaša različite razine ekspertnosti ($t = 4,04$, $p < .001$); kod rekreativnih nogometaša ($t = 2.94$, $p < .001$, $d = 1.22$), kod amaterskih nogometaša ($t = 2.21$, $p = .03$, $d = 0.92$) te na

graničnoj razini značajnosti kod profesionalnih nogometaša ($t = 1.92$, $p = .06$, $d = 0.68$). Tendencija statističkoj značajnosti, odnosno utvrđena nezanemariva veličina učinka kapaciteta radnog pamćenja na taktičko odlučivanje kod profesionalnih nogometaša izazov je postavkama teorije dugoročnog radnog pamćenja, odnosno hipoteze prevladavanja ograničenja. Nalaz podupire teoriju kontrole pažnje radnog pamćenja i hipotezu nezavisnog utjecaja sugerirajući da je kapacitet radnog pamćenja kao generalni kognitivni mehanizam važan ne samo tijekom faza usvajanja znanja i vještina nego da i vrhunski sportaši u određenim taktičkim situacijama mogu imati korist od većeg kapaciteta radnog pamćenja.

S obzirom na rezultate smatramo da polazišta teorija radnog pamćenja koje uz specifično znanje naglašavaju i generalni kognitivni kapacitet mogu doprinijeti boljem razumijevanju taktičkog odlučivanja na različitim razinama ekspertnosti te elaboraciji opće teorije ekspertnosti, što je u skladu s recentnim sugestijama.

Ključne reči: kapacitet radnog pamćenja, taktičko odlučivanje, ekspertnost, nogomet

The role of working memory in tactical decision making task - expertise as moderator?

Skilled sports performance would not be possible without deliberate practice and extensive work. As a result of engagement in deliberate practice activities, experts acquire sophisticated and complex skills that, as proposed by the long term working memory theory (Ericsson & Charness 1994; Ericsson & Kintsch, 1995), enable them to circumvent basic limits of working memory capacity and sequential processing. Consistent with classical models of skill acquisition (e.g. Anderson, 1982), this theory state that acquired mechanisms gradually result in automated processes and circumvent the role of any basic general cognitive capacities which is in line with the circumvention-of-limit hypothesis. However, recent research breakthroughs emphasize the role of working memory in sport performance at various levels of expertise supporting independent influences hypothesis, as well as making plausible working memory theories that, in explaining domain specific cognitive functioning, highlight working memory capacity and attentional control processes (Baddeley, 1986, 2007; Engle, Kane & Tuholski, 1999).

The goal of this study was to explore the role of working memory capacity in tactical decision-making context at various levels of expertise. Eighty-two soccer players from different levels of expertise; recreative players, active competitive amateur players, and professional soccer players, participated in the study. In laboratory conditions, participants took tactical decision-making task and two working memory tasks Foster et al., 2015): shortened version of Operation span and shortened version of Symmetry Span.

Moderator analysis with categorical moderator, using PROCESS macro for SPSS (Hayes, 2013), showed significant role of working memory capacity in tactical decision making at various levels of expertise ($t = 4.04$, $p < .001$); at recreative level ($t = 2.94$, $p < .001$, $d = 1.22$), at amateur level ($t = 2.21$, $p = .03$, $d = 0.92$) and marginally statistical significant effect at professional level ($t = 1.92$, $p = .06$, $d =$

0.68). The tendency to statistical significance and medium to large effect size of working memory capacity in tactical decision-making at professional level challenges long-term working memory theoretical assumptions and related circumvention-of-limits hypothesis. Finding supports controlled attention theory of working memory and independent influences hypothesis suggesting that working memory as general cognitive mechanism plays a role not only during the learning of knowledge and skills, and that skilled, expert players can also benefit from high working memory capacity in tactical decision-making situations.

Given the results, we stand that assumptions of working memory theories that, besides domain-specific knowledge, highlight domain-general cognitive capacity, can contribute to the more comprehensive understanding of tactical decision-making at different levels of expertise and understanding of expert cognition what is in line with recent suggestions.

Keywords: working memory capacity, tactical decision-making, expertise, soccer

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Cognitive processing of syntax by German-acquiring children - eye tracking and pupillometry outcomes

Previous research has shown that children fully comprehend passives rather late in their language development. Apart from a few languages (e.g. Sesotho, Standard Indonesian) the passive is usually acquired at about the age of 5-6, depending on the study and the language in question. German-acquiring children are no exception. Different studies have shown that children can comprehend the passive structure in German at the age of 5 (e.g. Aschermann, Gülzow & Wendt, 2004).

There are several theories about the delay in the acquisition of passives. One of the more prominent ones is the A-Chain Deficit Hypothesis (Borer & Wexler, 1987; Hirsch & Wexler, 2004), which states that children are unable to process the A-chain rising involved in the movement of the object. The main conclusion of the theory is that children under a certain age cannot process such a complex syntactic rising before the full cognitive and neurological maturation of the brain.

The current study used syntactic priming to check whether prior exposure to passives can cause faster comprehension of the structure in German-acquiring children. Successful priming of passives would mean that younger children can comprehend the structure, and that the reason for the delay is more likely to be its infrequency. For this purpose, eye tracking was used to measure the anticipatory looks towards the correct image during a sentence comprehension task. 32 monolingual German-acquiring children, age 5;6-6;0 were tested and their gaze was measured during the

comprehension of passive sentences. Furthermore, pupil size data was also measured. Pupillometry measures represents the natural occurring phenomenon of pupil size change during increased cognitive load or being exposed to an unexpected stimulus. In the context of the current study, passives, being infrequent in German and not yet fully acquired by the participating children, represent a stimulus which is unexpected and requires more cognitive processing.

The gaze data showed that passives were more difficult than actives to comprehend, requiring more time to look at the correct image and with lower overall proportion of looks towards the correct image. Furthermore, no significant priming effect was found, meaning that even the previous exposure to passive sentences did not help the children look faster towards the right image on the screen. The pupillometry data however, showed a small, but significant effect of passive priming, visible in the lower cognitive load after hearing a passive sentence twice.

The gaze data is supportive of the A-chain Deficit Hypothesis, because children were unable to improve their comprehension of passives after priming. Since the pupillometry is still a relatively novel approach, the results and implications of this study are taken with caution, but seem to be implying that a prior exposure to a syntactic structure – passive sentence in this instance – reduces the cognitive load and the surprisal effect in children.

Keywords: language acquisition, priming, children, syntax, passives, eye tracking, pupillometry, cognitive load, German

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Levels of categorization in Alternative Uses Task

In cognitive categorization of objects, basic level of categorization is known to be superior to superordinate and subordinate level (e.g. a dog versus animals, a labrador). That paradigm is usually tested with object attributes naming task or free associations task. The purpose of this study was to examine the effects of levels of categorization (superordinate, basic, subordinate) in the object attributes naming task and to test whether the superiority of basic level categorization can be generalized to a more complex task; Alternative Uses Task. 47 participants from the Faculty of Humanities and Social Sciences in Rijeka, Croatia took part in the study. The participants were tested in the Remote Associations Test (RAT test), often used as a measure of divergent thinking, in the classical object attributes naming task and in the Alternative Uses Task. Within each task, three objects were presented for each level of categorization. In Alternative Uses Task, four components of divergent thinking were measured: originality, fluency, flexibility and elaboration of the answers.

To examine the number of listed attributes in the object attributes naming test, one-way ANOVA with levels of categorization as a within-participant factor was conducted. As expected, a main effect of levels of categorization was revealed ($F = 35.26$, $df = 1,46$, $p < .001$, $\eta^2 = 0.61$). Šidak post-hoc test showed that more attributes were produced on the basic level ($M = 7.1$, $SD = 2.70$), compared to superordinate ($M = 5.82$, $SD = 2.55$) and subordinate level ($M = 5.49$, $SD = 2.29$).

To examine the number of produced answers considering different divergent thinking components in the Alternative Uses Task, four one-way ANOVAs with levels of categorization as within-participant factors were conducted. There was a significant main effect of categorization level only for the originality component of divergent thinking ($F = 3.33$, $df = 1,46$, $p < .05$, $\eta^2 = 0.13$). Šidak post-hoc test revealed higher originality on subordinate level ($M = 1.15$, $SD = 1.64$) compared to superordinate level ($M = 0.83$, $SD = 1.11$).

Finally, RAT test showed a positive correlation with originality on superordinate ($r = .29$, $p < .05$) and subordinate level ($r = .38$, $p < .01$), elaboration on superordinate ($r = .40$, $p < .01$) and basic level ($r = .32$, $p < .05$). There was a significant negative correlation of RAT test score with subordinate fluency ($r = .32$, $p < .05$). The correlations between RAT test scores and performance in object attributes naming task did not reach significance level.

To conclude, the absence of categorization level effect for three out of four components of divergent thinking implies that different cognitive processes are used in Alternative Uses Task to which the superiority of basic level categorization can not be generalized.

Keywords: levels of categorization, divergent thinking, object attributes naming task

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Neologisms in early Serbian child language

The occurrence of neologisms in a child's spontaneous language production is an indicator of important developmental processes. It reveals that a child: a. recognizes a meaning as appertaining to a certain class of words, b. wields some knowledge on structural regularities in her mother tongue, c. uses the regularities in her efforts of a new word formation. Neologisms reveal the connection between the form and function at a moment of its emergence. Innovative solutions that a child opts for display the regularities known to a child, and features of grammar that are still missing in the system at the moment of a word composition.

The study aimed at an exploration of instances of verbal neologisms in the Serbian Corpus of Early Child Language (SCECL). The transcripts of spontaneous language production of 8 children longitudinally recorded at 16 age levels (18-48 months) were searched for verbs and innovative verbal forms. Their prevalence at different age levels was explored, as well as structural regularities that can be found in word formation. An approximate estimation was made that 2.8% of all children's word types in the corpus are neologisms. In addition, 6.8% of all verbal types are neologisms, which reveals that verbs are particularly fruitful ground for innovative word formation in Serbian. Verbal neologisms exhibit a large variety of occurrence across age levels and between individual children. Some examples are prone to appear in the language of different children, and their total frequency in the corpus reach 20 (e.g. hoćem, možem, bide). Others are rare (2 or 3 incidences only in the production of one child). The largest number of neologisms are hapaxes (freq = 1).

An exploration of their derivational and inflectional properties revealed 3 major kinds of regularities in their formation:

- a. Morphological overgeneralization: adding of an inappropriate inflectional suffix to a verb root guided by analogy with the suffixes appropriate for some other class of verbs (hoćem/ hoćam instead of hoću, možem/ mogam instead of mogu, ljubaju instead of ljube). The verbs susceptible to this kind of innovation deviate from the verb paradigm in Serbian language and their suffixes are less frequent than the overgeneralized suffixes.
- b. Overgeneralization of a stem of another verbal form of the same verb: The morphological paradigm of the newly formed verb obeys typical inflectional suffixes for a particular verb form, but the deviation happens at the stem level (donesti instead of doneti, uzmo instead of uzeo).
- c. Change in derivational word formation: The change in prefixation and/or suffixation (ključaj instead of zaključaj, crtavati instead of crtati, zapravim instead of pravim).

The results indicate that neologism formation in Serbian appears to be highly developed, and follows several formation patterns, which suggests that given types of neologisms should not be treated as mere production errors, but rather a typical step in language development.

Keywords: neologism, language development, verb morphology, derivation, inflection

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Out of sight, out of mind: Prompting to rethink in a base-rate task

Research in the field of reasoning has mainly been based on the dual-process approach. Type 1 processes are intuitive while Type 2 processes are analytical. Recent research shows prompting

participants to rethink their decisions in reasoning tasks leads to a sizeable change in response selection. A well-known paradigm in this type of research was developed by Thompson and colleagues. Participants respond as fast as possible and after making a metacognitive judgement they are given additional time to rethink their answer. Our goal was to modify this approach by allowing participants to complete a block with the time pressure instruction, after a short break they would complete the same items at their own pace. We wanted to determine if this discontinuous presentation of the two blocks would result in significant rethinking or the participants would adopt the same way of responding regardless of instruction. To test this, we used a modified version of the base rate task. Participants ($N = 48$) were shown a single trait for a random person (e.g. Person A is tall), shortly after, they were shown information about the group composition from which that person was selected (e.g. The group contains 850 basketball players, and 150 physicians). Participants had to decide from which group was the person more likely chosen. Finally, they made confidence judgements for each decision. The traits were used to initiate a stereotypical response, while group composition provided information about mathematical probability. We constructed items in four experimental situations by manipulating congruence (of the intuitive and probability response) and base rate ratios (high or low). We predicted the usual influence of induced conflict: reduced confidence and prolonged response times regardless of measurement (first or second block). Three-way ANOVAs showed participants were systematically slower ($F(1,47) = 11.25, p < .01$) and less confident ($F(1,47) = 5.74, p < .05$) in the second block. A strong effect of conflict was present for both response times ($F(1,47) = 27.27, p < .01$) and confidence judgements ($F(1,47) = 30.53, p < .01$). As expected, participants were slower and less confident for conflict items for both blocks of measurements. The high conflict items (high ratio) induced a stronger effect than lower conflict items resulting in significant congruence by base rate ratio interactions for response times ($F(1,47) = 22.46, p < .01$) and confidence judgements ($F(1,47) = 21.85, p < .01$). These results in combination with a low proportion of response selection change and correlation based analyses confirm the prompt to rethink had little to no effect. We can conclude that simple repetition and familiarity does not lead to a significant change in the way participants approach this type of reasoning task. It seems that in order to observe changes in reasoning, like in the original research, the content of task has to remain in working memory until the chance to rethink is offered.

Keywords: base-rate neglect, metareasoning, metacognition, judgement of confidence

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Valnea Žauhar, Igor Bajšanski, Dražen Domijan*Department of psychology, Faculty of Humanities and Social Sciences, University of Rijeka, Croatia**Email: vzauhar@ffri.hr***The influence of category learning condition on metacognitive monitoring of categorization tasks**

Category learning can be an explicit process when the rule that defines category membership is available, or an implicit process of slowly associating members to categories when the rule is not known. The empirical question is whether the implicit process of learning categories can be facilitated by explicitly informing participants to direct their attention on relevant aspects of the category members in situation when the correct rule is not discovered.

In this study, we examined whether classification accuracy and metacognitive monitoring of that accuracy reflect the category learning condition. Participants were divided into four groups that learned complex categories in which category membership was defined by a three-dimensional rule. The stimuli were arrows presented on a background. Three relevant dimensions with respect to categorization rules were arrow orientation, arrow color, or arrow numerosity. The background color and shape were irrelevant dimensions. In the course of learning, the first group was informed about the correct rule, the second group was instructed to direct the attention to the arrows and to ignore the background, the third group was informed about three relevant dimensions, and the fourth group was not given any information. In the following prediction phase, participants were asked to predict the likelihood that they could correctly classify novel exemplars in the subsequent transfer phase at the category level by giving category learning judgments (CLJs). Finally, in the transfer phase, participants were asked to classify stimuli that varied in similarity to exemplars observed in the learning phase (old vs. similar vs. dissimilar) and to give confidence judgments about each classification.

The analyses were performed only for participants who acquired complete accuracy during learning. The results of the prediction phase showed that CLJs were not sensitive to learning conditions ($F(3,41) = 1.94, p > .05$). More precisely, participants who successfully learned correct category memberships predicted the likelihood that they could correctly classify novel exemplars in the transfer phase to be moderate ($M_s < 72\%$). As expected, in the transfer phase the results revealed significant learning condition $\times$ item similarity interactions for both accuracy ($F(6,82) = 3.33; p < .01$) and confidence ($F(6,82) = 10.31, p < .001$). Informing participants about relevant dimensions in three learning conditions resulted in equally high accuracy ($M_s < 82\%$) and confidence ($M_s < 86\%$) for three levels of item similarity. Conversely, accuracy and confidence decreased as a function of item similarity when participants were not given any information ($p_s < .05$, Accuracy: $M_{old} = 92.92\%$, $M_s = 82.42\%$, $M_{ds} = 74.17\%$; Confidence: $M_{old} = 92.41\%$, $M_s = 86.6\%$, $M_{ds} = 66.17\%$). The obtained results

suggest that once attention is directed toward relevant dimensions, even when participants are not explicitly informed about the correct rule, categorization performance can be facilitated.

Keywords: category learning, learning conditions, classification accuracy, metacognitive monitoring, item similarity

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Uloga perceptivnog bogatstva u slobodnoj reprodukciji

Perceptivno bogatstvo je konceptualno povezano sa konkretnošću reči. Novina ovog konstrukta leži u tome što uzima u obzir sve čulne modalitete kojima se neki pojam može iskusiti. Rezultati naših prethodnih istraživanja bili su u skladu sa teorijama višestrukog koda, prema kojima perceptivna informacija ubrzava obradu reči i utiče na tačnost reprodukcije u memorijskim zadacima. Međutim, druge teorijske interpretacije nisu mogle biti u potpunosti odbačene, jer neke kritične varijable nisu bile kontrolisane. S obzirom na navedeno, cilj ovog istraživanja bio je da istraži da li perceptivno bogatstvo poboljšava tačnost slobodne reprodukcije u paradigmi asocijativnog učenja parova reči, nakon što se kontroliše dostupnost konteksta reči i emocionalna valenca.

U istraživanju je učestvovalo 52 studenta psihologije raspoređenih u dve grupe. Jedna grupa je videla listu semantički i asocijativno povezanih parova reči, dok je druga videla listu nepovezanih parova. Obe liste su imale 41 par reči: 11 parova pojmova koji se mogu iskusiti sa malo čula, 11 parova parova pojmova koji se mogu iskusiti sa mnogo čula, 11 parova apstraktnih reči i osam filera. Mete su bile iste u obe liste, dok su znakovi bili različiti, tj. mogli su biti povezani ili nepovezani sa metom (vreme-istorija, cigla-kamen, cvet-pčela; požuda –istorija, veo-kamen, tastatura-pčela). Tri grupe reči bile su ujednačene po dužini reči, logaritmu frekvencije leme, generalnoj i vizuelnoj konkretnosti, dostupnosti konteksta, povezanosti i emocionalnoj valenci.

Primenili smo mešovite logit modele, gde je zavisna varijabla (tačnost reprodukcije) binarno kodirana, a fiksni faktori su bili povezanost (povezani i nepovezani parovi) i broj perceptivnih modaliteta (nula, malo i mnogo perceptivnih modaliteta). Najbolja podesnost (najmanji AIC i BIC) postignuta je za model koji uključuje slučajne faktore ispitanika i stimulusa, kao i oba fiksna faktora bez njihove interakcije.

Zabeležen je statistički značajan fiksni efekat povezanosti: ispitanici su bolje reprodukovali povezane nego nepovezane parove reči ($z = 2.78$, $p < .01$). Fiksni efekat perceptivnog bogatstva bio je

marginalno značajan između apstraktnih koncepata i onih koji se mogu iskusiti sa mnogo perceptivnih modaliteta (1.92, $p = .054$): ispitanici su tačnije reprodukovali koncepte koji se mogu iskusiti sa mnogo čula, nego apstraktne koncepte. Međutim, razlike između koncepata koji se mogu iskusiti sa mnogo i malo modaliteta kao i razlike između koncepata koji se mogu iskusiti sa malo modaliteta i apstraktnih reči nisu bile zabeležene.

Ovakvi nalazi su slični onima iz prethodnih istraživanja. S obzirom na to da su stimuli bili ujednačeni po velikom broju kontrolnih varijabli, naši rezultati sugerišu da bi perceptivna informacija mogla da ima izvestan, ograničen uticaj na slobodnu reprodukciju. U kontekstu paradigme asocijativnog učenja parova reči moglo bi se reći da takva informacija predstavlja dodatni memorijski kod koji pospešuje memorijske procese.

Ključne reči: slobodna reprodukcija, povezanost, perceptivno bogatstvo, mešoviti logit modeli.

The role of perceptual richness in free recall

Perceptual richness is conceptually tightly related to the word concreteness. The novelty of it lies in that all sensory modalities through which a concept could be perceptually experienced are taken into account. Our previous results were in accordance with the view of Multiple Coding Theories according to which perceptual information enhances word processing and accuracy in memory tasks. However, alternative interpretations were not fully ruled out, as the effects of some critical variables were not controlled for. In this research, we aimed to explore if the perceptual richness would enhance free recall in the paired associated learning paradigm, even when controlling for the effects that would allow for alternative interpretations, namely those of Context Availability Theory. Fifty-two psychology students were assigned to one of two experimental groups. One group was presented with a list containing semantically and associatively related word pairs, and the other group saw the list of unrelated word pairs. Each list contained 41 pairs: 11 that could be experienced with few sensory modalities, 11 that could be experienced with many sensory modalities, 11 pairs of abstract words, and eight fillers. Target words were identical across lists, whereas cues differed, being either related or unrelated to the target (time-history, brick-stone, flower-bee; lust-history, scarf-stone, keyboard-bee). Critical groups of words were matched for word length, (log) lemma frequency, general concreteness, visual imagery, context availability, relatedness and emotional valence. We applied mixed logit model analysis, where the dependent variable was binary coded and the fixed factors were the relatedness (related and unrelated word pairs) and the number of perceptual modalities (zero, few and many perceptual modalities). A nested model comparison revealed that the model with the random factor of participants and words and both fixed factors without interaction was the model with the best fit indices, smallest AIC and BIC.

Analysis revealed a statistically significant fixed effect of the relatedness, where participants were better in recalling related word pairs compared to unrelated words ($z = 2.78$, $p < .01$). Fixed effect of perceptual richness was marginally significant between zero and many modalities ($z = 1.92$, $p = .054$). However, neither the differences between zero and few modalities nor between few and many

modalities were significant. In other words, compared to abstract words, participants were better in reproducing concepts that could be experienced through many sensory modalities, but not few sensory modalities.

This pattern of results is similar to those previously reported. As words were matched for a large number of control variables, our results suggest that perceptual information could influence free recall. In the context of paired associated learning paradigm, it means that such information represents additional memory code that enhances memory processes.

Keywords: free recall, relatedness, perceptual richness, mixed logit models

Ličnost, kreativnost i inteligencija / Personality, creativity and intelligence

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Aesthetic art – realization as psycho-educational approach and stimulator to reduce of psychosomatic reactions among adolescents

Subject of the research is to prove that the applied art technique of drawing and painting as psychological support, will initiate changes in the personality of adolescents or reduce psychosomatic reactions (gastrointestinal and cardiovascular weakness) and increase interest in art. Psychosomatic reactions are relatively frequently associated with certain physical symptoms (cardiovascular changes: heart arrhythmia, hypertension, migraine pain, vertiginous, digestive and abdominal problems like vomiting, abdominal cramps and diarrhea) that can be short and long term and therefore need timely prophylaxis and rehabilitation. With timely detection of symptoms of psychosomatic reactions and prompt intervention with psychological support, the preservation of mental and physical health is enabled of adolescents. Art-realization as tehchnque for relief and self-relaxation, is an active, direct and psycho-educatiomal approach with long tearm effects. The sample consists of 40 subjects (20 male and 20 female) secondary school students from Bitola, who differ in terms of age 17 and 18 years old and type of education: high school and vocational. Measuring instruments: 1. Cornell Index-CI, a tool for tendency detection of anxiety states, hypochondria, phobia, hypersensitivity, depression, cardiovascular and gastrointestinal changes, conversions, impulsiveness, aggressiveness and paranoia. 2. The Self-assessment Questionnaire for adolescents, which measures attitudes toward change and the effects of applied art technique. In the questionnaire, statements are given in two subscales - A) Realationship to ourselves (self-control, self-respect, tolerance, and sense of satisfaction; and B) Effects of applied art self-expression, (reduction of tension, increased adaptability, confidence and interest in art). From the statistics of conclusion and the results of Cornell index (scale for gastrointestinal and cardiovascular weakness) the group is tested twice before and after applying of the art tehchnque. Method of repeated measures wihtin one sample is used and estimation of significance of differences between the correlated aritmetics areas. The difference is statistically significant $Z(1,96) = 2.34; p > .05$. A) While assessing the changes made to self, most of the participants, show that the greatest percentage of changes is present in the following elements: increased self-control and self-respect, improved tolerance, and the sense of satisfaction. B) While assessing the effects of the applied art self-expression, the most frequent is the effect in terms of tension reduction, show increased

adaptability and confidence and have increased interest in art. Effects of art self-expression, as such are very often present and equally represented among male and female students in both types of education. Art self-realization as psycho-educational approach and stimulator leads to reduction of psychosomatic reactions, and to increase the level of aesthetic development and interest in art among adolescents.

Keywords: psychosomatic reactions, art-tehchnque, adolescents

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Diversity of international scientific production of Serbian authors in psychology

During the past ten years, the number of articles published by Serbian authors in international psychology journals has increased significantly. This study aims to investigate characteristics of Serbian international scientific production in the field of psychology in the context of diversity and relations among journals in which those publications have appeared.

The total of 547 articles with Serbian authors' affiliation published from 2007 to 2016 in psychology journals referred in Scopus database was selected. In order to explore changes during the time, this sample of articles was divided into two five-year periods. Journals metadata and all cited references were extracted from the articles. Herfindahl index was used as a measure of diversity of journals. This measure is based on the sum of proportions of articles published in each of the selected journals. Relations among journals were analyzed using the bibliographic coupling technique and visualized with VOSviewer - visualization software for bibliographic data (<http://www.vosviewer.com/>). Additionally, characteristics of the most common journals in which Serbian authors publish their articles were analyzed. Analyses were applied separately to both samples of articles.

Results show that in the first observed period almost 50% of the articles were published in Psihologija, the only national psychology journal referred in WoS. About 20% of the remaining articles were published in regional journals without impact factors. In the second period, the role of one particular national journal in international visibility somewhat decreased, which consequently dropped Herfindahl index from 0.24 to 0.06. The maps of journals show hardly interpretative structure of relations among journals, with the central position of Psihologija journal in both periods. In the second period, a larger number of journals was involved in scientific communication, especially those from the fields of individual differences, psychopathology and computer-related behavior. It is noticeable that the majority of these journals have significantly increased in size in the observed

period. Despite of this, regional journals still play rather significant role in knowledge exchange and international visibility of Serbian psychology.

Results suggest that diversity of journals in which Serbian authors published increased during the past ten years. However, Serbian scientific production in the field of psychology still relies heavily on national and regional communication channels.

Keywords: psychology journals, psychology in Serbia, Scopus database, Herfindahl index, bibliographic mapping

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On the edge of art: Effect of name presence and familiarity on aesthetic preferences

According to a recent model of aesthetic experience by Leder and his colleagues aesthetic perceptions depend on two main sets of processes. Aesthetic judgments to a large degree depend on prior knowledge, expertise and experience while aesthetic emotion represents “raw” experience. In a previous study we found name presence increased aesthetic judgments of paintings by anonymous artists. This finding is consistent with findings of other researchers in which participants perceive works of art as more valuable if attributed to a named author (authentic or otherwise). The goal of the present study was to use the highest and lowest judged paintings from the previous study in order to determine whether name presence and fluency was a significant factor for paintings on the extremes of aesthetic experience. We conducted an online 2 (high/low paintings) x 3 (artist name: no name present, famous names present [van Gogh and DaVinci], and less known names present [Thomas Cole and John Constable]) experiment. Participants (N = 441) were randomly assigned to one of the six experimental conditions, and it is important to note that the artworks were created by anonymous artists and are not famous pieces of art. We hypothesized name presence would influence aesthetic judgments with famous names increasing the judgments to a larger extent than the less known names. Previous ratings of the sets of paintings predictably had a strong effect on judgments ($F(1,435) = 73.73, p < .01$) with the higher rated paintings from the previous study receiving higher scores in the current study regardless of name presence. More importantly there was a slight effect of artist name on judgments ($F(2,435) = 3.71, p < .05$). Post hoc analysis shows higher judgments for the famous name group. Painting rating by artist name interaction was not significant ($F(2,435) = 2.73, p = .07$) even though there is a trend in which artist name presence has a lower influence on judgments for low rated paintings compared to high rated paintings. Since the sample was dominantly female (77%) the same analysis was conducted only for

the female participants. The marginal interaction effect from the last analysis is significant for the female sample ($F(2,333) = 4.51, p < .05$). For the female sample name presence decreased judgments for low rated paintings while increasing them for the high rated paintings. Results show a marginal effect of name presence and fluency on aesthetic judgments for very high and very low rated paintings. The effect of name information is probably most pronounced for moderately attractive works of art. We could conclude there is an interaction between aesthetic emotion and knowledge which impacts aesthetic experiences. The study poses more questions and implications for further research to better understand the complexities of aesthetic experiences.

Keywords: aesthetic experience, aesthetic perception, familiarity effect

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Da li je autentičnost pozitivna crta ličnosti per se?

Teorijski je autentičnost definisana kao pozitivna crta ličnosti, odnosno kao osnova mentalnog zdravlja, pokazatelj psihičkog blagostanja i odlika adaptivne i funkcionalne ličnosti. Cilj istraživanja je bio da se ispituju dimenzije autentičnosti u odnosu sa pozitivnim i negativnim afektom, samopouzdanjem, psihološkim distresom i psihološkim blagostanjem kao pokazateljima mentalnog zdravlja. Uzorak su činili studenti ($N = 206$; 93.2% ženskog pola) Univerziteta u Novom Sadu. Instrumenti koji su se koristili su bili Skala autentičnosti (Grijak, 2017), Skala samopouzdanja (Rosenberg, 1965), PANAS (Watson et al., 1988) i MHI-38 (Mental Health Inventory – 38; Veit & Ware, 1983). Eksplorativnom faktorskom analizom su izdvojena tri faktora autentičnosti koja objašnjavaju 55.70% varijanse – autentični život, prihvatanje spoljašnjeg uticaja i samotudenost. Konfirmatornom faktorskom analizom je potvrđena dvodimenzionalna latentna struktura autentičnosti – adaptivna i maladaptivna autentičnost ($CFI = .98$; $RMSEA = .05$). Maladaptivna autentičnost se najbolje odražava u faktorima samotudenost i prihvatanje spoljašnjeg uticaja, a adaptivna autentičnost u autentičnom životu. Maladaptivna autentičnost je dobar prediktor visokog psihološkog distresa ($\beta = .18$; $p < .01$) i niskog psihološkog blagostanja ($\beta = -.17$; $p < .05$). Dimenzija adaptivne autentičnosti je u pozitivnoj korelaciji sa samopouzdanjem ($r = .32$; $p < .05$), ali nije povezana sa varijablama mentalnog zdravlja. Zaključak istraživanja je da se autentičnost sastoji iz tri faktora - autentični život, prihvatanje spoljašnjeg uticaja i samotudenost, u kojima se reflektuju dve dimenzije – maladaptivna i adaptivna autentičnost. Kako rezultati pokazuju da autentičnost nije pozitivna crta ličnosti per se, opšti zaključak je da je neophodno uzeti u obzir sve faktore i dimenzije autentičnosti pre nego što se stavi u kontekst individualnog mentalnog zdravlja.

Ključne reči: autentičnost, maladaptivna, adaptivna, mentalno zdravlje

Is the authenticity positive personality trait *per se*?

In theory, authenticity is defined as positive personality trait, rather as the basis of mental health, an indicator of psychological well-being and characteristic of an adaptive and functioning personality. The aim of this study was to examine the dimensions of authenticity in relation to the positive and negative affect, self-esteem, psychological distress and psychological well-being as indicators of mental health. The aim of this study was to examine the dimensions of authenticity in relation to the positive and negative affect, self-esteem, psychological distress and psychological well-being. The sample consisted of students ($n = 206$; 93.2% female), from University of Novi Sad. Instruments that have been used were the Authenticity scale (Grijak, 2017), the Scale of self-confidence (Rosenberg, 1965), PANAS (Watson et al., 1988) and MHI-38 (Mental Health Inventory - 38; Veit & Ware 1983). Exploratory factor analysis isolated three factors of authenticity, which explain 55.70% of the variance - authentic life, and excepting of external influence and self-alienation. Confirmatory factor analysis confirmed the two-dimensional latent structure of the authenticity - the adaptive and maladaptive authenticity ($CFI = .98$; $RMSE = .05$). Maladaptive authenticity is best reflected in factors of self-alienation and acceptance of external influence, and adaptive authenticity in an authentic life. Maladaptive authenticity is a good predictor of a psychological distress ($\beta = .18$, $p < .01$) and a low psychological well-being ($\beta = -.17$; $p < .05$). Adaptive authenticity is positively correlated with confidence ($r = .32$, $p < .05$), but not associated with the variables of the mental health.

The conclusion of the research is that authenticity is consisted of three factors - authentic life, excepting of external influence and self-alienation and that there are two dimensions that are reflected in those factors - maladaptive and adaptive authenticity. As results showed that authenticity is not positive personality traits *per se*, the overall conclusion is that it is necessary to consider all factors and dimensions of authenticity before we put it into the context of individual mental health.

Keywords: authenticity, maladaptive, adaptive, mental health

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Kreativnost i kontradikcije: Kako ambivalentne slike utiču na kreativnu produkciju?

Po psihodinamskim tumačenjima, poreklo kreativnosti treba tražiti u intrapsihičkom konfliktu, a sam čin stvaranja može se objasniti mehanizmom sublimacije. Savremeni autori produbljuju uvide o kreativnom procesu analizirajući homospacijalno mišljenje kako bi objasnili ukrštanje udaljenih

asocijativnih elemenata koji su suprotstavljeni u funkciji pojave novih ideja. Postavlja se pitanje kakvu ulogu imaju emocije u povezivanju i kombinovanju različitih asocijacija i da li se ukrštanje zasniva isključivo na pretpostavkama semantičke raznorodnosti, ili pak (ne)kongruentnost emocionalnog doživljaja može imati značajne efekte na kreativnu produkciju. Cilj ovog istraživanja je da ispita da li postoji razlika između sadržaja koji izazivaju kongruentne i nekongruentne emocionalne doživljaje u pogledu njihovog delovanja na kreativnu produkciju. Stepem kongruentnosti emocionalnog doživljaja koji sadržaj izaziva kontrolisan je na dimenzijama valence i pobuđenosti. Eksperiment je izveden uz učešće 43 studenta Fakulteta dramskih umetnosti u Beograda, a za vizuelnu stimulaciju korišćena je IAPS baza (Interactive Affective Picture System): ukrštanjem 16 izabranih fotografija napravljeno je 28 superponiranih vizuelnih kompozicija (tzv. duplih ekspozicija). Vrednosti valence i pobuđenosti sistematski su varirane, a uzorak se sastojao od kompozicija izrazitog, umerenog i odsutnog kontrasta kako na dimenziji valence tako i pobuđenosti, kao i kompozicija koje su u potpunosti neutralne odnosno pretpostavljaju srednje vrednosti na obe dimenzije emocionalnog doživljaja. Ispitanicima su stimuli izlagani nasumičnim redosledom, i od njih je traženo da za svaku kompoziciju smisle kreativan naslov. Nakon toga, mera kreativnosti svakog naslova dobijena je izračunavanjem koeficijenta koji je zasnovan na proceni učestalosti i intencionalnosti odgovora. Rezultati pokazuju statistički značajne efekte kontrasta na dimenziji valence [$F(3,24) = 6.11; p < .01$], ali ne i pobuđenosti. Superponirane kompozicije u potpunosti kongruentne po valenci (sasvim prijatne ili sasvim neprijatne) rezultuju manje kreativnim naslovima no izrazito ili umereno ambivalentne kompozicije, ili pak one u kojima su ukrštene slike neutralnih vrednosti. Rezultati proširuju uvide o uticaju emocionalnog doživljaja na kreativnu produkciju, sugerišući nova pitanja o dejstvu ambivalentnih sadržaja na kreativnost. U okviru istraživanja predložen je jedinstven metodološki pristup uz primenu pouzdanog i objektivnog merenja putem konstruisanog koeficijenta kreativnosti. Sledstveno, stvoreni su uslovi za dalje ispitivanje uloge emocija u generativnim procesima.

Ključne reči: kreativnost, emocionalni doživljaj, valenca, kontrast, superponirane fotografije

Creativity and contradictions: How ambivalent images affect the creative production?

According to the psychodynamic interpretation, the origin of creativity should be sought in intrapsychic conflict, and the act of creation can be explained by the sublimation. Contemporary authors deepen the insights about creative process by analyzing the homospatial thinking, in order to explain connecting of remote associative elements which could be opposed in function of ideas emergence. The question is what is the role of emotions in connecting and combining different associations and whether the juxtaposition is based solely on semantic heterogeneity, or the (in)congruence of emotional experience can have significant effects on the creative production. The aim of this study was to examine a difference between content that cause congruent and incongruent emotional experiences in terms of their effects on creative production. The degree of

congruence in emotional experience was controlled by the dimensions of valence and arousal. The experiment was performed with 43 students of Faculty of Drama in Belgrade. Visual stimuli were selected from IAPS database (Interactive Affective Picture System): 28 superimposed images were generated by crossing 16 selected photos. The values of valence and arousal were systematically varied, and the sample was consisted of photos which were extreme, moderate and absent in contrast (on dimensions of valence and arousal), including neutral images with balanced and moderated values of both dimensions. Subjects were randomly exposed to stimuli, and they were asked to generate the creative title for each image. Thereafter, measurement of title creativity was derived by calculating the coefficient based on response frequency and intentionality. The results show a statistically significant effect of contrast in dimension of valence [$F(3,24) = 6.11; p < .01$], but not arousal as well. Superimposed images which cause congruent emotional experience regarding the valence dimension (completely pleasant or completely unpleasant) resulted in less creative titles compared to the highly or moderately ambivalent images, or even those with neutral values. The results broaden the insights on the role of emotional experience in creative production, suggesting new questions about the effects of ambivalent content on creativity. A unique methodological approach has been proposed within the research, with the application of reliable and objective measurement through the constructed creativity coefficient. Consequently, the conditions for further examination of the role of emotions in generative processes have been created.

Keywords: creativity, emotional experience, valence, contrast, superimposed images

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Relacije između implicitnih teorija inteligencije, matematičkog self-koncepta i matematičkog postignuća kod učenika srednje škole

Rezultati dosadašnjih istraživanja ukazuju na to da ako učenik veruje da je nivo inteligencije moguće promeniti, to može, za uzvrat, dovesti do većeg truda i boljih rezultata u školi. Implicitne teorije o promenljivosti inteligencije se odnose na uverenje da je inteligencija nepromenljivi entitet (entitetsko stanovište), ili promenljivi kvalitet, koji može biti povećan ulaganjem truda i napora (inkrementalno stanovište). Matematički self-koncept je deo akademskog self-koncepta, koji se odnosi na uverenja učenika o tome kako procenjuju sopstvene kompetencije iz matematike. Imajući u vidu to da su dečaci bolji u matematici od devojčica, kao i to da su više od devojčica pristalice entitetskih stanovišta o promenljivosti inteligencije, čini se da relacije ispitivanih konstrukata u mnogome zavise od pola. Dodatno, odabir srednje škole i zastupljenost matematike u kurikulumima različitih vrsta srednje

škole, mogu biti povezani sa time koliko se učenik ulaže u nastavu matematike i kako sebe opaža u kontekstu matematičkog postignuća. Cilj istraživanja je ispitivanje povezanosti implicitnih uverenja o promenljivosti inteligencije, samoprocene inteligencije i demografskih obeležja sa matematičkim self-konceptom i uspehom iz matematike. Uzorak istraživanja od 504 ispitanika (276 ženskog pola) predstavljaju učenici srednjih škola sa teritorije Srbije, prosečne starosti 16.7 godina. Instrumenti primenjeni u istraživanju su: Skala implicitnih teorija inteligencije (ITIS), sa merama Inkrementalne i Entitetske teorije inteligencije, i jednodimenzionalna Skala matematičkog self-koncepta (MSC) namenjena proceni uverenja učenika o tome koliko su dobri u matematici. Uspeh iz matematike je izražen prosečnom ocenom iz matematike sa polugodišta i kraja školske godine. Kategorička mera samoprocene inteligencije je dobijena pomoću jednog ajtema ("Smatram da je moja inteligencija") Likertovog tipa, na koji su učenici odgovarali na skali od 1 (ispod proseka), preko 2 (prosečna) do 3 (iznad proseka). Primenjena je multivarijatna analiza kovarijanse, gde su nezavisne varijable bile pol, vrsta srednje škole i samoprocena intelektualnih sposobnosti, dok su kovarijeteti skorovi na skalama entitetske i inkrementalne teorije inteligencije, a zavisne varijable su matematički self-koncept i uspeh iz matematike. Rezultati ukazuju na značajan efekat inkrementalnih stanovišta o promenljivosti inteligencije na matematički self-koncept ($\beta = 2.68$, $p < .01$) i uspeh iz matematike ($\beta = 0.22$, $p < .01$). Od demografskih varijabli značajne relacije sa obe kriterijumske varijable ostvaruju pol, vrsta srednje škole i samoprocena intelektualnih sposobnosti. S obzirom na to da je za većinu učenika matematika jedan od najzahtevnijih predmeta i da generalno postoji negativan stav prema matematici, isticanje značaja koji imaju implicitna uverenja o promenljivosti inteligencije na matematički self-koncept i uspeh u matematici, može biti od velike važnosti u radu školskog psihologa sa učenicima srednje škole.

Ključne reči: implicitne teorije inteligencije, matematički self-koncept, matematičko postignuće, srednja škola

Relations between implicit theories of intelligence, math self-concept and math achievement in high school

The results of previous research indicate that if a student believes the level of intelligence can be changed, that can lead to a greater effort and better results in school. Implicit theories of the changeability of intelligence refer to the belief that intelligence is an absolute entity (the entity theory) or a variable quality, that can be increased by making effort (the incremental theory). Math self-concept is part of the academic self-concept, which refers to beliefs about how students assess their own competencies in the mathematics. Due to boys are better in math than girls, and that they are more frequently supporters of the entity theories about changeability of intelligence, it seems that relations of these constructs are gender-dependent. Additionally, highschool choice and the representation of math in the curricula of different highschool types, can be correlated to the level of student's investment in math lessons and how he perceives himself in the context of math achievement. The aim of this research is to investigate correlation between implicit beliefs about the

changeability of intelligence, self-assessment of intelligence and demographic characteristics with math self-concept and math achievement. The sample consisted of 504 high school students (276 females) from Serbia, with an average age of 16.7 years. The instruments used were: The Implicit Theories of Intelligence Scale (ITIS), with the measurements of the incremental and the entity theory of intelligence, and one-dimensional Math self-concept scale (MSC), designed for student's assessment of how good they believe they are in math. The math achievement was operationalized as an average score in math at the end of the semester and at the end of the school year. Categorical measurement of the self-assessed intelligence was obtained by a Likert-type single item ("I think it's my intelligence is"), where students answered on a scale from 1 (below average), over 2 (average) to 3 (above average). The multivariate analysis of covariance was applied, where the independent variables were the gender, the type of high school and the self-assessment of intellectual abilities, while covariates were scores on the incremental and entity intelligence theory scales. Dependent variables were math self-concept and success in math. Results imply a significant effect of the incremental theories of intelligence on math self-concept ($\beta = 2.68$, $p < .01$), and math achievement ($\beta = 0.22$, $p < .01$). The demographic variables that had significant correlations with both of the criteria were gender, type of high school and self-assessment of intellectual abilities. Having in mind that for most of the student's math is one of the most complex subjects, and that they generally have a negative attitude about it, emphasizing the importance of implicit beliefs about intelligence changeability for math self-concept and math achievement can be crucial in the work of highschool psychologist.

Keywords: implicit theories of intelligence, mathematical self-concept, mathematical achievement, high school

Percepcija / Perception

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Complexity modulates aesthetical preference of curviness

Recent studies consistently showed that curved objects were preferred over angular ones. However, most of these studies lacked control on the complexity of the stimuli. In order to examine influence of complexity on the shape preference, we generated 70 curved-angular geometrical pairs of the stimuli with different complexity. 104 participants took part in the pilot experiment and rated randomly chosen stimuli on three scales: curvature, complexity and symmetry (each stimulus was rated by 26-28 participants).

32 participants took part in the main experiment. Based on results of pilot study, 33 curved-angular stimuli pairs were selected, with criteria of no differences on symmetry and complexity rates but with significant differences on curviness rates within the pair. Additionally, three groups of stimuli have been made based on between-pair differences on complexity rates. The task was to rate beauty of successive presented figures on 7-point scale. The order of the figure appearance was randomized.

ANOVA showed significant main effect of complexity ($F(2,62) = 21.29, p < .001$) and significant complexity x curviness interaction ($F(2,62) = 17.23, p < .001$). Although the main effect of curviness was not statistically significant, differences between curved and angular figures have appeared on Bonferroni post hoc tests when we introduced complexity into analysis: (1) for simple objects angularity was preferred over curviness, (2) for medium complex objects no differences between angularity and curviness were obtained and (3) for more complex objects curviness was preferred. Additionally, preference rates increased with increasing object's complexity. Results of our experiment have provided a new insight into the field of object shape preference and showed that aesthetical preference of curviness can be modulated by object complexity.

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Keywords: complexity, curviness, shape, aesthetical preference, beauty

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Facial expression categorization of unfamiliar and familiar faces

Studies that investigated the effect of the familiarity factor on processing of facial expressions provided additional arguments for interactive processing of face identity and expressions. Most of these studies investigated whether the expressions influence familiarity rating. According to our knowledge only one study examined the effect of familiarity on facial expressions categorization. Categorization of happy expression were faster for familiar faces compared to unfamiliar while there were no differences in reaction times for disgust. This study only used two expressions. We wanted to investigate the categorization of other expressions as well.

In order to examine the effect of familiarity on expression categorization, we conducted two experiments. Overall, 30 students of psychology took part in experiments. In the Exp.1 participants categorized the facial expressions of unfamiliar faces (that were seen for the first time in the experiment). Their task was to choose one of six possible expressions (surprise, happiness, anger, disgust, neutral or sadness). In the Exp.2 participants have the same task but faces were previously “learned”. In the learning phase, each of the photographs of 10 people were presented on the screen 10 times for 5s with the neutral facial expression.

Data were analyzed using Generalized estimating equations (appropriate for analyzing repeated measures binary data). Accuracy in both experiments were high, namely 90% in Exp.1 and 92.4% in the Exp.2. Further analysis showed the statistically significant differences between expressions regarding to accuracy of categorization (Wald $\chi^2(5) = 99.77$ $p < .01$ Exp.1 and Wald $\chi^2(5) = 41.33$ $p < .01$ in Exp.2). Bonferroni post hoc test showed that in Exp.1 happiness and surprise were recognized the most easily while anger and disgust were recognized worse comparing to other expressions. Similar results were obtained in Exp.2. Happiness were equally well recognized as neutral and surprise and better than other expressions. Again, accuracy for disgust and anger were the lowest and it didn't only differ from accuracy for sadness. Additionally, differences between particular facial expression in RTs followed the trend obtained for accuracy – the shorter RTs were obtained for expression of happiness and the longest for anger and disgust. Finally, comparing the average RTs between two experiments we did not obtain statistically significant difference, although the average RTs were smaller in the Exp.2.

Our experiments did not confirm the results of the previous studies. We obtained the similar pattern of the results regardless of the level of familiarity. The results of our study may suggest that those

expressions that include obvious mouth movement (such as surprise and happy expression with the smile) are more distinctive and therefore easier to recognize.

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Keywords: facial expressions, face recognition, categorization, familiarity factor

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Go ask Alice, when she's ten feet tall – anisotropy of perceived size

Size-distance invariance hypothesis (SDIH) claims that perceived distance is related to perceived size. According to one version of SDIH there is linear relation between perceived size and distance, while according to other this relation can be exponential. On the other hand, some phenomena contradict SDIH predictions, for example in Moon illusion people perceive horizon Moon as larger and closer, although according to SDIH and flattened sky dome it should be perceived as larger and further. In our previous studies we showed that perceived distance is anisotropic, in reduced cue situation, meaning that people perceive vertical distances as longer than physically equal horizontal ones. According to size-distance invariance hypothesis we would expect that perceived distance anisotropy must imply perceived size anisotropy. We tried to test this SDIH prediction in two experiments. In both experiments participants were sitting in an upright position and changed viewing direction by moving their head, which implies change in vestibular information and proprioception from neck muscles. First experiment was performed in a dark room, with two dim light stimuli positioned on horizontal and vertical direction. Length of the stimuli was 7cm or 14cm and they were positioned on one of the three distances, 1m, 3m or 5m from the observer. Task for 16 participants was to estimate size of stimuli, horizontal and vertical one, by choosing one of the columns of staircase-like object which they held in their hands. Second experiment was similar like previous, only it was performed in virtual reality with Oculus Rift DK2 equipment. There were also two stimuli, with 20cm or 40cm in length, positioned on horizontal and vertical direction, on 1m, 3m or 5m distances from the observer. Task for 15 participants was to equalize length of two stimuli, positioned on same distance from the observer, but on different viewing direction, by using keyboard arrows. Results from the first experiment show significant effect of stimuli size (smaller objects are perceived as smaller), distance (further objects are perceived as smaller), but did not show any effect of direction. This means that there is no difference in perceived sizes of stimuli on various viewing directions. Results from the second experiment show significant effect of size

(smaller objects are perceived as smaller), distance (further objects are perceived as smaller) and direction ($F(1,14) = 5.623, p < .05$). Effect of direction gained in virtual reality shows that people tend to perceive vertical objects as shorter in comparison to physically equal horizontal objects. Taken together results of both experiments show that although perceived distance is anisotropic, perceived size is either isotropic or anisotropic in opposite direction than Size-distance invariance hypothesis would predict.

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Keywords: size-distance invariance hypothesis, perceived distance anisotropy, perceived size isotropy, size and distance matches

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Dolina jeze: dopadljivost i socijalna distanca

Japanski robotičar, Masahiro Mori, pretpostavio je da što robot više podseća na ljude više će nam se i dopadati. Ali, baš pre nego što izgled robota dostigne 100% ljudskih karakteristika, dopadljivost značajno opada i takav robot nam izgleda jezivo. Mori je ovaj pad u funkciji dopadljivosti nazvao "Dolina jeze" (UV). Istraživači su predložili nekoliko objašnjenja ovog fenomena, a neka od njih su nedoslednost u realističnosti, izbegavanje patogena, narušavanje estetskih normi, problem kategorizacije objekta, itd. Primere za postojanje UV efekta pronalazimo među robotima, 3D kompjuterskim animacijama, lutkama, ali i vampirima i zombijima. Razumevanje UV efekta potencijalno može dovesti do unapređenja robotike kao i interakcije između čoveka i robota.

Brojne studije su istraživale UV fenomen ali i dalje ne postoji saglasnost oko toga koja je najadekvatnija mera za ispitivanje ovog efekta. Stoga smo u ovom istraživanju pokušali da uvedemo novu meru, socijalnu distancu (koristeći skalu inspirisanu Bogardusovom originalnom skalom socijalne distance), sa namerom da ispitamo i socijalni aspekt fenomena.

U ovom istraživanju je učestvovalo 16 studenata psihologije (5 muškog pola). Stimulusi su bila četiri para lica (2 muška i 2 ženska), a svaki par se sastojao od ljudskog lica i lica robota. Parovi stimulusa su morfovani na 8 nivoa. Ispitanici su u prvom eksperimentu procenjivali stimuluse na 7-stepenoj skali dopadljivosti. Rezultati ovog istraživanja ukazuju na to da što stimulus ima veći procenat ljudskih karakteristika, ispitanicima se više dopada ($F(9,7) = 24.132, p < .001, MSE = 53.108, \eta^2 = 0.617$). Ovaj

trend nije linearan, te baš pre nego što lice robota postane ljudsko (88% ljudskih karakteristika), merimo značajan pad na skali dopadljivosti ($t(15) = 14.091, p < .001$). Ukoliko uporedimo lica ljudi, robota i morfirana lica, možemo videti da se ispitanicima, skladu sa Morijevim očekivanjima, najviše dopadaju ljudska lica.

U drugom eksperimentu smo uveli socijalnu distancu kao meru za UV i ponovili smo proceduru iz prvog eksperimenta. Faktor morfiranja je bio značajan $F(3,13) = 11.972, p < .002, MSE = 53.085, \eta^2 = 0.446$). Kao u prvom eksperimentu, i u slučaju socijalne distance, merimo UV kod morfa sa maksimalnim brojem ljudskih karakteristika ($t(15) = 8.944, p < .001$). Rezultati pokazuju da se socijalna distanca snižava što morf poprima veći procenat ljudskih karakteristika. Ispitanici imaju najnižu socijalnu distancu za originalna ljudska lica.

Rezultati pokazuju da su dve mere: dopadljivost i socijalna distanca, značajno različite ($F(1,15) = 12.771, p = .003, MSE = 37.812, \eta^2 = 0.342$). Ipak, iako su ove dve mere različite, UV efekat merimo i na dopadljivosti i na socijalnoj distanci. Može se pretpostaviti da UV, pored perceptivnog aspekta, uključuje i socijalni aspekt.

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Ključne reči: dolina jeze, dopadljivost, socijalna distanca, morfiranje

Uncanny valley: Likability vs. social distance

Japanese roboticist, Masahiro Mori, observed that as robots start to intensely resemble humans (such as Honda's Asimo or Sony's Qrio), they become more likable. However, there is a pronounced decrease in likability at a point when their appearance, almost, but not exactly, resembles human, and then they start to seem eerie (such as Kokoro's Simroid). Mori named this dip in likability function Uncanny Valley (UV). Several explanations of the phenomenon have been proposed such as realism inconsistency, pathogen avoidance, violation of aesthetic norms and problem of object categorization. Examples of UV can be found in robotics, 3D computer animations, lifelike dolls, art etc. Understanding of the UV phenomenon could help human-robots interface and lead to the development of more effective artificial characters.

UV was tested in many studies but there is still a disagreement about adequate measure for the effect. Therefore, we tested a new measure, Social Distance, with a view to also explore the social aspect of the phenomenon.

Participants in both experiments were the same 16 Psychology students (5 males). Stimuli were four pairs of faces (2 male & 2 female), each pair had a human and robot faces and they were morphed on 8 levels. In the first experiment participants estimated Likability of presented face on a 7-point scale. Likability increases as more human's characteristics were added ($F(9,7) = 24.132, p < .001, MSE = 53.108, \eta^2 = 0.617$). However, this trend was not linear. When the morph had mostly human characteristics (88% of human appearance) we measured a predicted dip in Likability ($t(15) = 14.091, p$

< .001). Participants prefer human faces in comparison to morphed human and robot faces. These findings are in agreement with Mori's expectations.

In the second experiment we introduced Social Distance (using an adapted scale inspired by the Bogardus original instrument) and repeated the whole procedure from the first experiment. Morphing degree was again significant when measured using Social Distance ($F(3,13) = 11.972$, $p < .002$, $MSE = 53.085$, $\eta^2 = 0.446$). In this experiment, we measure UV between the last morphed face and human face ($t(15) = 8.944$, $p < .001$). As robot acquired more human features, Social Distance became lower. Compared to human faces, participants exhibit increased Social Distance for morphed faces. Likability and Social Distance were significantly different ($F(1,15) = 12.771$, $p = .003$, $MSE = 37.812$, $\eta^2 = 0.342$). Our results suggest that Uncanny Valley, apart from perceptual aspect, also includes social side of the phenomenon. Still UV is well observed on both measures: Likability and Social Distance.

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Keywords: uncanny valley, likability, social distance, morphing

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Kontrast i asimilacija svetline: značaj perifernih mehanizama

Kontrast i asimilacija svetline su fenomeni koji proizvode suprotne perceptualne efekte. Usled kontrasta, svetlina površine (tj. mete) biva izmenjena u smeru koji je suprotan reflektansi površina koje je okružuju (induktori). Zbog toga, siva meta koja je okružena crnim induktorima izgleda svetlije od fizički identične sive mete koja je okružena belim induktorima. Suprotno se dešava kod asimilacije svetline. Svetlina mete biva izmenjena u smeru reflektanse induktora, čineći da siva meta deluje tamnije kada je okružena crnim induktorima.

Prethodna istraživanja su pokazala da su spacijalna frekvenca induktora i razlika reflektanse između mete i induktora najznačajniji aspekti stimulacije koji uslovljavaju pojavu ova dva fenomena. Kada je spacijalna frekvenca induktora visoka i kada je razlika reflektanse meta i induktora mala, dolazi do efekta asimilacije. Ovi rezultati ukazuju da periferni mehanizmi (tj. oni koji su bazirani na aktivnosti mrežnjače) stoje u osnovi ova dva fenomena. Međutim, rezultati novijih istraživanja su pokazali da

identična proksimalna stimulacija može proizvesti i kontrast i asimilaciju u zavisnosti od opažene dubine između mete i induktora. Kada su induktori opaženi tako da stoje u istoj ravni sa metom (tj. da nema dubine), dolazi do asimilacije svetline. Ovi rezultati ukazuju da periferni mehanizmi ne mogu biti jedina osnova ovih fenomena već da i centralni mehanizmi mogu biti uključeni.

Cilj ovog istraživanja bio je da ispita glavne efekte i interakcije perifernih faktora u jednom tipu eksperimenta, uz kontrolu dužine ekspozicije (3s) i vizuelnih uglova mete i induktora. Spacijalna frekvenca induktora imala je tri nivoa, dok je razlika u reflektansi testirana na šest nivoa reflektansi: 2 mete (12 i 28%) x 3 induktora (7, 20 i 33%).

Rezultati su pokazali značajan efekat reflektanse mete ($F(1,9) = 466.877$, $p < .001$, $\eta^2 = 0.981$) i induktora ($F(2,18) = 27.893$, $p < .001$, $\eta^2 = 0.756$), kao i njihovu interakciju ($F(2,18) = 7.733$, $p = .004$, $\eta^2 = .462$). Glavni efekat spacijalne frekvence je takođe značajan ($F(2,18) = 4.172$, $p = .032$, $\eta^2 = .317$), kao i njegova interakcija sa reflektansom induktora ($F(4,36) = 4.837$, $p = .003$, $\eta^2 = .350$). U skladu sa očekivanjima, velika razlika reflektanse mete i induktora proizvela je efekt kontrasta. Međutim, kada je ova razlika bila mala, do efekta asimilacije došlo je samo u 50% očekivanih situacija. Spacijalna frekvenca proizvela je očekivani efekat: najveći efekat u smeru kontrasta dobijen je kada je spacijalna frekvenca bila niska, dok je visoka spacijalna frekvenca proizvela najveći efekat asimilacije. Uloga centralnih i perifernih mehanizama će biti diskutovana u svetlu dobijenih rezultata.

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Ključne reči: kontrast svetline, asimilacija svetline, spacijalna frekvenca, diferencijalna stimulacija

Lightness contrast and assimilation: Pheripherall mechanisms revisited

Lightness contrast and assimilation are phenomena that produce opposite perceptual effects. Due to lightness contrast, lightness of a surface (target) is changed in the direction opposite to the reflectance of the neighboring surfaces (inducers). Therefore, a grey target surrounded by black inducers appears lighter than the physically same target surrounded by white inducers. In lightness assimilation, opposite occurs. Lightness of a target is changed in the direction that is similar to the reflectance of the inducers, influencing a grey target to appear darker when surrounded by black inducers.

Previous studies showed that the spatial frequency of inducers and the reflectance difference between the target and the inducers were the most important aspect of stimulation that favor the occurrence of one of two phenomena. When the spatial frequency of inducers is high and the reflectance difference between the targets and the inducers is low, assimilation should be observed. These results indicate that peripheral mechanisms (i.e. based on retinal activity) underlie these phenomena. However, recent studies showed that the same proximal stimulation could produce contrast or assimilation depending on perceived depth between the target and the inducers. When the inducers are perceived to be coplanar to the target, lightness assimilation occurs. These results

indicate that peripheral mechanisms could not be the only basis for these phenomena but some central mechanisms might be also involved.

The goal of our study was to test the main effects and interactions of peripheral factors in a single type of experiment, while controlling for the exposure time (3s) and visual angles of targets and inducers. The spatial frequency of the inducers had 3 levels and the reflectance difference was tested on six levels: 2 targets (12 and 28%) x 3 inducers (7, 20 and 33%) reflectance levels.

Results showed the significant main effects of target ($F(1,9) = 466.877$, $p < .001$, $\eta^2 = 0.981$) and inducers ($F(2,18) = 27.893$, $p < .001$, $\eta^2 = 0.756$) reflectance, as well as their interaction ($F(2,18) = 7.733$, $p = .004$, $\eta^2 = .462$). The main effect of spatial frequency was also significant ($F(2,18) = 4.172$, $p = .032$, $\eta^2 = .317$), as well as its interaction with the reflectance of the inducers ($F(4,36) = 4.837$, $p = .003$, $\eta^2 = .350$). As expected, largest reflectance difference condition dominantly produced the contrast effect. However, when this difference was small, assimilation occurred only in half of expected situations. Spatial frequency generally produced the expected effect: the largest contrast effect was obtained when the spatial frequency was low while high frequency produced the largest assimilation effect.

The role of central and peripheral mechanisms will be discussed in the context of obtained results.

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Keywords: lightness contrast, lightness assimilation, spatial frequency, differential stimulation

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Strategije pri diskriminaciji boja zavise od memorijskog opterećenja

Kategorička percepcija boja (KPB) predstavlja bržu diskriminaciju nijansi koje pripadaju različitim lingvističkim kategorijama, u odnosu na nijanse iz iste kategorije, čak i kada je fizička udaljenost između nijansi jednaka. Prethodna istraživanja su pokazala da verbalna interferencija ukida KPB, ali samo u zadacima sa memorijskim opterećenjem. Takođe, pokazano je da dodatna vizuelna informacija pomaže diskriminaciju nijansi u zadacima bez memorijskog opterećenja. Ovakvi rezultati sugerišu mogućnost da ispitanici koriste različite strategije pri diskriminaciji boja – u zadacima sa memorijskim opterećenjem oslanjaju se na verbalno kodiranje, a u zadacima bez opterećenja na vizuelno.

Precizno utvrđivanje dometa i primene strategija zahtevalo je dodatne eksperimente: E1 sa pojačanom verbalnom interferencijom u zadatku bez memorijskog opterećenja i E2 sa vizuelnom interferencijom u zadatku sa memorijskim opterećenjem. Stimulusi su izabrani oko plavo-zelene granice formiranjem parova nijansi unutar i između lingvističkih kategorija. U E1, ispitanici (15) su u zadatku simultane diskriminacije odgovarali koji od dva donja stimulusa (kvadrata) je iste boje kao gornji, koji je prikazivan u vidu obojene reči. Zavisno od uslova, reč je označavala boju kojom je napisana (kongruentni uslov), drugu boju (nekongruentni) ili je prikazivan red krstića (neutralni). U E2, ispitanici (14) su u zadatku odložene diskriminacije odgovarali koji od dva naknadno prikazana stimulusa (test ili distraktor) je iste boje kao prethodno prikazani (meta). Kao vizuelnu interferenciju, varirali smo oblik stimulusa u 4 situacije: kongruentna (meta i test istog oblika, distraktor različitog), nekongruentna (meta i distraktor istog oblika, test različitog), neutralna (svi stimulusi istog oblika), kontrolna (svi stimulusi različitog oblika).

Efekat KPB je bio značajan u zadatku simultane diskriminacije sa verbalnom interferencijom ($F(1,14) = 17.67$; $p < .001$; $\eta^2 = .55$) i u zadatku odložene diskriminacije sa vizuelnom intereferencijom ($F(1,13) = 4.10$; $p < .05$; $\eta^2 = .24$). U E1, verbalna interferencija je usporila odgovore u nekongruentnom uslovu ($F(1,14) = 7.60$; $p < .005$; $\eta^2 = .35$). U E2, vizuelna nekongruentnost je usporila ispitanike ($F(1,13) = 4.10$; $p < .05$; $\eta^2 = .24$), ali nije zabeleženo ubrzanje u kongruentnom u odnosu na neutralni i kontrolni uslov.

Rezultati pokazuju da u zadatku bez memorijskog opterećenja ni pojačana verbalna interferencija ne ukida KPB, što potvrđuje manju ulogu verbalnog kodiranja u ovoj vrsti zadataka. Činjenica da dodatna vizuelna informacija (kongruentnost u obliku) nije pomogla diskriminaciju u E2, ukazuje na to da se ispitanici manje oslanjaju na vizuelno kodiranje ukoliko zadatak ima memorijsko opterećenje. Ovi rezultati ne samo da potvrđuju postojanje različitih strategija nego i njihovu konkretnu primenu u zavisnosti od parametara zadatka.

Rad je pomognut sredstvima Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije, projekat 179033.

Ključne reči: kategorička percepcija boja, memorijsko opterećenje, verbalno kodiranje, vizuelno kodiranje

Colour discrimination strategies depend on memory load

Categorical perception of colour (CPC) represents faster discrimination of shades that belong to different colour categories than the shades from the same category, even when the physical distances between the shades are equal. Previous studies have shown that verbal interference cancels CPC, but only if colour discrimination is memory demanding. Additionally, visual information facilitates discrimination in tasks without memory load. These results suggest possible existence of different colour discrimination strategies - in tasks with memory load participants rely on verbal coding, while in tasks without memory load they rely on visual coding.

In order to accurately determine the range and the usage of those strategies, we conducted 2 experiments: E1 with enhanced verbal interference in a task without memory load, and E2 with visual interference in a task with memory load. Colour stimuli around the blue-green boundary formed within- and between-category pairs. In E1, participants (15) conducted a simultaneous discrimination by colour-matching 2 bottom stimuli squares to the stimuli on the top of the screen, which was a coloured word. Depending on the condition, the word was naming the colour of that stimulus (congruent), other colour (incongruent) or had a row of crosses (neutral). In E2, participants (14) conducted delayed discrimination where they answered which of the 2 stimuli (test or distractor) was the same colour as the stimuli presented on the preceding screen (target). Visual interference, obtained through different stimuli shapes, was varied on 4 levels: congruent (target and test - same shape; distractor – different shape), incongruent (target and distractor - same shape; test – different shape), neutral (all stimuli - same shape), control (all stimuli - different shape).

CPC effect was significant in the simultaneous task with verbal interference ($F(1,14) = 17.67$; $p < .001$; $\eta^2 = .55$) and in the delayed task with visual interference ($F(1,13) = 4.10$; $p < .05$; $\eta^2 = .24$). In E1, participants were significantly slower in the incongruent condition ($F(1,14) = 7.60$; $p < .005$; $\eta^2 = .35$). In E2, visual incongruence delayed participants' reaction time ($F(1,13) = 4.10$; $p < .05$; $\eta^2 = .24$), but visual congruence did not facilitate discrimination compared to control and neutral condition.

Results showed that even the enhanced verbal interference does not cancel CPC in tasks without memory load, which confirms the less important role of verbal coding in this type of tasks. The result that additional visual information (shape congruence) did not facilitate discrimination in E2, suggests that participants rely less on visual coding when memory load is present. These results not only reconfirmed the existence of different strategies of colour discrimination, but they also showed their limits and specific usage, depending on the task demands.

The research was supported by Ministry of education, science and technological development of Republic of Serbia, project 179033.

Keywords: categorical perception of colour, memory load, verbal coding, visual coding

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The effect of recalled emotion on brightness perception: A neuro-computational perspective

Several studies found that recalling emotional state or perceiving facial expression alter perception of brightness (Banerjee et al., 2012; Meier et al., 2007; Song et al., 2012). For instance, a smiling face is

perceived to be brighter than it actually is. In the current work, we examined a neural network model based on the adaptive resonance theory (ART) to explain observed findings. In the ART cortical circuit, categorization of sensory input is achieved by matching bottom-up sensory signals with top-down expectations. When the bottom-up and top-down signals are closely aligned, resonant state develops that indicates successful recognition of the input pattern. On the other hand, mismatch between bottom-up and top-down signals produces a global reset wave that clears the traces of erroneous categorization and top-down expectation. According to Grossberg (1999), all conscious states are resonant states, that is, conscious perception arises when the neural network enters into a resonant state indicating a match between bottom-up and top-down signals. Here, we suggest that previous statement implies that cognition and emotions cannot influence perception directly. Therefore, recalling the emotional state associated with certain brightness through a previous learning experience will not produce resonant state if bottom-up signals are not consistent with the top-down prediction based on this recall. However, traces of erroneous prediction can still influence a decision or response preparation stage. We extended the ART circuit by adding response selection stage consisting of nodes representing the points on the Munsell brightness scale. Furthermore, we assume that there is a noise in the mapping from the output layer of the ART network and the response selection stage. Therefore, every node in the ART circuit that represents different shade of perceived brightness is connected to several points on the Munsell scale. We performed computer simulations with the proposed model to show how bias induced by recalled emotional state develops over time and how it shifts the decision to choose the certain brightness level without altering actual brightness perception. In conclusion, we employed established computational mechanisms of the adaptive resonance theory to show that emotions can alter brightness perception only indirectly by influencing decision or response, but not perception itself, which is consistent with the recent proposal of Firestone and Scholl (2016).

Keywords: brightness perception, cognitive impenetrability, emotion, computational model

Politička psihologija / Political psychology

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Cognitive resources and electoral participation in Serbia

Extensive evidence suggests that voters and electoral abstainers can be differentiated by resources available to them. Those who have more economic, social and other resources at their disposal are more likely to vote. In this way, inequality in disposable resources translates into political inequality. Sociological research emphasizes the role of socio-economic resources such as the economic status, education, material welfare. The focus in this paper is on cognitive resources - the influence of political information onto electoral participation. We examine the hypothesis that cognitive resources increase the probability of turnout, even after statistically controlling for the effects of the basic socio-economic variables. The data from the 2012 Serbian election study are used. This is a post-election public opinion survey conducted after the 2012 presidential and parliamentary elections in Serbia.

The results demonstrate that cognitive political resources, measured by four political knowledge questions, affects electoral turnout (logistic regression result: Wald Chi-Square = 40.52, $p < .001$; $N = 1505$). Electoral abstainers are characterized by relatively lower level of political information. Further analyses revealed that political 'coloring' of certain indicators of political information influences the relationship between political information and turnout. Those underestimating the unemployment rate are relatively more likely to vote compared to those who are better informed concerning this particular question. The paper concludes that the resource theory, expanded to include cognitive factors, is a useful framework for more comprehensive understanding of political participation in Serbia.

Keywords: elections, participation, turnout, political information, cognitive resources, Serbia.

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Alija Selimović, Ljubica Tomić Selimović*Filozofski fakultet, Univerzitet u Tuzli, Bosna i Hercegovina**Email: alija.student@gmail.com***Nationality matters: The attribution framework and the attribution bias in the case of Lazar Rebić**

Media reports in Bosnia and Herzegovina over the past two decades have provided significant and numerous evidence of the existence of significant differences in perception, understanding and attribution of events in Bosnia and Herzegovina. One of the most important generators for different portraying of events is the ethnicity of the participants included in the events. Ethnicity "determines" the perception and framework for the creation of attribution and attribution bias. This paper analyses the contents of three daily newspapers and four web portals from Federation of Bosnia and Herzegovina and Republic of Srpska, that in first seven days after the event followed and reported on the death of a twenty months old boy Lazar Rebić from Zvornik in August 2016. The main research questions focus on the nature and quality of the discourse to which readers were exposed. This case was chosen because suspects were the guardians of boy, and they were Serbian and Bosnian nationality. We particularly analyzed texts that were written immediately after the murder, when there was no clear evidence of the killer. In addition to the texts, readers' comments on web portals are also analyzed. The coding and analysis of the materials was performed manually. The overall inter-rater reliability between the two observers expressed through Cohen's kappa was 0.86. Individual protocol dimensions ranged between 0.77 and 0.91. Newspaper articles by the authors of three daily newspapers were analyzed through seven categories extending from the nature of the offense, the depiction of male guardian, female guardian, biological parents, and the social situation of the family in which the boy lived. The size of the space allocated to the suspects in the text, as well as perspectives that are missing were also observed.

The results of the analysis point to significant differences in writing in media from Federation of Bosnia and Herzegovina and Republic of Srpska. Ultimate attribution error was manifested through different preferences in attributing guilty of the suspects. The media inscriptions from Republic of Srpska fits mostly in attribution framework of Bosnian woman as culprit, while there is the opposite trend in the media from Federation, that is more inclined to create attribution frames where the guardian of Serbian nationality is more responsible for the death of the child. In addition to the differences in attributes of guilt, differences in stereotypes that correspond to the selected attribution frame were also recorded. We found a record of national stereotyping in about 40% of the comments among the comments on the websites.

Keywords: attribution bias, stereotypes, ultimate attribution error

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Janko Međedović, Boban Petrović*Institute of Criminological and Sociological Research, Belgrade, Serbia**Email: janko.medjedovic@fmk.edu.rs***Parental social attitudes and political ideology predict the Ethos of conflict in children**

The process of learning attitudes, social norms, ideology and values regarding political life in general, is called political socialization. Parents, as one of the crucial factors of socialization in general, have a very important role in this respect. Scholars hypothesize that the role of parents, among other factors of socialization, is even more important in the context of violent intergroup conflict. Ethos of Conflict (EOC) represents a set of societal beliefs regarding violent intergroup conflict. EOC is a crucial psychological factor in violent conflicts because it protracts the conflict itself and hinders the possibility of reconciliation. In the present research we explored the relations in EOC between parents and their offspring, together with the social attitudes and political ideology of parents as predictors of the EOC in children. The research participants were family members of Serbian nationality ($N_{\text{total}} = 253$; 102 families). Ethos of conflict was measured by the EOC inventory, while Social attitudes were explored via SDI 24 scale (it captures four social attitudes: traditionally-oriented religiousness, materialistic self-interest, support for state institutions and subjective spirituality). Political ideology was measured by the evaluation of the work of major political parties which were represented in Serbian parliament. These evaluations constitute two factors: national-conservative and socio-liberal parties. The inventories were administrated to the students of psychology who distributed them to their parents as well.

The data revealed high correlation in the general EOC score between parents and their children ($r = .56$; $p < .01$). Furthermore, parental traditional religiousness ($r = .28$; $p < .01$), materialistic ethnocentrism ($r = .22$; $p < .05$), conservative ($r = .30$; $p < .01$) and liberal political ideology ($r = -.30$; $p < .01$) were correlated with the EOC in the offspring. The similar structure of attitudes and political ideology predicted EOC in the offspring in a linear regression analysis ($R^2 = .24$; $F(8,94) = 3.74$; $p < .01$). Furthermore, these predictors successfully explained the shared variance in EOC between parents and children - which can be viewed as a measure of transgenerational transmission of EOC ($R^2 = .33$; $F(8,94) = 5.73$; $p < .01$). The research findings showed that parental attitudes can indeed be a major source of EOC in their children. Results specified that religious, self-oriented and conservative parents have higher EOC themselves and tend to share beliefs about the conflict with their children to a higher extent. The results have a conceptual and practical implication for building reconciliation and peace.

Keywords: Ethos of Conflict, family, transgenerational transmission, attitudes, political ideology

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Political parties and ideology over time: Does political parties' evaluation reflect political ideology orientation?

Complexity of political situation in Serbia is reflected in the insufficiently differentiated political options, in terms of noncompliance of programs and practical functioning of the political parties, as well as in the ambiguity of their ideological positions. However, some research suggested that, from the beginning of the 1990th, political parties have become ideologically more differentiated. These findings implied that political parties and their supporters could have clearer ideological positions these days than in previous period. Following these findings, we explored stability of relations between evaluations of Serbian political parties and lexically derived ideological dimensions over time. We tested two hypotheses: 1) political parties should be divided into conservative and democratic parties, and the latent structure of political parties' evaluations should be stable over time; 2) political parties' evaluation should consistently reflect political ideology orientation – conservative parties should be associated with indicators of conservative ideology – religiosity and self-interests, but democratic parties should be related with humanistic ideological orientation. Data about political parties' evaluation was collected in three time-points on three different samples: 2010 (N = 102), 2014/15 (N = 358) and 2016 (N = 117) in Serbia. Participants were students, all Serbian nationality. In all three studies, we explored relations between evaluations of Serbian political parties (DSS, DS, SRS, SPS, SNS, and LDP) and lexically derived ideological dimensions: Traditional religiosity, Unmitigated Self-interest, Communal Rationalism and Subjective Spirituality.

In all three studies principal component analyses of political parties' evaluations showed that two components were extracted, which were interpreted as National-Conservative Parties and Socio-liberal (in 2010 and 2014), i.e., Democratic Parties (in 2016). Coefficients of congruence between National-Conservative factors were .97, .91 and .90, but among Socio-Liberal factors they were .93, .87 and .79, for periods of 2010-2014/15, 2010-2016 and 2014-2016, respectively. Canonical correlation analyses showed that canonical correlations between ideological dimensions and political parties' evaluations were .62, .48 and .45, respectively. National-Conservative parties were rooted in Traditional religiosity and Unmitigated Self-interest in all three time-points, but Socio-Liberal parties did not reflect ideological orientations.

Results suggested that political parties are ideologically lesser differentiated over time - in 2016, their structure reflects rather government-opposition than conservative-liberal polarization. Also, only National-Conservative parties have clearer ideological background, while Socio-Liberal parties are ideologically undefined. The findings suggest that there is some kind of "ideological crisis" in Serbia, primarily in Socio-Liberal parties.

Keywords: political parties, social attitudes, ideology, lexical approach, changes over time

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Marija Branković, Ognjen Filipović, Marijana Krstić*Faculty of Media and Communication, Singidunum University, Serbia**Email: marija.brankovic@fmk.edu.rs***Remembering the nineties: How perceptions of the troubled past affect outgroup outcomes**

In this study, we wanted to explore how perceptions of the troubled past, more specifically, the decade of the nineties, affect present-day attitudes towards ethnic outgroups that were on the opposite side in the conflicts. We investigated this in a survey in which we measured exposure to traumatic experiences during the nineties as well as more general perceptions of the decade along with feelings towards previously adversarial outgroups. We recruited participants ($N = 427$) based on age quotas since we wanted to investigate both those who remember the decade personally as well as generations who presumably share some general perceptions, although more reflective of collective memory than personal experience.

Among ethnic Serbian participants aged 35 and older, we found significant relations between perceptions of the nineties, historical negation and outgroup feelings. More negative perceptions of the nineties predicted less readiness to accept the ingroup's part of the responsibility for the past injustices ($\beta = .16$, $p = .021$). Further, the relation between perception of the nineties and the present feelings towards Bosniaks and Albanians was fully mediated by this readiness to accept the responsibility of the own group ($\beta = .88$, $SE = .45$, 95% CI: .12, 1.88 for Bosniaks and $\beta = .129$, $SE = .64$, 95% CI: .17, 2.62 for Albanians). Interestingly, we did not observe any effects of specific exposure to traumatic experiences during the nineties, rather measures of general perceptions of the decade obtained through semantic differential technique. In stark contrast, although perceptions of the past decade were quite consistently gloomy among participants younger than 35, they did not affect either of the outgroup outcomes.

Our findings highlight the importance of dealing with the troubled past as a prerequisite for improving intergroup relations in post-conflict societies. It is, in particular, the issues of recognizing the part that the own group played in the conflicts that appear to be of importance for improving outgroup outcomes.

Keywords: perceptions of past, outgroup outcomes, post-conflict societies, historical negation

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Što nam poručuju školski zidovi? Etnički simboli u višeeetničkim sredinama u Hrvatskoj

U Hrvatskoj postoje četiri višeeetničke sredine u kojima nacionalne manjine prakticiraju školovanje na vlastitom jeziku i pismu. To su češka manjina u Daruvaru i okolici, mađarska manjina u Osijeku i Baranji, srpska manjina u Vukovaru i okolici te talijanska manjina u Istri. U svakoj od tih sredina žive i pripadnici većine (Hrvati) koji se školuju na hrvatskom jeziku. Budući da škole imaju središnju ulogu u prenošenju vrijednosti društva i oblikovanju identiteta mladih, za višeeetnička društva je jako važno kako i u kojoj mjeri škola promovira multikulturalnost i na koji način pridonosi oblikovanju i očuvanju etničkog identiteta mladih. U tome je pogledu istraživački posebno zanemaren aspekt fizičke okoline u kojoj se odvijaju interakcije između pripadnika manjine i većine, kao onog aspekta školske klime koji pridonosi oblikovanju etničkog identiteta i stava prema multikulturalnosti. No, postavlja se pitanje potiču li škole svojim uređenjem toleranciju i multikulturalnost kao poželjne vrijednosti u hrvatskom društvu ili zapravo i fizičkim uređenjem šalju poruku etničke zatvorenosti i monokulturalnosti.

Cilj istraživanja bio je ispitati kako fizička okolina, odnosno uređenje škole putem etničkih simbola, komunicira vrijednost multikulturalnosti i na koji način ilustrira postojeće međugrupne odnose u zajednicama. Metodom sustavnog opažanja fizičkog prostora škole prikupljeni su podaci o zastupljenosti etničkih simbola specifične (relevantne) manjinske i većinske grupe u 21 školi u četiri navedene višeeetničke regije u Hrvatskoj. Dva nezavisna procjenjivača kodirala su simbole u kategorije uz visoko međusobno slaganje, te su analizirane razlike u frekvenciji zastupljenosti određene kategorije simbola po regijama.

Rezultati pokazuju da se zastupljenost etničkih simbola u školama razlikuje u različitim regijama, te se čini da je povezana s prirodom međugrupnih odnosa u pojedinoj regiji. Tako su etnički simboli općenito najzastupljeniji u Vukovaru, kao post-konfliktnom kontekstu, dok su tek umjereno zastupljeni u drugim višeeetničkim sredinama u kojima su međugrupni odnosi harmonični. Nadalje, analiza prema kategorijama simbola pokazuje da su regionalni odnosno zavičajni simboli najzastupljeniji u Istri, gdje ističu sličnost dviju grupa i zajednički identitet. S druge strane, simboli vezani uz Domovinski rat kao i religijski simboli najzastupljeniji su u Vukovaru, gdje ističu razlike između manjinske i većinske grupe. Rezultati također pokazuju da se etnički identitet i multikulturalnost u fizičkom prostoru škola u svim regijama njeguju isticanjem simbola kulturne baštine

i poznatih (prije svega povijesnih) ličnosti. Pri tome su u školama općenito jače zastupljeni simboli kulturne baštine većinske grupe te poznatih ličnosti iz manjinske grupe.

Keywords: etnički simboli, multikulturnost, višetetničke zajednice, fizički aspekt okoline, manjinsko obrazovanje

What are the school walls telling us? Ethnic symbols in multi-ethnic communities in Croatia

There are four multi-ethnic regions in Croatia, in which ethnic minorities practice schooling in their own mother tongues. They are Czech minority in Daruvar and surroundings, Hungarian minority in Osijek and Baranja, Serbian minority in Vukovar and surroundings, and Italian minority in Istria. Each of these regions is also inhabited with Croats who attend classes on Croatian language. Taking into account that schools have central role in transmitting values of a society and forming the identity of youth, for multi-ethnic societies it is very important how and to what extent schools promote multiculturalism and contribute to formation and preservation of youth's ethnic identity. The role of school physical environment in which interaction of minority and majority take place, as the aspect of school's climate that contributes to the formation of ethnic identity and attitude towards multiculturalism, is still under-investigated topic. It would be important to explore whether schools by their physical environments promote tolerance and multiculturalism as desirable values in Croatian society or send a message of ethnic closeness/tightness and monoculture.

The aim of this study was to investigate how school's physical environment via ethnic symbols communicates multicultural values and reflects minority/majority relations in each region. Using the systematic observation of the school physical space we gathered data on representation of minority and majority ethnic symbols in 21 schools in four multi-ethnic regions in Croatia. Two independent assessors coded symbols into categories with very high agreement, and differences were analysed in representation of specific category of ethnic symbols in the school space depend on the specific region.

Results show that the representation of ethnic symbols in schools differs depending on the region and reflects the very nature of intergroup relation in the specific intergroup context. Thus, ethnic symbols are more represented in Vukovar, a post-conflict context, than in other multi-ethnic regions in Croatia where intergroup relations are more harmonious. Furthermore, analysis of the categories of specific symbols showed that regional symbols are most represented in Istria where they emphasize similarities and common identity of the two ethnic groups. On the other hand, symbols of the Homeland war as well as religious symbols are the most represented in Vukovar where they point to the differences between minority and majority ethnic group. Altogether in all regions national and ethnic identities and multiculturalism are promoted in schools' physical environment by emphasizing symbols referring to national cultural heritage and famous members of minority ethnic groups.

Keywords: ethnic symbols, multiculturalism, multi-ethnic communities, physical environment, minority education

Psihologija ličnosti i socijalna psihologija / Personality and social psychology

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Implementation and validation of SAPA technology in Serbian sample

SAPA technology represents an innovative and modern way of conducting online research. Broadly speaking, it combines data obtained from a large number of participants, and allows the examination of complex psychological phenomena. This means that every participant answers only a small group of items randomly selected from a pool of all items, and since every participant data is “incomplete” adequate use of this technology requires big samples. The primary aim of this study was to examine the applicability of SAPA technology in a Serbian sample. Two key aspects of SAPA were examined: psychometric properties of the measures applied, and the congruence between the factor solutions extracted in a Serbian sample (N = 4500, 71% female, average age 29 years), and in a global sample (N = 19925, 63.7% female, average age 28.5 years). Both samples were collected using SAPA technology. Serbian sample data was collected as result of first implementation of SAPA technology in Serbian language, whilst global sample was obtained from SAPA project. Global SAPA data is part of open data and free to use for research purposes. IPIP versions of the Big Five questionnaire, MPQ, Alternative 7 factors and HEXACO were applied in the study, whereby, according to SAPA technology, random samples of items were assigned to each participant. The measures showed satisfactory reliability. Cronbach alpha for IPIP50 (Big Five) scales ranged from .77 to .86, from .69 to .89 for IPIP-HEXACO scales, from .73 to .82 for Alternative 7 factors scales, and from .64 to .87 for IPIP-MPQ scales. Structural validity was assessed using principal component analysis and results are satisfactory. Convergent validity was assessed by examining correlations between psycholexical questionnaires and VP + 2 (Big five plus two evaluative dimensions questionnaire in Serbian language), and examining correlation between IPIP-MPQ and UOP-15 (Revised reinforcement sensitivity theory questionnaire). Results indicate satisfactory convergent validity of the measures. Factor congruence ranged from .93 to .98 for the IPIP50, from .97 to .98 for IPIP-HEXACO, and from .94 to .99 for IPIP-MPQ questionnaire. By demonstrating the applicability of the SAPA method in a Serbian sample, the results point to the possibilities for the use of SAPA in non-English speaking cultures. Practically SAPA technology allows the researchers to explore complex phenomena by collecting big data sets in an effective and inexpensive way.

Keywords: SAPA technology, IPIP repository, Big Five, Hexaco, MPQ

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Dijana Sulejmanović*Filozofski fakultet, Univerzitet u Beogradu, Srbija**Email: os.mahala.psiholog@gmail.com***“Kad si u Rimu, ponašaj se kao Rimljanin” – Istorijat istraživanja konformizma**

Kao rezultat socijalnog utjecaja, fenomen konformizma se može pojaviti u malim grupama, ali i u čitavom društvu kao čin upoređivanja stavova, uvjerenja i ponašanja s normama grupe. Premda samo postojanje društva podrazumijeva postojanje određenog stepena konformizma u vidu popuštanja zahtjevima većine, praćenja trendova i zajedničkih aktivnosti u svrhu napretka čovječanstva, fenomen konformizma istraživački je zanimljiv obično u slučajevima kada podrazumijeva odstupanje pojedinca od vlastitih vrijednosti, stavova, mišljenja i procjena kako bi se priklonio većini, bilo zbog toga što sam nije siguran u ispravnost svoje procjene ili pak ne želi ugroziti svoj položaj u određenoj socijalnoj grupi.

Najstariji poznat eksperiment o utjecaju većine, odnosno konformizmu, djelo je Muzafera Sherifa koji je pokazao da pojedinac, ne samo da se prilagođava većini, nego nastavlja koristiti grupni referentni okvir kao svoj i onda kada izvor utjecaja, tj. grupa, prestane biti prisutan. Sherifov rad je nastavio Solomon Asch, čija istraživanja konformizma su temelj svih kasnijih radova o ovom socijalnom fenomenu.

Mijenjaju li pojedinci svoje mišljenje pod utjecajem socijalne sredine ili pak odustaju od vlastitih stavova samo izvana, a privatno zadržavaju svoja uvjerenja? Kakve nedostatke imaju dosadašnja istraživanja konformizma i kako je konformizam ispitivan na našim prostorima i u svijetu? Gdje je i koliko je jasna granica kada dvije glave nisu pametnije od jedne, problem je kojim se bavimo u ovom radu. Cilj ovog preglednog rada je prikazati istorijat i razvoj istraživanja konformizma, od pionirskih radova Sherifa i Ascha do danas, pritom prateći dobivene rezultate i smještajući ih u istorijski i socijalni okvir.

Ključne reči: konformizam, socijalni uticaj, Asch, Sherif

“When in Rome, do as the Romans do” – History of conformism research

Conformity phenomena can occur in small groups, but also in society as a result of the influence of the others and the pressures of the group, and also as an act of comparing attitudes, beliefs and behaviors with the norms of the group. The oldest known experiment on the social influence, or the conformism, is the work of Muzafer Sherif, which showed that an individual not only adjusts to the majority, but continues to use the group's reference framework as his own. Sherif's work was

continued by Solomon Asch, whose research of conformism is the foundation of all later work on this social phenomenon.

Do individuals change their opinion under the influence of the social environment or they abandon their own attitudes only seemingly and privately retain their beliefs? What are the disadvantages of the previous research of conformism and how conformism is researched in our regions and in the world generally?

Our goal is to present the history and development of conformism research, from the pioneering works of Sherif and Asch to today, by placing the obtained results in a historical and social framework.

Keywords: conformism, social influence, Asch, Sherif

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Doprinos ljubavnih stilova, dimenzija partnerske afektivne vezanosti i osobina ličnosti razumevanju načina prekida ljubavnih veza

Prekid romantične veze determinisan je različitim faktorima koji određuju koliko direktno i sa koliko obzira prema partneru, odnosno na koji način, će osoba pristupiti raskidu ljubavne veze. Cilj ovog istraživanja je da ispita koliko dobro stilovi ljubavi, dimenzije partnerske afektivne vezanosti, osobine ličnosti i pitanja vezana za iskustvo u partnerskim odnosima mogu predvideti specifična ponašanja vezana za raskid ljubavne veze. Uzorak čini 407 ispitanika (339 ženskih), starosti 18-41 godine ($AS = 24,16$; $SD = 4,60$). Instrumenti korišćeni u istraživanju su Upitnik strategija raskida (Baxter, 1982), LAS skala (Hendrick & Hendrick, 1986), Upitnik partnerske afektivne vezanosti (Brennan, Clark & Shaver, 1998, modifikacija Kamenov i Jelić, 2003) i Kratki HEXACO inventar ličnosti (De Vries, 2013, adaptacija Lakić, Damjanić i Pedović, 2016). Rezultati multiple regresione analize pokazuju da su stilovi ljubavi, dimenzije partnerske afektivne vezanosti i osobine ličnosti značajni prediktori svih sedam strategija raskida, sa izuzetkom strategije Deeskalacija, gde regresioni model osobina ličnosti nije bio značajan, kao ni model afektivne vezanosti u predikciji strategije Pozitivan ton. Procenat objašnjene varijanse modelom stilova ljubavi varira od najmanjeg na strategiji Izbegavanje ($R^2 = .06$, $F(6,400) = 4.23$, $p < .001$) do najvišeg na Eskalaciji ($R^2 = .15$, $F(6,400) = 11.36$, $p < .001$). Regresioni model partnerske afektivne vezanosti najmanji procenat varijanse objašnjava na strategijama Izbegavanje ($R^2 = .04$, $F(2,404) = 8.61$, $p < .001$) i Udaljena komunikacija ($R^2 = .04$, $F(2,404) = 8.61$, $p < .001$) dok je nešto viši procenat na strategiji Eskalacija ($R^2 = .10$, $F(2,404) = 23,1$, $p < .001$). Relativno niskom procentu objašnjene varijanse doprinose osobine ličnosti i to najmanje na strateriji Pozitivan ton ($R^2 = .03$,

$F(6,400) = 2.23, p < .05$) a samo nešto više na Eskalaciji ($R^2 = .06, F(6,400) = 4.70, p < .001$). Osobe koje su češće inicijatori raskida od njihovih partnera biraju strategije kao što su Otvorena konfrontacija ($t(172) = -3.07, p < .001$) i Udaljena komunikacija ($t(398) = 2.49, p < .05$). Žene češće od muškaraca pribegavaju Izbegavanju ($t(112) = -3.46, p < .001$), Udaljenoj komunikaciji ($t(119) = -2.66, p < .01$) i Deeskalaciji ($t(405) = -3.10, p < .001$). Dobijeni rezultati saglasni su teorijskim pretpostavkama i empirijskim rezultatima drugih istraživača iz ove oblasti, i pokazuju da stilovi ljubavi, dimenzije partnerske afektivne vezanosti i osobine ličnosti ostvaruju određeni doprinos u razumevanju načina prekida ljubavnih veza, iako ne objašnjavaju veliki procenat varijanse, ali treba imati u vidu i složenost psiholoških i sredinskih faktora koji otežavaju potpunije razumevanje. Ovaj rad se može posmatrati kao skup smernica za dalja istraživanja pomenutih strategija, namenjenih istraživačima iz ove oblasti, u kontekstu popularnih psiholoških teorija korišćenih u ovom radu.

Ključne reči: strategije raskida, stilovi ljubavi, afektivna vezanost, HEXACO

Contribution of love styles, dimensions of adult attachment and personality traits to understanding ways to terminate romantic relationships

The breakup of a romantic relationship is defined by a variety of factors that determine how directly and with how much regard for the partner, that is, in which way, a person will approach the breakup of the romantic relationship. The aim of this research was to examine how well love styles, the dimensions of adult attachment, personality traits and issues related to experience in relationships can predict specific behaviors related to the breakup. The sample consisted of 407 participants (339 females), aged 18-41 ($M = 24.16, SD = 4.60$). The instruments used in the research are the Breakup strategies questionnaire (Baxter, 1982), the LAS scale (Hendrick & Hendrick, 1986), the Questionnaire of adult romantic attachment (Brenan, Clark, & Shaver, 1995, adaptation Kamenov & Jelić, 2003) and Brief HEXACO Inventory (De Vries, 2013, adaptation Lakić, Damjanić, & Pedović, 2016). The results of standard multiple regression analysis show that love styles, the dimensions of adult attachment, and personality traits are significant predictors of all seven breakup strategies, with the exception of the De-escalation strategy, where the regression model of personality traits was not significant, and of the model of attachment in the prediction of the Positive tone strategy. The percentage of variance explained by the model of love styles ranges from the lowest at the Avoidance strategy ($R^2 = .06, F(6,400) = 4.23, p < .001$) to the highest at Cost escalation ($R^2 = .15, F(6,400) = 11.36, p < .001$). The regression model of adult attachment explains the lowest percentage of variance at the strategies Avoidance ($R^2 = .04, F(2,404) = 8.61, p < .001$) and Distant communication ($R^2 = .04, F(2,404) = 8.61, p < .001$), while somewhat higher percentage is at the Cost escalation strategy ($R^2 = .10, F(2,404) = 23.1, p < .001$). Personality traits contribute to a relatively low percentage of the explained variance, the lowest at the Positive tone strategy ($R^2 = .03, F(6,400) = 2.23, p < .05$) and only slightly higher at Cost escalation ($R^2 = .06, F(6,400) = 4.70, p < .001$). Individuals who are the initiators of breakup more frequently than their partners choose strategies such as Open confrontation ($t(172) = -3.07, p < .001$) and Distant communication ($t(398) = 2.49, p < .05$). Women more often than men resort to

Avoidance ($t(112) = -3.46, p < .001$), Distant communication ($t(119) = -2.66, p < .01$) and De-escalation ($t(405) = -3.10, p < .001$). The obtained results are in accordance with the theoretical assumptions and empirical results of other researchers in this field, and they show that love styles, attachment and personality traits make a certain contribution to understanding the way of breaking up. It should be kept in mind that the complexity of psychological and environmental factors might make it difficult to fully understand all this. This paper can be viewed as a set of guidelines for further research on the above-mentioned strategies, intended for researchers in this field, in the context of the popular psychological theories used in this paper.

Keywords: breakup strategies, love styles, attachment, HEXACO

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Osobine ličnosti kao prediktori subjektivnog blagostanja

Teorijsku osnovu rada čini šestofaktorski model ličnosti HEXACO koji uključuje šest dimenzija ličnosti: Poštenje/Skromnost, Emocionalnost, Ekstraverzija, Saradljivost, Savesnost, Otvorenost, i Kizov model mentalnog zdravlja kojim su obuhvaćeni različiti aspekti subjektivnog blagostanja: emocionalno, psihičko i socijalno. Cilj istraživanja je bio da ispitamo prediktivnu moć osobina ličnosti u predviđanju emocionalnog, psihičkog i socijalnog blagostanja. U istraživanju su učestvovali studenti oba pola, svih godina studija Filozofskog fakulteta i Fakulteta tehničkih nauka u Kosovskoj Mitrovici, njih ukupno $N = 400$ (139 ispitanika i 261 ispitanica), prosečne starosti $AS = 21,48$, $SD = 2,474$. Ispitanici su popunjavali Inventar ličnosti HEXACO i Skalu kontinuum mentalnog zdravlja-duga forma.

Regresionom analizom je utvrđeno da je šestofaktorski model ličnosti značajan u predviđanju mentalnog zdravlja, odnosno sva tri aspekta subjektivnog blagostanja. Model je značajan u predviđanju emocionalnog blagostanja ($R^2 = .228$, $F = 4.537$, $p = .000$) i objašnjava 22,8% varijanse emocionalnog blagostanja. Iz grupe prediktivnih varijabli su se kao značajni prediktori izdvojili izbegavanje pohlepe kao aspekt poštenja/skromnosti ($\beta = .068$, $t = 1.083$, $p < .05$), socijalno samopoštovanje ($\beta = .213$, $t = 3.074$, $p < .05$) i živahnost kao aspekti ekstraverzije ($\beta = .196$, $t = 2.895$, $p < .05$). U predviđanju psihičkog blagostanja, model je takođe značajan ($R^2 = .409$, $F = 10.606$, $p = .000$) i objašnjava 40.9% varijanse psihičkog blagostanja, a kao značajni prediktori su se izdvojili: iskrenost ($\beta = .133$, $t = 2.423$, $p < .05$) i skromnost kao aspekti poštenja/skromnosti ($\beta = .116$, $t = 2.239$, $p < .05$), bojažljivost kao aspekt emocionalnosti ($\beta = -.257$, $t = -3.164$, $p < .05$) i socijalno samopoštovanje kao aspekt ekstraverzije ($\beta = .347$, $t = 5.714$, $p < .05$). Takođe, šestofaktorski model ličnosti je značajan u predviđanju socijalnog blagostanja ($R^2 = .297$, $F = 6.471$, $p = .000$) i objašnjava 29,7% varijanse

socijalnog blagostanja. Iz modela su se izdvojili sledeći značajni prediktori: pravednost ($\beta = .166$, $t = 2.781$, $p < .05$) i izbegavanje pohlepe kao aspekti poštenja/skromnosti ($\beta = -.124$, $t = -1.990$, $p < .05$), anksioznost kao aspekt emocionalnosti ($\beta = -.216$, $t = -.378$, $p < .05$) i socijalno samopoštovanje kao aspekt ekstraverzije ($\beta = .345$, $t = 5.218$, $p < .05$).

Osobe koje nisu zainteresovane za posedovanje bogatsva, imaju pozitivnu sliku o sebi naročito u društvenom kontekstu, optimistične su i dinamične, ostvariće emocionalno blagostanje. Osobe koje nisu sklone manipulaciji drugima, skromne su, jake, hrabre i otporne na fizičku bol, i zadovoljne sobom ostvariću psihičko blagostanje. Ispitanici koji teže pravednosti, otporne su na stres, imaju osećaj lične vrednosti, dostićiće i socijalno blagostanje. Takođe, postoje podaci da se na temelju osobina ličnosti može predvideti čak 40-50% varijanse subjektivnog blagostanja. Značaj istraživanja se ogleda u tome što je primenom Inventara ličnosti HEXACO dobijena značajna povezanost dimenzije poštenje/skromnost sa sva tri aspekta blagostanja.

Ključne reči: osobine ličnosti, mentalno zdravlje, blagostanje.

Personality traits as predictors of subjective well-being

The theoretical basis of the work makes Hexaco model of personality that includes six dimensions of personality: Honesty/Humility, Emotionality, Extroversion, Agreeableness, Conscientiousness, Openness, and Keyes model of mental health which covers various aspects of subjective well-being: emotional, mental and social. The aim of this study was to examine the predictive power of personality traits in predicting emotional, mental and social well-being. The study involved students of both sexes, of all years of study Faculty of Philosophy and the Faculty of Technical Sciences in Kosovska Mitrovica, a total of $N = 400$ (139 men and 261 women), the average age of $M = 21.48$, $SD = 2.474$. Respondents were filled HEXACO personality inventory and Scale continuum of mental health-form. Regression analysis showed that the HEXACO model of personality significant in predicting mental health, and it means all three aspects of subjective well-being. Model is important in predicting the emotional well-being ($R^2 = .228$, $F = 4.537$, $p = .000$) and 22.8% of the variance explained by the emotional well-being. From the group of predictors were significant predictors of avoiding greed separated as an aspect of honesty/modesty ($\beta = .068$, $t = 1.083$, $p < .05$), social self-esteem ($\beta = .213$, $t = 3.074$, $p < .05$) and liveliness as aspects extroversion ($\beta = .196$, $t = 2.895$, $p < .05$). In predicting the psychological well-being, model is also important ($R^2 = .409$, $F = 10.606$, $p = .000$) and 40.9% of the variance explained by the psychological well-being, and as well as significant predictors were separated honesty ($\beta = .133$, $t = 2.423$, $p < .05$), and the modesty of such aspects honesty/modesty ($\beta = .116$, $t = 2.239$, $p < .05$), as an aspect of timidity emotionality ($\beta = -.257$, $t = -3.164$, $p < .05$) and social extroversion as an aspect of self-esteem ($\beta = .347$, $t = 5.714$, $p < .05$). Also, six factor model of personality is important in predicting social well being ($R^2 = .297$, $F = 6.471$, $p = .000$) and 29.7% of the variance explained by social well-being. In this model, they extract a further significant predictors: fairness ($\beta = .166$, $t = 2.781$, $p < .05$) and the avoidance of such aspects greed honesty / modesty ($\beta = -.124$, $t = -1.990$, $p < .05$), anxiety, as an aspect of emotionality ($\beta = -.216$, $t = -.378$, $p < .05$) and social

extroversion self as an aspect ($\beta = .345$, $t = 5.218$, $p < .05$). People who are not interested in the richness, have a positive self-image especially in a social context, they are optimistic and dynamic, will achieve emotional well-being. People who are not prone to manipulation by others, are modest, strong, brave and resistant to physical pain, and satisfied them achieve psychological well-being. Respondents who seek justice, they are resistant to stress, have a sense of personal value, will reach social well-being. Also, there is information that is based on personality traits can predict as many as 40-50% of the variance of subjective well-being. The significance of the research is in the connection of the dimension of honesty / modesty with all three aspects of well-being.

Keywords: personality traits, mental health, well-being.

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Povezanost stilova socijalne kompeticije i dimenzija Mračne trijade

Kompeticija, nadmetanje ili takmičenje, predstavlja jedan od osnovnih oblika socijalne interakcije. Javlja se kada god neko ulaže napor da postigne više i bolje od određene druge osobe ili kada želi da to postigne na štetu druge osobe. Iza kompetitivnog ponašanja najčešće ne stoji želja da se nanese šteta drugima, već ostvarenje namere jedne osobe obično sprečava ostvarenje namere druge osobe. Dok saradnja maksimizira ishode kolektiva, takmičenje maksimizira relativnu prednost nad drugima. Odnos između kooperativnosti i kompetitivnosti je jedno od najznačajnijih pitanja u oblasti socijalne psihologije, bilo da li je reč o odnosima u okviru malih ili velikih grupa, ili pak dinamici društvenog ponašanja uopšte. Uzroci i ishodi ovog ponašanja se mogu posmatrati makropsihološki kroz evolucione teorije, posebno kroz teorije adaptivne vrednosti. U duhu ovih pretpostavki, Zurof i saradnici su konstruisali upitnik stila socijalne kompeticije – USSK (eng. RSPQ, Zuroff et al., 2010). Upitnik sadrži sedamnaest ajtema grupisanih oko tri gotovo nezavisne dimenzije: Dominantno liderstvo, Građenje koalicija i Bezobzirna samopromocija. Niz konfirmativnih faktorskih studija je potvrdilo da USSK poseduje robusnu faktorsku strukturu i da ona ima utemeljenje u teorijskim očekivanjima.

Mračna trijada je danas popularan naziv za područje psiholoških istraživanja koja se bave tamnom stranom ličnosti, pre svega narcizmom, psihopatijom i makijavelizmom. Narcizam karakteriše grandioznost, osećaj veličine, prvenstva, dominacija i superiornost. Psihopatiju odlikuju visok nivo impulsivnosti i hiperaktivnosti uz snižen nivo empatije. Makijavelizam obuhvata cinizam, nemoralnost, besprincipijalnost i manipulisanje drugima kako bi se ostvarila lična korist.

Pretpostavili smo je individualistički stil socijalne kompeticije – Bezobzirna samopromocija – u pozitivnoj vezi sa dimenzijama mračne trijade, a da kooperativni stil – Građenje koalicija karakteriše odsustvo mračnih dimenzija. Povezanosti stilova socijalne kompeticije i dimenzije Mračne trijade smo ispitali na prigodnom uzorku od 400 ispitanika, novosadskih studenata prosečne starosti 22.3 godine. Poduzorak muškog pola broji 178 ispitanika (44.5%), a ženskog pola 222 ispitanice (55.5%). Sva tri stila socijalne kompeticije statistički značajno koreliraju sa dimenzijama mračne trijade – kompetitivni i individualistički pozitivno, a kooperativni negativno. Dominantno liderstvo prati najviše pozitivna povezanost sa Narcizmom ($r = .61, p < .01$), dok Bezobziru samopromociju karakteriše visoka korelacija sa Makijavelizmom ($r = .60, p < .01$). Građenje koalicija karakteriše negativne veze sa mračnim dimenzijama ličnosti, posebno negativna korelacija sa Psihopatijom ($r = -.45, p < .01$). Ovaj nalaz doprinosi razumevanju psiholoških osnova stilova socijalne kompeticije, ali isto tako, ukazuje na konkretne strategije kojima se određeni tipovi ličnosti služe u socijalnim interakcijama.

Ključne reči: Mračna trijada, stilovi socijalne kompeticije, makijavelizam, narcizam, psihopatija

The association between social competition styles and the Dark Triad

Competition is one of the main forms of social interaction. It occurs whenever someone is making efforts to achieve more and better than certain other persons, or when one wants to do it at the expense of others. While cooperation maximizes the outcomes of collective, competition maximizes relative advantage over others. The association between cooperation and competition is one of the most important issues in the field of social psychology, whether we talk about small or large groups, or the dynamics of social behaviour in general. Causes and outcomes of this behaviour can be observed through the evolutionary theory, especially the theory of adaptive value. In the spirit of these assumptions, Zuroff and associates have constructed a Rank Style with Peers Questionnaire – RSPQ (Zuroff et al., 2010). The questionnaire contains seventeen items grouped around three independent dimensions: Dominant Leadership, Building coalitions and Ruthless self-promotion. A series of CFA studies have confirmed that RSPQ has a robust factor structure and that it has a foundation in the theoretical expectations.

The Dark Triad is currently very popular in the field of psychological research dealing with the dark side of the personality, especially narcissism, psychopathy and Machiavellianism. Narcissism is characterised by grandiosity, sense of size, priority, domination and superiority. Psychopaths are characterised by high levels of impulsiveness and hyperactivity with reduced levels of empathy. Machiavellianism include cynicism, immorality and manipulation of others to achieve personal benefit.

We assumed that the individualistic style of social competition - ruthless self-promotion - is positively related to the dimensions of the dark triad, and that cooperative style - Building coalitions is characterised by the absence of dark dimension. The association of social competition styles and dimensions Dark Triad was tested on a sample of 400 respondents, students from Novi Sad, average

age 22.3. Subsample of males counted 178 respondents (44.5%) and subsample of female 222 respondents (55.5%).

All three styles of social competition was significantly correlated with the dimensions of the dark triad - competitive and individualistic styles positively and cooperative style negatively. Dominant Leadership was followed by the high positive correlation with narcissism ($r = .61, p < .01$), while Ruthless self-promotion was characterised by the high correlation with Machiavellianism ($r = .60, p < .01$). Building coalitions is characterised by the negative connection to the dark personality dimensions, in particular a negative correlation with psychopathy ($r = -.45, p < .01$). This finding contributes to understanding the psychological basis of styles of social competition, but also suggests concrete strategies that certain personality types are used in social interactions.

Keywords: Dark Triad, social competition styles, Machiavellian, narcissism, psychopathy

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Zadovoljstvo životom i kvalitet porodičnih interakcija studenata

Prema brojnim istraživanjima, kvalitet porodičnih interakcija značajno utiče na formiranje identiteta i na kasniju psihičku i socijalnu zrelost pojedinca, a što kasnije vodi i većem životnom zadovoljstvu. U radu su predstavljeni rezultati istraživanja koje je provedeno s ciljem utvrđivanja povezanosti pojedinih dimenzija kvaliteta porodičnih interakcija i zadovoljstva životom studenata. Ispitane su i relacije zadovoljstva životom studenata sa njihovim sociodemografskim karakteristikama, koncipiranim kroz pol, materijalni status, akademski uspeh, tip naselja u kome žive i obrazovni status njihovih roditelja. Istraživanje je provedeno na uzorku od 285 studenata (59.6% ženskog pola) Zeničkog, Tuzlanskog, Sarajevskog, Banjalučkog i Travničkog univerziteta, a primenjene su dvije skale: Skala opšteg zadovoljstva životom (Penezić, 1996; Delić, 2016) i Skala kvaliteta porodičnih interakcija (Vulić-Prtorić, 2000).

Rezultati provedenog istraživanja pokazuju da su studenti većinski zadovoljni svojim životom (91,57% studenata ima skor > 45), te ukazuju i na pozitivan odnos između zadovoljstva životom i kvaliteta porodičnih interakcija studenata na što ukazuju statistički značajne pozitivne korelacije zadovoljstva životom i sljedećih dimenzija: zadovoljstvo celokupnom porodicom ($r = .36$), prihvatanje od strane majke ($r = .32$) i dimenzije – prihvatanje od strane oca ($r = .31$). Na isti odnos ukazuju i statistički značajne negativne korelacije zadovoljstva životom i dimenzija – odbijanje od strane i majke ($r = -.25$) i oca ($r = -.31$). Statistički značajna razlika u nivou zadovoljstva životom utvrđena je za materijalni status uz vrednosti umerenog efekta ($F(3,281) = 9.85, p = .000, \eta^2 = 0.11$), a statistički značajna

pozitivna korelacija dobijena je između zadovoljstva životom i akademskog uspeha studenata ($r = .18$). Nadalje, utvrđeno je nepostojanje statistički značajne razlike u nivou zadovoljstva životom studenata s obzirom na pol, mesto prebivališta i obrazovni status roditelja. Na kraju, dimenzijama kvaliteta porodičnih interakcija moguće je predvideti 21% varijanse zadovoljstva životom uz vrednosti niskog efekta ($F(5,220) = 11.36, p = .000, f^2 = .26$), a sociodemografskim karakteristikama moguće je predvideti 12.5 % varijanse zadovoljstva životom studenata, uz vrednosti niskog efekta ($F(6,278) = 6.60, p < .001, f^2 = .14$). Istraživanjem se nastojalo doprinijeti okvirima pozitivne i obiteljske psihologije, kao i ukazati na važnost ulaganja u porodične odnose.

Ključne reči: zadovoljstvo životom, kvalitet porodičnih interakcija, sociodemografske karakteristike, studenti

Life satisfaction and quality of family interactions of students

According to numerous researches, the quality of family interactions significantly influences the formation of identity and the later psychological and social maturity of an individual, and later leads to greater satisfaction with life. The paper presents the results of the research carried out in order to establish the correlation between the individual dimensions of family interaction and student life satisfaction. The relationships of student life satisfaction with their socio-demographic characteristics were studied, conceived through gender, material status, academic success, type of settlement in which they live and the educational status of their parents. The study was conducted on a sample of 285 students (59.6% female) of Zenica, Tuzla, Sarajevo, Banja Luka and Travnik University, and two scales were used: Life satisfaction scale (Penezić, 1996, DeliĆ, 2016) and Family quality of family interaction (Vulić-Prtorić, 2000).

The results of the conducted research show that the students are most satisfied with their life (91.57% of students have a score of > 45), and they also point to a positive relationship between life-longing and the quality of family interaction of students pointing to statistically significant positive correlations of life satisfaction and the following dimensions: Satisfaction with the whole family ($r = .36$), acceptance by the mother ($r = .32$) and dimensions - acceptance by the father ($r = .31$). The same relationship is also indicated by statistically significant negative correlations of life satisfaction and dimensions - rejection by both mother and mother ($r = -.25$) and father ($r = -.31$). The statistically significant difference in the level of satisfaction with life was determined by the material status of the mature effect value ($F(3,281) = 9.85, p = .000, \eta^2 = 0.11$) and a statistically significant positive correlation was obtained between life satisfaction and student academic success ($r = .18$). Furthermore, there was no statistically significant difference in the level of satisfaction of student life in terms of gender, place of residence and educational status of parents. Finally, the quality dimensions of family interactions can predict 21% of life satisfaction variance with the low effect value ($F(5,220) = 11.36, p = .000, f^2 = .26$), and socio-demographic characteristics can predict 12.5% satisfaction variances Student life, with low impact values ($F(6,278) = 6.60, p < .001, f^2 = .14$). The

Sekcije**Oral sessions**

research sought to contribute to the framework of positive and family psychology, as well as to point to the importance of investing in family relations.

Keywords: life satisfaction, quality of family interactions, sociodemographic characteristics, students

Razvojna psihologija / Developmental psychology

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Eksploracija odnosa otac-dete: zadovoljstvo i vrste aktivnosti

Interakcija roditelj-dete je tema koja je već dugo prisutna u psihologiji i različiti istraživači su joj pristupali iz različitih uglova. Aktivnosti koje roditelji provode sa decom predstavljaju jedan aspekt interakcije. Dosadašnja istraživanja su bila usmerena na količinu vremena provedenog u interakciji, dok je pitanje vrste aktivnosti za to vreme ostalo zanemareno. Rezultati ovakvih istraživanja dosledno pokazuju da majke provode više vremena sa decom. Međutim, iako taj trend i dalje postoji, novija istraživanja sugerisu da očevi provode sve više vremena sa decom. Stoga je cilj ovog istraživanja bio da se ispita interakcija očeva sa decom, pre svega njihovo zadovoljstvo, kao i da se utvrdi u kojim aktivnostima oni porovode najviše vremena.

U istraživanju je učestvovalo 115 očeva dece predškolskog uzrasta prosečne starosti 36.45 godina ($SD = 5.97$). Za procenu zadovoljstva očeva korišćena je jednoajtemska skala, putem koje su procenjivali koliko su zadovoljni količinom vremena i načinom interakcije (u potpunosti zadovoljni i načinom i vremenom, zadovoljni samo vremenom, zadovoljni samo načinom, nezadovoljni i načinom i vremenom). Pored procene zadovoljstva, provereno je koje aktivnosti očevi sprovode sa decom i kolika je njihova učestalost. U svrhu ovoga korišćena je ček lista od 20 aktivnost, podeljenih na zabavne (npr. igranje, crtanje) i formalne aktivnosti (npr. kućni poslovi, razgovor o vrtiću). Učestalost svake aktivnosti je procenjivana na skali od 1 (gotovo svakodnevno) do 5 (gotovo nikada).

Deskriptivna statistika pokazuje da je 57 očeva u potpunosti zadovoljno i načinom i količinom vremena, 17 očeva je zadovoljno samo vremenom, dok je samo načinom zadovoljan ukupno 41 roditelj. Razlike između zabavnih i formalnih aktivnosti su proverene t-testom, i rezultati pokazuju da svi očevi provode značajno više vremena u zabavnim aktivnostima ($t(114) = 21.74, p < .01$). Pored toga, pokazano je da očevi koji su u potpunosti zadovoljni interakcijom, imaju značajno više zastupljenih i zabavnih ($t(96) = -3.87, p < .01$) i formalnih aktivnosti ($t(96) = -2.21, p < .05$), u odnosu na očeve koji nisu zadovoljni količinom vremena. Logističkom regresijom je dodatno pokazano da su samo zabavne aktivnosti značajan prediktori zadovoljstva ($\chi^2 = 14.25, p < .01; \beta = 0.11, p < .01$), pri čemu veća zastupljenost, znači i potpunije zadovoljstvo.

Nalazi ove studije ukazuju na značaj zabavnih aktivnosti u zadovoljstvu očeva interakcijom sa detetom. Iako očevi koji su u potpunosti zadovoljni interakcijom, pored zabavnih praktikuju značajno više i formalnih aktivnosti, rezultati ukazuju da je zadovoljstvo ipak više određeno količinom zabave, što je u skladu sa predškolskim uzrastom deteta. Ovi nalazi služe kao polazna tačka za dalje istraživanje kvaliteta odnosa očeva i dece.

Istraživanje je deo projekta Ministarstva prosvete, nauke i tehnološkog razvoja R. Srbije br. 179022 “Efekti egzistencijalne nesigurnosti na pojedinca i porodicu u Srbiji”.

Ključne reči: interakcija otac-dete, zadovoljstvo, zabavne aktivnosti, formalne aktivnosti

Exploration of father-child interaction: satisfaction and type of activities

Parent-child interaction is topic that has been present in psychology for many years, and different scholars have explored it from different angles. Activities that parents spend with children are only one aspect of this interaction. Most of the research that covered this topic is about quantity of time spent in parent-child interaction, while question of type of activities remained neglected. These studies consistently show that mothers spend more time with children. However, although this trend still exists, new research indicates that now-days fathers are spending more time with children, than earlier. Therefore, the aim of this study was to explore father-child interaction, with focus on their satisfaction, and type of activities they spend together.

Data were collected from 115 fathers of preschool children (age $M = 36.45$, $SD = 5.97$). Satisfaction with interaction is estimated with one-item scale, where fathers indicated how satisfied they are, with quantity and quality of interaction (completely satisfied with both quantity and quality, satisfied with the quantity, satisfied with the quality, unsatisfied with the both quantity and quality). We also estimated type and frequency of activities that fathers spend with children. For this purpose we used check list of 20 activities, divided into two subtypes: fun (e.g. playing, drawing) and formal (e.g. chores, conversations about kindergarten) activities. Frequency of each activity is estimated on scale ranging from 1 (almost daily) to 5 (almost never).

Descriptive statistics showed that 57 fathers are completely satisfied with quantity and quality of interaction, 17 fathers are satisfied with only quantity, and 41 fathers are satisfied with only quality of interaction. Differences between formal and fun activities were tested using t-test analysis, and results showed that all fathers spend more time in fun activities ($t(114) = 21.74$, $p < .01$). Additionally it is shown that fathers who are completely satisfied with interaction practice significantly more fun ($t(96) = -3.87$, $p < .01$) and formal ($t(96) = -2.21$, $p < .05$) activities than do fathers who are not satisfied with the amount of time. Logistic regression has shown that fun activities are significant predictors of satisfaction ($\chi^2 = 14.25$, $p < .01$; $\beta = 0.11$, $p < .01$), whereby larger amount of these activities means greater satisfaction.

Results are showing that fun activities have impact on father's satisfaction with father-child interaction. Although fathers who are fully satisfied with interaction, practice more fun and formal activities than fathers who are dissatisfied with the quantity, results indicate that greater satisfaction is more determined with the amount of fun activities, which is in accordance with young age of children. These results represent a starting point for further research.

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Keywords: father-child interaction, satisfaction, fun activities, formal activities

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Prikaz istraživanja o socijalnopsihološkim posljedicama apstinencije od roditeljstva

Roditeljstvo predstavlja važan cilj ostvarivanja ličnosti i njene pozicije u društvu, preciznije rečeno, opaža se kao smisao egzistencije pojedinca. Uprkos navedenom primjetno je da je apstinencija od roditeljstva, bilo da je ona prisilna ili voljna, poslednjih godina u porastu. U našem društvu, ona gotovo uvijek dovodi do snažnog pritiska socijalne zajednice i brojnih psiholoških problema. Shodno tome, pokušali smo da sumiramo najcesce socijalnopsiholoske posledice apstinencije od roditeljstva. Stoga ćemo u ovom radu prikazati istraživanja koja su opservirala uzroke i posljedice za tri grupe apstinencije od roditeljstva imenovane kao: dobrovoljna apstinencija, odgođeno roditeljstvo i prisilna apstinencija, a koja su radjena u poslednjih dvadesetak godina (2000-2017.). Istraživači koji se bave modelima donošenja odluka za apstinenciju od djece kažu da na postojanje negativnog ili pozitivnog stava utiče procjena ispunjenja određenih vrijednosti ili teškoća koje će nastupiti rađanjem djeteta. Uglavnom se teškoće opažaju u strahovima od gubitka slobode, prestanka karijere ili komplikacija u trudnoći. Odgođeno roditeljstvo se uglavnom vezuje za potrebu supružnika da ostvare neke životne ciljeve, najčešće vezane za ciljeve u karijeri prije nego se ostvare kao roditelji. Istraživanja koja se bave prisilnom apstinencijom ukazuju na to i da bez obzira na to koji od partnera je uzrok neplodnosti, žene su te koje sebe okrivljuju, potcjenjuju i predviđaju negativan ishod, ruminiraju i češće doživljavaju snažniji emocionalni distres, krivicu, strah i bijes, pa su posebno razmatrane i polne razike u ovom kontekstu, a potom i nivo stresa, depresije i anksioznosti, kao i problem identiteta i slike od sebi kod parova koji su prisilni apstinenci od roditeljstva. Razmatrana je i rezilijentnost u kontekstu steriliteta. U skorije vrijeme se medicina i psihologija više zanimaju za psihološke uzroke i posljedice prisilne apstinencije od roditeljstva nego od bioloških faktora.

Ključne reči: apstinencija od roditeljstva, sterilitet**The social and psychological consequences of being childless**

Parenting is one of the most important life goals for achieving personality and its position in society, to be more precisely it is a sense of life for the majority. Despite this, it is noticeable that childlessness, voluntary or involuntary, has been increased in previous years. In our society, it almost always leads to strong social pressure and many psychological problems. Accordingly, we tried to summarize the most frequent psychosocial consequences of this phenomenon. Therefore,

this article will show the studies that has been observing the causes and consequences of belonging to one of the three childlessness groups: voluntary childlessness, delayed parenthood and involuntary childlessness, which were done in the last twenty years (2000 - 2017). Researchers involved in the decision-making models of childlessness said that the existence of a negative or positive attitude affecting assessment of fulfillment of certain values and difficulties that will occur in the birth of a child. Mainly difficulties observed like a fear of loss of freedom, career goals or pregnancy complications. Delayed parenthood is mainly linked to the need for spouses to gain some life goals, usually related to career goals before become a parent. Studies dealing with involuntary childlessness suggests that no matter which of the partners is a cause of infertility, there are various psychological and psychosomatic effects, and especially women are affected, so we discuss about differences between gender, but also level of stress, depression and anxiety, as well as the problem of identity and resilience in the context of sterility. Recently, the medicine and psychology are more interested in the psychological causes and consequences of involuntary childlessness than for biological factors.

Keywords: childlessness, infertility

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Relacije afektivne vezanosti i psihološke separacije - individuacije adolescenata

Iz ugla teorije afektivne vezanosti, osim potrebe za brigom i zaštitom, dete ima potrebu i da se odvoji kako bi istraživalo svet, pratilo vlastitu znatiželju i upoznavalo i ovladalo novim veštinama i ulogama. Afektivna vezanost i autonomija mogu se konceptualno posmatrati nezavisno, ali i kao komplementarni proces, jer su neophodne za razvoj nezavisnosti i individuacije. Separacija-individuacija predstavlja normativni pravac razvoja u adolescenciji i vodi od interpersonalne zavisnosti od roditelja kao internalizovane, idealizovane predstave roditeljskog modela u detinjstvu, do separacije kao interpersonalne nezavisnosti u adolescenciji. Istraživanje prikazano ovim radom imalo je za cilj da ispita relacije između afektivne vezanosti i sekundarne psihološke separacije-individuacije adolescenata. Uzorkom je obuhvaćeno 1027 ispitanika uzrasta od 12 do 25 godina. Za potrebe istraživanja korišteni su Test za procjenu separacije-individuacije za adolescente (SITA) i instrument za procjenu afektivne vezanosti adolescenata UPIPAV-R. Svi instrumenti su pokazali zadovoljavajuće karakteristike. U cilju određivanja obrazaca afektivne vezanosti na skalama instrumenta UPIPAV-R, primenjena je klaster analiza. Potvrđena je pretpostavka o postojanju četiri

obrasca vezanosti sa, teorijski očekivano, najviše ispitanika u kategoriji sigurno afektivno vezanih (77.66%). Primenom MANOVA analize ispitivane se razlike između grupa formiranih prema obrascima afektivne vezanosti i dimenzija psihološke separacije-individuacije. Rezultati ukazuju na to da se grupe formirane prema obrascima afektivne vezanosti statistički značajno razlikuju u pogledu svih dimenzija sepracije-individuacije, a to su: dimenzije negiranje potrebe za drugim ($F = 65.080$), zdrava nezavisnost ($F = 48.914$), sputanost zbog roditeljske kontrole ($F = 32.074$), čežnja za djetinjstvom ($F = 23.289$) i separacione anksioznosti ($F = 16.069$). Rezultati post hoc analize su pokazali da sigurno afektivno vezani adolescenti, u odnosu na sve druge grupe, najmanje negiraju potrebu za drugim, a u odnosu na ispitanike preokupiranog i plašljivog obrasca značajno manje čeznu za detinjstvom; preokupirano vezani se, u odnosu na sve druge grupe, osećaju najmanje sputanim zbog roditeljske kontrole, a u odnosu na ispitanike sigurnog i izbegavajućeg obrasca izveštavaju o značajno većoj separacionoj anksioznosti; plašljivo vezani su značajno manje zdravo nezavisni u odnosu na ispitanike preokupiranog obrasca vezanosti. Dobijeni rezultati u skladu su sa teorijskim postavkama, te rezultatima prethodnih istraživanja.

Ključne reči: psihološka separacija-individuacija, afektivna vezanost, adolescencija

Relations between attachment and psychological separation - individuation of adolescents

Child needs to investigate the world because of curiosity and learning and mastering new skills and roles, beside of requisite for care and protection. Attachment and autonomy can be observed independently or as a complementary process, because they are necessary for the development of independence and individuation. Separation-individuation represents normative direction in adolescence development and leads from interpersonal depending on the parent such as the internalized and idealized image of the parent model in childhood, to the separation of interpersonal adolescence independence. Research presented in this paper includes searching for significant relations between attachment and separation-individuation of adolescents. The sample included 1027 aged 12 to 25 years. We were using the following instruments: Questionnaire UPIPAV-R to measure the attachment style for adolescents, Separation-individuation Test of Adolescence (SITA). The instruments showed satisfactory characteristics. In order to determine patterns of attachment on the Questionnaire UPIPAV-R scale, we applied cluster analysis. It was assumed the existence of four patterns of attachment and that more than 50% of the subjects are in the category secure attachment (77.66%), which is in accordance with the theoretical model. Using the MANOVA analysis we studied the differences between the groups formed by attachment styles and dimensions of psychological separation-individuation. The results showed that the groups formed by attachment styles determine significant differences in terms of all dimensions of separation-individuation: denying the need for others dimension ($F = 65.080$), healthy independence ($F = 48.914$), inhibition due to parental control ($F = 32.074$), a yearning for childhood ($F = 23.289$) separation anxiety ($F = 16.069$). The results of post hoc analysis showed that securely attached adolescents are denying the

need for others at the lowest level and have significantly lower scores than those of all other styles of attachment, and they have lower level of yearning for childhood, than the preoccupied and fearful style of attachment. The preoccupied adolescents are feeling inhibited due to parental control at the lowest level of all the other styles of attachment, and they have separation anxiety at higher level than those of the style of a secure and avoidant attachment. The fearful adolescents have significantly lower level of healthy independence than those of the preoccupied style of attachment. The results are consistent with the theoretical principles, as well as the results of the previous researches.

Keywords: psychological separation-individuation, attachment, adolescence

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Struktura i korelati porodičnih rituala u Vojvodini

Teorija ekološkog razvoja i koncept porodične klime predstavljaju širi okvir za razumevanje uloge i doprinosa porodičnih rituala porodičnom funkcionisanju. Cilj ovog rada je procena karakterističnih vrsta i dimenzija porodičnih rituala na uzorku porodica iz Vojvodine i nekih njihovih sociodemografskih korelata, Primenjenim instrumentom, korišćenim u više istraživanja porodičnih rituala u različitim kulturnim kontekstima (Upitnik porodičnih rituala (FRQ, Fiese&Klein, 1992), ispitan je 141 roditelj sa teritorije Vojvodine. Instrument je i na našem uzorku pokazao zadovoljavajuće vrednosti osnovnih metrijskih karakteristika (Kronbah Alfa 0,862). Rezultati o vrsti porodičnih rituala, njihovim dimenzijama i nekim sociodemografskim korelatima, pokazuju da se porodice iz našeg uzorka najviše okupljaju oko proslava rođendana i religijskih praznika dok su godišnji odmori i zajednički obroci percipirani kao manje značajni i praktikovani porodični rituali. Dimenzije učestalost i emocionalna involviranost prepoznaju se kao visoko izražene, dok su dimenzije podele uloga i rutiniziranosti radnji kod naših porodica izražene u manjoj meri. Ispitivanje sociodemografskih korelata dimenzija i konteksta porodičnih rituala pokazuje da je broj dece u porodici u blagoj negativnoj korelaciji sa kontekstom zajedničkog obedovanja ($r = -.178$, $p < .05$). Visina prihoda, zaposlenost oba roditelja, stepen obrazovanja majke i oca, pokazuju povezanost sa različitim načinima provođenja vikenda ($r = .237$, $p < .01$; $t(130) = 2.332$, $p < .05$; $t(137) = -2.7$, $p < .05$), $t(135) = 2.086$, $p < .05$). Visina prihoda porodice i stepen obrazovanja oca koreliraju sa načinom provođenja godišnjih odmora ($r = .286$, $p < .01$). Dimenzija emocionalne involviranosti korelira sa najvećim brojem merenih sociodemografskih varijabli (broj članova porodice $r = -.235$, $p < .01$; visina prihoda $r = .14$, $p < .05$).

.01; zaposlenost oba roditelja, $t(130) = 2.104$, $p < .05$; stepen obrazovanja majke i oca $t(137) = -3.698$, $p < .01$; $t(137) = 2.433$, $p < .05$). Visina prihoda dodatno je povezana i sa dimenzijama učestalosti rituala ($r = .207$, $p < .05$), simboličkim značenjem ($r = .233$, $p < .01$) i jasnoćom uloga ($r = -.415$, $p < .05$). Stepen obrazovanja majke je povezan sa jasnoćom uloga tokom porodičnih rituala ($t(137) = 2.325$, $p < .05$), dok je stepen obrazovanja oca povezan sa dimenzijom njihovog planiranja ($t(137) = 2.099$, $p < .05$). Dobijeni rezultati impliciraju da je funkcionisanje porodice kroz obrasce porodičnih rituala značajno pod uticajem različitih karakteristika same porodične strukture i sociodemografskih faktora. Takođe dobija se slika o vrstama i dimenzijama porodičnih rituala u našoj sredini, što pruža osnovu za mogućnosti osnaživanja porodica da izgrade rituale koji će unaprediti njihovo funkcionisanje i dati doprinos optimizaciji porodične klime.

Rezultati su deo Istraživačkog projekta Ministarstva prosvete, nauke i tehnološkog razvoja R. Srbije br. 179022 "Efekti egzistencijalne nesigurnosti na pojedinca i porodice u Srbiji".

Ključne reči: porodica, porodični rituali, mentalno zdravlje porodice

Structure and correlates of family rituals in Vojvodina

The theory of ecological development and the concept of family climate represent a wider framework for understanding the role and contribution of family rituals to family functioning. The aim of this paper is to evaluate the characteristic types and dimensions of family rituals on the sample of families from Vojvodina and some of their sociodemographic correlates. The applied instrument, used in several studies of family rituals in different cultural contexts (Family Rituals Questionnaire (FRQ, Fiese & Klein, 1992), examined 141 parents from the territory of Vojvodina. The instrument also showed satisfactory values of basic metric characteristics (Kronbach Alpha 0.862). The results of the type family rituals, their dimensions and some sociodemographic correlates show that the families of our sample are mostly gather around the celebration of birthdays and religious holidays, while vacations and joint meals are perceived as less significant and practiced family rituals. Dimensions of occurrence and emotional involvement are identified as highly expressed, while the dimensions of the assignement of roles and routines expressed to a lesser extent. The study of sociodemographic correlates of the dimensions and contexts of family rituals shows that the number of children in the family is in a slightly negative correlation with the context of joint meals common dining ($r = -0.178$, $p < 0.05$). Amount of family income, parents employment and education level are associated with different ways of weekend activities ($r = .237$, $p < .01$; $t(130) = 2.332$, $p < .05$; $t(137) = -2.7$, $p < .05$), $t(135) = 2.086$, $p < .05$). In addition, income and level of fathers education correlate with spending vacations ($r = .286$, $p < .01$). Dimension of emotional involvement correlates with most of measured variables (number of family members: $r = -.235$, $p < .01$; income: $r = .14$, $p < .01$; employment of both parents, $t(130) = 2.104$, $p < .05$; level of mothers and fathers education: $t(137) = -3.698$, $p < .01$; $t(137) = 2.433$, $p < .05$). Amount of income is connected with the occurrence of the rituals ($r = .207$, $p < .05$), symbolic significance ($r = .233$, $p < .01$) and assignement of roles and duties ($r = -.415$, $p < .05$). Mother's education level is related to the assignement of roles ($t(137) = 2.325$, $p < .05$), while the level

of father's education is associated with dimension of preparation and planning family rituals ($t(137) = 2.099, p < .05$). The results imply that the functioning of the family through patterns of rituals is influenced by the different characteristics of the family structure itself and sociodemographic factors. Also provides an information about the types and dimensions of family rituals in our environment, which provides the possibilities for empowering families to make rituals that will improve their functioning and contribute to the optimization of the family climate.

Survey is part of a research project of the MESTD R.S. no179022, "The effects of existential insecurity on the individuals and family in Serbia".

Keywords: family, family rituals, family mental health

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Veza između afektivne vezanosti i kapaciteta za mentalizaciju kod muškaraca i žena

Cilj ovog istraživanja bio je ispitati vezu između dimenzija afektivne vezanosti i kapaciteta za mentalizacije, kod ispitanika muškog i ženskog pola. Uzorak je činilo 318 ispitanika, od čega 52.5% žena i 43.1% muškaraca. Za procjenu dimenzija afektivne vezanosti, anksioznosti i izbjegavanja, korištena je revidirana verzija upitnika Iskustva u bliskim odnosima. Dimenzije su ispitivane putem sedmostepene Likertove skale. Za procjenu kapaciteta za mentalizaciju i aspekata mentalizacije (Mentalizacija sopstvenih stanja, Mentalizacija stanja drugih i Motivacija za mentalizaciju) korišten je Upitnik za samoprocjenu mentalizacije. Ispitanici su odgovarali na petostepenoj Likertovoj skali. Rezultati pokazuju da su žene sklonije mentalizaciji stanja drugih, te da su motivisanije za mentalizaciju od muškaraca. Anksioznost je u negativnoj korelaciji sa Mentalizacijom sopstvenih stanja ($r = -.45, p < .05$), a u pozitivnoj sa Motivacijom za mentalizaciju ($r = .11, p < .05$). Izbjegavanje pozitivno korelira sa Mentalizacijom stanja drugih ($r = .14, p < .05$). Na osnovu rezultata regresione analize obje dimenzije su značajni prediktori jedino Mentalizacije sopstvenih stanja ($F(2, 315) = 41.57, p < .01$). Na poduzorku muškaraca ovaj rezultat se ponavlja ($F(2,149) = 25.72, p < .01$), dok je kod žena samo Anksioznost značajan prediktor Mentalizacije sopstvenih stanja ($F(2,163) = 17.47, p < .01$). Dobijeni rezultati djelimično potvrđuju postavljene hipoteze. Rezultati ove studije otkrivaju specifičan odnos afektivne vezanosti i kapaciteta za mentalizaciju na domaćem uzorku i pružaju uvid u relevantne polne razlike u oba konstrukta.

Ključne reči: afektivna vezanost, dimenzije, kapacitet za mentalizaciju, pol

The relationship between attachment and mentalization in men and women

The aim of this study was to examine the relationship between attachment dimensions and mentalization in a sample of men and women. The sample involved 318 participants, from which 52.5% were female and 43.1% were male. The revised version of the Experiences in Close Relationships Scale was used for the assessment of attachment dimensions Anxiety and Avoidance. These dimensions were measured through a 7-point Likert's scale. For the assessment of mentalization and its aspects (Mentalization the Self, Mentalization of Others and Motivation for Mentalization), the Mentalization Questionnaire was used. Participants responded on a 5-point Likert's scale. The results show that women are more prone to mentalization of others and are more motivated for mentalization in general, than men are. Anxiety is negatively correlated with the Mentalization of the Self ($r = -.45, p < .05$) and positively correlated with Motivation for Mentalization ($r = .11, p < .05$). Avoidance is positively correlated with Mentalization of Others ($r = .14, p < .05$). Based on the results of the regression analysis both attachment dimensions are significant predictors of only Mentalization of the Self ($F(2,315) = 41.57, p < .01$). This result repeats on the sample of male participants ($F(2,149) = 25.72, p < .01$), while in female participants only Anxiety predicted Mentalization of the Self ($F(2,163) = 17.47, p < .01$). The obtained results only partially confirmed our hypothesis. The results of this study revealed a specific relationship of attachment and mentalization on a domestic sample and highlighted gender differences in both constructs.

Keywords: attachment, dimensions, mentalization, gender differences



POSTER SEKCIJA

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Marko Šunjka, Damir Bogdan, Bojana Dinić*Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia**Email: markosunjka19@gmail.com***An aphotic belief: Dark Tetrad in relation to superstition**

Superstition refers to the degree of belief that certain objects or actions can influence one's fate, while those beliefs are not grounded in scientific knowledge or logic. In this study the relationships with the malevolent traits, e.g. Dark Tetrad, were examined. People with these traits are often described as callous, manipulative and antagonistic. It could be assumed that they are less superstitious, but that they could use this to manipulate or to take control.

On a sample of 408 participants (204 of males), with age range between 18 and 79 years and average age of 33 (SD = 14.05), five instruments were applied: 1. Short Sadistic Impulse Scale (SSIS), 2. Narcissistic Personality Inventory (NPI) which measures grandiose narcissism, 3. Psychopathic Personality Traits Scale (PPTS) which consists of four subscales: Affective responsiveness (shallowness and the general lack of empathy), Cognitive responsiveness (lack of ability to mentally represent someone's emotional process), Interpersonal manipulation and Egocentrism, 4. Machiavellianism scale (Mach IV) and 5. The recently created Superstition Questionnaire (SQ), which consists of three subscales: Popular superstition, Negative superstition and Belief in supernatural. SQ was constructed by the students of the second year of psychology at the Faculty of Philosophy in Novi Sad, under the course Psychometrics 2 and under the mentorship of B. Dinić.

Results of regression analysis showed that percents of explained variance of superstition scales are small, ranging from 2.3 for Belief in supernatural to 6.8 for Negative superstition. Popular superstition could be negatively predicted by Affective responsiveness ($\beta = -.18, p < .01$), and positively by Cognitive responsiveness ($\beta = .15, p < .01$) and Egocentrism ($\beta = .12, p < .05$). Negative superstition could be positively predicted by Cognitive responsiveness ($\beta = .16, p < .01$) and Egocentrism ($\beta = .15, p < .01$), and negatively by Narcissism ($\beta = -.15, p < .01$), while there is not significant prediction of Belief in supernatural. Machiavellianism and sadism are not significant predictors of superstitions. Results showed that tendency towards superstitions are generally related to psychopathy; especially focus on one's own interest, beliefs, and attitudes as to lack of ability to understand emotions of other people. However, there is a small distinction between the types of superstitions. Higher affective empathy is related to popular, mostly positive superstitions, indicating emotional engagement among people with higher these superstitious beliefs. However, grandiose narcissism is related to lower tendency towards negative superstitions, possible due to the narcissistic belief that nothing unwanted could possible happen to oneself. Results showed that there are distinctions between dark traits considering their relationships with the dimensions of superstition. Also, the results revealed the importance of subtrait level of dark traits, especially psychopathy.

This research was supported by the Ministry of Education, Science and Technological Development of Republic of Serbia (179006).

Keywords: superstition, psychopathy, narcissism, Machiavellianism, sadism

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Implicit theories of intelligence and mathematics achievement: Role of gender

High school students believe that intelligence is one of the most important predictors of mathematical achievements. In general, high school students believe that intelligence has an influence on the mathematics achievement more than on the achievement in other subjects, but also that mathematics achievement emerges as a product of "inborn intelligence". Some research findings implies that boys, more than girls, support entity viewpoint of the nature of intelligence. Given that boys, traditionally, have better math achievement than girls, it seems that gender differences can play an important role in the relationship between implicit theories of intelligence and achievement in mathematics in high school. The aim of this study was to examine the role of implicit theories of intelligence in adolescents' mathematics achievement by detecting gender-related patterns between them. Implicit Theories of Intelligence Scale (ITIS, Abd-El-fattah & Yates, 2006) has been applied to the sample of 514 high school students in Serbia (54.7% of girls; average age 16.8 years). Seven items of ITIS operationalize the belief that intelligence is fixed, stable and unchangeable characteristic (entity theory), while the remaining seven items are related to the belief that intelligence is malleable and enhanceable through individual efforts (incremental theory). Mathematics achievement is operationalized by the overall grade point average in mathematics. The results of multiple regressions indicate differences in the prediction of mathematics achievement of boys and girls due to their implicit theories of intelligence. Although incremental theories of intelligence in both cases show a low correlation with the criterion (boys: $\beta = -.14$, $t = -2.37$, $p < .05$; girls: $\beta = .11$, $t = 2.66$, $p < .01$), the important finding is that the boys' prominent beliefs about the possibility of developing intelligence are significantly related to their lower achievement in mathematics, while the correlation between these two variables in the group of girls occurs in opposite direction. It seems that boys' view of the intelligence as less changeable characteristic has positive influence on their math achievement. These findings could be explained by greater tendency of boys to the entity theories of intelligence, which stems from the understanding of hardworking and dedication as a typically feminine characteristics.

Keywords: implicit theories of intelligence, mathematics achievement, gender differences

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Men copying with infertility

It is estimated that one out of ten couples worldwide experience reproduction problems and infertility. Although infertility is primarily treated as a physiological problem, the diagnosis of infertility relates to a number of psychological and social difficulties. Couples coping with reproduction problems are likely to experience emotional distress, loss of control, jealousy, envy, anxiety, depression; at some point, infertility is likely to become the focal point of couples tasks and communication. In addition, couples often experience a disruption of developmental transition to adulthood and social stigmatisation; infertile couples are said to be one of the most neglected and silent minorities.

Reproduction problems and the diagnosis of infertility is a stressful event for both women and men. Whereas there are a lot of studies to address women perspective and gender differences when coping with infertility, only a few studies focus primarily on men. The main aim of the current study was to investigate how men cope with involuntary childlessness; in particular, we compared men who experience reproduction problems to those who do not, across a number of psychological dimensions.

The sample included 87 childless men who's spouses were subjects of assisted reproduction—*in-vitro-fertilisation (IVF)* treatment in particular. In addition, we composed two control samples of men who did not experience reproduction treatment: 50 childless men who had a sexual partner but were currently not planning pregnancy; and a control group of 45 men who were parents themselves. We used self-report scales to assess anxiety, depression, self esteem, and life satisfaction. Multivariate analyses techniques such as MANOVA and discriminant analysis were applied to estimate adjustment problems of men who cope with their own, partner's or undiagnosed source of infertility. In addition, we controlled for social stigmatisation and tabooisation of infertility. The results suggested men's self esteem and quality of life were affected by couple's reproduction difficulties; men who were coping with infertility were more likely to feel social pressure to conceive a child when their friends announced pregnancy, but have similar social patterns (such as getting together with friends and family) as men from the control samples. In addition, reproduction assisted treatment was related to life satisfaction on many domains such as satisfaction with leisure time, hobbies, housing, family life and sexuality.

The results suggest that experience with IVF treatment is likely to affect men's self esteem and quality of life. Theoretical and practical implications of these results are discussed, particularly in terms of goal oriented psychological interventions.

Keywords: infertility, childlessness, gender differences

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Nonword repetition accuracy in Serbian preschool children

The nonword repetition task (NRT), which consists of instantaneous repetition of presented nonsense words, enables the investigation of the ability which closely resembles that of learning a new word. It is widely used for gaining insight into the phonological, lexical and overall language development in typically developing (TD) children, as well as in vulnerable language populations.

The aim of this study was to investigate the ability of phonological repetition of TD Serbian preschool children by using a NRT constructed according to the characteristics of the Serbian language. The NRT consists of 48 nonwords of varying prosodic complexity, constructed by systematically varying phonological parameters on four simple two-syllable nonwords: two parameters of syllable structure (onset: consonant/consonant cluster, and coda: null/consonant) and two of metrical structure (number of syllables: two/three/four, and position of syllable stress: first/second syllable). Seventy-five TD children aged 3 to 7 ($n = 15$ per age group) and 20 adults participated in the study. Prerecorded nonwords were presented in two randomized orders. The participants' repetitions were audio recorded, transcribed and coded for accuracy and types of errors.

The results show that nonword repetition accuracy significantly increases with age in Serbian TD children ($F(5,89) = 55.50, p < .001$) and that 7-year-olds do not differ significantly from adults on the overall performance on the task. Further, the analyses show a significant effect of the number of syllables on repetition accuracy ($F(2,178) = 243.09, p < .001$), as well as a significant interaction of age and number of syllables ($F(10,178) = 10.21, p < .001$). The effect of the syllable structure on repetition accuracy is also significant ($F(3,267) = 79.61, p < .001$), as well as the interaction of age and syllable structure ($F(15,267) = 6.13, p < .001$). The analysis of the errors in repetitions reveals a significant

Poster sekcija**Poster session**

effect of age ($F(80,390) = 2.33, p < .001$) for 11 of 16 types of errors on the word, syllable and phoneme level, with phoneme substitution, onset consonant cluster reduction and coda consonant omission being the most frequent.

It may be concluded that the ability of phonological repetition increases with age. While 3-year olds have trouble repeating even the simplest two-syllable nonwords, with age children master prosodic complexity, and at the age of 7 they have mostly mastered the phonological system of the Serbian language. During development, children tend to simplify complex phonological structures, thus making several types of errors on all levels. The nonwords used in this study are highly age discriminative and may be used for constructing a test for the assessment of phonological development in Serbian preschool children.

Keywords: phonological development, nonword repetition task, prosodic complexity, preschool children, Serbian language

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Precompetition emotions in Serbian national bowling team

Emotional state prior to competition often influence performance during the game. That is way precompetition regulation of emotions is very important. Due to pronounced stress related to competition, athletes are required to know how to control and restructure their thoughts and suppress emotions that are detrimental for performance. Among factors, that can shape emotional response to competition stress, is certainly personality structure. Although in sport settings, personality, per se, shows inconsistent correlation with achievement, its contribution, as disposition to react in specific manner, is more reliable. Aim of this research was to establish relation between emotions in elite bowlers prior to their performance with personality structure and emotional regulation.

Sample consisted of 25 elite bowlers (13 women), senior and junior age category from Serbian national team. Age range were from 18 to 41 years ($M = 24,24, SD = 6,64$) and training experience from 4 to 20 years ($M = 11,16, SD = 4,16$). Precompetition emotions were assessed with Sport Emotion Questionnaire (SEQ, Jones et al., 2005) that comprises 5 subscales: Anxiety, Dejection, Excitement, Anger and Happiness. Personality structure was measured with Zukerman-Kulman Personality Questionnaire Shortened Version (ZKPQ-50-CC) and Emotional Regulation with Emotion Regulation Questionnaire (ERQ). Data were collected during World Championship that was held in Novogard, Croatia in 2015. SEQ was applied approximately half hour before each bowler had its own

performance, and the others questionnaires were filled out after performance. Data were analyzed using multiple regression analysis so that gender, age, training experience, successfulness, scores of 5 five subscales from ZKPQ-50-CC and two from ERQ were treated as predictors, while scores on five subscales of SEQ were used as criteria variables.

Results indicated that all predictors, taken together significant predict score on two subscales: Anxiety ($R = .86$; $F = 2.98$; $p < .05$) and Excitement ($R = .81$; $F = 3.07$; $p < .05$). Specifically, results indicate that “impulsive sensation seeking” predicted negatively score on anxiety subscale ($\beta = -.47$, $p < .05$), and “aggression-hostility” predicted in positive fashion score on excitement subscale ($\beta = .46$, $p < .05$), while emotional suppression predicted it negatively ($\beta = -.53$, $p < .05$). Although obtained results could be due to small sample, it seems that personality factors indeed show inconsistent relations, not just to achievement in sport, but to various precompetition states. As emotional regulation concerns, emotional suppression was only in significantly inverted relation with excitement scale perhaps suggesting that bowlers learned well to self-induce positive and performance-facilitative emotions and suppress harmful negative emotions.

Keywords: emotions in sport, personality, emotional regulation

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Self-efficacy in mathematics and math anxiety in high school: Gender differences

The results of the research of gender differences, related to mathematical anxiety, support the fact that girls are more prone to experience this kind of fear in high school. The development of anxiety in students is affected by many factors, and one of the main factors are students' attributions about their success or failure in school achievement. Attributions can influence on the formation of self-image and achievements in various domains in school, including mathematics, through belief in effort for success. Given that boys, traditionally, have better math achievement than girls, it seems that gender differences can play an important role in the relationship between mathematics self-efficacy and anxiety about math achievement in high school. The purpose of the study was to investigate the possibility of predicting math anxiety in both genders by using different sources of self-efficacy in mathematics. Three instruments have been applied to the sample of 514 high school students in Serbia (54.7% of girls; average age 16.8 years): 1) Sources of Math Efficacy Scale (SMES: Usher & Pajares, 2009), which measures the mastery experience, vicarious experience, social persuasions and physiological and affective states; 2) Math Anxiety Questionnaire (MAQ: Wigfield & Meece, 1988) which includes two components of math anxiety - a negative affective reactions

component and a cognitive component; 3) Abbreviated Math Anxiety Scale (AMAS: Hopko, Mahadevan, Bare, & Hunt, 2003) with factors of learning math anxiety and math evaluation/math test anxiety. The results of multiple regressions indicate that physiological and affective states show significant positive correlation with each component of the two types of math anxiety in the group of boys (Worry: $\beta = .40$; Negative affective reaction: $\beta = .64$, Learning anxiety: $\beta = .39$, Evaluation anxiety: $\beta = .42$, for all $p < .01$), as well as in the group of girls (Worry: $\beta = .43$, Negative affective reaction: $\beta = .57$; Learning anxiety: $\beta = .62$; Evaluation anxiety: $\beta = .50$, for all $p < .01$). As for the remaining sources of self-efficacy in mathematics, social persuasions are negatively correlated with both negative affective reactions component ($\beta = -.20$, $p < .01$) as well as a cognitive component in the group of girls ($\beta = -.37$, $p < .01$), and only with a cognitive component of math anxiety in the group of boys ($\beta = -.32$, $p < .01$). Finally, the boys' vicarious experience predicts only negative affective reactions component ($\beta = .22$, $p < .01$), while in the group of girls this source of self-efficacy also predicts math evaluation/test type of math anxiety ($\beta = .24$, $p < .01$). The results indicate different pattern of relations between self-efficacy in mathematics and math anxiety depending on the gender. It seems that there is need for paying attention to more sources of attribution in girls than in boys in context of risk factors that can influence on development of math anxiety in high school.

Keywords: self-efficacy in mathematics, math anxiety, gender differences

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Semantic Settling Dynamics model and number of senses

Large body of empirical investigation revealed that lexical ambiguity effects have been unstable. Compared to unambiguous words, polysemy (multiple related senses) typically elicited shorter processing latencies, whereas homonymy (multiple unrelated meanings) prolonged processing. However, depending on the task used in the experiment, the effects have varied. Semantic Settling Dynamics model was recently developed to account for these variations by assuming that they originated from differences in the amount of semantic processing, closely linked to processing time that is evoked by the specific task. According to this model, tasks that elicit shorter processing time favour the polysemy advantage, whereas longer processing is needed for homonymy effect to become observable. To test this prediction, the authors of the model applied manipulation that was aimed to prolong processing by presenting stimuli in high and low contrast, low contrast leading to 100ms longer processing and more pronounced homonymy disadvantage, followed by less

pronounced polysemy advantage. However, this was demonstrated only for comparison of polysemous words and unambiguous words at the group level – in a factorial design. In this research we aimed to test whether the predictions could be generalized to number of senses effect (the finding that an increase in number of senses is followed by a decrease in processing time), in a correlational design. Considering that the model predicts that prolonged processing would lead to attenuation of polysemy effect, we predicted that prolonged processing would also attenuate the number of senses effect.

We presented 160 words with 1-18 senses and 160 pseudowords. Visual lexical decision task was administered to 84 participants, divided into two groups. One group was presented with white stimuli on a black background (high contrast), whereas the same items were presented to the other group as dark-grey on a black background (low contrast). Linear mixed effect regression revealed marginally slower processing in a low contrast condition ($t(72) = 1.756, p = .083$) and significant effect of number of senses ($t(138) = -2.099, p = .037$). We did not observe interaction between number of senses and contrast, but there was a marginally significant word length by contrast interaction ($t(10, 80) = -1.857, p = .063$). This interaction revealed that low contrast tends to attenuate the effect of longer words taking longer to process.

Overall, our results contradict predictions derived from the SSD model and suggest further research. However, one should bear in mind that our contrast manipulation prolonged the processing time by just 40ms, less than the authors of the model reported. Therefore, the same predictions should be tested by using alternative strategies of inducing longer processing.

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Keywords: semantic ambiguity, lexical processing, polysemy, Semantic Settling Dynamics

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Razvoj timova u cilju upravljanja organizacionim promenama - HR perspektiva

Istraživanje je imalo za cilj procenu otpora prema promenama timova u okviru male softverske kompanije koja je u procesu uvođenja organizacionih promena i predlog HR mera za implementaciju planiranih promena. Istraživanjem su bili obuhvaćeni svi zaposleni u kompaniji ($N = 40$; 62.5% muškarci; 52.4% zaposlenih ima manje od 30 godina; 80% zaposlenih ima završen fakultet). U prvoj fazi, RTC skalom meren je stepen otpora preme promenama i rezultati su pokazali nizak stepen otpora ($M = 1.99$; $SD = 0.354$). U okviru druge faze, sprovedena je dijagnostika timova primenom

Modela kritične granice i procenjivana su četiri kriterijuma: stručna znanja, obim posla, inicijativa i predprodajne aktivnosti. Na osnovu navedenog modela, u svakom timu smo došli do trenutnog stanja i definisali ciljeve kvartalno za naredni period. Takođe, primenjen je i Hokinsonov modela pet disciplina i procenjivane su sledeće discipline: ovlašćenje, pojašnjavanje, saradivanje, povezivanje, učenje i razvoj tima. Za svaku disciplinu izračunavali smo razliku između sadašnjeg i željenog stanja i prepoznali ključne aktivnosti koje mogu voditi ka procesu promene i željenom ishodu. Rezultati su pokazali da je najveća razlika između postojećeg i željenog stanja procenjena za ovlašćenje ($M = 2.8$ trenutno; $M = 4.8$ željeno) i za učenje i razvoj tima ($M = 3.67$ trenutno; $M = 4.94$ željeno). Na osnovu dobijenih rezultata, predložene su HR mere koje su sprovedene u proteklih 10 meseci: analiza posla za nove pozicije u kompaniji i formiranje srednjeg nivoa menadžmenta, redefinisavanje nadležnosti, reorganizacija, veća ovlašćenja za tim lidere, koučing sa tim liderom i timovima, zajedničke radionice i treninzi, sistematsko uvođenje koučing kulture u organizaciju. Druga faza je i dalje u toku, a pozitivan feedback zaposlenih i nizak stepen otpora daju dobru polaznu osnovu za implementaciju planiranih promena.

Ključne reči: organizacione promene, timovi, HR mere, koučing

Managing organizational change by team development - HR perspective

The research goal was to investigate employees' resistance to change within one small software organization, which is in the process of organizational changes. . All of the employees in the company participated in the research ($N = 40$; 62.5% males; 52.4% are less than 30 years old; 80% have a university degree). The first phase of the research included measuring employee's resistance to change. The results show a low level of resistance ($M = 1.99$; $SD = 0.354$). Following the results, second phase included teams diagnostic through applying two team coaching techniques: a) implementation of Critical limit model (assessing four criteria: expert knowledge, extent of job, initiative and pre sales activities, in order to estimate present state/situation and define goals for the next period); b) team assessment using Hawkins model of five disciplines (authorization, clarification, connection. cooperation, learning and team development). We calculated the difference between current and desired situation and identified key actions that can lead to a process of change and desired outcomes. The greatest difference was found for authorization ($M = 2.8$ current; $M = 4.8$ desired) and learning and team development ($M = 3.67$ current; $M = 4.94$ desired). HR measures implemented during 10 months involved: job analysis (new job positions including middle management positions); redefinition of jurisdiction; reorganization; more authority for team leaders; basic coaching with team leaders and further implementation of coaching principles within teams; common workshops and training programs for development division and sales division; introduction of coaching culture as a corporate culture in the company. The second phase is still in progress.

Keywords: organizational change, teams, HR measures, coaching

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Prema Teoriji afektivnog vezivanja, može se pretpostaviti da će partneri koje karakteriše nesigurna afektivna vezanost, bez obzira na to o kom nesigurnom obrascu partnerskog afektivnog vezivanja je reč, imati veći potencijal za razvod u odnosu na partnere sa sigurnim obrascem partnerske afektivne vezanosti. U cilju utvrđivanja povezanosti kombinacije obrazaca partnerske afektivne vezanosti i potencijala za razvod supružnika, ispitano je 490 parova različitog socioekonomskog statusa, starosti od 20 do 79 godina ($AS = 40.7$; $SD = 11.38$). Za identifikovanje obrazaca partnerske afektivne vezanosti primenjena je skraćena verzija Inventara iskustava u partnerskim odnosima (ECR: Brennan, Clark, & Shaver, 1998, modifikacija Kamenov i Jelić, 2003), dok je potencijal za razvod meren skraćenom verzijom Indeksa bračne nestabilnosti (Marital Instability Index: Booth, Johnson, & Edwards, 1983; preuzetom iz Tadinac i sar., 2005). Primenom jednofaktorske analize varijanse utvrđeno je postojanje statistički značajnih razlika u stepenu potencijala za razvod između partnera sa različitim kombinacijama obrazaca afektivne vezanosti ($F(2,403) = 3.83$; $p = .02$, eta square = 26%). Najizraženiji potencijal za razvod imaju parovi u kojima oba partnera pripadaju nesigurnom obrascu afektivne vezanosti ($M = 5.71$, $SD = .67$), dok najniži potencijal za razvod imaju parovi u kojima oba partnera pripadaju sigurnom obrascu partnerske afektivne vezanosti ($M = 5.40$, $SD = .90$). Dobijeni rezultati su u skladu s početnom pretpostavkom i većinom nalaza dosadašnjih istraživanja. Ovi nalazi potvrđuju i značaj usmeravanja preventivnog rada na parove gde oba partnera imaju nesigurne obrasce.

Rezultati istraživanja koji su prikazani ovim radom predstavljaju deo projekta "Efekti egzistencijalne nesigurnosti na pojedinca i porodicu u Srbiji", koji finansira Ministarstvo prosvete i nauke Republike Srbije (DN 179022).

Ključne reči: partnerska afektivna vezanost, kombinacije obrazaca partnerske afektivne vezanosti, potencijal za razvod

Combinations of partner attachment forms and potential for divorce

According to the Attachment Theory, it can be assumed that partners characterized by insecure attachment, regardless of the type of insecure attachment, have a greater potential for divorce in relation to partners with a safe form of partner attachment. In order to determine the association of the combination of partner attachment patterns and the potential for divorce, 490 couples with

different socioeconomic status, aged 20 to 79 years (Mean = 40.7, SD = 11:38) were tested. To identify patterns of partner attachment, a shortened version of the Experiences in Close Relationships Scale – Short Form (ECR: Brennan, Clark, & Shaver, 1998, modification: Kamenov & Jelić, 2003) was used, while the potential for divorce was measured by a shortened version of the Marital instability Index (Booth, Johnson, & Edwards, 1983; taken from Tadinac et al., 2005). Using the analysis of variance it was shown that there were statistically significant differences in the level of potential for divorce between partners with different combinations of attachment ($F(2,403) = 3.83$; $p = .02$, eta square = 26%). The highest potential for divorce had couples in which both partners belong to the uncertain form of attachment ($M = 5.71$, $SD = .67$), while the lowest potential for divorce had couples in which both partners belong to the safe form of partner attachment ($M = 5.40$, $SD = .90$). The results are consistent with the initial assumption and the findings of most previous research.

These findings confirm the importance of preventive work with couples in which both partners have insecure attachment patterns. Results which are presented in this paper are part of the project "Effects of existential uncertainty on individual and family in Serbia", funded by the Ministry of Education and Science of the Republic of Serbia (DN 179022).

Keywords: partner attachment, combinations of partner attachment patterns, divorce potential

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Liderstvo/Autoritet i Egzibicionizam/Ovlašćenost kao ključni faktori grandioznog narcizma: Evaluacija Inventara narcističke ličnosti

Jedan od najviše upotrebljivanih instrumenata za merenje narcizma je Inventar narcističke ličnosti – Narcissistic Personality Inventory (NPI: Raskin & Hall, 1979). U prethodnim istraživanjima dolazilo se do različitog broja (od 2 do 7) i strukture faktora ovog inventara. Ovo istraživanje se bavi psihometrijskom validacijom srpske verzije NPI. Na uzorku od 410 ispitanika (50% muškaraca), starosti od 17 do 79 godina ($M = 32.92$, $SD = 14.06$), primenjen je NPI od 40 stavki sa dihotomnim formatom odgovaranja. Konfirmatornom faktorskom analizom testirano je pet predloženih modela: dva dvofaktorska modela (i po jedan tro-, četvoro- i sedmofaktorski model. Iako svi modeli imaju dobar fit, pouzdanost nije bila zadovoljavajuća za sve skale predloženih modela. Zadovoljavajuće pouzdanosti skala imala su dva dvofaktorska modela, od kojih model sa faktorima Liderstvo/Autoritet ($\alpha = .77$, 9 ajtema) i Egzibicionizam/Ovlašćenost ($\alpha = .75$, 14 ajtema) ima bolje AIC i BIC pokazatelje, te je on zadržan kao finalno rešenje ($DWLS \chi^2(229) = 445.88$, $CFI = .94$, $TLI = .94$,

RMSEA = .05, SRMR = .07). Korelacija između faktora je .66, a visine parametara se kreću u rasponu od .31 do .72, s izuzetkom dva ajtema faktora Egzibicionizam/Ovlašćenost koji imaju parametre ispod .30. Nakon isključivanja pomenuta dva ajtema, fit je ostao dobar (DWLS $\chi^2(188) = 399.80$, CFI = .97, TLI = .96, RMSEA = .04, SRMR = .06), a pouzdanosti skala nepromenjene. Rezultati pokazuju da je najbolje faktorsko rešenje ono koje su predložili Corry i sar., kao kritiku na prethodna rešenja u kojima se kao metod ekstrakcije koristila PCA ili EFA neprimerena dihotomnim podacima. Naše istraživanje sugeriše da prilikom određivanja faktorske strukture treba voditi računa o nivou merenja podataka i izboru adekvatnih metoda procene, kako bi se dobilo validno faktorsko rešenje.

Rad je nastao u okviru projekta Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije (ON179006).

Ključne reči: NPI, Inventar narcističke ličnosti, narcizam, faktorska struktura

Leadership/Authority and Exhibitionism/Entitlement as the key factors of grandiose narcissism: Evaluation of Narcissistic Personality Inventory

One of the most widely used measure of narcissism is the Narcissistic Personality Inventory (NPI: Raskin & Hall, 1979). In the previous studies, different number of factors and factor structures regarding NPI were found. The goal of this study is to inspect psychometric validity of the Serbian version of the NPI and compare it with previously identified models. A 40-item dichotomous format version was applied to 410 (50% males) participants aged 17 to 79 ($M = 32.92$, $SD = 14.06$). Five previously suggested models were tested using CFA: two two-factor models, three-, four- and seven-factor model. Although all models fit well, the reliability wasn't good for every scale in the suggested models. Models with acceptable scales reliability are the two two-factor models (Power and Exhibitionism; Leadership/Authority and Exhibitionism/Entitlement). The second model has better AIC and BIC, so it was chosen as the final solution (DWLS $\chi^2(229) = 445.88$, CFI = .94, TLI = .94, RMSEA = .05, SRMR = .07). Inter-factor correlation is .66 and parameters range from .32 to .72, with the exception of two items on the second factor whose parameters are below .30. Factors Leadership/Authority (9 items) and Exhibitionism/Entitlement (14 items) have a reliability of .77 and .75, respectively. After the two items were excluded, the model fit remained good (DWLS $\chi^2(188) = 399.80$, CFI = .97, TLI = .96, RMSEA = .04, SRMR = .06), while scale reliability remained unchanged. The best solution was the one suggested by Corry et al., as the critique of previous solutions in which PCA or EFA, inappropriate for dichotomous data, were used as extraction method. Our study suggests that when inspecting the factor structure, levels of data measurement and the selection of the appropriate estimators should be taken into particular account in order to get a valid factor solution.

This study is a part of a project supported by the Ministry of Education, Science and Technological Development of Republic of Serbia (ON179006).

Keywords: NPI, Narcissistic Personality Inventory, narcissism, factor structure

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Reč nostalgija (od grčkog nostos-povratak u zavičaj i algija-bol, patnja, čežnja) prvi put se sreće krajem sedamnaestog veka, u okviru medicine, i predstavljala je bolest čije su simptome tretirali pijavicama, emulzijama sa uspavljajućim dejstvom ili boravkom u Alpima. Od devetnaestog veka, ona je više predmet književnosti i umetnosti, uopšte, dok je savremena psihologija shvata kao složeno osećanje, a psihopatologija kao oblik regresije (Krstić, 1996). Refleksivnu nostalgiju podstiče algia, sama čežnja, i ona večito odlaže povratak u zavičaj - sa setom, ironijom i očajanjem (Boym, 2005).

U ovom pilot istraživanju, delu šire studije o kolektivnom identitetu na Balkanu, razmatran je odnos tzv. refleksivne nostalgije (zasnovane na individualnom sećanju), osobina ličnosti i odnosa prema vremenu kod studentske populacije, na uzorku od 88 studenata oba pola, prosečne starosti 20 godina. Kao merni instrumenti korišćeni su: Bačo inventar nostalgije (Batcho, 1995), Zimbardov upitnik vremenskih perspektiva (Zimbardo & Boyd, 1999) i Upitnik velikih pet plus dva - kraća verzija (Smederevac i sar., 2010).

Rezultati su pokazali da postoji statistički značajna pozitivna korelacija između nostalgije i neuroticizma ($r = .261, p < .05$) i između nostalgije i pozitivnih stavova o prošlosti ($r = .426, p < .01$).

Ovi nalazi su saglasni sa rezultatima nekih prethodnih istraživača. Klej Ratlidž u knjizi "Nostalgija: Psihološki resursi" (Routledge, 2015) takođe navodi da je sklonost nostalgiji u pozitivnoj korelaciji sa pozitivnom prošlošću i neuroticizmom. Prema istraživanju Frederika Bareta i saradnika (Barrett et al., 2010) nostalgija se može uspešno predvideti dimenzijom neuroticizma, imajući u vidu da se neurotično ponašanje odlikuje, između ostalog, smanjenom efikasnošću u sadašnjosti, usled preteranog "okretanja" ka prošlosti. Ta okrenutost ka prošlosti je odraz čežnje nostalgičara "...za vremenom našeg detinjstva i sporijim ritmom naših snova..." kako kaže Svetlana Bojm (Boym, 2005). Prema Ksiaoli Taou (2014) kod osoba bez neurotske simptomatologije, nostalglična osećanja mogu imati, suprotnu, pozitivnu funkciju - ona obezbeđuju integraciju čovekove prošlosti i sadašnjosti. Pri tome, pozitivan pogled na prošlost može pomoći u doživljaju kontinuiteta i smisla života (Gergov & Stoyanova, 2013). Veza između nostalgije i neuroticizma može se tražiti i preko potrebe za pripadanjem nekoj socijalnoj grupi, miljeu a, preko toga, i aktuelnom vremenu. Neurotične osobe, često, upravo imaju problem adekvatnog povezivanja sa okruženjem, što ih okreće nostalgiji ili traganju za idealizovanom prošlošću.

Ključne reči: nostalgija, neuroticizam, pozitivna prošlost

Nostalgia - a neurotic view on the past?

The word “nostalgia” (made up of two greek words: nostos - homecoming and algia - pain, suffer, longing), first mentioned in medicine at the end of seventeen century, represented a disease and treated by leeches, emulsion with sleepy effect and spend time in the Alps. In nineteen century, nostalgia was mostly represented in literature and art generally, whilst contemporary psychology defines it as a complex emotional state and psychopathology defines it as regression (Krstić, 1996). Reflective nostalgia thrives in algia, the longing itself, and delays the homecoming - wistfully, ironically, desperately (Boym, 2005).

In this pilot research, which is a part of bigger study about collective identity in the Balkan, relationship between reflexive nostalgia (based on individual memories) with personality traits and attitudes towards time of the student population was discussed.

Sample was consisted of 88 psychology students both sexes and average age was 20.25. Instruments used in this study were: Batcho Nostalgia Inventory (Batcho, 1995), Zimbardo Time Perspective Inventory (Zimbardo & Boyd, 1999) and Big Five Plus Two Questionnaire - short version (Smederevac et al., 2010).

The results showed existance of statistically significant positive correlation between nostalgia and neuroticism ($r = .261, p < .05$) and between nostalgia and positive past ($r = 0.426, p < 0.01$).

This results are consistent with the results of other researchers. Clay Routledge in book “Nostalgia: A Psychological Resource” (Routledge, 2015) says that nostalgia proneness is positively correlated with positive attitudes about the past. According to study of Frederick Barrett and his associates (Barrett et al., 2010), nostalgia can be successfully predicted by neuroticism, considering that nostalgic behavior is characterized, among other things, by decreased efficiency in present time because of “excessive focus” on the past. Focus on the past is reflection of nostalgic’s longing “... for the time of our childhood and the slower rhythms of our dreams...” - says Svetlana Boym (Boym, 2005). According to Xiaoli Tao (2014) in those without neurotic symphomatology, nostalgic feelings may have opposite, more precisely, a positive function - this feelings enable the integration of the past with the present. At the same time, a positive view of the past could help to give us a greater sense of continuity and meaning to our lives (Gergov & Stoyanova, 2013). Relation between nostalgia and neuroticism can also be examined through need for belonging to certain social group or certain part of population and, besides that, trough present time. Neurotic individuals often have problem of establishing adequate connection with external environment which turns their focus on nostalgia or searching for idealized past.

Keywords: nostalgia, neuroticism, positive past

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Prokrastinacija predstavlja odgađanje započinjanja ili dovršavanja nekog planiranog ponašanja ili odgađanje donošenja neke odluke. Prokrastinacija je vrlo raširena među studentima te prema nekim istraživanjima oko 80–95 % studenata prokrastinira. Zbog potencijanih negativnih posljedica poput slabog akademskog uspjeha, lošeg fizičkog i mentalnog zdravlja ili narušenih međuljudskih odnosa važno je pokušati detektirati potencijalne prediktore prokrastinacije. Cilj ovog istraživanja bio je ispitati odnos akademskog uspjeha, samoefikasnosti i perfekcionizma s prokrastinacijom kod studenata, te provjeriti mogućnost predviđanja prokrastinacije na temelju akademskog uspjeha, samoefikasnosti i dimenzija perfekcionizma. U istraživanju je sudjelovalo 84 studenata i 143 studentice drugih i trećih godina preddiplomskih studija različitih fakulteta Osječkog sveučilišta. Dob sudionika bila je u rasponu od 19 do 26 godina ($M = 20.59$; $SD = 0.966$). Instrumenti korišteni u istraživanju su: Tuckmanova skala prokrastinacije, Revidirana skala težnje perfekcionizmu te Upitnik opće samoefikasnosti. U istraživanju su korišteni podaci o uspjehu na kraju prošle akademske godine. Rezultati su pokazali negativnu povezanost akademskog uspjeha, samoefikasnosti i adaptivnog perfekcionizma s prokrastinacijom te pozitivnu povezanost maladaptivnog perfekcionizma i prokrastinacije. Također, rezultati također ukazuju na pozitivnu povezanost adaptivnog perfekcionizma i samoefikasnosti, te negativnu povezanost maladaptivnog perfekcionizma i samoefikasnosti. Nadalje, pokazalo se da je pozitivni prediktor prokrastinacije maladaptivni perfekcionizam, dok su akademski uspjeh, samoefikasnost i adaptivni perfekcionizam negativni prediktori. Na kraju, Hayesovim PROCESS-om smo provjerili mogućnost medijacije. Pokazalo se da samoefikasnost samostalno nije medijator odnosa akademskog uspjeha i prokrastinacije, ali da su putevi koji sadrže samoefikasnost te adaptivni ili neadaptivni perfekcionizam posreduju tom odnosu. Konačno, pokazalo se i da adaptivni i maladaptivni perfekcionizam posreduju odnosu samoefikasnosti i prokrastinacije. Dobiveni rezultati su relevantni jer ukazuju na potrebu za osmišljavanjem intervencija koje bi bile usmjerene na: jačanje samoefikasnosti kod studenta, postavljanje realnih ciljeva i smanjivanje straha od neuspjeha.

Ključne reči: akademski uspjeh, prokrastinacije, perfekcionizam, samoefikasnost

The relationship between academic achievement, self-efficacy, perfectionism and procrastination in university students

Procrastination presents delaying the commencement or completion of a planned behavior or delay of making a decision. Procrastination is very widespread among students and, according to some studies, about 80-95% of students procrastinate. Due to potentially negative consequences such as: poor academic success, poor physical and mental health or disrupted interpersonal relationships, it is important to detect potential predictors of procrastination. The aim of this study was to examine the relationship of academic achievement, self-efficacy, and perfectionism with procrastination in University students, and to examine whether procrastination can be predicted by academic achievement, self-efficacy, and perfectionism dimensions. 227 University students (143 female, 84 male, mean age 20.59) from different faculties in Osijek completed Tuckmans' procrastination scale, Almost Perfect Scale – Revised (APS-R; Slaney Rice, Mobley, Trippi, & Ashby, 2001) and General self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995), as well as data about academic achievement at the end of last academic year. Results have shown negative correlations of academic achievement, self-efficacy and adaptive perfectionism with procrastination, and a positive correlation between maladaptive perfectionism and procrastination. Results have, also, shown that self-efficacy is positively correlated with adaptive perfectionism and negatively with maladaptive perfectionism. Maladaptive perfectionism was a positive predictors of procrastination, while academic achievement, self-efficacy and adaptive perfectionism were all negative predictors. Finally, we used Hayes PROCESS to examine possible mediations. The results have shown that self-efficacy, by its self isn't a significant mediator, while paths containing self- efficacy and adaptive or maladaptive perfectionism mediate the relationship between academiic achievement and procrastination. Furthermore, both adaptive and maladaptive perfectionism mediated the relationship between self-efficacy and procrastination. This results are relevant because they show that there is a need for interventions which should include: strengthening student self-efficacy, more realistic goal setting and reducing fear of failure.

Keywords: academic achievement, procrastination, perfectionism, self-efficacy

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Tokom adolescencije sport, kao novo socijalno okruženje, doprinosi socijalnom, kognitivnom i emocionalnom razvoju mladih. Kao facilitator mentalnog zdravlja on predstavlja protektivni faktor za razvoj problema u ponašanju, kao i zdravstvenih problema. Međutim, svake godine oko 50% adolescenata odustane od sporta. Tako visok procenat u ključnom razvojnem periodu, pobudio je interesovanje istraživača. Jedna od teorija koja predstavlja osnovno polazište u razumevanju procesa odustajanja od sporta jeste Teorija samoodređenja koja polazi od toga da je ključ u razumevanju ljudskog ponašanja – motivacija. Ova teorija definiše šest vrsta motivacije, od koji je jedna nisko samoregulisana motivacija – amotivacija. Amotivacija se definiše kao nedostatak kontigencije između akcije i ishoda, osećanje nekompetentnosti i odsustvo razloga za bavljenjem sportom. Ranija istraživanja su pokazala da postoje značajne polne razlike u odustajanju od sporta, te da devojčice u većoj meri odustaju od sporta. Zbog samog značaj sporta za razvoj adolescenta kao i izgradnje slike o sebi, ovo istraživanje se bavi ulogom amotivacije i pola u predviđanju namere mladih rukometaša i rukometašica da odustanu od sporta. Uzorak se sastojao od 66 rukometašica i 57 rukometaša, prosečnog uzrasta od 13,5 godina, koji treniraju rukomet u proseku 50 meseci. Ispitanici su tokom regionalnog takmičenja u Vojvodini, u februaru 2016 godine, popunjavali Upitnik za procenu motivacije za sport 2 (Pelletier et al., 2013) koji meri: intrinzičku, introjektovanu, integrisanu, identifikovanu, ekstrinzičku i amotivaciju. Namera da se odustane od sporta procenjivala se na jednoajtemskoj petostepenoj Likterovoj skali. Nakon što je preliminarnim analizama utvrđeno da su zadovoljene pretpostavke normalnosti, linearnosti i multikolinearnosti sprovedena je analiza moderacije, sa namerom da se odustane od sporta kao kriterijum varijablom. Amotivacija i pol predstavljaju značajan prediktivni model ($F(2,119) = 9.68, p < .001$) koji objašnjava 14% varijanse, gde se kao značajan prediktor izdvaja samo amotivacija ($\beta = .374, p < .001$). Uvođenjem pola kao moderator varijable, rezultati analize moderacije pokazuju da ovakav prediktivni model objašnjava 22% varijanse ($F(3,118) = 11.18, p < .001$) i da je moderatorski efekat pola značajan za objašnjenje namere da se odustane od sporta ($\beta = -.39, p < .01$). Dečaci koji imaju viši stepen amotivacije u većoj meri nameravaju da odustanu od bavljenja sportom, dok kod devojčica namera da odustanu od bavljenja sportom ne zavisi od stepena amotivacije. Ovi rezultati pozivaju na dalja istraživanja procesa odustajanja od sporta kod mladih, kao i koji su to dodatni faktori rizika kod devojčica u odnosu na dečake. Teorijske i praktične implikacije biće razmatrane u radu.

Ključne reči: amotivacija, rukomet, adolescencija, odustajanje od sporta

Dropping out of sports in adolescence: The role of gender and amotivation for sports

During adolescence sport, as a new social environment, contributes to social, cognitive and emotional development of young people. As a facilitator of mental health it represents a protective factor for the development of behavioral and health problems. However, each year about 50% of adolescents drop out of sport. Such high percentage at this critical developmental period raised the interest of researchers. One of the theories that represent basic standing point for understanding the process of dropping out of sports is Self-determination theory which postulates that the key for understanding human behavior is his motivation. This theory defines six types of motivation, one of which is low self-regulated motivation - amotivation. Amotivation is defined as a lack of contingency between actions and outcomes, feeling of incompetence and lack of reasons for playing sports. Earlier studies have shown that there are significant gender differences in dropping out of sports, and that girls tend to drop out in higher percentage. Because of the importance of sports for development in adolescence and the development of self-image, this study examines the role of amotivation and gender in predicting intention to drop out of sports of young male and female handball players. The sample consisted of 66 female and 57 male handball players, the average age of 13.5 years, who train handball on average 50 months. The data was obtained during the February of 2016, at the regional handball competition in Vojvodina. The participants filled out the Sport Motivation Scale -2 (Pelletier et al., 2013) which measures: intrinsic, introjected, integrated, identified, extrinsic motivation and amotivation for sports. Intention to drop out of sports was assessed on one, five-point scale Lickert scale. Before conducting moderation analysis where intention to drop out of sports was criteria, first all the assumptions of normality, linearity and multicollinearity were met. Amotivation and gender represent significant predictive model ($F(2,119) = 9.68, p < .001$), which explains 14% of the variance, where only amotivation was singled out as significant predictor ($\beta = .374, p < .001$). Introducing gender as moderator, result of moderation analysis show that this predictive model explains 22% of variance ($F(3,118) = 18.11, p < .001$) and that moderating effect of gender is important factor in explaining the intention to drop out of sports in adolescence ($\beta = -.39, p < .01$). Boys who have higher amotivation to a greater extent intend to drop out of sports, while in girls intention to drop out of sports doesn't depend on the degree of amotivation. These results call for further research of the process of dropping out of sports in adolescence, and to determine additional risk factors for girls. Theoretical and practical implications will be discussed in this paper.

Keywords: amotivation, handball, adolescence, dropping out of sports

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Bratislava Stojković*Centar za socijalni rad, Aleksinac, Srbija**Email: b.stojkovic@hotmail.com***Program rane intervencije za decu sa smetnjama u razvoju i njihove porodice - prikaz slučaja**

Rana intervencija predstavlja niz neophodnih podsticajnih mera usmerenih na decu sa smetnjama, u trenutku kada se uoči postojanje prvih mogućih znakova razvojnog odstupanja, kao i savetodavnih i mera podrške, usmerenih na njihove porodice.

Porodice dece sa razvojnim smetnjama nisu dovoljno informisane, edukovane, nemaju potrebnu podršku, sniženih kapaciteta, prepuštene su same sebi. Nisu naučene da prepoznaju potrebe deteta i da na njih odgovore na najadekvatniji način i time omoguće detetu organizovanu i kontinuiranu psihomotornu stimulaciju i kvalitetnu afektivnu i socijalnu interakciju. Okrenute su nedostatku, a ne sposobnostima i potencijalima deteta čiji razvoj treba podsticati na odgovarajući način, sa težnjom za sticanje životnih veština i osposobljavanje za samostalan život.

Uvažavajući individualne potrebe dece sa smetnjama u razvoju, program rane intervencije je osmišljen tako da deci pruži pravilno odrastanje u porodici, podsticanje razvoja i socijalnu integraciju, uz aktivno učešće porodice. Način rada u okviru programa koji je realizovan obuhvatao je procenu aktuelnog nivoa razvoja deteta, sagledavanje individualnih potreba i mogućnosti, procenu porodičnih snaga, stimulaciju i tretman, uz kontinuirano praćenje napredovanja i pružanje podrške porodici. Rana intervencija kao stimulativni program, realizovana u kućnim uslovima, pruža direktnu i neposrednu podršku deci sa smetnjama i njihovim porodicama.

Rezultati rada sa 16-oro dece, u trajanju od dve godine, kroz prikaz slučaja, pokazuju uticaj na podsticanje detetovog razvoja i osnaživanje porodice deteta s razvojnim rizicima. Kod dece dolazi do napretka u razvoju kognitivnih veština, motorike, komunikacije, socijalnom i emocionalnom razvoju, razvoju svakodnevnih veština, samostalnosti. Porodici je omogućeno informisanje, edukacija, savetovanje i dobijanje potrebne podrške. Program rane intervencije koji je realizovan, doveo je do sticanja životnih veština kod dece i osamostaljivanja, jačanja porodičnih kapaciteta i bolje socijalne integracije.

Ovaj program promoviše izlazak (outreach) stručnjaka ka korisniku. Kao metoda, outreach, pomaže da se porodicama pruži podrška u skladu sa njihovim potrebama, dajući nove mogućnosti deci sa smetnjama u razvoju za život u porodičnom okruženju kao najmanje restriktivnom.

Ključne reči: deca sa smetnjama, porodica, rana intervencija

Early intervention program for the children with disabilities and their families - case review

Early intervention comprises a set of encouraging measures that are necessary for the children with disabilities from the moment the first potential developmental discrepancies are noticed, as well as a set of advisory, support measures that are necessary for their families.

The families of these children are neither informed, nor educated. Moreover, they do not have necessary support systems, their capacities are reduced, and they are left to their own devices. Finally, they have not been taught to recognize the needs of their children and respond to them in the most adequate manner, thus providing an organized, continuous stimulation and a quality affective and social interaction for their children. They tend to focus on the disabilities, rather than capabilities and potentials of the children whose development needs to be encouraged in a proper manner, while also giving them the opportunity to gain life skills and live independently.

Taking into account the individual needs of the children with disabilities, the idea behind the early intervention program is to allow these children to grow up within their family properly, encourage their development and integrate them socially, while including the family members significantly. The method of work that has already been realized comprised the assessment of the actual stage of development of the child, the consideration of individual necessities and capabilities, the assessment of family capacities, stimulation, and treatment, followed by the continuous tracking of progress and support given to the family. Early intervention as a stimulating program realized at children's homes offers direct and immediate support to the children with disabilities and their families.

The results of the 2 years' work with 16 children that we can see in the case review show the influence on both the encouragement of the children's development and the strengthening of their families. When it comes to the children, the progress occurs in numerous areas, such as the development of cognitive and motor skills, communication, social and emotional development, the development of everyday skills, and independence. The families, on the other hand, have information, education, counseling, and necessary support at their disposal. The early intervention program which has been realized has led to the children being more independent, while also gaining necessary life skills; moreover, the strengthening of the families' capacities and the improvement of social integration have occurred, as well.

This program promotes the outreach of the experts towards the users. As a method, outreach offers support to the families in accordance with their needs, while also giving new opportunities to the children with disabilities by enabling them to live in the least restrictive surroundings – family surroundings.

Keywords: children with disabilities, family, early intervention

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S obzirom na to da se u mnogim istraživanjima, uključujući i meta-studije, izveštava o razlikama u kvalitetu partnerske relacije među bračnim parovima i parovima u kohabitaciji, koje se najčešće pripisuju razlikama u međusobnoj posvećenosti partnera, cilj ovog istraživanja je bio utvrđivanje značajnosti razlika u percepciji kvaliteta partnerske relacije među bračnim parovima i parovima u kohabitaciji. Na uzorku od 490 parova različitog socioekonomskog statusa, starosti 20-79 godina ($M = 40,7$; $SD = 11,38$) primenjena je Skala prilagođenosti u bračnom odnosu (DAS: Spanier, 1976, 1989), za procenu kvaliteta partnerskog odnosa, sa četiri dimenzije kvaliteta partnerske relacije: Konsenzus, Zadovoljstvo relacijom, Afektivno-seksualna usaglašenost i Kohezivnost. Jednofaktorskom multivarijatnom analizom kovarijanse su ispitane razlike između bračnih parova i parova u kohabitaciji u navedene četiri dimenzije kvaliteta partnerske relacije, uz kontrolu uticaja dužine veze. Rezultati upućuju na izostanak značajnih razlika u svim procenjenim dimenzijama kvaliteta partnerske relacije, izuzev u procenjenom zadovoljstvu partnerskom relacijom, pri čemu parovi u kohabitaciji izveštavaju o većem zadovoljstvu u poređenju sa bračnim parovima. Dobijeni rezultati su u suprotnosti sa prethodno sprovedenim istraživanjima koji izveštavaju o generalno većem kvalitetu partnerske relacije kod bračnih parova, u odnosu na parove u kohabitaciji, te se pretpostavlja da postoje drugi faktori koji su medijatori odnosa između kvaliteta partnerske relacije i bračnog statusa, kao npr. namera partnera u kohabitaciji da se venčaju. Rezultati istraživanja imaju praktične implikacije i prvenstveno se odnose na inkorporiranje novih saznanja o odsustvu negativnih efekata kohabitacije u oblikovanje savetodavnog rada sa mladim parovima, kao i podsticanju partnera na razmatranje sopstvene posvećenosti relaciji i diskusije o očekivanjima koje imaju od kohabitacije. Rezultati istraživanja koji su prikazani ovim radom predstavljaju deo projekta "Efekti egzistencijalne nesigurnosti na pojedinca i porodicu u Srbiji", koji finansira Ministarstvo prosvete i nauke Republike Srbije (DN 179022).

Ključne reči: kvalitet partnerske relacije, bračni parovi, kohabitacija

Married couples versus cohabitating couples: A comparison of relationship quality

Many studies, including meta-analysis, found differences in the relationship quality between married couples and cohabitation couples, which are most often attributed to the differences in the partner's

mutual commitment, so this study had purpose to examine those potential differences. To examine differences in the perception of relationship quality among married couples and cohabitating couples a total of 490 couples of diverse socioeconomic status, aged between 20 and 79 were examined ($M = 40,7$; $SD = 11,38$). For measuring relationship quality the Dyadic Adjustment Scale (DAS: Spanier, 1976, 1989) with four factors of relationship quality: dyadic consensus, dyadic satisfaction, affectional expression, and dyadic cohesion was administered. To assess the differences between married couples and cohabitating couples across the four factors of relationship quality, controlling for relationship duration, one-way MANCOVA was performed. Results indicate the absence of significant differences across all assessed factors of relationship quality, except in the estimated satisfaction with relationship – cohabitating couples reported greater relationship satisfaction compared to married couples. The obtained results are in contrast with previous research in which greater relationship quality was found in married couples, so it is assumed that there are other factors that mediate the relationship between the relationship quality and marital status, for example, cohabitators plans for marriage. This results have practical implications which are primarily related to the incorporation of new knowledge about the absence of negative effects of cohabitation in the work with young couples and encouraging consideration of commitment to the relationship, as well as open discussion between partners about the meaning and expectations each partner assigns to cohabitation.

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Keywords: relationship quality, married couples, cohabitating couples

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Validacija MOPS inventara disfunkcionalnih roditeljskih stilova na srednjoškolskom uzorku

Postoji veliki broj nalaza o vezama između disfunkcionalnih ili neadekvatnih roditeljskih stilova i kasnijih eksternalizujućih i internalizujućih problema kod djece, uključujući i veći rizik za javljanje depresije. Jedan od poznatijih modela disfunkcionalnih roditeljskih stilova operacionalizovan je preko MOPS inventara, koji obuhvata supskale Indiferentnih (6 ajtema), Zlostavljajućih (5 ajtema) i Pretjerano kontrolišućih (4 ajtema) roditeljskih ponašanja (odnosno "stilova") tokom prvih 16 godina djetetovog života. Ove dimenzije su mjerene putem 4-stepenih Likertovih tvrdnji, na osnovu

retrospektivne samoprocjene (bivše) djece. Cilj istraživanja je predstavljao inicijalnu psihometrijsku validaciju MOPS inventara, uključujući provjeru internih konzistencija njegovih supskala i provjere faktorske i kriterijumske validnosti (predikcija depresivnosti). Istraživanje je sprovedeno na uzorku srednjoškolskih učenika iz Republike Srpske (N = 1399 učenika, po 50% djevojaka i mladića; prosječan uzrast: M = 16.85, SD = 0.99 godina). Svi učenici su ispunjavali MOPS inventar posebno za majku i oca. Podaci o nivou depresivnosti tokom prethodne dvije sedmice su prikupljeni uz pomoć PHQ-9 upitnika. Konfirmativna faktorska analiza (CFA) ukazala je na dobru saglasnost pretpostavljenog trofaktorskog MOPS modela sa empirijskim podacima i za majke ($\chi^2(87) = 354.73$, $p < .001$; CFI = .986, TLI = .983, RMSEA = .047, 90% CI [.042, .052]) i za očeve ($\chi^2(87) = 559.75$, $p < .001$; CFI = .981, TLI = .978, RMSEA = .062, 90% CI [.057, .067]). Faktori su bili visoko interkorelirani, uz visoke interne konzistencije, osim za supskalu Pretjerano kontrolišućeg stila (majka: $\alpha = .75$, $\omega = .53$; otac: $\alpha = .74$, $\omega = .53$). Učenici su konzistentno postizali više skorove od učenica na svim supskalama, iako su razlike bile u rasponu trivijalnih do niskih intenziteta efekata (naviše razlika bila je na supskali Zlostavljajućeg roditeljskog stila oca: $d = 0.21$, $p < .001$). Sve procjene po korespodentnim supskalama za majke i očeve bile su visoko korelirane, iako su očevima pripisivani neznatno viši prosječni skorovi Indiferentnog stila ($d = 0.10$, $p < .001$), a majkama nešto viši prosječni skorovi Pretjerano kontrolišućeg stila ($d = 0.26$, $p < .001$). Na bivarijacionom planu, sve MOPS supskale su korelirale sa skorom depresivnosti, iako su povezanosti bile niskog intenziteta (najniža korelacija bila je s Pretjerano kontrolišućim stilom oca: $r = .12$, $p < .001$; najviša korelacija bila je sa Zlostavljajućim stilom majke: $r = .22$, $p < .001$). U cjelini, MOPS supskale su objašnjavale 7.2% varijanse depresivnosti, a značajni parcijalni prediktori bili su: Pretjerano kontrolišućí stil majke ($\beta = .14$, $p < .001$), Indiferentni stil oca ($\beta = .13$, $p = .002$) i Zlostavljajući roditeljski stil majke ($\beta = .12$, $p = .017$). Moguće je zaključiti da MOPS inventar posjeduje dobro fitujuću faktorsku strukturu i uglavnom visoke interne konzistencije supskala, iako su korelacije sa depresivnošću nešto niže u odnosu na vrijednosti iz referentnih inostranih istraživanja.

Ključne reči: MOPS inventar, disfunkcionalni roditeljski stilovi, depresivnost, srednjoškolski učenici, konfirmativna faktorska analiza (CFA)

Validation of the MOPS inventory of dysfunctional parenting styles on a sample of high school students

There are a number of findings linking dysfunctional or inadequate parenting styles with externalizing and internalizing problems in children later on, including a higher risk of depression. One of the most known models of dysfunctional parenting styles is measured by the MOPS inventory, which includes subscales of Indifference (6 items), Abuse (5 items) and Overcontrol (4 items), which refer to parental behavior (or “styles”) during the first 16 years of a child’s life. These dimensions are measured as a (former) child’s retrospective self-assessments, through 4-point Likert-type items. The aim of this study was to conduct an initial psychometric validation of the MOPS inventory, which included an examination of the internal consistencies of its subscales and

both factor and criterion validity (i.e., a prediction of depressiveness). The research was conducted on a sample of high school students from the Republic of Srpska (N = 1399 students; 50% girls and boys each; average age: M = 16.85, SD = 0.99 years). All respondents completed the MOPS inventory separately for mother and father. Data regarding depressiveness levels in the past two weeks were collected with the PHQ-9 questionnaire. Confirmatory factor analysis (CFA) revealed that a proposed 3-factor MOPS model had a good fit with the empirical data for both mothers ($\chi^2(87) = 354.73$, $p < .001$; CFI = .986, TLI = .983, RMSEA = .047, 90% CI [.042, .052]) and fathers ($\chi^2(87) = 559.75$, $p < .001$; CFI = .981, TLI = .978, RMSEA = .062, 90% CI [.057, .067]). Factors were highly intercorrelated, with high internal consistencies, except for the Overcontrol subscale (mother: $\alpha = .75$, $\omega = .53$; father: $\alpha = .74$, $\omega = .53$). Male students had higher scores than females on all subscales, although the differences were in a trivial to low effect size interval (the highest difference was on the Abuse subscale for a father: $d = 0.21$, $p < .001$). All the scores for corresponding mothers' and fathers' subscales were highly correlated, although fathers were attributed trivially higher mean Indifference scores, and mothers were attributed slightly elevated mean Overcontrol scores ($d = 0.26$, $p < .001$). On a bivariate level, all MOPS subscales correlated with a depressiveness score, although the effect sizes were of a small intensity (the lowest correlation was with a father's Overcontrolling style: $r = .12$, $p < .001$; the highest correlation was with a mother's Abusive style: $r = .22$, $p < .001$). In general, MOPS subscales explained 7.2% of the depressiveness' variance, with significant partial predictors being: mother's Overcontrol ($\beta = .14$, $p < .001$), father's Indifference ($\beta = .13$, $p = .002$) and mother's Abuse ($\beta = .12$, $p = .017$). It can be concluded that MOPS inventory has well fitting factor structure and mostly high internal consistencies, although correlations with depressiveness are somewhat lower in comparison to the values from referent foreign studies.

Keywords: MOPS inventory, dysfunctional parenting styles, depressiveness, high school students, confirmatory factor analysis (CFA)



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Rodne predrasude i stereotipi o osobama gej i lezbijske populacije kod osoba različite seksualne orijentacije

Veliki broj istraživanja pokazuje da postoje tradicionalna uverenja o rodnim ulogama, što utiče na čestu pojavu rodnih predrasuda. Takođe, danas postoje izraženi stereotipi prema manjinskim grupama, pa tako i prema osobama homoseksualne orijentacije. Stoga su ove dve pojave bile ključne za ovo istraživanje. Cilj ovog rada bio je da ispita da li se pripadnici različitih seksualnih orijentacija razlikuju u izraženosti rodnih predrasuda, kao i u izraženosti stereotipa o gej i lezbijskoj populaciji. Pretpostavljeno je da su ove predrasude i stereotipi izraženiji kod heteroseksualaca oba pola nego kod muškaraca i žena homoseksualne i biseksualne orijentacije. U istraživanju je učestvovalo 282 ispitanika, koji su bili podeljeni u pet grupa s obzirom na pol i seksualnu orijentaciju: muškarci heteroseksualne orijentacije ($n = 30$), žene heteroseksualne orijentacije ($n = 130$), gejevi ($n = 41$), lezbijke ($n = 33$) i žene biseksualne orijentacije ($n = 48$). Primenjene su novokonstruisane skale, skala stereotipa o gejevima i skala stereotipa o lezbijkama, kao i već postojeće, skala predrasuda prema muškarcima (AMI) ($\alpha = .91$) i skala predrasuda prema ženama (ASI) ($\alpha = .92$). Skala stereotipa o gejevima sadrži dve dimenzije – maskulnost ($\alpha = .70$) i zabavnost ($\alpha = .78$), a skala stereotipa o lezbijkama sadrži takođe dve dimenzije – femininost ($\alpha = .61$) i individualnost ($\alpha = .53$). Rezultati su pokazali da heteroseksualke imaju najizraženije stereotipe o maskulnosti gejeva, tj. da im one pripisuju mnogo više femininih osobina, u odnosu na ostale grupe ($F(4,277) = 8.64, p < .05$). Što se tiče ostalih dimenzija stereotipa o gejevima i lezbijkama, nisu dobijene značajne razlike među grupama ($F_s(4,277) \leq 2.24, ps > .05$). Utvrđeno je i da i žene i muškarci heteroseksualne orijentacije imaju izraženije hostile i benevolentne predrasude prema ženama, kao i benevolentne predrasude prema muškarcima ($F_s(4,277) \leq 12.33, ps < .05$), dok ne postoje značajne razlike u izraženosti hostile predrasuda prema muškarcima između grupa ($F(4,277) = 1.54, p > .05$). Može se zaključiti da heteroseksualke vide gejeve kao osobe koje su po svojim osobinama drugačiji od tipičnih, snažnih muškaraca (heteroseksualaca), a sličniji “slabijem polu”. Zbog toga vide gejeve kao osobe koje su emotivne, iskrene, nežne. Drugi nalaz sugerše da su kod heteroseksualaca i heteroseksualkiviše prihvaćene, pa i izraženije kulturno specifične rodne uloge, te su i rodne predrasude snažnije.

Pripadnici heteroseksualne populacije vide žene kao osobe koje pokušavaju da ugroze dominaciju muškaraca tražeći ravnopravnost (hostilne predrasude), ali i kao osobe koje su slabije, ranjivije i zavisnije od pažnje muškaraca (benevolentne predrasude), dok muškarce vide kao dominantne, ali i izgubljene bez žena, jer im je potrebno da neko vodi računa o njima (benevolentne predrasude).

Ključne reči: rodne predrasude, stereotipi, homoseksualci, biseksualci, seksualna orijentacija

Gender prejudices and stereotypes about the gay and lesbian population among people with different sexual orientations

A large number of studies shows that there are traditional beliefs about gender roles, which affects the frequent occurrence of gender prejudices. Also, there are strong stereotypes about minority groups today, including homosexual people. Therefore, these two phenomena were in focus of this research. The aim of this study was to examine whether individuals of different sexual orientations differ in the expression of gender prejudices and stereotypes about the gay and lesbian population. It is assumed that these prejudices and stereotypes are more expressed among heterosexuals of both sexes than in men and women of homosexual and bisexual orientation.

The study included 282 participants who were divided into five groups considering gender and sexual orientation: heterosexual men ($n = 30$), heterosexual women ($n = 130$), gays ($n = 41$), lesbians ($n = 33$) and bisexual women ($n = 48$). Several instruments were applied: newly constructed scales, the scale of stereotype about gays and the scale of stereotype about lesbians, as well as the already existing, ambivalent sexism inventory (AMI) ($\alpha = .91$) and ambivalence toward men inventory (ASI) ($\alpha = .92$). The scale of the stereotype about gays contains two dimensions – masculinity ($\alpha = .70$) and fun ($\alpha = .78$), and the scale of the stereotype about lesbians also contains two dimensions - femininity ($\alpha = .61$) and individuality ($\alpha = .53$).

The results showed that heterosexual women have the strongest stereotypes about masculinity of gays, i.e. they attribute them more feminine traits than other groups ($F(4.277) = 8.64$, $p < .05$). Regarding the other dimensions of stereotypes about gays and lesbians, there were no significant differences between groups ($F_s(4.277) \leq 2.24$, $p_s > .05$). It has been found that women and men of heterosexual orientation have more pronounced hostile and benevolent prejudices against women, as well as benevolent prejudices against men ($F_s(4.277) \leq 12.33$, $p_s < .05$), while there were no significant differences in the expression of hostile prejudices against men between groups ($F(4.277) = 1.54$, $p > .05$).

It can be concluded that heterosexual women see gay men as individuals who are much different from typical, strong men (heterosexual men), and more similar to "weaker sex". That is why they see gays as emotional, honest, gentle persons. The second finding suggests that heterosexuals accept and express more culturally specific gender roles, so gender prejudices are more powerful. Members of the heterosexual population see women as individuals who are trying to endanger the dominance of men by seeking equality (hostile prejudice), but also as individuals who are weaker, more vulnerable and more dependent on men's attention (benevolent prejudices), while men are seen as

dominant but lost without women, because they need someone to take care of them (benevolent prejudices).

Keywords: gender prejudices, stereotypes, homosexuals, bisexuals, sexual orientation

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Povezanost religioznosti i militantnog ekstremizma sa percepcijom pripadnika različitih religija

Usled bliskoistočnih nemira, masovnih migracija ljudi s tog područja, kao i religiozno inspirisanog terorizma, ispitivanja percepcije različitih religioznih grupa postaju sve značajnija. Cilj ovog istraživanja bio je da se ispita povezanost militantnog ekstremizma i religioznosti ispitanika sa procenama pripadnika različitih veroispovesti. Prigodan uzorak činilo je 325 ispitanika (227 žena i 98 muškaraca). Prosečna starost ispitanika iznosila je 27.49 (SD=10.13) godina. Ispitanici su podeljeni u dve grupe s obzirom na religioznost: pravoslavce i ateiste. Primenjena je skala militantnog ekstremizma sa tri supskale: apologija nasilja, zli svet i sveti cilj. Procena pripadnika različitih religija vršena je na parovima opozitnih opisa ličnosti koji su zadavani uz fotografije osoba uz koje su stajali socio-demografski podaci, uključujući i veroispovest (pravoslavna, katolička, islamska ili ateistička). Primenjena je hijerarhijska regresiona analiza u kojoj je prosečna procena pripadnika svake religije predstavljala kriterijum (u zasebnim analizama), dok su prediktori uvođeni u dva koraka: (1) pol i veroispovest ispitanika i (2) supskale militantnog ekstremizma. Kod procene pravoslavaca, značajan je bio samo prvi regresioni model ($R^2 = .02$, $F(2,322) = 3.38$, $p < .05$). Značajan efekat ima samo veroispovest ispitanika ($\beta = -.13$, $t = -2.48$, $p < .05$), pri čemu pravoslavci pozitivnije procenjuju pripadnike svoje grupe od ateista. Kod procene ateista, značajna su oba regresiona modela (model 1: $R^2 = .12$, $F(2,322) = 22.25$, $p < .01$, model 2: $\Delta R^2 = .04$, $F(2,319) = 4.94$, $p < .01$). Kao značajni prediktori izdvajaju se pol ispitanika ($\beta = -.34$, $t = -6.45$, $p < .01$), pri čemu žene daju pozitivnije procene, veroispovest ispitanika ($\beta = -.11$, $t = -2.00$, $p < .05$), gde pozitivnije procene daju ateisti, a iz drugog modela sveti cilj ($\beta = -.16$, $t = -2.37$, $p < .05$) i apologija nasilja ($\beta = -.16$, $t = -2.94$, $p < .01$). Kod procene muslimana, značajna su oba modela (model 1: $R^2 = .07$, $F(2,322) = 11.97$, $p < .01$, model 2: $\Delta R^2 = .03$, $F(2,319) = 4.01$, $p < .01$). Utvrđeno je da negativnije procene daju muškarci ($\beta = .26$, $t = 4.83$, $p < .01$), dok značajan efekat ostvaruje i apologija nasilja ($\beta = -.18$, $t = -3.25$, $p < .01$). Kod procene katolika, takođe su oba modela značajna (model 1: $R^2 = .09$, $F(2,322) = 15.11$, $p < .01$, model 2: $\Delta R^2 = .04$, $F(2,319) = 4.86$, $p < .01$). Muškarci negativnije procenjuju katolike ($\beta = .28$, $t = 5.26$, $p < .01$), a značajan je i efekat apologije nasilja ($\beta = -.20$, $t = -3.70$, $p < .01$).

Rezultati sugerišu da muškarci generalno negativnije procenjuju pripadnike različitih religija, kao i da i ateisti i pravoslavci pozitivnije ocenjuju pripadnike sopstvene grupe. Kada je u pitanju militantni ekstremizam, zagovaranje upotrebe nasilja za ostvarivanje ciljeva konzistentno je povezano sa negativnom procenom pripadnika različitih religijskih grupa. Rezultati istraživanja ukazuju na grupe koje su sklone razvijanju ekstremnijih stereotipa i predrasuda prema pripadnicima tuđih grupa, na osnovu čega se mogu planirati edukacije usmerene na razvoj tolerancije i građanskih vrednosti.

Ključne reči: stereotipi, religija, militantni ekstremizam, socijalna percepcija

Relations between religiosity and militant extremist mind-set and perception of different religion

Due to political turmoils in the Middle East, massive migrations from that area, as well as the religious terrorism, research of perception of different religious groups is getting more important. The aim of this research is to examine the relations of militant extremism and participants' religious beliefs with evaluation of various religions' followers. A convenient sample consisted of 325 participants (227 women and 98 men; mean age 27.49, SD = 10.13), divided into two groups regarding their religiosity: Orthodox Christians and Atheists. Militant Extremist Mindset Scale, with three subscales: Provioleence, Vile World and Divine Power, was applied. Different religions' followers were evaluated on pairs of opposite personality characteristics given along with pictures of individuals, which were accompanied by the socio-demographic characteristics including religion (Ortodox, Catolic, Muslim or Atheist).

Data were analyzed using hierarchical regression analysis, where the average assessment of different religious group follower was the criteria (in four separate analyses for every religious group), while predictors were introduced in two steps: (1) participant's gender and religion and (2) subscales of militant extremism. Regarding the assessment of Orthodox Christians, only the first regression model was significant ($R^2 = .02$, $F(2,322) = 3.38$, $p < .05$). Only participant's religion shows significant effect ($\beta = -.13$, $t = -2.48$, $p < .05$), indicating that Orthodox Christians give more positive assessments of thier in-groups. Regarding the assessment of Atheists, both regression models were significant (model 1: $R^2 = .12$, $F(2,322) = 22.25$, $p < .01$, model 2: $\Delta R^2 = .04$, $F(2,319) = 4.94$, $p < .01$). Significant predictors are participants' gender ($\beta = -.34$, $t = -6.45$, $p < .01$) and religion ($\beta = -.11$, $t = -2.00$, $p < .05$), with women and Atheists giving more positive assessments, as well as the Divine Power ($\beta = -.16$, $t = -2.37$, $p < .05$) and Provioleence ($\beta = -.16$, $t = -2.94$, $p < .01$). In the regression analysis where the assesment of Muslims was criteria, both models were statistically significant (model 1: $R^2 = .07$, $F(2,322) = 11.97$, $p < .01$, model 2: $\Delta R^2 = .03$, $F(2,319) = 4.01$, $p < .01$). Men assess Muslims more negatively ($\beta = .26$, $t = 4.83$, $p < .01$), while Provioleence also shows significant effect ($\beta = -.18$, $t = -3.25$, $p < .01$). Finally, when the assessment of Catholics was the criteria, both models were statistically significant (model 1: $R^2 = .09$, $F(2,322) = 15.11$, $p < .01$, model 2: $\Delta R^2 = .04$, $F(2,319) = 4.86$, $p < .01$). Men assess Catholics more negatively ($\beta = .28$, $t = 5.26$, $p < .01$), and there is also significant effect of Provioleence ($\beta = -.20$, $t = -3.70$, $p < .01$).

Results suggest that men generally give more negative assessments of different religions' followers, while both Atheists and Orthodox Christians evaluate their in-groups more positively. When it comes to militant extremism, advocating violence for achieving personal goals is consistently related to negative assessment of different religions' followers. Results point out groups more prone to developing extreme stereotypes and prejudices towards members of other groups. On basis of that, some plans for education can be made, directed towards development of tolerance and civil values.

Keywords: stereotypes, religion, militant extremism, social perception

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Protetička šaka u dolini jeze

Nagli razvoj tehnologije i robotike nametnuo je pitanje kako ljudi percipiraju različite tehnološke proizvode. U slučaju robota je primećeno da će njihova dopadljivost rasti sa dodavanjem ljudskih karakteristika, ali samo do jedne tačke, nakon koje počinju da se percipiraju kao živi. Tada dolazi do naglog pada dopadljivosti, čak izazivaju jezu, te se otuda ovaj fenomen naziva dolina jeze (uncanny valley: UV). Do sada je UV efekat dominantno ispitivan na robotima, a retka istraživanja su uključivala druge tehnološke proizvode, kao što su protetička pomagala. Usled sve veće zastupljenosti protetičkih udova, način na koji ih ljudi percipiraju nameće se kao relevantno istraživačko pitanje, koje ima i direktne praktične i socijalne implikacije. Pretpostavka je da će i protetičke šake pratiti isti obrazac procene prijatnosti sa porastom realističnosti, ali i pad u proceni kada postanu suviše realistični. Istovremeno, uvođenje pokreta šake bi trebalo da doprinese jačini efekta, ali, do sada, ove pretpostavke nisu empirijski testirane. Cilj ove studije je da proširi ispitivanje UV efekta na situaciju koja se može javiti u direktnoj interakciji sa osobama koje koriste protetička pomagala, a koja bi, pored izgleda, obuhvatala i pokret. Takođe, provereno je da li i brzina pokreta doprinosi efektu. Studija je sprovedena koristeći video snimke tri vrste šake - mehaničke, protetičke i ljudske, a svaka šaka je dva puta izvela pokret otvaranja i zatvaranja. Dodatno, svaka šaka je izvela pokrete u tri različite brzine - brzinom karakterističnom za mehaničku, za protetičku i ljudsku šaku. Zadatak 39 ispitanika je bio da, nakon svakog snimka, na sedmostepenim Likertovim skalama, procene u kom stepenu prikazanu šaku percipiraju ljudskom, prijatnom i jezivom. Predikcije na osnovu UV efekta su da će protetička šaka biti procenjena kao najjezivija, srednje ljudska i najmanje prijatna, a da će brzina pokreta pojačati ovaj efekat.

Rezultati nisu demonstrirali postojanje UV efekta. Iako je postojao značajan glavni efekat vrste šake za sve tri zavisne varijable - ljudskost ($F(1.42,54.17) = 484.79, p < .05, MSE = 3.21, \eta^2 = .93$), prijatnost ($F(1.67,63.54) = 52.84, p < .05, MSE = 4.83, \eta^2 = .58$) i jezivost ($F(1.79,68.26) = 49.27, p < .05, MSE = 5.15, \eta^2 = .56$), mehanička šaka je bila procenjivana kao najmanje prijatna i najjezivija. S druge strane, nije dobijen glavni efekat brzine pokreta, niti interakcija dve varijable. Nalazi studije sugerišu da se UV efekat ne javlja u slučaju šake u pokretu ili nije dovoljno prominentan da bi se izmerio na ovako malom broju stimulusa. Razloge potencijalno možemo tražiti i u tome što su šake, u socijalnoj interakciji, manje informativne od lica, te da ih je teže interpretirati kao jezive. U narednim istraživanjima, ispitanicima bi se mogao prikazivati veći broj različitih stimulusa, uz ispitivanje uloge ostalih karakteristika pokreta, a ne samo brzine.

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Ključne reči: uncanny valley, Masahiro Mori, socijalna percepcija, estetske preferencije

Prosthetic hand in the uncanny valley

Rapid development in the field of technology and robotics instigated a question of various technological products perception. The likeability of robots increases as they become more human-like, up to the point when they are perceived as alive. This is followed by a sharp decrease in likeability, which turns into eeriness, and hence this phenomenon is called the Uncanny Valley (UV). Research of UV effect included mostly robots, and only a few studies used other technological products, such as prosthetic. The larger use of prosthetic limbs imposes an important research question concerning their perception, which in return has direct social implications. Prosthetic hands are expected to fall under the same behavioral patterns as robots, with their perceived pleasantness correlating with their humanoid appearance, but also to be eerie when they become too realistic. At the same time, movement should contribute to the strength of the effect, but still, these assumptions were not tested experimentally. The aim of this study was to test the UV effect in a situation that could be encountered in interaction with people who have mobile prosthetic limb. Also, we examined whether the speed of movement contributes to the effect. The study was conducted using videos of three types of hands - mechanical, prosthetic and human, and each hand in the video performed opening and closing twice. In addition, each hand executed these movements at three different speeds - speed typical for mechanical, prosthetic and human hand. After each video, 39 participants were instructed to rate the humanness, eeriness and pleasantness of the presented hand, using 7-point Likert-type scales. Predictions based on UV effect are that the prosthetic hand will be evaluated as the most eerie, moderately human and the least pleasant, while the addition of varying speeds of movement will enhance these effects.

The results did not confirm the UV effect. Although there was a significant effect of hand type for all three dependent variables – humanness ($F(1.42,54.17) = 484.79, p < .05, MSE = 3.21, \eta^2 = .93$), pleasantness ($F(1.67,63.54) = 52.84, p < .05, MSE = 4.83, \eta^2 = .58$) and eeriness ($F(1.79,68.26) = 49.27, p < .05, MSE = 5.15, \eta^2 = .56$), the mechanical hand was rated as the least pleasant and the eeriest.

Furthermore, neither the main effect of movement speed nor the interaction between the two variables was significant. Findings of the study suggest that the UV effect does not exist in the case of moving hands or it is not prominent enough to be demonstrated with such a small number of stimuli. Prosthetic hands arguably convey less information in social interaction than faces, and thus potentially they are harder to interpret as eerie. Following studies should consider using larger number of different stimuli, as well as include other characteristics of movement.

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Keywords: uncanny valley, Masahiro Mori, social perception, esthetic preferences

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Povezanost stavova o ravnopravnosti polova i emocionalne kompetencije sa porodičnim funkcionisanjem

Porodična atmosfera u današnjem tranzitivnom društvu dovodi se u vezu sa formiranjem i usvajanjem određenih stavova koji se odnose na uloge pripisane polovima, ali takve uloge su se sa razvojem modernog društva i stvaranjem savremene porodice promenile. Još jedna važna uloga porodice odnosi se naznačaj aktuelne porodične atmosfere u stvaranju kapaciteta za emocionalno reagovanje i regulaciju emocionalnih reakcija, odnosno razvoj emocionalnih kompetencija. Cilj ovog rada jeste ispitivanje povezanosti emocionalnih kompetencija i stavova prema ravnopravnosti polova sa važnim aspektima porodičnog funkcionisanja. Uzorak čini 406 ispitanika ($m = 182$, $\bar{z} = 224$), starosti od 18 do 31 godine, prosečne starosti 20.92 ($SD = 1.39$), pripadnika studentske populacije. Instrumenti korišćeni u istraživanju su Skala porodične fleksibilnosti i kohezivnosti (FACES IV; Olson, 2011), Upitnik emocionalnih kompetencija (UEK-45; Takšić, 2002) i Skala stavova o ravnopravnosti polova (Raboteg-Šarić i Ravlić, 1990). U svrhu analize podataka korišćena je kanonička korelaciona analiza. Kada je u pitanju povezanost između skupa varijabli porodičnog funkcionisanja i emocionalne kompetencije, rezultati pokazuju da postoji jedna statistički značajna povezanost ($R = .38$, $p < .001$). Dimenzije balansiranih porodičnih odnosa kohezivnost i fleksibilnost, komunikacija i zadovoljstvo porodicom povezani su sa dva faktora koji čine emocionalne kompetencije – sposobnost izražavanja i imenovanja emocija i sposobnost regulacije i upravljanja emocijama. Tako rezultati pokazuju da osobe koje potiču iz porodica sa dobrom međusobnom komunikacijom, koji su zadovoljni porodicom i porodice sposobne da se na adekvatan način suprotstave stresorima i svakodnevnim problemima (balansirane porodice) imaju izraženije sposobnosti koje se tiču izražavanja, imenovanja i kontrole vlastitih emocija. Kada je u pitanju povezanost između porodičnog funkcionisanja i stavova o ravnopravnosti polova, postoje dve statistički značajne povezanosti. Prva ($R = .29$, $p < .001$) koju čine

kohezivnost, komunikaciji zadovoljstvo porodicom povezani su sa pozitivnim stavovima o obrazovnim, bračnim i rodnim ulogama. Drugu ($R = .26$, $p < .02$) čine rigidnost i kohezija i oni su povezani sa pozitivnim stavom prema bračnim i socijalno-interpersonalno heteroseksualnim ulogama. Pojedinci koji potiču iz ovakvih porodica, sastabilnim emocionalnim vezama između članova porodice (niska kohezivnost), dobrom komunikacijom i koji su zadovoljni porodicom uopšte – imaju pozitivne stavove prema obrazovnim, bračnim, rodnim i socijalno-interpersonalno heteroseksualnim ulogama. Pojedinci iz porodica sa niskom fleksibilnošću, zatvorene i nepopustljivih granica (rigidnost) imaju pozitivne stavove samo prema bračnim i socijalno-interpersonalno heteroseksualnim ulogama, što može biti posledica konzervativne porodične atmosfere.

Ključne reči: porodični odnosi, FACES IV, ravnopravnost polova, emocionalna kompetencija

Relations between attitudes toward gender equality and emotional competence with family functioning

Family atmosphere in today's transitive society is linked to the formation and adoption of certain gender role attitudes, but such roles have been altered by the development of a modern society and the creation of the modern family. Another important role of the family is related to the significance of the present family atmosphere in the creation of the capacities for emotional responding and regulation of emotional reactions, i.e. the development of emotional competencies. The aim of this paper is to examine the correlation between emotional competencies and attitudes towards gender equality with important aspects of family functioning. The sample included 406 respondents ($m = 182$, $f = 224$), mostly students, aged 18 to 31, the average age being 20.92 ($SD = 1.39$). We used The Family Adaptability and Cohesion Scale (FACES IV; Olson, 2011), Questionnaire of Emotional Competence (UEK-45; Takšić, 2002) and Gender Equality Scale (Raboteg-Šarić & Ravlić, 1990). A canonical correlation analysis was used for the purpose of data analysis. When it comes to the correlation between the set of variables of family functioning and emotional competence, the results show that there is one statistically significant correlation ($R = .38$, $p < .001$). Dimensions of balanced family relationships cohesiveness and flexibility, communication and family satisfaction are linked with two factors that make emotional competencies - the ability to express and name emotions and the emotion management and regulation ability. The results show that people who come from families with good mutual communication, who are satisfied with family and who come from families capable to adequately oppose stressors and everyday problems (balanced families) have more pronounced abilities regarding the expression, naming and control over one's own emotions. When it comes to the correlation between family functioning and attitudes towards gender equality, there are two statistically significant links. The first ($R = .29$, $p < .001$) consists of cohesiveness, communication and family satisfaction, which are connected to the positive attitudes regarding the educational, marital and gender roles. The second ($R = .26$, $p < .02$) consists of rigidity and cohesion and these are connected to the positive attitudes towards the marital and social-interpersonal heterosexual roles. Individuals who come from such families, with stable emotional relationships

between family members (low cohesiveness), good communication and who are satisfied with the family in general - have positive attitudes toward educational, marital, gender and social-interpersonal heterosexual roles. Individuals from families with low flexibility, closed and unbending boundaries (rigidity) have positive attitudes only towards marital and social-interpersonal heterosexual roles, which can be a consequence of a conservative family atmosphere.

Keywords: family relations, FACES IV, gender equality, emotional competence

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Kako volimo kada smo slobodni, a kako kada imamo partnera?

Cilj ovog istraživanja jeste utvrditi razliku u odnosu na pol i aktuelni partnerski status (ima/nema partnera) u kontekstu ljubavnih stilova i sklonosti ka traženju senzacija. Po teoriji John Lee-a, postoji 6 različitih stilova ljubavi. Eros – zaljubljeni najčešće privlače telesne karakteristike, oduševljeni su partnerom i žele ga što pre i intimnije upoznati. Žele odnos koji je isključiv, ali nisu posesivni. Cilj im je ostvariti zajednički život sa partnerom. Storge – podrazumeva polagan i postepen razvoj ljubavi, pa se prijateljski odnosi postepeno menjaju u partnerske. Ovakvi partneri često ulaze u brak. Ludus – podrazumeva vođenje ljubavi bez obaveza prema partneru, nisu zainteresovani za trajne odnose, i to jasno pokazuju partneru. Promiskuitetni su i nisu ljubomorni. Manija – Zaljubljeni je vrlo ljubomoran, posesivan i stalno traži potvrdu da je voljen uz istovremeno suzdržavanje u izražavanju iste. Karakteristična je za mlade bez iskustva. Pragma – podrazumeva svesno traženje partnera sličnih stavova, uverenja, ideologije i životnih ciljeva. Najpre odlučuju šta žele, nakon čega tragaju za tim. Najbolje se opisuje kombinacijom ludusa i storgea. Agape – uključuje nesebično pomaganje i ljubav, pri čemu se ne očekuje uzvraćena ljubav. Zaljubljeni će pre prekinuti vezu nego nauditi partneru. Uzorak je činilo 288 ispitanika (51% žena), uzrasta od 18 do 62 godine ($AS = 25.37$, $SD = 7.02$). Za potrebe ispitivanja datog problema primenjene su LAS skala – Skala ljubavnih stavova i SSS-V – Skala traženja senzacija. U cilju ispitivanja efekata pola i partnerskog statusa na dimenzije stilova ljubavi i sklonosti ka traženju senzacija primenjena je dvosmerna multivarijantna analiza varijanse. Nezavisne varijable su pol i partnerski status, dok su zavisne varijable skorovi na šest dimenzija stilova ljubavi i ukupni skor na Skali traženja senzacija. Rezultati pokazuju da postoje značajni univarijantni efekti pola i statusa veze. Efekat pola je uočljiv kod sledećih stilova ljubavi: ludus ($F(1,284) = 5.93$, $p < .01$), storge ($F(1,284) = 3.86$, $p < .05$), pragma ($F(1,284) = 5.23$, $p < .05$), agape ($F(1,284) = 39.01$, $p < .001$). Efekat statusa veze je značajan kod sledećih stilova ljubavi: eros ($F(1,284) = 92.92$, $p < .001$), ludus ($F(1,284) = 24.88$, $p < .001$), agape ($F(1,284) = 24.70$, $p < .001$). Muškarci pokazuju veću sklonost ka

posedovanju sledećih stilova ljubavi: ludus, storge i agape, a žene ka pragmi. S druge strane, osobe sa partnerima sklonije su eros i agape stilu ljubavi, dok su osobe bez partnera sklonije ludus stilu ljubavi. Osvrtom na celokupno istraživanje može se zaključiti da pol i partnerski status diktiraju preferencije određenih stilova ljubavi, dok nemaju nikakav uticaj na sklonost ka traženju senzacija.

Ključne reči: stilovi ljubavi, sklonost ka traženju senzacija, SSS-V, partnerski status

How do we love when we are single, and how when we have a partner?

The aim of this survey is to determine the difference in regard to gender and current partner status (with/without a partner) in context of love styles and tendency towards sensation seeking. In John Lee's theory, there are 6 different love styles. Eros – The ones that are in love are mostly attracted by physical characteristics, they are thrilled by the partner and want to meet him/her as soon as possible and intimate as they can. They want relationship which is exclusive, but are not possessive. Their goal is to achieve common life with their partner. Storge –implies slow and gradual development of love, so friendships gradually turn into partnerships. These partners usually end up in marriages. Ludus – implies making love with no attachments towards the partner, they are not interested in long – lasting relationships, and they are clear about it with their partner. They are promiscuous and are not possessive. Mania – The one in love is very jealous, possessive and constantly seeks confirmation that he is loved, while at the same time keeps in the expression of the same. It is characteristic for young people with no experience. Pragma – implies conscious partner seeking which have similar attitudes, beliefs, ideology and life goals. Primarily, they decide what they want, and after they are seeking for it. They are best described as a combination of ludus and storge. Agape – includes selfless helping and love, whereby returned love is not expected. The one in love will rather end the relationship than harm the partner. The sample consisted of 288 participants (51% of women) aged from 18 to 62 years ($M = 25.37$, $SD = 7.02$). For the purpose of testing this problem the Love Attitudes Scale (LAS) and the Sensation Seeking Scale (SSS-V) were used. In order to see into the gender and partner status effects on love style dimensions and tendency towards sensation seeking, a two-way multivariate analysis of variance was conducted. Independent variables are gender and partner status, whereas dependent variables are scores of six love style dimensions and total score from the Sensation Seeking Scale. The results are showing that significant univariate gender and relationship status effects do exist. The gender effect is found in the following love styles: ludus ($F(1,284) = 5.93$, $p < .01$), storge ($F(1,284) = 3.86$, $p < .05$), pragma ($F(1,284) = 5.23$, $p < .05$), agape ($F(1,284) = 39.01$, $p < .001$). The relationship status effect is significant in the following love styles: eros ($F(1,284) = 92.92$, $p < .001$), ludus ($F(1,284) = 24.88$, $p < .001$), agape ($F(1,284) = 24.70$, $p < .001$). Men are showing stronger tendency towards using the following love styles: ludus, storge and agape and women towards pragma. On the other hand, persons with partners are leaning more towards eros and agape love style, whereas persons without partners are more likely to use ludus love style. Reviewing overall research, it can be concluded that gender and partner status dictate preferences of certain love styles, while they do not have any influence on tendency towards sensation seeking.

Keywords: love styles, tendency towards sensation seeking, SSS-V, partner status

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Usled svakodnevnog brzog načina života, kao i opšte dostupnosti i sveprisutnosti interneta, ljudi sve češće svoj život organizuju u virtuelnom svetu, te su istraživanja uticaja socijalnih mreža na živote ljudi postala sve značajnija. Cilj ovog istraživanja bio je da se ispita da li su potreba za pripadanjem i stres u različitim životnim domenima povezani sa samoprezentacijom na Facebook-u i traženjem socijalne podrške od Facebook prijatelja. Uzorak je činilo 207 studenata i srednjoškolaca (81.6% ženskog pola), prosečne starosti 20.7 godina. Primenjene su sledeće skale: Skala potrebe za pripadanjem ($\alpha = .80$), Skala doživljene socijalne podrške prilagođena tako da se odnosi na Facebook prijatelje ($\alpha = .98$), supskala samoprezentacije iz skale Psiho-socijalnih aspekata upotrebe Facebook-a ($\alpha = .88$), i Skala stresa kod adolescenata ($\alpha = .90$) koja sadrži supskale: stres kod kuće, stres povezan sa školskim učinkom, stres zbog romantične veze, stres zbog pritiska vršnjaka, stres zbog interakcije sa profesorima i stres zbog škole. Primenjena je hijerarhijska regresiona analiza u kojoj su kriterijumske varijable predstavljale samoprezentacija na Facebook-u i traženje podrške od Facebook prijatelja. Prediktori su uvođeni u dva koraka: u prvom koraku potreba za pripadanjem, a u drugom koraku supskale doživljaja stresa u različitim domenima. Samoprezentaciju na Facebook-u uspešno predviđaju potreba za pripadanjem ($R^2 = .078$, $F(1.205) = 17.35$, $p < .05$, $\beta = .28$, $t = 4.16$, $p < .05$); kao i iz drugog seta prediktora ($R^2 = .061$, $F(6.199) = 2.36$, $p < .05$), stres zbog romantične veze ($\beta = .20$, $t = 2.80$, $p < .05$). Kada je u pitanju traženje podrške od Facebook prijatelja, ni potreba za pripadanjem, ni različiti domeni u kojima osoba doživljava stres nisu omogućili značajnu predikciju traženja podrške. Rezultati ukazuju na to da je samoprezentacija povezana sa izraženijom potrebom za pripadanjem, kao i da se javlja kod osoba koje doživljavaju stres, ali prvenstveno povezan sa iskustvima iz romantične veze. Ostali vidovi stresa ispitani u ovom istraživanju, kao na primer stres kod kuće, u školi, od pritiska vršnjaka, ne doprinose tome da se osoba samoprezentuje u idealizovanom svetlu na Facebook-u. Pored toga, istraživanje pokazuje da se ni potreba za pripadanjem ni stres ne mogu dovesti u vezu sa traženjem podrške od Facebook prijatelja, te se može zaključiti da osobe koje doživljavaju stres u različitim domenima verovatno podršku traže i dobijaju od osoba iz „realnog“ života. Značaj rezultata ovog istraživanja ogleda se u mogućnosti razumevanja i predviđanja ponašanja mladih na društvenim mrežama, kao i pružanja stručne pomoći ukoliko se za njom ukaže potreba.

Ključne reči: potreba za pripadanjem, stres, samoprezentacija, socijalna podrška, adolescenti

Relations between the need to belong and stress in different life domains and self-presentation and seeking social support on Facebook

Due to the fast lifestyle, as well as the general availability and omnipresence of the Internet, people are increasingly organizing their lives in the virtual world. Therefore, the research about the impact of social networks on the lives of people has become increasingly important. The aim of this study was to examine whether the need to belong and stress in different life domains are related to self-presentation on Facebook and seeking social support from Facebook friends. The sample consisted of 207 students and high school students (81.6% female), with an average age of 20.7 years. The following scales were applied: Need to Belong Scale ($\alpha = .80$), Multidimensional Scale of Perceived Social Support adapted to refer to Facebook friends ($\alpha = .98$), subscale Self-presentation from the scale Psycho-Social Aspects of Facebook Use ($\alpha = .88$), and Adolescent Stress Questionnaire ($\alpha = .90$) containing subscales: stress of home life, stress of school performance, stress of romantic relationships, stress of peer pressure, stress of teacher interaction and stress of school conflict.

A hierarchical regression analyses were carried out with self-presentation on Facebook and seeking social support from Facebook friends as criterion variables. Predictors were introduced in two steps: in the first step, the need to belong, and in the second step, the subscales of stress in different life domains. The self-presentation on Facebook was successfully predicted by the need to belong ($R^2 = .078$, $F(1.205) = 17.35$, $p < .05$, $\beta = .28$, $t = 4.16$, $p < .05$); and from the second set of predictors ($R^2 = .061$, $F(6.199) = 2.36$, $p < .05$), stress of romantic relationships ($\beta = .20$, $t = 2.80$, $p < .05$). When it comes to seeking social support from Facebook friends, the need to belong and stress in different life domains didn't contribute to prediction of this criterion variable.

The results indicate that self-presentation is related to a more pronounced need to belong, and it also occurs in people experiencing stress, but primarily related to their romantic relationship. Other types of stress, such as stress at home, at school, etc., did not contribute to the person's self-presentation on Facebook. Further, research showed that neither the need to belong, nor stress can be related to seeking social support from Facebook friends, suggesting that people experiencing stress in different life domains probably seek and receive support from people from their "real life" surrounding. The results of this research imply that understanding young peoples' behavior on social networks can help us in providing professional help in cases of problematic social networks' use.

Key words: need to belong, stress, self-presentation, social support, adolescents

POSTER SEKCIJA / POSTER SESSION

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Predikcija sklonosti ka sujeverju na osnovu HEXACO dimenzija ličnosti

Sujeverje se uglavnom definiše kao verovanje da određeni događaji mogu uticati na čovekovu sudbinu i da donose sreću ili nesreću, ali ne mogu biti objašnjeni naučnim činjenicama, već im se pripisuje magijski ili mistični uzrok. U ranijim istraživanjima pokazano je da su značajni prediktori sujeverja neke socio-demografske karakteristike (npr. pol), ali i karakteristike iz domena osobina ličnosti. Iako su rezultati u vezi sa korelatima iz domena ličnosti različiti, postoji načelno slaganje da je neuroticizam dominantni prediktor sklonosti ka sujeverju, posebno negativnih sujeverja i verovanjima ljudi da nemaju sreće. S druge strane, verovanje ljudi da imaju sreće je pozitivno povezano sa ekstraverzijom i otvorenošću ka iskustvu. Cilj ovog rada je ispitivanje predikcije sklonosti ka sujeverju na osnovu bazičnih dimenzija ličnosti HEXACO modela. Prethodni mali broj istraživanja je kao referentni okvir za ispitivanje osobina ličnosti uglavnom koristio model Velikih pet, te se postavlja pitanje da li će se rezultati replicirati korišćenjem drugog modela ličnosti. Uzorak je obuhvatio 410 ispitanika iz opšte populacije, starosti od 18 do 79 godina i jednakog broja muških i ženskih ispitanika. Pored inventara ličnosti HEXACO-PI-R, primenjen je i Upitnik sujeverja (US), kojeg su konstruisali studenti druge godine psihologije Filozofskog fakulteta u Novom Sadu, u okviru kursa Psihometrija 2, pod mentorstvom B. Dinić. Faktorizacijom Upitnika sujeverja dobijena su tri faktora koja se mogu opisati kao popularna sujeverja (sujeverja koja su najviše rasprostranjena, npr. poželeti želju kad se vidi zvezda padalica, pri čemu ovaj faktor više uključuje pozitivna sujeverja tj. sujeverja povezana s očekivanjem pozitivnih posledica kao i protektivne rituale), negativna sujeverja (sujeverja povezana s očekivanjem negativnih posledica i predskazanjem nesreće) i verovanje u natprirodno (sujeverja povezana s paranormalnim, kao što su verovanja u spiritualno lečenje ili kontaktiranje s mrtvima). Rezultati regresione analize ukazuju na to da se sklonost ka popularnim sujeverjima može predvideti na osnovu više emocionalnosti ($\beta = .25, p < .001$), ekstraverzije ($\beta = .13, p < .05$) i savesnosti ($\beta = .14, p < .01$), dok dimenzija otvorenost ostvaruje negativnu povezanost ($\beta = -.10, p < .05$). Značajni prediktori negativnog sujeverja su emocionalnost ($\beta = .28, p < .001$) i savesnost ($\beta = .11, p < .05$), dok je otvorenost, ponovo, negativno povezana ($\beta = -.18, p < .001$). U slučaju predikcije verovanja u natprirodno, nisu dobijeni značajni prediktori. Na osnovu dobijenih rezultata može se zaključiti da osobine ličnosti, pre svega emocionalnost, mogu poslužiti kao dobri prediktori sklonosti ka pojedinim aspektima sujeverja. Dalja istraživanja na temu ovog fenomena su potrebna, radi uspešnijeg predviđanja i boljeg razumevanja značaja sujeverja.

Ključne reči: popularna sujeverja, negativna sujeverja, verovanje u natprirodno, HEXACO

Prediction of the superstitious tendencies based on HEXACO personality traits

Superstition is often defined as believing that certain events can influence a person's fate and that they can bring good or bad luck, which cannot be explained with scientific facts, but their source can be found in magical or mystical causes. In previous researches it has been shown that the significant predictors of superstition are some socio-demographic characteristics (for example, gender), as well as characteristics from the personality domain. Even though the results regarding the correlates from the personality domain are different, there is a general agreement that the dominant predictor of the superstition is neuroticism, especially when it comes to negative superstitions and one's beliefs that they are unlucky persons. On the other hand, people's beliefs in their luck are positively correlated with extraversion and openness to experience. The aim of this research is to examine the prediction of the superstition based on the personality traits from the HEXACO model. A small number of previous researches have mostly used the Big Five Model as a frame of reference, so the question is whether the results will be replicated by using another personality inventory. The sample consisted of 410 participants, aged from 18 to 79 years, and with the equal number of the males and females. Besides the HEXACO-PI-R personality inventory, participants filled out the Superstition Questionnaire (SQ), constructed by the students at the second year of psychology at the Faculty of Philosophy in Novi Sad, at the course Psychometrics 2 and under the mentorship of B. Dinić. Based on factor analysis of SQ, three factors have been extracted, which can be interpreted as popular superstitions (superstitions that are the most widespread, e.g. making a wish when you see a shooting star, mostly including positive superstitions - superstitions related to good consequences and protective rituals), negative superstitions (superstitions related to bad consequences and misfortune) and beliefs in supernatural (superstitions related to paranormal activities, such are belief in spiritual healing or contacting the dead). Results of the regression analysis show that the popular superstitions can be predicted by higher scores on emotionality ($\beta = .25, p < .001$), extraversion ($\beta = .13, p < .05$) and conscientiousness ($\beta = .14, p < .01$), while the dimension of openness to experience showed negative relation ($\beta = -.10, p < .05$). Significant predictors of negative superstition are emotionality ($\beta = .28, p < .001$) and conscientiousness ($\beta = .11, p < .05$), with openness again being negatively related ($\beta = -.18, p < .001$). There are no significant predictors of beliefs in supernatural. Based on these results, it can be concluded that personality traits, especially emotionality, can be used as good predictors of some aspects of superstition. Further researches of this phenomenon are needed for more successful predictions and better understanding of the importance of superstition.

Keywords: popular superstitions, negative superstitions, beliefs in supernatural, HEXACO

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Ovo istraživanje ispituje povezanost preferirane vrste kave s osobinama ličnosti, spolom, dobi, navikama pušenja te razlozima konzumiranja kofeina. Ciljevi istraživanja su otkriti ovisi li preferencija vrste kave o navedenim karakteristikama te opisati skupinu potrošača određene vrste kave. Prethodna istraživanja pokazala su kako kofein različito utječe na muškarce i žene pri čemu kofein ima snažniji utjecaj na muškarce. S obzirom na to, ovim istraživanjem dodatno se ispitivao i moderatorski učinak spola na odnos ličnosti i preferencije određene vrste kave. Istraživanje je provedeno putem online obrasca koji se sastojao od ankete za utvrđivanje demografskih karakteristika, preferirane vrste kave i navika pušenja sudionika, BFI upitnika osobina ličnosti te CMQ (Caffeine Motives Questionnaire) upitnika. Korištena verzija CMQ sastoji se od pet faktora (Poboljšanje kognitivnih sposobnosti, Smanjenje negativnog efekta, Efekt osnaživanja, Kontrola tjelesne mase, Društveni razlozi). Povezanost svih faktora ispitivala se sa pet vrsta kava: espresso produžen (EP), espresso kratka (EK), turska kava (TK), instant kava (IK) i cappuccino (CA), od kojih prve tri pripadaju vrsti kave s većim udjelom kofeina. Istraživanje je provedeno na prigodnom uzorku od 644 ispitanika u rasponu od 18 do 84 godine. Rezultati regresijske analize pokazali su kako osobe visoko na dimenzijama ekstraverzije (za kriterij EP: $\beta = .100$, $p < .01$) i otvorenosti (za kriterij EP: $\beta = .098$, $p < .01$; za kriterij EK: $\beta = .143$, $p < .01$; za kriterij TK: $\beta = .123$, $p < .01$) preferiraju kavu s većim udjelom kofeina. Nadalje, broj prosječno popušanih cigareta u danu te dob pozitivni su prediktori preferencije kava s većim udjelom kofeina. Osobe koje kofein konzumiraju radi poboljšanja kognitivnih sposobnosti također preferiraju kave s većim udjelom kofeina (za kriterij EP: $\beta = .166$, $p < .05$; za kriterij EK: $\beta = .212$, $p < .01$, za kriterij TK: $\beta = .100$, $p < .05$). Nadalje, postoje spolne razlike u preferenciji vrste kava, pri čemu muškarci konzumiraju kavu s većim udjelom kofeina, dok je kod žena obrnuto (EP: $t(644) = -3.230$, $p < .01$; EK: $t(644) = -7.251$, $p < .01$; TK: $t(644) = -2.153$, $p < .05$; IK: $t(644) = 2.383$, $p < .05$; CA: $t(644) = 2.787$, $p < .01$). Dodatno, ispitivanje moderatorskog učinka spola na povezanost preferencije vrsta kave i osobina ličnosti ukazalo je na značajne razlike među spolovima; s porastom savjesnosti kod muškaraca raste preferencija turske i espresso produžene kave, dok kod žena vrijedi obrnuto. Ovi rezultati pokazuju da postoji povezanost preferirane vrste kave i osobina ličnosti te da razlike u spolu, dobi i navikama pušenju utječu na odabir kave s obzirom na udio kofeina. Važnost rezultata ovog istraživanja ogleda se u praktičnom značaju kada su u pitanju oglašavanje i marketing pojedinih brandova i vrsta kava.

Ključne reči: kava, ličnost, spol, dob, navike pušenja, CMQ

The association of personality traits, demographic characteristics, smoking habits and reasons for caffeine consumption with preferred types of coffee

The current study examined the association of preferred types of coffee with personality traits, gender, age, smoking habits and reasons for caffeine consumption. The purpose of this research was to determine whether or not the preferred types of coffee depend on these characteristics and to specify consumer groups for different types of coffee. Previous research has shown that caffeine have a stronger effect on men than women. This research additionally tried to give some new insight into how gender moderates the relationship between preferred type of coffee and personality traits. The research was conducted on a convenience sample of 644 participants, 18 to 84 years of age. Personality was assessed using the Big Five Inventory (BFI) and the reasons for caffeine consumption were evaluated using the Caffeine Motives Questionnaire (CMQ). In addition, participants completed a short survey to determine their demographic characteristics, preferred types of coffee and smoking habits. CMQ is a measure of motives for consuming caffeine consisting of five factors (Cognitive enhancement, Negative affect relief, Reinforcing effects, Weight control, Social motives). Correlation of all five factors was tested with these coffees: Long black coffee, Espresso, Turkish coffee, Instant coffee and Cappuccino. Long black coffee, Espresso and Turkish coffee are considered coffees with more caffeine. The results of several hierarchical regression analysis showed that participants with higher levels of extraversion (Long black coffee: $\beta = .100$, $p < .01$) and openness to experience (Long black coffee: $\beta = .098$, $p < .01$; Espresso: $\beta = .143$, $p < .01$; Turkish coffee: $\beta = .123$, $p < .01$) prefer types of coffee with more caffeine as do older participants and those who smoke more cigarettes per day. People who consume caffeine for the purpose of cognitive enhancement also prefer types of coffee with more caffeine (Long black coffee: $\beta = .166$, $p < .05$; Espresso: $\beta = .212$, $p < .01$, Turkish coffee: $\beta = .100$, $p < .05$). Further, results show that men preferred coffee with more caffeine than women (Long black coffee: $t(644) = -3.230$, $p < .01$; Espresso: $t(644) = -7.251$, $p < .01$; Turkish coffee: $t(644) = -2.153$, $p < .05$; Instant coffee: $t(644) = 2.383$, $p < .05$; Cappuccino: $t(644) = 2.787$, $p < .01$). It was also found that gender moderated the relationship between preferred type of coffee and personality traits. Men with higher levels of conscientiousness prefer Turkish coffee and Long black coffee while women with higher levels of conscientiousness prefer less Turkish coffee and Long black coffee. The results indicate that consumers' preferred type of coffee is influenced by factors such as personality traits, gender differences, age and smoking habits. The results of this research have practical significance when it comes to marketing and advertising various types of coffee.

Keywords: coffee, personality traits, age, gender differences, smoking habits, CMQ

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Dragana Nešin*Odsek za psihologiju, Filozofski fakultet, Univerzitet u Novom Sadu**Email: dragne16@gmail.com***Sujeverje i neke socio-demografske karakteristike**

Iako u svakodnevnom životu pri donošenju nekih odluka ili pred neki važan događaj ljudi često postupaju prema sujevnim uverenjima, sujeverje je slabo istražen konstrukt. Sueverje se može definisati kao stepen verovanja da određeni objekti ili akcije utiču na čovekovu sudbinu, pri čemu ta verovanja nisu zasnovana na naučnim saznanjima ili logici. Prethodna istraživanja su pokazala da su sujeverju više sklone žene, kao i manje obrazovani ispitanici, dok su rezultati u vezi s mestom stanovanja (urbana nasuprot ruralnoj sredini) i starošću nedosledni. Međutim, u ovim istraživanjima su efekti socio-demografskih karakteristika ispitivani zasebno. Cilj ovog istraživanja bio je ispitivanje predikcije dimenzija sujeverja na osnovu socio-demografskih karakteristika kao što su pol, starost, obrazovanje i mesto življenja. U istraživanju je učestvovalo 384 ispitanika (193 muškarca), starosti od 18 do 60 godina ($AS = 33$, $SD = 14.05$), koji su podeljeni u tri obrazovne kategorije (1. OŠ i SŠ, 2. studenti, 3. fakultet, viša škola i više) i dve koje se odnose na mesto u kojem su proveli najveći deo svog života (ruralna nasuprot urbanoj sredini). Primenjen je Upitnik sujeverja koji su kreirali studenti druge godine studija psihologije na Odseku za psihologiju Filozofskog fakulteta u Novom Sadu, pod mentorstvom B. Dinić. Upitnik u finalnom obliku sadrži 19 stavki uz petostepenu skalu Likertovog tipa za odgovaranje. Faktorskom analizom (metod glavnih osa) upitnika su izvojena tri faktora: popularna sujeverja ($n = 9$, $\alpha = .84$), negativna sujeverja ($n = 5$, $\alpha = .73$) i verovanje u natprirodno ($n = 5$, $\alpha = .73$). Rezultati multivarijatne analize kovarijanse ukazuju na značajne multivarijatne efekte pola ($F(3,369) = 6.99$, $p < .001$) i mesta življenja ($F(3,369) = 3.37$, $p < .05$), pri čemu ostali glavni efekti, kao i interakcije, nisu značajni. Iako nivo obrazovanja i starost ostvaruju značajne efekte na dimenzije sujeverja kada se ispituju zasebno, u finalnom modelu koji uključuje širi spektar karakteristika, ove dve socio-demografske varijable nemaju značajan efekat. Pol ostvaruje značajne univarijatne efekte na faktore popularna i negativna sujeverja, pri čemu žene postižu više skorove, što je u skladu s ranijim istraživanjima. Mesto prebivališta ostvaruje značajan univarijatni efekat samo na faktor koji se odnosi na natprirodna sujeverja, međutim, u smeru u kojem ispitanici iz urbanih sredina ostvaruju više skorove. Ovaj nalaz je neočekivan i moguće ga je objasniti većom dostupnošću različitih sadržaja natprirodnih sujeverja u urbanim sredinama, poput dostupnosti u medijima i na internetu, kao i mogućnost posećivanja objekata i mesta koja propagiraju verovanje u natprirodno. Takođe, moguće je da je život u urbanoj sredini više stresan, te u ovim okolnostima ispitanici više pribegavaju sujeverju.

Ključne reči: sujeverje, pol, mesto stanovanja, obrazovanje, starost

Superstition and socio-demographic characteristics

While making everyday decisions in life, or decisions prior to an important event, people tend to behave in accordance with their superstitious beliefs. Nonetheless, superstition is a poorly researched construct. Superstition is defined as a level of belief which suggests that certain objects or actions influence one's fate, without relying on any scientific or logical basis. Previous studies showed that women and those with lower levels of education are more liable to superstition, while the results related to age and place of living (urban opposite to rural areas) are incoherent. However, the effects of socio-demographic characteristics in mentioned studies were examined separately. The aim of this research was to examine the prediction of the dimensions of superstitions regarding socio-demographic characteristics such as gender, age, education and place of living. 384 subjects (193 men), aged 18 to 60 ($M = 33$, $SD = 14.05$) participated in this research, divided into three categories according to their education level (1. elementary and high school; 2. students; 3. faculty, college and higher) and into two additional categories which are related to the place where they spent most of their lives (again urban opposite to rural areas). The Superstition Questionnaire - SQ was applied, created by the second year students of psychology on the Department of Psychology at the Faculty of Philosophy in Novi Sad, under the mentorship of B. Dinić. The questionnaire contains of 19 items with 5-point Likert type format. Based on principal axis, three factors were extracted: popular superstitions ($n = 9$, $\alpha = .84$), negative superstitions ($n = 5$, $\alpha = .73$) and beliefs in the supernatural ($n = 5$, $\alpha = .73$). Results of multivariate analysis of covariance indicate that gender ($F(3,369) = 6.99$, $p < .001$) and living place ($F(3,369) = 3.37$, $p < .05$) have significant multivariate effects, while other main effects and interactions are not significant. Although the level of education and age have significant effects on superstition dimensions when analyzed separately, they have no significant effect in the final model which includes a wider range of characteristics. Gender has significant univariate effects on popular and negative superstitions, with women having higher scores, which is consistent with previous researches. Living place has significant univariate effect only on the beliefs in the supernatural, in the way that participants from urban areas obtain higher scores. This result is unexpected and could be explained by a greater availability of various supernatural superstition contents in urban areas, such as presence in media and internet, and also a greater possibility of visiting the objects and places which propagate belief in the supernatural. Also, it is possible that life in urban area is more stressful, so participants from these areas are more liable to superstitious beliefs.

Keywords: superstition, gender, living place, education, age

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Kristina Petrović, Iva Konc, Marija Bulat*Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia**Email: kristi.dm@gmail.com***Validation of a new Superstition Questionnaire (SQ)**

Superstition is a multidimensional construct that can be defined as a degree of belief that certain objects or actions can influence one's fate, while those beliefs are not grounded in scientific knowledge or logic. The aim of this research is to validate a new measure of superstition – Superstitions Questionnaire (SQ). The baseline for the construction of this scale is the classification into positive and negative superstitions found in earlier attempts at superstition scales' validation (e.g. Paranormal Belief Scale), while the initial set of indicators represents a list of representative superstitions in Serbia, based on internet pages dedicated to this matter and on informal communication. Questionnaire was constructed by the students at the Department of Psychology, Faculty of Philosophy in Novi Sad, under the mentorship of B. Dinić. The sample included 410 participants from general population (50% males), aged between 18 and 79 ($M = 33.00$, $SD = 14.05$). Besides the SQ, short scale IPIP-Locus of control and Religious beliefs are also applied. Based on factor analysis and item-analyses, the final solution of the SQ comprises 19 items (5-point Likert scale) which are arranged in three factors: 1. Popular superstitions ($n = 9$, $\alpha = .84$), which contains items about those kinds of superstitious beliefs that can most often cross someone's mind (e.g. making a wish when you see a shooting star), including good consequences as protective rituals; 2. Negative superstitions ($n = 5$, $\alpha = .73$), which contains items about misfortune and bad consequences that are bound to happen or could happen; 3. Beliefs in the supernatural ($n = 5$, $\alpha = .73$), which contains items about paranormal activities that could be accomplished by humans, like believing in spiritual healing or contacting the dead. Correlation between Popular and Negative superstitions is .63, between Popular superstitions and Beliefs in the supernatural is .49, and between Negative superstitions and Beliefs in the supernatural .46. All three factors have significant correlations with external locus of control, whereby correlations range from .49 (for Negative superstitions) to .57 (for Popular superstitions). Correlations with religious beliefs are lower, and range from .26 (for Negative superstitions) to .31 (for Popular superstitions). Results indicate that SQ is a valid measure of different aspects of superstition. Also, one of the advantages of SQ is the small number of items per factor, which facilitates its use.

Keywords: Superstition Questionnaire, factor analysis, validation

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