

XXIV NAUČNI SKUP

EMPIRIJSKA ISTRAŽIVANJA U PSIHOLOGIJI

23 – 25. MART 2018.

FILOZOFSKI FAKULTET, UNIVERZITET U BEOGRADU



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PLENARNA PREDAVANJA

DYNAMICS OF AESTHETIC APPRECIATION

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Stable aesthetic standards seems to be a classic narrative: the golden section, the perfect harmony, the eternal beauty! Many people believe in such stable on so static concepts as they do not observe and understand ongoing changes in the canon, the material, the shape and design of products, goods and aesthetic objects. Actually, stable aesthetic standards might be a typical idea born in idealistic philosophy, but anthropological constants seem to be highly unrealistic and implausible from an empirical and everyday life perspective. Many aesthetic domains such as fashion, design, or art are inherently dynamic and we experience these dynamics from year to year when we realize that our taste has changed meanwhile without having noticed this. In the present contribution, empirical data from a variety of experiments and studies are discussed and a simple two-step model is developed based on these findings. Based on such a developmental, adaptive model of aesthetic appreciation, we can also predict future appreciation. I will argue that such an adaptation mechanism is essential in explaining the appeal and success of innovations.

MEASUREMENTS OF SOCIOECONOMIC STATUS AS AN INSTRUMENT TO STUDY EDUCATIONAL EQUITY: SOME METHODOLOGICAL ISSUES

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Socio-economic Status (SES) is a fundamental construct in social stratification and equity studies. In social behavioural sciences, SES and its relations to different performance and outcomes are very often used as an equity measure. Another important use of SES is to control for selection effects in research on determinants of educational, psychological and other life outcomes. Commonly used indicators of SES are parental occupational status, education level and income. However, there is no consensus on the conceptualization of SES, leading to different measurements of SES and SES effects. It should be noted, however, that some methodological factors also affect the estimation of the trend and strength of SES effect. In this talk, this last aspect will be emphasized. I will briefly introduce some existing theoretical views and related measurements of SES. Some examples will be given to illustrate these methodological issues. I will also show alternative measurements of SES and the advantage of such method choices. One alternative method is a reflective approach to defining SES in the latent variable framework, where the latent SES variable can be continuous (i.e., a factor) and categorical (i.e., latent classes or profiles). In sum, the past and current status of conceptualization and measurement of SES will be reviewed and future developments in these issues will be discussed.

SIMPOZIJUMI

PSYCHOLOGICAL IMMUNIZATION AGAINST ANTI-VACCINATION: SUPPORTING THE PARENTS

Moderator: **Kaja Damnjanović**

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Human behavior regarding vaccination, specifically, the behavior of parents, is pivotal for successful immunization of the whole population(s), and we are currently witnessing how our herd lost its immunity. In some parts of the world, the decision on childhood vaccination is one of the most important concerns a parent encounters. Unlike a few decades ago, parents today are "socially forced" to have an opinion and to make the decision about this immensely important health-related issue. At the same time, parents are not forced to make an informed decision, nor are they protected from intensive and explicit societal influences of both normative-medical and lay-experience form. Vaccine concern is not a contemporary phenomenon; however, due to the more than a few reasons, there is a threat of vaccine hesitancy epidemic. Focal points of this symposium are parents and vaccine hesitancy, which will be discussed starting from reference points of psychology, sociology, epidemiology and global health system. We are going to address the public policies regarding vaccine-related behavior, how is hesitancy conveyed via cognitive and social mechanisms, what ideology is behind it, are parents susceptible to cognitive biases in health-related reasoning, how the vaccine market works, and finally, how can we approach to a concerned parents and their questions regarding vaccines. We will describe and understand parental decision making about childhood vaccination in order to contribute to psychological immunization against the anti-vaccination.

EPIDEMIOLOGY AND THE TRUST IN THE BENEFIT OF VACCINATION

Predrag Kon

Gradski zavod za javno zdravlje

The epidemic of measles cannot be stopped without the immunization against the MMR of over 95% of children eligible for vaccination. Therefore, it can be estimated that the epidemic will continue and should reach its peak in March. Without any intervention in the field of public health but due to the change in the seasons, the intensity of the morbillivirus activity will reduce and the epidemic will slow down in April, even more so in May. The virus activity may be interrupted over the summer, but it is more likely that it will be maintained at low intensity throughout the year, and it is possible that it will continue into the next year. The vaccination of over 95% of eligible children there would be no

conditions for the outbreak of the epidemic to continue. Accurate information is of great importance for public health and prognoses are always made on the basis of this available information. Short-term forecasts are very often precise and long-term ones can be of less precision, due to changed circumstances or subsequently available data. Each form of data tracking used for public health has a specially developed monitoring and reporting system as well as specific indicators being monitored for years. The emergence of "know-it-all" stances, backed up with no data and no analysis, who "knowingly" talk about immunization, contributes to the general distrust both in vaccines and in Serbian epidemiology. Epidemiology as a science and epidemiologists, in addition to their core activity - the fight for public health, are here to answer questions about immunization and its mechanisms. The presentation will provide expert answers on the most common parental concerns about immunization.

VACCINES – MARKET, TRENDS AND PARTNERSHIPS

Dragoslav Popovic

International Health Consultant

The history of the vaccine market may be short but it has prolonged effects on the productivity, collective efforts for global benefits, and implications for public health. Until the '90s, only 5 traditional vaccines were widely used and were not considered to be commercially attractive investments, as pharmaceutical companies considered vaccines a commodity with high risks, so research on new vaccines was limited and underfunded. More than two thirds, especially the poorer part, of the global population were deprived of access to vaccines. Back then the “commercial” industry was based exclusively in industrialized countries with State-owned enterprises covering the needs of national markets – such as in SFRY, Cuba or USSR – with none or very limited capacity for exports. Things changed when the GAVI Alliance was established, which focused on providing long-term funding for vaccines worldwide. The global vaccine market between 2000 and 2014 expanded from USD 6 billion to USD 33 billion. Still, the vaccine market size is a small fraction of the global pharmaceuticals market and it is dependent on the sales in rich countries. Today, the global production of vaccines is on a steep rise, enabling the international community to deliver doses to an unprecedented number of children globally. Technology transfer and the globalized market led to the disappearance of national manufacturers – currently, in Europe, there is no country with a state-owned, national vaccine manufacturer. Vaccine research expanded with new funding, transparent information sharing and collaboration between scientists worldwide. The global community recognized the momentum and declared the "Decade of Vaccine 2010-2020" as a period in which previous efforts in prevention of diseases need to be "cemented"

and expanded to new levels. Many scientists see vaccines as the backbone of a "new paradigm in medicine", with vaccine quality and safety reaching its highest level in history. It takes around 24 months to produce one bulk of vaccines with 70% of that time spent on quality control. Each bulk undergoes over 110 tests on average before putting in vials for distribution, with a zero tolerance for failures. As Serbia is a part of the global platform of events in public health, its population shares vaccination benefits with the global community. We haven't seen cases of Diphtheria or Polio for decades, but ongoing Measles outbreak is a stark reminder that more needs to be done.

VACCINES – MARKET, TRENDS AND PARTNERSHIPS

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In three independent studies, we investigated the spread, causes and change of support for mandatory childhood vaccination (MCV) and potential resistance to it in Serbia. In the first study, on a representative sample of 1019 adult citizens (51.5% women), 11% claimed they would not vaccinate their child. There were no gender differences, but higher education was associated with higher support for vaccination, as was being a parent of a minor. In the second study, on a student sample (N=216) we found higher support was weakly associated with more knowledge and higher endorsement of conspiracy mentality.

Research on attitudes towards mandatory childhood vaccination (AMCV) usually targets so-called "anti-vaxers" or "vaccine-hesitant" parents, investigating their motives for rejecting/questioning MCV and stability of this decision. In the third study, we targeted psychology students who strongly supported MCV (N=104) and investigated whether their attitudes can be changed and whether the quality of anti-vaccination arguments determines the change. Arguments were represented to the participants in the article form which was directed against MCV. One text was based on low-quality arguments - LQA (e.g. lay source, biased sample), and the other was based on high-quality arguments – HQA (e.g. expert source, representative sample). The average initial positive attitude of all respondents decreased significantly after reading the articles. Registered sensitivity to manipulation was different between two groups. High-quality

arguments substantially decreased support to MCV but also did the low-quality arguments, albeit with smaller effect. These findings go to show that even strong support for MCV can be relatively easily eroded with even low-quality evidence.

HOW LACK OF TRUST IN EPISTEMIC AUTHORITIES, FACTUAL KNOWLEDGE, AND MISINFORMATION LEAD TO VACCINE HESITANCY

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There is a scientific consensus that vaccines are an efficient and safe way to protect the public from vaccine-preventable diseases. So-called "deficit model" posits that public opinion differs from scientific consensus because of the lack of scientific knowledge; thus, if people were sufficiently informed, they would come to accept the consensus (Sturgis, & Allum, 2004). Evidence, however, suggests that knowledge can be unrelated, and in some cases, negatively related to pro-vaccine attitudes (Kahan, 2010). In our research, neither on student samples nor on the representative sample of parents, vaccine-related knowledge was not a predictor of vaccination intentions. In addition, subjective knowledge and objective knowledge were not related either: people tended to grossly overestimate their actual knowledge, and this subjective assessment was also not a predictor of vaccination intentions. What we found to be significant predictors of vaccine-hesitancy, are (a) beliefs in myths and conspiracies related to vaccine efficacy and safety, and (b) lack of trust in epistemic authorities (health officials, scientific experts and especially official media). This presents a challenge for tailoring vaccine-related public communications: if knowledge is not a protective factor for vaccination, should we invest in educating the public; which information should be provided and in which form; how to de-bunk vaccine-related myths without sensitizing the majority to anti-vaccine contents. In addition, once the trust in epistemic authorities is impaired, it is very hard to rebuild it. We will discuss the strategies to overcome these challenges.

NEOLIBERAL PARADIGM AND ANTI-VACCINATION MOVEMENT

Ivana Pavlović

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Neoliberal ideologies, understood as dominant ideologies in current historic period, support two frames of individual choice - a view of economic systems and governmentalities as rooted in entrepreneurial values such as competitiveness, self-interest, and decentralization, and second, a standpoint that individuals should feel obligated to actively manage the self, work hard, behave morally, and avoid calculable risk through informed decision making. This presentation relies on a concept brought up by Jennifer Reich in *Gender & Society*, where she describes vaccine-refusing mothers (in the USA) as displaying “neoliberal mothering”.

What seems to be widespread among women is an ideology of intensive mothering that advises mothers to expend a tremendous amount of time, energy and money in raising their children. Although there is evidence that this ideology has permeated all socioeconomic levels, this experience of motherhood is marked most intensely by those in the middle and upper class who have the material and cultural resources to invest most heavily in their children's development, and are most fearful of their children's downward mobility. These mothers assert their individual choice to manage their children independently of the influence of medical institutions and government, and for them, good parenting rests on the ability to intervene between children and external institutions. Three factors contributed to the mother's decisions to refuse vaccination. The first one deals with their perception of vaccine risk and necessity, the second one point to their intensive mothering practices – particularly feeding, nutrition and natural living as superior means of health promotion, and the third one refers to risk control through management of social exposure. For Reich, these mothers' narratives illustrate how they embrace neoliberal mothering, with goals of individual optimization and consumption and draw on privilege and access to resources to exercise choice.

Having in mind different social contexts (different legal frameworks concerning vaccination and different healthcare systems, just to begin with), these findings would not be completely relevant for Serbian case, but they can probably give us glimpse of what ideological frameworks we might expect within our sample, since we already have some data that show similar findings concerning socioeconomic backgrounds of the vaccine-refusing parents here and in the USA.

PRIMENA METODE ERP U ISTRAŽIVANJIMA KOGNICIJE I SRODNIH FENOMENA

Moderator: **Vanja Ković**

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Iako se metoda merenja i analize evociranih potencijala (eng. event-related potentials, ERP), izvedena iz starije metode elektroencefalografije (EEG), koristi u istraživanjima još od izmaka tridesetih godina XX veka, ekstenzivno korišćenje metode ERP u psihologiji počinje tek sredinom šezdesetih godina prošlog veka. Značajni primeri primene ERP-a u istraživanjima stranih autora beleže se već duže vreme, međutim sistematsko korišćenje ove metode u domaćim neuronaučnim i psihološkim istraživanjima počinje relativno skoro. Tema najvećeg broja radova u kojima je ova metoda primenjena u nas spada u oblast istraživanja kognicije i srodnih fenomena. Cilj ovog simpozijuma je da prvo upozna slušaoce sa osnovama ERP metode, a potom i sa našim istraživanjima odabranim tako da ilustruju doprinose metode ERP razumevanju različitih fenomena pažnje i kognicije, počev od onih bazičnih, poput vizuelne, motoričke i somatosenzorne detekcije, preko analize jezičkih fenomena, semantičke memorije, do ERP fluktuacije pažnje na radnom mestu i razumevanja mentalnih poremećaja poput shizofrenije.

EVENT-RELATED POTENTIALS IN PSYCHOLOGICAL RESEARCH

Andela Šoškić

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Event-related potentials (ERP) are voltage fluctuations of the brain which are time-locked to an event, such as appearance of a stimulus or a motoric response. They are studied using electroencephalography, and extracted by taking time epochs from the continuous recording. The epochs are then subjected to signal processing and averaged together to distinguish event-related activity from the remainder of neural activity and various sources of noise.

In psychological research, it is typical to record and study evoked potentials, ERPs that follow presentation of stimuli. An averaged ERP waveform is always a result of several distinct processes, which partially overlap. Therefore, the waveform is ordinarily partitioned into components, individual waves that are assumed to represent a single process or (more frequently) a combination of processes, whose functional, temporal, and topographical characteristics are

relatively well known. ERP components can be described with several measures of latency and amplitude, which can be used as variables in an experiment, and scalp voltage distributions can also be compared to examine differences between experimental situations or participant groups.

Two components that are likely the most widely known and used are P300, a positive deflection peaking at about 300ms, and N400, a negative wave peaking approximately at 400ms. P300 is part of a reaction to an unexpected (infrequent or novel) stimulus, and it includes several distinct subtypes. It is predominantly used in study of attention, memory, categorisation and psychopathology (schizophrenia research). N400 occurs during processing of meaning, mostly of words, but also of non-verbal stimuli, and its amplitude depends on semantic expectation of a stimulus within its preceding or surrounding context. It is especially relevant for researchers in the fields of psycholinguistics and semantic memory study.

EVENT-RELATED POTENTIALS IN PSYCHOLOGICAL RESEARCH

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Our visual apparatus seems to be perfectly capable of triggering a percept effortlessly based on the spatially distinct elements, as Kanisza originally demonstrated with his Pac-Man-shaped illusions. Numerous studies were run since, linking this effect to early visual processing. In this study we wanted to examine the ease of detection of different illusory shapes in comparison to detection of the different shape orientation. To do so, we used an odd-ball paradigm, in which two stimuli were presented alternately (20:80, deviant to standard, respectively), we contrasted four critical experimental conditions: detection of illusory triangle amongst illusory squares vs. illusory squares within illusory triangles as well upright illusory triangles among inverted illusory triangles vs. inverted illusory triangle within upright illusory ones. As expected, we found that participants were quicker to detect the deviants in the first two experimental situations (when detecting different shape) in comparison to the third and fourth situation (when detecting different orientation). This results quite well match the observed ERP latency in the P300 effect, which starts around

200ms for detection of different shape in comparison to 120ms latter start of the P300 effect for the detection of the different-orientation of illusory contours. There were no differences in ERP amplitudes across the four experimental condition. These results demonstrate how behavioural and ERP data can fit together in detection of differences in seemingly similar and automated processes of illusory contours perception.

DA LI NAM JE GRAMATIČKO PRIMOVANJE ZBILJA NEOPHODNO? UVID STEČEN PRIMENOM ODBOL PARADIGME

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Gramatičko primovanja vrsta je jezičkog primovanja u kojem primovi specificuju vrstu i neku od gramatičkih kategorija mete. Ovaj postupak nameće potrebu da se, često arbitrarno, definišu proceduralni detalji poput trajanja ekspozicija prima i interstimulusnog intervala prim-meta. Ovi parametri pak presudno utiču na sud o dejstvu gramatičkog konteksta na obradu reči. Primenom odbol paradigme, pokušali smo da proverimo može li se koristiti jednostavniji postupak koji više odgovara uslovima svakodnevnog čitanja. Upotrebili smo parove reči koje su činili nasumično odabrani imenica i glagol kojima je u gramatički ograničavajućem kontekstu prethodio odgovarajući predlog (na loptu), odnosno lična zamenica (on pije), dok je istoj imenici i glagolu u gramatički neograničavajućem kontekstu prethodio veznik ili. Parovi su prikazani prvo kao devijanti (20%), potom kao standardi (80%). Tako su formirane četiri eksperimentalne situacije, po dve sa imenicom i sa glagolom. Zadatak je bio detekcija devijanta manuelnim odgovaranjem. Istovremeno, beleženi su evocirani električni potencijali putem CZ elektrode. Vreme reagovanja u svim situacijama bilo je jednako ($Mdn=408$ ms). Amplitude evociranih potencijala analizirane su u okvirima od po 20ms t-testovima razlika otklona za devijante i standarde. Imenica u neograničavajućem kontekstu kao devijant pobudila je razlike u intervalu 360-380ms do 420-440ms, dok je imenica u ograničavajućem kontekstu kao devijant razlike pobudila u opsegu 420-440ms do 480-500ms. Glagol u neograničavajućem kontekstu kao devijant pobudio je razlike u

opsezima 440-460ms do 480-500ms i 540-560ms do 600-620ms. Razlike pobuđene glagolom u ograničavajućem kontekstu kao devijantom nisu dostigle značajnost iako su bile istog smera kao u ostale tri situacije. Zabeleženi potencijali pripadaju gornjem opsegu P300, sa latencijama osetno dužim od onih koje se registruju u odbol eksperimentu sa vizuelnim stimulusima koji nemaju značenje. Nismo zabeležili ranije potencijale koji bi svedočili u razlikama pažnji i opažanju, te smo skloni da tvrdimo da su naši ispitanici semantički obradili obe reči u prikazanim parovima, na sličan način na koji se u Strupovom zadatku obrađuju nerelevantna svojstva stimulusa. Jednovremeno prikazivanje reči stoga bi moglo biti primenjeno u istraživanju dejstva gramatičkog konteksta. Ovakav način prikazivanja omogućio bi jednostavno merenje evociranih potencijala i izvođenje potpuno paralelnih eksperimenata sa ajtrekingom.

DO WE REALLY NEED GRAMMATICAL PRIMING? INSIGHTS GAINED THROUGH ODBALL PARADIGM

A two-stimulus odblall ERP experiment was created to explore alternatives to standard grammatical priming. A noun and a verb with congruent preposition and personal pronoun respectively preceding them were paired to create grammatically constrained condition, while conjecture preceding both target words was employed to create unconstrained condition. The results pattern was the similar across situations, with stimuli chosen evoking clear P300 potential as deviants in three out of four situations. In each of the situations P300 peaked well after 400 ms, falling near the upper limit of P300 range usually reported. Such P300 latencies mark semantic processing and indicate subjects read and linguistically processed both words in pairs in a simple task of deviant detection. We conclude that simultaneous primes and targets presentation could constitute ecologically valid alternative in grammatical context on visual word processing research by circumventing some of grammatical priming procedure technical pitfalls.

COMPARING THE TEMPORAL DYNAMICS OF THEMATIC AND TAXONOMIC PROCESSING USING EVENT-RELATED POTENTIALS

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Taxonomic relationship refers to item pairs or objects that belong to the same semantic category based on the overlap in features or meaning (cow–donkey, apple–pear), whereas thematically related objects are objects that are related based on the complementary roles they play in the same scenario or event (cow–milk, nail—hammer). We report here the results of a study comparing the temporal dynamics of thematic and taxonomic knowledge activation in a picture-word priming paradigm using event-related potentials. Although we found no behavioral differences between thematic and taxonomic processing, ERP data revealed distinct patterns of N400 and P600 amplitude modulation for thematic and taxonomic priming. Thematically related target stimuli elicited less negativity than taxonomic targets between 280–460ms after stimulus onset, suggesting easier semantic processing of thematic than taxonomic relationships. Moreover, P600 mean amplitude was significantly increased for taxonomic targets between 520–600ms, consistent with a greater need for stimulus reevaluation in that condition. So far, ERP differences in thematic and taxonomic processing have rarely been reported, with several studies reporting no differences and a few studies reporting the similar pattern of results to the one obtained in our study. Thus, this result is among the first to offer strong evidence for the neural distinction of thematic and taxonomic thinking in early phases of conceptual processing.

MISMATCH NEGATIVITY EVENT-RELATED POTENTIAL AS A CLINICAL TOOL FOR ASSESSMENT OF BRAIN FUNCTION

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Mismatch negativity (MMN) or mismatch response is an electrophysiological signal measured by EEG/MEG and it occurs as mismatch in morphology of event-related potential to an odd stimulus in a train of standard stimuli. From 1970s MMN has been employed for understanding the processes of pre-attentive detection of rule violations, considered a form of "primitive intelligence". Depending on evoking stimulus MMN can be auditory, visual and somatosensory (electrical, touch, vibration stimuli). Major advantage of MMN methods for assessing brain functions is its simplicity, usually not comprising any specific task concerning the series of evoking stimuli, and not requiring active cooperation/attention. MMN is a promising tool to detect abnormalities in neural system functioning and it has been proven to be modulated in neurological/mental disorders, vegetative state, with age or level of physical fitness. MMN is considered to be a potential biomarker for reliable diagnostics or outcome prediction in various disorders. However, translation into clinical practice requires standardization in recording techniques and disorder-specific normative data.

FUTURE JOB POST: UTILIZING PHYSIOLOGICAL MEASUREMENTS IN QUANTIFICATION OF THE INTERACTION BETWEEN WORKER AND A WORKPLACE

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Wearables are becoming ubiquitous in everyday life. Humans are willingly accepting the technological advancement of sensing technology, mainly for improving their daily routines and well-being. This general trend consequently opened a whole set of new topics in the applied psychology research that were previously not exploited enough. The main reason for this was the lack of the lightweight equipment for physiological sensing, especially the equipment that can be used in free environment (outside the laboratory settings). Following this trend, the field of Human Factors and Ergonomic (HFE) became richer for the new discipline called neuroergonomics. The main objective of neuroergonomics is to investigate the brain functions during work and in everyday life (Parasuraman, 2003). It provides the possibility to objectively quantify the worker's cognitive state, through investigation of the covert cognitive processes, instead of the classical ergonomics methods that mainly relied on the qualitative assessment. Neuroergonomics is expected to especially benefit in future from the real-time data acquisition and processing. This provides the possibility to timely investigate the how different workplace parameters are influencing the worker's cognition, which can provide a valuable input for the workplace optimization. We offer a brief insight in several tools that can be employed in future – all relying on electroencephalography (EEG) for brain states quantification. We showcase industrial neuroergonomics tools' implementation example, application in consumer market segment – retail store optimization, and a workload quantification demo, to be used for focus critical work posts.

ERP STUDIES IN PEOPLE WITH SCHIZOPHRENIA

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Schizophrenia is a chronic brain disorder that affects about one percent of the population. Although it has been one of the most studied psychiatric disorder, it is still not known what causes schizophrenia, but is believed that a combination of genetics, brain chemistry and environmental factors contributes to development of the disorder. Neuroimaging studies show differences in the brain structure and central nervous system of people with schizophrenia. While researchers are not certain about the significance of these changes, they indicate that schizophrenia is a brain disease. Most people with schizophrenia show clear signs of cognitive impairments, such as deficits of attention, concentration and memory, as well as decrease in academic performance. Event-related potentials (ERPs) are relevant markers of cognitive deficits in schizophrenia. Impaired P300 component, as well as impariments of late components (N400, P600) are consistent finding in people with schizophrenia, while studies of early components (P1,N1,MMN) show inconsistencies. One of the major problems in schizophrenia treatment is large time gap between first symptoms and final diagnosis, leading to delay in implementation of treatment protocols. The majority of ERP studies in schizophrenia have been conducted with heterogeneous samples of chronic patients. Over the last several years there has been a shift in performing studies with people experiencing first episode psychosis in order to determine distinctive properties of ERP components that potentially could be used as diagnostic predictors of schizophrenia.

OKRUGLI STO

PROBLEMI UZORKOVANJA U RAZLIČITIM TIPOVIMA ISTRAŽIVANJA

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Jedna od temeljno važnih istraživačkih odluka koja se donosi već u prvim koracima svakog istraživačkog poduhvata jeste odluka o uzorku, o kriterijumu za selekciju jedinica posmatranja i merenja. Ova odluka se ipak ne zasniva isključivo na kriterijumima postavljenim u okviru tradicionalnih statističkih pristupa, već i na praktičnim i teorijskim kriterijumima. Neki od takvih aspekata koji oblikuju odluku o uzorku jesu i priroda i dostupnost fenomena koji se istražuje, a ponekad je to neiskutvo istraživača. Izbor uzorka ima jasne i merljive posledice kako po nalaze istraživanja, tako i na njihove implikacije na modele i praksu koja se na njima zasniva. Izazovi uzorkovanja, sa užitim usmerenjem na loše i dobre prakse i koliko različitih uzoraka i uzorkovanja srećemo u različitim tipovima istraživanja, te kako se to odražava na zaključke – jesu tema ovog okruglog stola. Biće reči o uzorkovanju u istraživanjima u kojima se koristi iskustvena građa nastala nezavisno od potreba istraživanja, o specifičnostima uzorkovanja tekstualne građe, odnosno koliko se razlikuje od opšte teorije uzorkovanja, zatim o vrstama primenljivih uzoraka. Biće diskutovani dobri i loši primeri primene različitih tehnika uzorkovanja i veličina uzorka. Takođe će biti reči o mogućnostima i izazovima koje pred uzorkovanje stavlja proučavanje građe dostupne online. Konačno, biće prikazana razvojna linija od tradicionalnog „tvrđog“ uzorkovanja u velikim socijalnim istraživanjima i okvirima koji su nam za to na raspolaganju do “modernih” rešenja, (snowball, bootstrapping, neslučajni uzorci) kao odgovor na situacije gde takvi okviri ne postoje.

PERCEPCIJA

VIZUELNA PAŽNJA I DETEKCIJA AUDITIVNIH STIMULUSA

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Kada su ljudi fokusirani na izvođenje jednog vizuelnog zadatka veliki dio vizuelnih informacija ostaje neregistrovan. Taj fenomen je poznat kao „sljepilo usljed nepažnje“ (eng. inattention blindness). Većina istraživanja ovog fenomena je bila usmjerena na proučavanje unutar jednog čulnog modaliteta. Glavni zaključak tih istraživanja je bio da vizuelna pažnja ima veliku ulogu u percepciji stimulusa koji pripadaju istom čulnom modalitetu. Postavlja se pitanje da li takav zaključak vrijedi i za percepciju stimulusa iz drugog čulnog modaliteta, odnosno da li se može govoriti o zajedničkim resursima u okviru bimodalne percepcije. Osnovni cilj ovog istraživanja bio je da se ispita uticaj usmjerenosti pažnje na vizuelni zadatak na detekciju auditivnog stimulusa, kao i da se ispita da li tip auditivnog stimulusa utiče na njegovu detekciju u uslovima nepažnje. Sprovedena su dva eksperimenta u kojima su učestvovala po 34 ispitanika. U oba eksperimenta je procedura bila identična. Pažnja ispitanika je bila usmjerena na vizuelni zadatak procjene dužine linija. U jednom od izlaganja se uz primarne stimuluse neočekivano pojavio auditivni stimulus, pri čemu je variran tip stimulusa. Izabarana su dva kvalitativno različita tona iz baze podataka Auditivne laboratorije (Laurie Heller's environmental sound events database). Pratila se uspješnost u izvođenju vizuelnog zadatka i detekciji auditivnog stimulusa. Razlika između dva eksperimenta se ogledala u prisustvu/odsustvu bijele buke. Dobijeni rezultati pokazuju da u odsustvu bijele buke detekcija auditivnog stimulusa ne zavisi od angažovanja vizuelne pažnje (94% ispitanika je registrovalo pojavu tona). Takođe, ne postoji razlika u detekciji kada se uzme u obzir tip stimulusa ($\chi^2(1,34)=.030$, $p>.05$). Međutim, prisustvo bijele buke značajno smanjuje sposobnost detekcije auditivnog stimulusa u odnosu na detekciju u odsustvu buke ($\chi^2(1,68)=7.703$, $p<.01$). Rezultati pokazuju da postoji razlika u detekciji jednog tipa stimulusa u prisustvu i odsustvu bijele buke ($\chi^2(1,37)=7.709$, $p<.01$).

Na osnovu dobijenih rezultata se može zaključiti da je detekcija stimulusa iz jednog čulnog modaliteta relativno nezavisna od stepena angažovanosti pažnje koja pripada drugom čulnom modalitetu. Međutim, uključivanje dodatnih auditivnih informacija, smanjuje se sposobnost uočavanja određenog tipa zvučnog stimulusa, što ima značajne praktične implikacije kada se uzme u obzir da je svakodnevna aktivnosti čovjeka izložena višestrukim senzornim inputima.

Ključne reči: vizuelna pažnja, auditivni stimulus, bimodalna percepcija

UTICAJ SIMETRIJE I VELIČINE SETA NA OPAŽANJE FORME U TAČKASTIM SKLOPOVIMA

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Variranjem simetrije i kolinearnosti u ranijim istraživanjima su dobijeni oprečni rezultati o ulozi ovih faktora na jednoznačnost opažanja forme. Cilj rada je ispitati stabilnost identifikacije forme u tačkastim sklopovima u zavisnosti od prisustva simetrije u rasporedu tačaka i broja tačaka koje čine datu formu. Kolinearnost tačaka je držana konstantnom. U eksperimentu je učestvovalo 36 studenata psihologije, starosti od 18 do 24 godina, oba pola. Za stimulse su izabrane dve ugaone (kvadrat i jednakokraki trougao) i dve oble (krug i elipsa) forme tačkastih sklopova, sa kolinearnim, približno ekvidistantnim rasporedom (8, 12, 16) tačaka. Dvofaktorska analiza varijanse ukazuje da postoji glavni efekat forme ($F(3)=21.905$; $p<0.01$) i broja tačaka ($F(2)=254.097$; $p<0.01$), kao i interakcije forme i broja tačaka ($F(6)=57.115$; $p<0.01$), rasporeda i broja tačaka ($F(2)=5.191$; $p<0.01$) i na kraju forme, rasporeda i broja tačaka ($F(6)=3.486$; $p<0.01$). Šefeovi testovi za ispitivanje razlika u tačnosti identifikacije u zavisnosti od broja tačaka u stimulusu ukazuju da kod forme kvadrata ispitanici tačnije identifikuju zadati sklop jedino kada je razlika u broju tačaka 16 prema 8, bez obzira na raspored. Kod oblika trougla samo ako je sklop konstruisan od 16 asimetrično raspoređenih tačaka u odnosu na 12 ili 8. Oblik kruga i elipse ispitanici tačnije identifikuju kada je broj konstitutivnih elemenata veći bez obzira na njihov raspored. Izuzetak predstavlja odnos između asimetrično raspoređenih 12 i 8 tačaka kod oblika kruga.

Variranjem broja sastavnih elemenata sklopa i njihovog rasporeda uočava se delimična doslednost ispitanika pri identifikaciji zadate forme. Možemo reći da kod obliha formi stepen identifikacije linearno raste kako se povećava broj konstitutivnih elemenata, bez obzira na njihov način uređenosti. Kod ugaonih formi, međutim, pravilnost je manje jasna. Kod obe forme kvadrata i asimetrične forme trougla, stepen identifikacije raste samo ako se broj konstitutivnih elemenata udvostruči, tj ne raste za blaži porast broja elemenata. Kod simetrične forme trougla nema porasta stepena identifikacije sa promenom broja konstitutivnih elemenata.

Ključne reči: amodalno kompletiranje, tačkasti sklopovi, simetrija/asimetrija, kolinearnost

EFFECT OF SYMMETRY AND SET SIZE ON FORM PERCEPTION IN DOT SETS

Aim of this research was to investigate stability of form identification in dot sets, depending on the symmetry and number of dots constituting certain form. Research involved 36 students, of both genders, aged between 18 and 24. Stimuli included two angular (square and equilateral triangle) and two round (circle and ellipse) forms of dot sets with collinear and approximately equidistant dot layout, including 8, 12 and 16 dots.

By varying number of constitutive elements and their layout we can notice partial regularity in participant behavior during form identification. We can say that the identification accuracy of round forms is linearly increasing with growing number of constitutive elements, regardless of their composition. In angular forms, regularity is less pronounced. In both square forms and asymmetric triangle form, identification accuracy is increasing only if number of constitutive elements is doubled, meaning that it does not increase with mild growth of number of elements.

Keywords: amodal completion, dot sets, symmetry/asymmetry, collinearity

A PERSON, A DOG, AND A VASE: THE EFFECT OF AVATAR TYPE IN A PERSPECTIVE TAKING TASK

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Recent research has shown people are capable of automatic processing of what another person sees even when not explicitly taking the other persons perspective. This has been concluded based on studies conducted using the dot perspective task. In this task participants are cued the perspective (self/other) from which they are viewing stimuli (dots) and the number of stimuli. They are then asked to decide whether the cued number of stimuli can be seen from the cued perspective. Results show people are slower in their responses when a different number of stimuli can be seen from one's own and the avatar's (other) perspective. In these incongruent trials the avatar's perspective interferes with the response about one's own perspective, and one's own perspective interferes with the response about the avatar's perspective. This indicates both perspectives are processed automatically. However, question remains whether this is purely a consequence of perceptual cueing or if social information contributes to the effect. The goal of

our study was to investigate differences in automatic processing depending on the species of the avatar in the task. The experiment was a 2 (self/other perspective) \times 2 (same/different number of stimuli seen from the two perspectives) \times 2 (person/dog avatar) repeated measures design. In a modified dot perspective task we instructed participants to respond as fast as possible with the number of stimuli (1 or 2) which could be seen from a previously cued perspective (self/other). Results from a three-way ANOVA showed participants ($N=33$) responded slower for incongruent trials ($F(1,32)=15.25$, $p<.01$, $\eta^2=.32$), and when taking the other perspective ($F(1,32)=11.40$, $p<.01$, $\eta^2=.26$). However, the avatar species by perspective interaction was also significant ($F(1,32)=13.04$, $p<.01$, $\eta^2=.29$). Post-hoc comparisons showed participants were significantly slower when taking a person's perspective compared to their own, this difference was not significant when taking a dog's perspective compared to their own. These results may imply additional time is required to take the perspective of a human being while the perspective of a dog represents a perceptive cue rather than requiring that additional step. We may conclude both perceptual and social information contribute to perspective taking. However, as expected, the contribution of social information varies depending on the type of avatar.

Keywords: mentalizing, perspective taking, dot perspective task, visual attention

ODNOS PROCESIRANJA IDENTITETA I FACIJALNE EKSPRESIJE U DUGOROČNOJ MEMORIJI

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Prethodne studije koje su ispitivale odnos procesiranja identiteta i facijalne ekspresije u dugoročnoj memoriji ne daju nedvosmislene nalaze. Neke studije pokazuju bolje pamćenje lica sa ekspresijom sreće dok druge pokazuju bolje pamćenje lica sa negativnom ekspresijom. Kao potencijalni faktori koji bi mogli da objasne ove nalaze ističu se: način učenja (namerno nasuprot slučajnom) i tip zadatka kod slučajnog učenja. Dodatni problem prethodnih studija je korišćenje samo nekih facijalnih ekspresija (ljutnja, sreća i neutralni izraz lica) ili nejasno definisanje ekspresija kao pozitivne i negativne.

Ovom studijom pokušali smo da detaljnije ispitamo odnos procesiranja facijalne ekspresije i identiteta u dugoročnoj memoriji uz istovremeno unapređivanje metodologije odnosno prevazilaženja nedostataka prethodnih studija. U istraživanju je učestvovalo ukupno 60 studenata psihologije u 4 eksperimentalne

situacije. Prva eksperimentalna situacija (1a) ispitivala je uticaj namernog učenja a korišten je zadatak prepoznavanja (eng. old/new task). Ostale tri eksperimentalne situacije bavile su se efektom slučajnog učenja koristeći modifikovan zadatak prepoznavanja pri čemu je zadatak koji su rešavali tokom faze učenja variran: procena uzrasta (1b), procena pola (1c) i kao novinu smo uveli procenu prijatnosti lica (1d). Test faza je bila ista za sve eksperimentalne situacije i sledila je nakon 24h.

Dobijeni podaci su analizirani korišćenjem analize GEE (eng. generalized estimating equations). Očekivano, tačnost prepoznavanja je veća kada je učenje namerno (Wald $\chi^2=37.112$, $df=3$, $p=.000$). Između eksperimentalnih situacija u kojima je učenje bilo slučajno nisu izmerene statistički značajne razlike iako je uspešnost nešto veća bila kada je ometajući zadatak procena uzrasta. Uzimajući u obzir sve 4 eksperimentalne situacije zajedno, pokazano je da se lica naučena sa određenom ekspresijom bolje pamte (Wald $\chi^2=48.391$, $df=5$, $p=.000$). Odnosno, lica koja su u fazi učenja prikazana sa ekspresijom sreće se značajno bolje prepoznaju u odnosu na sve ostale ekspresije osim neutralnog izraza lica. Zanimljivo je to što je prepoznavanje lica naučenih sa ekspresijom iznenađenja najlošije. Detaljnija analiza svake pojedinačne eksperimentalne situacije pokazuje da tip zadatka u situaciji slučajnog učenja, može da utiče na tačnost prepoznavanja lica sa određenom ekspresijom. Ipak, sem u situaciji kada je procena uzrasta ometajući zadatak, primećen je sličan trend.

Ključne reči: identitet, facijalna ekspresija, dugoročna memorija

Projekat Ministarstva prosvete, nauke i tehnološkog razvoja, grant br. 179033

Previous studies that examined the relation between processing of facial identity and facial expressions in long-term memory showed inconsistent results. One of the possible explanations could be different methodology that had been used. This study aimed to further explore these phenomena while taking into account some of potentially relevant factors: type of learning (intentional vs incidental) and type of task during incidental learning. We also include 6 expressions (neutral, sadness, happiness, anger, disgust, surprise).

We compared the accuracy between 4 experimental situations: (1) intentional learning (2) incidental learning with gender categorization, (3) incidental learning with age categorization and (4) incidental learning with rating the pleasantness of faces. GEE analysis showed that the performance is the highest in situation of intentional learning (Wald $\chi^2=37.112$, $df=3$, $p=.000$). Further, faces that were learned with happy expression were significantly better recognized than faces learned with other expressions (except neutral expression).

Keywords: identity, facial expression, long-term memory

LIGHTNESS CONTRAST AND ASSIMILATION: TESTING THE HYPOTHESES OF SPATIAL FREQUENCY, REFLECTANCE DIFFERENCE, AND PERCEIVED DEPTH

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Lightness assimilation alters the appearance of the gray targets making them more similar to the background while lightness contrast produces the opposite effect, making the targets more dissimilar from the background (or inducers). This created a long-lasting debate: are these two independent phenomena or opposite poles of the same event.

The aim of the present study was to disentangle the theoretical debate by testing following three hypotheses. Previous studies showed that assimilation occurs when the spatial frequency of inducers is high, and the reflectance difference between the targets and the inducers is low (Helson, 1964; Streger, 1968). Opposite conditions produce contrast. These are known as spatial frequency and reflectance difference hypotheses. Recent studies (Soranzo, et al., 2010; Acaster, et al., 2014) demonstrated that distance between the target and the inducers is also a significant factor, as increase in that distance reduces both contrast and assimilation. This is known as the depth hypothesis.

In this study, we also eliminated methodological differences found in the previous studies (task type, number of targets, exposure times and visual angles of targets and inducers) in order to measure the contribution of each factor. The spatial frequency of the inducers had 3 levels, the target reflectance had 2 levels (12%, 28%), the inducers reflectance had 3 levels (7%, 20%, 33%), and the distance between target and inducers had 3 levels (0cm, 30cm & 60cm).

Results showed that there was no four-way interaction, nor the three-way interaction between target reflectance, inducer reflectance and spatial frequency. Other three three-way interactions were significant. The interaction between target reflectance and spatial frequency was not significant, while other five two-way interactions were significant. The main effects of target reflectance ($F(1,8)=292.505$, $p<.001$), inducers reflectance ($F(2,16)=7.667$, $p=.005$) and spatial frequency ($F(2,16)=4.009$, $p=.039$) were significant, while the effect of depth was only marginally significant ($F(2,16)=3.448$, $p=.057$).

The hypothesis of reflectance difference could only account for the third of our data. The same was the case with frequency hypothesis. The depth hypothesis

was the most successful as the effects of contrast and assimilation really decreased with the increase of the distance between targets and the inducers.

Keywords: lightness contrast, lightness assimilation, spatial frequency, reflectance difference, depth

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A NEURODYNAMICAL ACCOUNT OF HOW EXPECTATIONS AFFECT COLOR PERCEPTION IN AFTERIMAGES

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A recent study by Gary Lupyan showed that adapting to objects with intrinsic colors (tomato) creates stronger afterimages (more vivid colors) than adapting to arbitrarily colored objects (car). He interpreted this finding as an evidence for predictive coding models of visual perception and for the cognitive penetrability of vision. Here, we offered an alternative explanation based on the theoretical framework of adaptive resonance theory (ART) that led to opposite conclusion. 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 indicate successful recognition of the input pattern. Resonance corresponds to conscious perception of the presented input. On the other hand, mismatch between bottom-up and top-down signals produces a global reset wave that clears the traces of erroneous top-down expectation. This is a crucial difference with respect to predictive coding models where perception is a compromise between bottom-up and top-down signals.

To explain the perception of afterimages, we introduced a model of opponent interactions with slowly adapting neurotransmitter release as a frontend to the ART circuit. It is closely related to the model of gated dipole proposed by Grossberg, Hwang and Mingolla where adapting to one color (red) produces subsequent reaction in the complement color channel (green) when the network is exposed to the achromatic field. Also, we developed a real-time implementation of the fuzzy ART algorithm to categorize analog patterns corresponding to different hues. Results of computer simulations showed that expected colors indeed produced stronger and more lasting resonant states

comparing to non-expected colors. In the latter condition, several reset waves make network activity less stable and consequently color perception less vivid. Furthermore, it should be noted that the effect of expected colors is short lived and eventually the network dynamics settle to the same gray level in both conditions resulting in veridical perception of achromatic input. In conclusion, we showed that vivid perception of expected colors in afterimages arises in a neural network where expectations are restricted and tightly controlled in order to achieve stable and unbiased categorization and perception.

Keywords: Cognitive Penetrability of Vision, Color Perception, Afterimages, Neural Networks

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THE DEPENDENCE OF THE ‘VERTICAL-HORIZONTAL’ ILLUSION ON ORIENTATION

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The so-called ‘vertical-horizontal’ illusion is one of the oldest visual illusions and arguably the simplest: in its standard form it involves a figure consisting of two equal lines arranged in the shape of the letter T, in either the upright or, more often, inverted (upside down) orientation. In such configurations the vertical line looks visibly longer than the horizontal line, for about 10% or more. Although a number of studies of this effect are reported in the literature, it is still unexplained. The illusion cannot be attributed to some general anisotropy of the visual field, such as vertical stretch or horizontal compression: when the standard figure is turned sideways by 90 degrees, it is not the vertical but the horizontal line in the T-configuration that looks longer, though the illusory effect tends to be weaker than in the standard form. Apart from this manipulation, little is known about the effect of the orientation of the stimulus figure on the strength of the illusion. One possibility is that the strength of the effect monotonically decreases as the figure is turned from vertical to horizontal. In order to get more insight into this aspect of the illusion, in the present research T-configurations were displayed in eight orientations, 45 degrees steps apart. Starting with the standard inverted-T form, two sets of stimuli were used, one containing the figures in orientations of 0, 45, 90, and 135 degrees, and the other containing the figures in orientations of 180, 225, 270, and 315 degrees. The two sets were presented to two different groups of subjects (with six repetitions in random order), who were asked to judge which

of the two lines looked longer. The main effect of orientation was significant for the first set ($F(3,14)=3.277$, $p=.030$) and for the second set ($F(3,12)=7.749$, $p<.001$). Additional tests indicated that the illusory effect in vertical orientations (0 and 180 degrees) was stronger than in horizontal orientations (90 and 270 degrees), confirming previous findings in the literature, but that it was not stronger (and numerically it was weaker) than in diagonal orientations (45, 135, 225, and 315 degrees). These results show that, contrary to the initial hypothesis, the strength of the illusion does not decrease monotonically as the figure turns from the vertical into the horizontal orientation.

Keywords: size perception, horizontal-vertical illusion, orientation

UTICAJ INFORMACIJA O BRENDU NA OPAŽANJE UKUSA KOLA NAPITAKA

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Cilj ovog istraživanja bilo je utvrđivanje odnosa na relaciji: brend-ukus-potrošačko ponašanje. Istraživanje je podjeljeno na tri dela. U prvom delu ispitanici su pili Koka-Kolu iz originalne ambalaže i Koka-Kolu iz ambalaže Skaj-Kole, ocenjujući pritom ukus oba napitka. Ovaj deo istraživanja imao je za cilj pružanje odgovora na pitanje da li informacije o brendu menjaju doživljaj ukusa napitka. U drugom delu ispitanici su pili Koka-Kolu iz neutralne ambalaže uz zadatak da prepoznaju o kom napitku je reč, radi utvrđivanja da li ispitanici mogu samo na osnovu ukusa da prepoznaju jedan brend kole. U trećem delu ispitanici su odgovarali na pitanje koji sok bi kupili u situaciji kada bi birali između Koka-Kole i Skaj-Kole, kako bismo utvrdili da li bi informacije o brendu uticale na potrošačko ponašanje.

Uzorak je bio prigodan i činilo ga je 116 studenata prve i druge godine psihologije ($M=20$, $\check{Z}=96$), prosečne starosti 19.56 godina.

Rezultati t testa pokazali su da su ocene koje ispitanici daju ukusu Koka-Kole, kada se konzumira iz originalne ambalaže statistički značajno veće od ocena koje daju Koka-Koli kada se konzumira iz ambalaže Skaj-kole ($t(115)=2.76$, $p<0.01$). Ovi rezultati ukazuju na to da informacije o brendu vrše uticaj na opažanje ukusa napitka.

Rezultati hi-kvadrat testa su pokazali da ispitanici ne mogu da prepoznaju Koka-Kolu samo na osnovu ukusa onda kada im se servira iz neutralne ambalaže ($\chi^2(1)=23.31$, $p<0.01$), čak ni kada je reč o ispitanicima kojima je to omiljeni

napitak ($\chi^2(1)=11.64$, $p<0.01$). U oba slučaja statistički značajna razlika dobijena hi-kvadrat testom išla je u korist netačnih odgovora. Ukus, dakle, ne predstavlja ključnu odliku po kojoj razlikujemo kola napitke različitih proizvođača. Takođe, hi-kvadrat testom dobijeno je da postoje statistički značajne razlike u korist Koka-Kole u odgovorima koji se odnose na preferencije pri kupovini ($\chi^2(1)=89.69$, $p<0.01$). Čak i oni ispitanici koji su u prve dve faze dali veću ocenu napitku za koji su mislili da je Skaj-kola, u četvrtoj fazi bi se odlučili za kupovinu Koka-Kole ($\chi^2(1)=14.29$, $p<0.01$). Ovi rezultati ukazuju na to da informacije o brendu vrše uticaj na potrošačko ponašanje ispitanika, čak i u situaciji kada ne utiču na doživljaj ukusa napitka.

Shodno tome, zaključujemo da odnos može da ide u smeru: brend-ukus-potrošačko ponašanje, ali i da informacije o brendu zaobilazeći ukus, posredstvom drugih komponenti, mogu da vrše uticaj na preferencije pri kupovini kola napitaka.

Ključne reči: brend, opažanje, ukus, kola sokovi, preferencije pri kupovini

The goal of this research was to determine a relation between brand, taste and consumer behavior.

The sample was convenient. It consisted of 116 students (M=20, F=96; average age=19.56).

The results have shown that respondents can't recognize Coca-Cola based on taste when they drink this beverage from neutral packaging. Results have shown that quality grades given to Coca-Cola were significantly higher when this beverage was consummated from original packaging from grades given to the Coca-Cola when consumed from Sky-Cola packaging ($p<0.01$). Results have also shown that there are statistically significant differences in favor of Coca-Cola when it comes to shopping preferences ($p<0.01$, $df=1$). Even those respondents who gave a higher grade to beverage for which they thought was Sky-Cola, chose to buy Coca-Cola ($p<0.01$, $df=1$). These results show that brand information can influence consumer behavior even in situations in which they don't influence taste perception of beverage.

Keywords: brand, perception, taste, cola juices, shopping preferences

VIRTUAL SPACE ODISSEY – ANISOTROPY EFFECTS IN PHYSICAL AND VIRTUAL REALITY

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It has previously been shown that people tend to perceive distances on vertical direction, towards zenith, as longer than physically equal distances on horizontal direction. This tendency is called perceived distance anisotropy and it relies on multisensory integration from visual, proprioceptive and vestibular system. We hypothesized that it can be explained through relation between action and perception. Since actions towards zenith require more effort, perceiving those distances as further would make action on that direction as successful as on horizontal direction. If perceived distance anisotropy depends on multisensory integration it is interesting to investigate whether it would appear in virtual reality displays, too. First two experiments were done in a dark gym, on 14 participants in upright position and 13 participants lying on their left side. In last two experiments we used virtual reality display, Oculus Rift DK2, on 17 participants in upright position and 14 participants lying on their left side. In all experiments participants visually matched stimuli distances on vertical and horizontal directions, and changed viewing direction by moving their head. In upright position, during the task vestibular and proprioceptive information changed, and if participants were lying on side, proprioceptive information changed only. Stimuli were set on three standard distances 1m, 3m and 5m from the observer. Results show significant effect of stimuli distance, such that further stimuli are perceived as further ($F=823.92$; $df=2;108$; $p<0.01$), direction, such that vertical distances are perceived as larger than horizontal ($F=135.64$; $df=1;108$; $p<0.01$), experiment ($F=7.23$; $df=3;54$; $p<0.01$) and interaction of distance, direction and experiment ($F=7.32$; $df=6;108$; $p<0.01$). Differences between experiments indicate that: (1) conditions in which only proprioception changed (lying on the side) produced smaller anisotropy effects; and (2) anisotropy effects were always smaller in virtual reality. Experimental condition differences are in line with multisensory nature of perceived distance anisotropy, since combination of vestibular and proprioceptive information created larger anisotropy effects. They also indicate that some depth reduction exists in VR technology itself.

Keywords: perceived distance anisotropy, action-perception schemes, depth cues, virtual reality

KLINIČKA PSIHOLOGIJA

SERBIAN ADAPTATION OF AN AMBIGUOUS SCENARIOS TEST FOR DEPRESSED MOOD (AST-D): A NEW TEST OF A DEPRESSOGENIC INTERPRETATION BIAS

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Several influential cognitive theories of psychopathology exclaim the role of biased negative (depressogenic) interpretations of internal and external stimuli in the genesis and maintenance of emotional disorders. Numerous studies provided support for this standpoint. The aim of this study is to check the psychometric properties of a Serbian translation and adaptation of An Ambiguous Scenarios Test for depressed mood (AST-D), a novel operationalization of the aforementioned construct.

A non-clinical sample was used, comprised of 1322 participants age ranged from 18 to 77 (Mage=33.64, SD=12.21; 51.7% female). The AST-D was adapted and translated into Serbian language, and administered with the Depression, Anxiety, and Stress Scale-21 (DASS-21). The AST-D consists of 24 ambiguous scenarios. Participants were instructed to imagine themselves in each situation and rate the level of pleasantness of image and its vividness. The more pleasant the rating is, the less likely for the participant is to have negative interpretation bias.

In order to explore the latent factor structure of the AST-D, Principal Component Analysis was conducted. Results supported a two-factor structure, unlike original unidimensional solution, explaining 31% of variance. The first factor (16 items, $\alpha=.83$) seemed to tap into meta-cognitive processes reflecting ones' thoughts about emotions and experiences in a given situation, whilst the second factor (8 items, $\alpha=.69$) can be understood as a measure of a ones' tendency to anticipate eminent negative outcomes of uncertain future events. Low and high distress groups ($\pm 1SD$ on the total DASS-21 score, which indicates General distress) were

created. High distress group obtained significantly lower scores on both extracted factors ($t(409)=8.23$, $p=.000$, $d=.82$; $t(409)=9.21$, $p=.000$, $d=.91$, respectively), meaning that high distress group demonstrated greater depressogenic interpretation biases.

Our results indicate the existence of two factors, which seem to be rooted in Beck's negative cognitive triad and Intolerance of uncertainty, respectively. It could be hypothesized that these factors point to two pathways towards depressogenic interpretative biases, which consequently can be followed by occurrence and maintenance of mood disorder symptoms. Additionally, given its discriminant validity, the AST-D can be considered as a useful tool for evaluation of therapeutic change. Other clinical implications will be discussed.

Keywords: An Ambiguous Scenarios Test, interpretation bias, negative bias, depression, validation

EVALUACIJA UPITNIKA MENTALNOG ZDRAVLJA MHI-38 U NAŠOJ KULTURI

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Upitnik mentalnog zdravlja MHI-38 (Mental Health Inventory, MHI-38; Veit & Ware, 1983) predstavlja jedan od primenjenijih testova za procenu mentalnog zdravlja u svetu. Do sada niko od istraživača sa našeg podneblja nije izvršio evaluaciju ovog upitnika u našoj kulturi, stoga se osnovni problem istraživanja odnosi na ovo pitanje. Istraživanje je sprovedeno u periodu od juna do avgusta 2014. godine na uzorku opšte populacije. Analizirani su odgovori 358 ispitanika, oba pola i starosti od 18 do 65 godina. Za procenu mentalnog zdravlja korišćen je upitnik MHI-38 (Veit & Ware, 1983). Pretpostavljeni model mentalnog zdravlja se sastoji od dva faktora: Psihološki distres koga mere dimenzije Anksioznost, Depresija i Gubitak emocionalno-bihevioralne kontrole, i drugi faktor Psihološko blagostanje koga mere dimenzije: Generalno pozitivan afekat, Emocionalne veze i Zadovoljstvo životom. Model koji su ponudili Veit i Ware (1983) proveravan je sa CFA i to: relacijama između teorijskog modela i empirijskih podataka procenjenim normiranim $\chi^2=1039.306$ na veličinu uzorka ($\chi^2(df=3.864/269)$). Korišćeni su i indeksi podesnosti CFI (.886) – indeks komparativnog fitovanja; RMSEA (.090) – kvadratni koren prosečne kvadrirane

greške aproksimacija; AIC (1151.306) – Akajkeov kriterijum informativnosti; CAIC (1424.616) – konzistentan Akajkeov kriterijum informativnosti. Proverom predloženog modela i empirijskih podataka prikupljenih u istraživanju dobijen je rezultat da teorijski model ne fituje dobro podatke. Dalja adaptacija upitnika MHI-38 (Veit & Ware, 1983), učinjena je pomoću EFA gde su izdvojena dva faktora nižeg reda Psihološki distres (PD) i Psihološko blagostanje (PB) i jedan faktor višeg reda Mentalno zdravlje (MZ). Na osnovu faktorskih zasićenja izbačeno je 6 ajtema iz originalne verzije upitnika. U ovakvoj postavci modifikovani upitnik je pokazao dobre metrijske karakteristike: pouzdanosti (α , λ_1 i $\lambda_6 > .80$) i reprezentativnosti ($KMO > .90$). Ovo istraživanje značajno doprinosi temeljima dobrog alata za procenu mentalnog zdravlja te omogućuje adekvatnu procenu ispitanika, sa podneblja naše kulture.

The survey was conducted in the period from June to August in 2014. The responses of 358 subjects, both sex, aged 18 to 65, were analyzed. An adaptive MHI-38 (Veit & Ware, 1983) was used to assess mental health. The assumed mental health model consists of two factors: Psychological distress measured by dimensions of: Anxiety, Depression and Loss of emotional-behavioral control, and the second factor the psychological well-being measured by dimensions of: Generally Positive Affect, Emotional Connections and Life Satisfaction. The offered model by Veit and Ware (1983) was examined by: the relationships between the theoretical model and the empirical data estimated by standardized $\chi^2 = 1039.306$ per sample size ($\chi^2 / df = 3.864 / 269$). The CFI (.886) Comparative fit index; RMSEA (.090) - Root mean square error of approximation; AIC (1151.306) - Akaike Information Criterion; CAIC (1424.616) - Consistent Akaike information criterion - the results showed that the theoretical model does not fit data. EFA extracted two factors defined as Psychological distress (PD) and Psychological well-being (PB) and the summative score Mental Health (MH). At the end 6 items from the original version of the questionnaire were excluded. The questionnaire based on EFA showed good metric characteristics: reliability (α , λ_1 and $\lambda_6 > .80$) and representativity ($KMO > .90$).

Keywords: mental health, MHI-38, psychological distress, psychological well-being

EVALUACIJA PILOTIRANJA PRIMENE VASPITNIH NALOGA U SRBIJI

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Izricanje krivičnih sankcija maloletnicima zbog izvršenja krivičnih dela često ima negativne psihološke posledice na njihov razvoj, dok s druge strane, ima mali uticaj na promenu ponašanja u prosocijalnom pravcu. Primena vaspitnih naloga, kao alternative krivičnim sankcijama, ima za cilj podršku razvoju i uključivanju mladih u zajednicu. Poslednjih nekoliko godina koordinisano se radi na implementaciji ovih diverzionih mera.

Istraživanje je imalo za cilj procenu efekata primene vaspitnih naloga na socijalnu integraciju i ponašanje maloletnika. Istraživačka pitanja su: da li se ponašanje mladih upućenih na vaspitne naloge razlikuje u odnosu na njihove vršnjake? Da li njihove porodice karakterišu poremećeni porodični odnosi? Kakav je stav dece prema krivičnom delu i sopstvenom ponašanju? Kakvi su ishodi primene vaspitnih naloga na recidivizam i promene u ponašanju dece?

Primenjen je kvalitativni metod zasnovan na intervjuima vođenim sa decom i njihovim roditeljima i Skala za procenu efekata vaspitnih naloga za roditelje.

Istraživanjem je obuhvaćeno 121 mladih uzrasta 14-18 godina ($M=16.93$, $SD=1.43$), od čega je 107 dečaka (88.4%), kao i 80 njihovih roditelja.

Ispitivanje je sprovedeno u četiri grada u Srbiji: Beogradu, Novom Sadu, Nišu i Kragujevcu u period od 2015. do 2016. Intervjue su vodili nezavisni i obučeni ispitivači 3-6 meseci ($M=4.4$) posle ispunjenja vaspitnih naloga.

Rezultati su pokazali da se u najvećem broju slučajeva (76.86%) na vaspitne naloge upućuju adolescenti koji nemaju značajne problema u ponašanju i školovanju ili odnosima sa vršnjacima, a samo manji broj dece (15.66%) dolazi iz konfliktnih porodica. U periodu do 6 meseci posle ispunjenja vaspitnih naloga nijedan ispitanik nije ponovio krivično delo. Promene koje najčešće roditelji opažaju su: prestanak problematičnog ponašanja (60%), bolja kontrola i predviđanje posledica ponašanja dece (63.75%), povećana odgovornost prema obavezama (41.25%), unapređenje odnosa sa roditeljima (52.5%), manje interpersonalnih konflikata (45%), itd. Utisak najvećeg broja dece (90.08%) i roditelja (95.83%) je da su vaspitni nalozi uvremenjena preventivna intervencija kojom se bitno umanjuje rizik od produbljivanja problema u ponašanju i daljeg vršenja krivičnih dela. Zaključci upućuju na značaj i pozitivne efekte primene vaspitnih naloga, kao i moguća unapređenja procene indikacija za njihovu primenu.

Ključne reči: vaspitni nalozi, evaluacija ishoda, maloletni učinoci krivičnih dela

Unapređenje prava deteta kroz jačanje sistema pravosuđa i socijalne zaštite” koji sprovodi UNICEF u partnerstvu sa Ministarstvom pravde i Ministarstvom za rad, zapošljavanje, boračka i socijalna pitanja, uz finansijsku podršku Evropske unije, u periodu od avgusta 2014. do decembra 2017

EVALUATION OF PILOTING DIVERSION ORDERS IMPLEMENTATION IN SERBIA

The juvenile justice system in Serbia have been started to support reintegration of young offenders in last decade. The goal of this study was monitoring the outcomes of diversion measures. The analyses included characteristics of children and their families; the attitudes of children toward the offence and the effects of implementation of diversion orders on children’s behavior. The study was based on qualitative research method and included in-depth semi structured interviews with children and parents and the self-report scale for the assessment of the effects of diversion orders.

The sample included 121 children aged 14-18 years (88.4% males) and 80 of their parents. The interviews were conducted 3-6 months after diversion order. The results showed absence of recidivism; improved ability to predict consequences of behavior (63.75%); increased responsibility (41.25%); improved relations with parents (52.5%), improved conflict solving skills (45%), etc. The conclusions generally confirm positive effect of diversion measures.

Keywords: diversion orders, evaluation of outcomes, young offenders

PARTNERSKI I PORODIČNI ODNOSI KAO PREDIKTORI BLAGOSTANJA STUDENATA

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Blagostanje mladih je jedna od najaktuelnijih tema savremenih istraživanja, kako u svetu tako i kod nas. Predmet ovog istraživanja jeste utvrđivanje nekih partnerskih i porodičnih determinanti blagostanja studenata. Osnovni cilj istraživanja je bio ispitati da li se na osnovu nekih varijabli partnerskih odnosa - stilovi ljubavi (LAS, Hendrick & Hendrick, 1986), seksualno zadovoljstvo (ISS,

Hudson, Fischer i Corcoran, 1994) i strastvena ljubav (PLS, Hatfield & Sprecher, 1986) i porodičnih faktora – dimenzija porodičnog afektivnog vezivanja (FAAQ, Brenan, Clark & Shaver, 1995) i zadovoljstvo porodicom (FAS, Antonovsky, & Sourani, 1988) mogu predviđati emocionalno, socijalno i psihičko studenata (MHC-SF, Keyes, 2009). Uzorak je činilo 198 studenata Univerziteta u Kosovskoj Mitrovici (74% ženskog pola), starosti $M=23.04$ ($SD=2.80$), koji su u trenutku ispitivanja bili u ljubavnoj vezi. Sve korišćene skale su imale dobru pouzdanost (Kronbah $\alpha > .70$). Kao značajni prediktori emocionalnog blagostanja izdvajaju se manični stil ljubavi ($\beta = -.157$, $p < .05$) i zadovoljstvo porodicom ($\beta = .301$, $p < .000$). Oni zajedno predviđaju 26% varijanse emocionalnog blagostanja. Kao značajan prediktor socijalnog blagostanja takođe se izdvajaju manični stil ljubavi ($\beta = -.162$, $p < .05$) i zadovoljstvo porodicom ($\beta = .292$, $p < .000$). Model predviđa 18% varijanse socijalnog blagostanja. Kao značajni prediktori psihičkog blagostanja izdvajaju se prijateljski stil ljubavi ($\beta = .183$, $p < .01$), mančni stil ljubavi ($\beta = -.162$, $p < .05$) i zadovoljstvo porodicom ($\beta = .301$, $p < .000$). Oni zajedno predviđaju 28% varijanse psihičkog blagostanja. Dakle, čini se da su dobri prediktori blagostanja studenata odsustvo elemenata maničnog stila partnerske ljubavi i uživanje u ljubavi sa elementima prijateljstva, dok je od ispitanih porodičnih faktora značajno zadovoljstvo sopstvenom primarnom porodicom. Ako dobijene rezultate stavimo u širi razvojni kontekst, onda bismo mogli zaključiti da je blagostanje studenata koji su u romantičnoj vezi povezano sa ostvarivanjem razvojnih zadataka koji karakterišu ovaj period života, a ogledaju se u izgradnji stabilnijih intimnih i porodičnih odnosa.

Ključne reči: partnerski odnos, porodica, blagostanje, studenti

PARTNER AND FAMILY RELATIONSHIPS AS PREDICTORS OF STUDENTS' WELL-BEING

The main aim of the study was to investigate predictive value of some partnership – the love styles (Hendrick & Hendrick, 1986), sexual pleasure (Hudson, Fischer and Corcoran, 1994), and passionate love (Hatfield & Sprecher, 1986), and family factors - the family affective attachment (Brenan, Clark & Shaver, 1995) and family satisfaction (Antonovsky, & Sourani, 1988) in determining well-being of students (MHC-SF, Keyes, 2009). The sample consisted of 198 University students (74% female), age $M=23.04$ ($SD=2.80$). The manic love style ($\beta = -.157$, $p < .05$; $\beta = -.162$, $p < .05$) and family satisfaction ($\beta = .301$, $p < .000$; $\beta = .292$, $p < .000$) predict emotional and social well-being, respectively. They predict 26% of emotional and 18% of social well-being. Significant predictors of psychological well-being were storge ($\beta = .183$, $p < .01$) and manic love style ($\beta = -.162$, $p < .05$), and family satisfaction. They predict 28% of variance of psychological well-being. Theoretical and practical implications of obtained results are discussed.

Keywords: partner relationship, family, well-being, university students

Unapređenje prava deteta kroz jačanje sistema pravosuđa i socijalne zaštite” koji sprovodi UNICEF u partnerstvu sa Ministarstvom pravde i Ministarstvom za rad, zapošljavanje, boračka i socijalna pitanja, uz finansijsku podršku Evropske unije, u periodu od avgusta 2014. do decembra 2017

CONCORDANCE BETWEEN DIFFERENT INFORMANTS IN ASSESSING AGGRESSIVE AND WITHDRAWAL BEHAVIOUR OF THE YOUNG IN A CORRECTIONAL INSTITUTION

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The aim of the study is to analyse the concordance between different informants in the assessments of the same phenomena. More precisely, the aim is to determine the degree to which the assessment of aggressive and withdrawal behaviour by one type of informants is predictive for the assessment of the same or related behaviour by other types of informants. In practice, conclusions about the psychological phenomena and interconnections between them were mostly based on the assessment of one type of informant, whose predictability could be dubious. In this study there were three groups of subjects-informants: 98 adolescent inmates of the Juvenile Correctional Institution in Krusevac – JCIK, Serbia, their 108 peers and 13 tutors in JCIK. The instruments were: Peers' Aggression Questionnaire (Hrnčić, 2002) for self-assessment of victimization, Personal Aggression Questionnaire (Hrnčić, 2002) of self-assessment of aggression, TRQ for rating of aggression, victimization and withdrawal by tutors and sociometry questions for rating liking, disliking and withdrawal behaviour by peers. Linear regression showed that the assessment of aggressive behaviour by the caregivers was predictive for self-assessment of aggressive behaviour but explained only 5.3% of the variance ($\beta=.230$, $t=2.253$, $p<.05$). Similarly, the assessment of withdrawal by the peers was predictive for the assessment of withdrawal by the caregivers and explained 5.2% of the variance ($\beta=.227$, $t=2.138$, $p<.05$). The assessment of current victimization by tutors in JCIK was predictive for self-assessment of victimization but explained only 5.0% of the variance ($\beta=.224$, $t=2.194$, $p<.05$). Peers' rejection had a stronger predictive power for self-assessment of victimization, which explained 11.5% of the variance ($\beta=.339$, $t=3.397$, $p<.001$), and was similarly predictive for tutors' assessment of victimization by explaining 10.5% of the variance ($\beta=.350$,

$t=3.505$, $p<.001$). The results showed a relatively high level of subjectivity in the assessment process. The type of informant was of utmost importance for drawing conclusions about the psychological phenomena.

Keywords: interrater concordance, self-assessment, tutors' assessment, peers' assessment, antisocial behaviour.

„Kriminal u Srbiji: fenomenologija, rizici i mogućnosti socijalne intervencije“ koji finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije, broj 47011.

ASSOCIATION BETWEEN SELF-CONCEALMENT, SEXUAL ORIENTATION AND WILLINGNESS TO SEEK PSYCHOLOGICAL HELP AMONG INDIVIDUALS IN EARLY ADULTHOOD IN MACEDONIA

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The role of self-concealment to help-seeking behavior among sexual minorities has not been examined in Macedonia as most of the research studies are focused on discrimination, violence and mental health issues among the LGBTI+ population. However, the role of self-concealment and sexual orientation as significant determinants to willingness to seek psychological help has not been well understood. The goal of this research is to examine the association between self-concealment, sexual orientation and willingness to seek psychological help among young and middle-aged adults ($n=179$; 95 male and 81 female) living in different cities in Macedonia. 79 non-heterosexually and 95 heterosexually oriented adults completed an online questionnaire that was consisted of the Inventory of Attitudes Towards Seeking Mental Health Services (IASMHS; Mackenzie et al., 2004), Self-Concealment Scale (SCS; Larson & Chastain, 1990), Barriers to Seeking Psychological Help Scale (BSPHS; Topkaya, Şahin & Meydan, 2017) and General Help-Seeking Questionnaire (GHSQ; Wilson, Deane, Ciarrochi & Rickwood, 2005) and additional items. The results supported the hypothesis that there is a significant negative association between self-concealment and attitudes towards seeking mental health services ($r=-.40$, $p<.01$). The second hypothesis was also supported as there was a strong positive association between self-concealment and perceived barriers in seeking psychological help ($r=.50$, $p<.01$). The findings did not support the third and fourth hypotheses as there were no differences between adults with heterosexual and non-heterosexual orientation in their attitudes towards seeking mental health services ($t(171)=.52$, $p>.05$), neither in their intention to seek help ($t(171)=.80$

$p > .05$). However, it was found that LGB participants would rather seek help from a friend ($t(171) = -3.25, p < .01$), and non-LGB participants would rather seek help from a parent ($t(171) = 5.16, p < .01$) and a relative ($t(171) = 3.29, p < .01$). Interestingly and contradictory to the hypothesis, straight self-identified participants scored significantly higher on help-seeking propensity ($t(171) = 2.43, p < .05$), which supposes that heterosexuals had higher tendency to seek professional psychological help than LGB participants. Limitations, implications for further research and recommendations for mental health professionals were discussed.

Keywords: self-concealment, LGB, willingness to seek psychological help, mental health

YOU ARE THE WEAKEST LINK – HELLO! RELATION BETWEEN THE WEAKEST LINK AND THE ADDITIVE MODEL IN DYSPHORIA SYMPTOMS PREDICTION

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Numerous cognitive models of vulnerability to psychopathology have been proposed over recent decades. Most of them incorporate several factors of vulnerability, mainly in the context of their individual impact on the development of clinical symptoms as well as their cumulative, interactive and synergistic effect. However, some authors have proposed a slightly different model, in which symptom occurrence is a function of the toxic effect of the most prominent factor, namely the “weakest link”. The aim of this study is to test whether the latter approach has merit in the prediction of dysphoric symptoms.

In this online study, 317 participants ($M = 24.92, SD = 7.54$) filled the depression subscale of the Psychiatric Diagnostic Screening Questionnaire, and measures of 5 cognitive factors of vulnerability: The Ruminative Thinking Style Questionnaire, the Leiden Index of Depression Sensitivity-Revised, the

Acceptance and Action questionnaire, the negative affect subscale of the Positive and Negative Affective Schedule, and the White Bear Suppression Inventory. The weakest link variable was formed based on the highest vulnerability score, the additive composite was computed, and a hierarchical regression models was calculated.

Results yielded a statistically significant regression model ($R^2=.27$, $p=.000$), when only the additive composite was included, and a significantly improved predictive model, ($\Delta R^2=.06$, $F=27.87$, $p=.000$) when the weakest link score was introduced in the second step. Upon further inspection, the results suggested that both the additive and the weakest link scores were statistically significant predictors of dysphoric symptoms, ($\beta=.20$, $p=.008$) and ($\beta=.40$, $p=.000$), respectively.

Results suggest that the additive composite of different factors of cognitive vulnerability successfully predicts dysphoric scores, which is in line with traditional perspectives. On the other hand, it would seem that the “weakest link” has its unique contribution as well. These findings give support for both models, spurring an idea of differential pathways to the development of depression, dynamic in nature, where the additive model represents a global vulnerability and the weakest link a “tailored” trajectory towards the incidence of clinical phenomena. Clinical implications will be discussed.

Keywords: Weakest link, additive model, cognitive vulnerability, dysphoria

PSIHOLOGIJA UMETNOSTI

THE AESTHETIC QUALITY OF AFFECTIVE CONGRUENCE OF MULTIMODAL STIMULI

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Previous research suggests that the affective congruence of multimodal stimuli could affect the aesthetic preference of stimuli from a single sensory modality. The aim of this study was to examine whether affective congruence/incongruence of simultaneously presented visual stimuli (abstract paintings) and auditory stimuli (music) affects the aesthetic preference of the visual stimuli. In the preparatory phase of the study 30 participants rated affective valence of 56 abstract paintings and 62 four second long music excerpts. Twenty paintings and twenty music stimuli (10 pleasant and 10 unpleasant in each category) were selected. In the main study, another group of 32 participants rated their aesthetic preference of paintings and music presented in the unisensory situation (visual and music stimuli presented separately) and in the multisensory situation (preference of visual stimuli simultaneously presented with affectively congruent or incongruent music). The results showed significant effect of affective valence, i.e. the preference of the paintings was higher in conditions with pleasant music in comparison to the situations with unpleasant music ($F(1,31)=44.77, p<.01$). There was no difference in aesthetic preference of the paintings in congruent, incongruent and neutral condition ($F(2,31)=.45, p=.64$). However, the interaction between congruence and valence appeared to have a significant effect on the aesthetic preference ($F(1,31)=76.32, p<.01$), i.e. the preference ratings were the highest in congruent pleasant-pleasant condition, while in unpleasant-unpleasant condition aesthetic preference of the paintings was the lowest. In spite of being presented simultaneously with unpleasant music, pleasant paintings were rated more likeable than unpleasant paintings presented together with the pleasant music stimuli. Findings of this study do not confirm the hypothesis that affective congruence per se, regardless of the quality of the valence, has an effect on aesthetic preference and call into question the usefulness of the processual fluency theory as a framework for interpretation.

Keywords: aesthetic preference, affective congruence, paintings, valence, multimodal stimuli

ESTETSKI ASPEKT PROCENE KONGRUENTNOSTI MUZIKE I APSTRAKTOG SLIKARSTVA

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U ovom radu ispitivan je uticaj muzike na estetsku procenu slika. Cilj istraživanja bio je da ispita efekat kongruentnosti istovremeno izlaganog muzičkog isečka i slike na estetsku preferenciju slika. Kongruentnost muzike i slike definisana je na osnovu procena muzičkih stimulusa (džez kompozicija) i apstraktnih slika u preliminarnom istraživanju. Stimulusi su bili procenjeni na skalama regularnosti, kompleksnosti, prijatnosti i poznatosti, s ciljem da se različite grupe stimulusa ujednače prema poznatosti i prijatnosti. I slike i muzički isecci podeljeni su u 4 grupe prema kombinacijama: niska regularnost-niska kompleksnost, niska regularnost-visoka kompleksnost, visoka regularnost-niska kompleksnost i visoka regularnost-visoka kompleksnost. Kongruentna situacija formirana je istovremenim izlaganjem auditivnih i vizuelnih stimulusa koji pripadaju istoj grupi, dok su nekongruentne situacije podrazumevale izlaganje stimulusa sa suprotnim kombinacijama regularnosti i kompleksnosti. Glavni eksperiment, u kojem je učestvovalo 32 ispitanika, sastojao se iz dva dela: (1) procene estetske preferencije slike i opaženog slaganja slike i muzike, pri simultanom izlaganju sa muzikom, kao i (2) procene estetske preferencije u tišini. Dobijeni nalazi pokazuju da kongruentnost situacije u kojoj se procenjuje slika ne ostvaruje efekte na estetsku preferenciju. Nije dobijena razlika između preferencije u tišini, u pratnji kongruentne, kao ni u pratnji nekongruentne muzike. Ipak, kongruentnost situacije bila je značajan faktor kada je reč o procenama slaganja slike i muzike ($F(1,31)=10.55$, $p<.01$). Osim što je ovo potvrda da su (ne)kongruentne situacije prethodno adekvatno konstruisane, može se reći da je sam doživljaj kongruentnosti svestan deo kognitivne procene audio-vizuelne stimulacije. Kontekst same muzike (nezavisno od kongruentnosti) nije ispoljio efekte na estetsku preferenciju. Ovakav nalaz može da implicira s jedne strane, uspeh ispitanika da jasno razdvoje doživljaj same slike od celovitog doživljaja slike i prateće muzike, dok sa druge strane može sugerisati potencijalne nedostatke u samoj instrukciji i konstrukciji zadatka. Kada je reč o izostanku efekata kongruencije i same muzike, moguće je da regularnost i kompleksnost nisu dovoljne dimenzije u odnosu na koje bi se oni ispoljili. Afektivna evaluacija i individualne razlike nisu uzete u obzir, a potencijalno bi mogle da budu značajni faktori.

Ključne reči: audio-vizuelna kongruentnost, slike, muzika, estetska preferencija

The purpose of the present study was to investigate whether congruence between, simultaneously exposed, music and paintings has an effect on aesthetic preference of the paintings. Congruent and incongruent conditions were specified after the participants' ratings of the stimuli (jazz compositions and abstract paintings) on the scales: regularity, complexity, pleasantness and familiarity. Both types of stimuli (either audio or visual) were classified in 4 different categories, based on the regularity and complexity scores (low regularity-low complexity, low regularity-high complexity, high regularity-low complexity and high regularity-high complexity). Presenting music and paintings from the same class together was considered congruent, whereas incongruent situations were defined through matching audio-visual stimuli from the opposite categories. The main experiment, in which 32 participants took part, included two sequences: rating aesthetic preference of the painting in situations 1. with music and 2. without music in the background. In the “music-sequence” participants were asked to rate the experienced compatibility between the exposed stimuli, as well. The results show no difference in aesthetic preference of the paintings between congruent and incongruent situations. In addition, effect of the music on aesthetic preference was not obtained, as well. Yet, congruence between music and paintings has emerged to be a significant factor in perception of the compatibility between the audio-visual stimuli. The experienced match between music and paintings, presented together, is significantly higher in the congruent than in the incongruent situation ($F(1,31)=10.55, p<.01$). This could be an indicator that the (in)congruent situations had been previously constructed adequately. Furthermore, it might be concluded that the experienced compatibility between music and paintings represents a conscious aspect related to the cognitive evaluation of the audio-visual stimulation. When it comes to the absence of the effects in aesthetic preference, regarding congruence between music and paintings, it may be concluded that regularity and complexity have not optimally been chosen as the only dimensions to be relied on while constructing the (in)congruent situations. Dimension of the Affective evaluation and individual differences have not been considered and they could be significant factors of the aesthetic preference.

POVEZANOST FORMALNE STRUKTURE I IZVEDBENE ZAHTJEVNOSTI KLAVIRSKE SKLADBE 20. STOLJEĆA S RAZLIČITIM ASPEKTIMA UVJEŽBAVANJA NOTNOG TEKSTA

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Cilj istraživanja bio je ispitati dimenzije na kojima se temelji vježbanje klavirske skladbe 20. stoljeća, koja iako u okviru klasične formalne strukture, sadrži širi spektar harmonija u usporedbi s djelima uobičajeno korištenima za ispitivanje utjecaja dimenzija glazbenog djela na proces uvježbavanja i učenja napamet. Problem istraživanja bio je ispitati povezanost količine vježbanja (broja započinjanja, repeticija i završavanja pojedinim taktom) sa formalnom strukturom glazbenog djela i definiranim tehnički zahtjevnim taktovima u prvoj fazi uvježbavanja – fazi usvajanja notnog teksta. U ovom je istraživanju sudjelovala učenica drugog razreda srednje glazbene škole koja je snimila svoje vježbanje Četvrte studije za klavir Borisa Papandopula. Prikupljeni podaci transkribirani su i analizirani za tri razine faze usvajanja notnog teksta: čitanje notnog teksta, uvježbavanje cjeline, te učvršćivanje i priprema za učenje napamet. Za obradu podataka korišten je Spearmanov koeficijent korelacije (ρ). Dobivena je značajna pozitivna povezanost broja započinjanja i formalne strukture glazbenog djela tijekom čitanja notnog teksta ($\rho=.45$) i uvježbavanja cjeline ($\rho=.36$). Smanjivanje povezanosti s napredovanjem vježbanja i izostanak opisane povezanosti tijekom učvršćivanja i pripreme za učenje napamet upućuje na to da se manji segmenti s napredovanjem vježbanja integriraju u veće cjeline. Cilj ove faze vježbanja upravo i jest fluentno i cjelovito uvježbati djelo te na taj način pripremiti sljedeću fazu uvježbavanja, fazu učenja djela napamet. Nadalje, dobivena je značajna pozitivna povezanost broja repeticija sa tehničkom zahtjevnosti tijekom čitanja notnog teksta ($\rho=.51$), uvježbavanja cjeline ($\rho=.33$), te učvršćivanja i pripreme za učenje napamet ($\rho=.18$). Smanjivanje povezanosti s napredovanjem vježbanja također ukazuje na povećanje fluentnosti izvođenja. Rezultati ovog istraživanja potvrdili su važnost hijerarhijske organizacije glazbenog djela od samog početka uvježbavanja skladbe 20. stoljeća.

Ključne riječi: usvajanje notnog teksta, formalna struktura glazbenog djela, tehnička zahtjevnost

VALIDACIJA SKALE HEDONIČKIH I EUDIMONIČKIH MOTIVA ZA GLEDANJE FILMOVA

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Motivi za gledanje filmova vrlo malo su istraživani u našem okuženju, pa tako i nema zadovoljavajuće sale za mjerenje ove vrste motiva. Cilj ove studije predstavlja uvid u preliminarnu psihometrijske karakteristike skale hedoničke i eudamoničke motivacije za gledanje filmova (Oliver & Raney, 2011) prevedene na srpski jezik. Dok se pod hedonički motivisanim ponašanjem smatra onim koje je pokrenutom težnjom da se postigne zadovoljstvo, a izbjegne bol i neugoda, eudaimonička motivacija se posmatra više kao transcendentalna i okrenuta je šire na pitanja o smisu života. Istraživanje je sprovedeno na uzorku od 200 ispitanika studenata Univerziteta u Banjoj Luci (82,5% ispitanica). Konfirmativna faktorska analiza sprovedena (A) je u programu lavaan za R. Korišten je DWLS postupak ekstrakcije faktora. Inicijalni fit (koreliranog) dvofaktorskog modela bio je: $\chi^2(53)=323.14$, $p<.001$; CFI=.947, TLI=.934, SRMR=.127, RMSEA=.160, 90% CI [.144, .177], a faktorska zasićenja (Λ) su se kretala u rasponu od .459 do .902 za dimenziju hedoničke motivacije, odnosno od .727 do .912 za skalu eudamoničke motivacije. Međutim, utvrđeno je prisustvo velikog broja povišenih korelacija reziduala kod tri stavke (dvije iz skale hedoničke, a jedna iz skale eudamoničke motivacije), koje su izbačene iz dalje analize. Novo dvofaktorsko rješenje je imalo adekvatnije indekse fita od inicijalnog: $\chi^2(26)=70.79$, $p<.001$; CFI=.989, TLI=.985, SRMR=.057, RMSEA=.093, 90% CI [.067, .119], a faktorska zasićenja su se kretala od .767 do .916 za skalu hedoničke motivacije, odnosno .734 do .917 za skalu eudamoničke motivacije. Korelacija između faktora iznosila je -.260. Pouzdanosti interne konzistencije za oba faktora i proporcije ekstrahovane zajedničke varijanse (AVE) bile su generalno visoke: 1) Skala hedoničke motivacije: Cronbach $\alpha=.908$, McDonald $\omega^2=.893$, AVE=.718; 2) Skala eudamoničke motivacije: Cronbach $\alpha=.922$, McDonald $\omega^2=.916$, AVE=.719. Na osnovu dobijenih rezultata, možemo zaključiti da ova skala mjeri dvije vrste motivacije koje nisu bipolarni krajevi jedne dimenzije, već nezavisni faktori, te da na ovom uzorku, skala pokazuje zadovoljavajuće psihometrijske osobine.

Ključne riječi: film, hedonički motivi, eudaimonički motivi

VALIDATION OF THE SCALE HEDONIC AND EUDAIMONIC MOTIVES FOR WATCHING MOVIES

This study presents an insight into the preliminary psychometric characteristics of the scale Hedonic and Eudaimonic Motivations (Oliver & Raney, 2011) translated into Serbian language. A survey was conducted on a sample of 200 students of the University of Banja Luka. The final two-factor solution had more adequate fit indexes of the initial: $\chi^2 (26) = 70.79$, $p < .001$; CFI=.989, TLI=.985, SRMR=.057, RMSEA=.093, 90% CI [.067, .119], and factor's saturation ranged from .767 to .916 for the scale of hedonic motivation, or .734 to .917 for the scale of eudaimonic motivation. Correlation between factors was -.260. The reliability of the internal consistency for both components and the proportions of the extracted common variance (AVE) have been generally high: 1) The scale of motivation hedonic: Cronbach $\alpha = .908$, McDonald $\omega^2 = .893$, AVE=.718; the scale of eudaimonic motivation: Cronbach $\alpha = .922$, McDonald $\omega^2 = .916$, AVE=.719. Based on these results, we can conclude that this scale measures two types of motivation that are not the bipolar ends of one dimension, but rather independent factors, and that for this sample, the scale shows satisfactory psychometric characteristics.

Keywords: movie, hedonic motives, eudaimonic motives

THE INFLUENCE OF DANCE TRAINING AND GENDER ON SOMATIC AND AESTHETIC EXPERIENCE OF CONTEMPORARY DANCE CHOREOGRAPHIES

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The aim of this study was to investigate the influence of gender and previous dance training of the observers on the observers' body reactions and the aesthetic experience while watching contemporary dance choreographies. In the study participated 89 students from the University of Novi Sad. There were 37 male and 52 female students. Out of this group, 37 participants had experience in dance training. Stimuli consisted of eight video records of choreographies that were performed within American televised dance competition show "So You Think You Can Dance". Participants judged their body reactions when observing dance on 12 dichotomous scales describing three dimensions: Focus (I hold my breath, I get goosebumps, I won't look away, I don't blink), Excitement (My heart beats faster, I have butterflies in my stomach, I feel vibrations in my body, I mimic the

movements while I sit) and Embodied Anticipation (My knees buckle, I get teary-eyed, I shake, My muscles clench). Aesthetic experience participants rated on 12 seven-point scales measuring three dimensions of aesthetic experience of dance: Dynamism (expressive, powerful, strong and exciting), Exceptionality (eternal, unspeakable, unique and exceptional) and Affective Evaluation (delicate, elegant, seductive and emotional). Compared to the male students results have shown that female students rated with significantly higher values dimensions of Focus ($t(87)=-2.28$, $p<.025$) as well as the all three dimensions of aesthetic experience: Dynamism ($t(87)=-3.81$, $p<.001$), Exceptionality ($t(87)=-2.82$, $p<.006$) and Affective Evaluation ($t(87)=-2.88$, $p<.005$). Students who had previous experience in dance training rated with significantly higher values dimensions of somatic response to dance: Focus ($t(87)=-2.66$, $p<.009$), Excitement ($t(87)=-2.45$, $p<.015$) and Embodied Anticipation ($t(87)=-2.11$, $p<.037$), as well as the dimensions of aesthetic experience of dance: Dynamism ($t(87)=-2.23$, $p<.028$), Exceptionality ($t(87)=-2.69$, $p<.008$) and Affective Evaluation ($t(87)=-2.09$, $p<.039$). The results of this study are in line with the previous findings which suggest an important role gender and previous dance training as factors which may shape aesthetic experience and body response concerning observers' aesthetic experience of dance choreographies.

Keywords: dance choreographies, gender, dance training, somatic response, aesthetic experience, observers

THE RELATIONSHIP BETWEEN OBSERVERS' SOMATIC REACTIONS AND AESTHETIC EXPERIENCE WHEN WATCHING CONTEMPORARY DANCE CHOREOGRAPHIES

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The aim of the present study was to investigate the relationship between observers' body reactions and the aesthetic experience while watching contemporary dance choreographies. In the study participated 89 students from the University of Novi Sad. Stimuli consisted of eight video records of choreographies that were performed within American televised dance competition show "So You Think You Can Dance". Participants judged their body reactions when observing dance on 12 dichotomous scales describing three dimensions: Focus (I hold my breath, I get goosebumps, I won't look away, I don't blink), Excitement (My heart beats faster, I have butterflies in my stomach, I feel vibrations in my body, I mimic the movements while I sit) and Embodied

Anticipation (My knees buckle, I get teary-eyed, I shake, My muscles clench). Aesthetic experience participants rated on 12 seven-point scales measuring three dimensions of aesthetic experience of dance: Dynamism (expressive, powerful, strong, exciting), Exceptionality (eternal, unspeakable, unique, exceptional) and Affective Evaluation (delicate, elegant, seductive, emotional). The multiple regression analyses have shown that the dimensions of somatic experience of observed dance significantly predict the Dynamism ($R^2=.33$, $p<.001$), Exceptionality ($R^2=.29$, $p<.001$) and Affective Evaluation ($R^2=.21$, $p < .001$). Analyses indicated that the dimension Focus is a significantly better predictor of all three dimensions of aesthetic experience: Dynamism ($\beta=.44$; $p<.001$), Exceptionality ($\beta=.32$; $p<.008$) and Affective Evaluation ($\beta=.35$; $p<.006$). On the base of the obtained results it can be concluded that the higher the dimension of Focus is the higher the dimensions of aesthetic experience are. The results of this study are in line with the previous findings which suggest an important role of body response concerning observers' aesthetic experience of dance choreographies.

Keywords: dance choreographies, somatic response, aesthetic experience, observers

HOMO LUDENS I NOVA IZNENAĐENJA: PO ČEMU SE KREATIVNI PROCES UMETNIKA RAZLIKUJE OD OSTALIH?

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Do sada su delimično potvrđene psihodinamske pretpostavke da neprijatni i novi sadržaji mogu podsticajno delovati na kreativnost. Uпитno je, međutim, na koji način bliskost sadržaja, dimenzije emocionalnog doživljaja, i kvaliteta emocija deluju na produkciju izrazito kreativnih osoba kao što su studenti umetnosti, i pokazuju li oni izvesne specifičnosti tokom generativnih procesa. U ovom istraživanju ispitan je stepen i vrsta povezanosti između kreativnosti odgovora i kvaliteta emocija (sreće, tuge, straha, ljutnje, iznenađenja i gađenja), dimenzija emocionalnog doživljaja (valence i pobuđenosti) i bliskosti sadržaja kod studenata različitih usmerenja. Takođe, provereno je da li kreativnost studenata umetničkih i neumetničkih smerova na različit način varira u odnosu na stepen izraženosti dimenzija i kvaliteta emocionalnog doživljaja. Eksperiment je izveden sa 59 studenata Fakulteta dramskih umetnosti i Visoke škole elektrotehnike i računarstva iz Beograda grupisanih u tri poduzorka koji čine: a)

umetničku; b) producentsku, i c) opštu studentsku populaciju. Za vizuelnu stimulaciju korišćena je baza Nencki Affective Picture System iz koje je izabrano 40 fotografija tako da su vrednosti dimenzija i kvaliteta emocionalnog doživljaja sistematski varirane. Od ispitanika je najpre traženo da ocene koliko im je blizak sadržaj fotografija, a zatim i da smisle najkreativniji naslov za svaku od njih. Kreativnost naslova merena je putem koeficijenta kreativnosti i izuzetnosti baziranih na statističkoj proceni obima produkcije i originalnosti produkovanih odgovora. Korelaciona analiza pokazuje da obrasci povezanosti kreativnosti i merenih varijabli nisu isti kod različitih studentskih populacija. Za studente umetnosti ključna je novina jer je kreativnost kod njih negativno povezana sa dimenzijom bliskosti ($r=-.51$; $p < .001$), a pozitivno sa emocijom iznenađenja ($r=.31$; $p < .05$). Analizom varijanse potvrđen je glavni efekat faktora studijski smer na kreativnost ($F(2,36)=51.05$; $p < .001$), kao i značajnost interakcija faktora studijski smer i valenca ($F(2,37)=3.76$; $p < .05$), tuga ($F(2,37)=3.44$; $p < .05$), i pobuđenost ($F(2,37)=3.84$; $p < .05$). Kod studenata umetnosti su evidentirana tek neznatna variranja u kreativnosti kada je reč o dimenzijama emocionalnog doživljaja i po tome se značajno razlikuju ne samo od opšte populacije čija kreativnost pokazuje tendenciju „skoka“ sa visokim stepenom pobuđenosti, već i od svojih kolega koji studiraju produkciju, a čija kreativnost opada sa povećanjem valence. Rezultati potvrđuju specifičnosti kreativnog procesa studenata umetnosti daleko osetljivijih na kognitivnu stimulaciju no na emocionalni doživljaj vezan za sadržaje koji su polazište procesa.

Ključne reči: kreativnost, primarne emocije, bliskost sadržaja, dimenzije emocionalnog doživljaja, umetnička produkcija

HOMO LUDENS AND THE NEW SURPRISES: WHAT MAKES CREATIVE PROCESS OF ARTISTS DIFFERENT FROM OTHERS?

Psychodynamic assumptions that unpleasant and novel content can stimulate creativity has been partially confirmed by empirical research. However, it is questionable, in which way the familiarity of content, the particular dimensions of the emotional experience and the qualities of emotions affect the production of highly creative individuals such as art students, and whether their creative process shows a certain level of peculiarity. In this research, the degree and type of correlations between the creativity of the response, and the qualities of emotions (happiness, sadness, fear, anger, surprise and disgust), the dimension of the emotional experience (valence and excitement) and the familiarity of content were examined with different student populations. Also, it was tested whether the creativity of artistic and non-artistic students varies in different ways in relation to the presence of dimensions and qualities of the emotional experience. The experiment was performed with 59 students from the Faculty of Dramatic Arts and School of Electrical and Computer Engineering of Applied Studies from

Belgrade, which were grouped in three subsamples: a) artists; b) producers; and c) general population. For visual stimulation, the Nencki Affective Picture System was used, from which 40 photos were selected so that the values of the dimensions and qualities of the emotional experience were systematically varied. Students were exposed to the photos and were asked to rate the familiarity of their content, and subsequently to make the most creative title for each of them. The creativity of the titles was measured by a creativity coefficient and a uniqueness coefficient, based on the assessment of the responses originality. Statistical analysis shows that patterns of correlations between creativity and measured variables are not the same for different student subsamples. Novelty seems to be crucial for prospective artists because creativity is correlated negatively with the familiarity of content ($r=-.51$; $p < .001$), and positively with surprise ($r=.31$; $p < .05$). Analysis of variance confirmed the main effect of students vocation on creativity ($F(2,36)=51.05$; $p < .001$), the significance of interaction between vocation and valence ($F(2,37)=3.76$; $p < .05$), sadness ($F(2,37)=3.44$; $p < .05$), and arousal ($F(2,37)=3.84$; $p < .05$). The creative process of art students differ from the others in terms of less sensitivity in creative process to dimensions of emotional experience. Results confirmed the process specificities of the art students, in which cognitive stimulation take the lead over other qualities and dimensions of emotional experience evoked.

Keywords: creativity, primary emotions, familiarity of content, dimensions of emotional experience, artistic production

INFLUENCE OF CONTEXTUAL INFORMATION ON THE ESTIMATION OF ARTISTIC PAINTINGS

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The aim of this research was to determine if the available informations, about the paintings presented to respondents, can influence their estimation of the painting's value. The research question in this paper was: do respondents estimate painting as more valuable in the artistic sense if they are given more detailed information about the author and the painting.

Answer to this question was examined through experiment with four groups of respondents. In the first group respondents graded paintings not knowing anything about them. In the second group respondents knew only name of the author. In the third group respondents knew name of the author but also name of

the painting and its description. In the fourth group respondents knew all these informations and estimated value of the painting (presented in American dollars). The sample was convenient and it consisted of 82 students, of both sexes (M=7; F=75) average age=19.58. In each stage there was nearly the same number of respondents (N1=20; N2=21; N3=21; N4=20).

Stimuli were 14 artistic painting ranging from Renaissance through Impressionism to Modern art. Respondents answered questions, given in the form of semantic differential, while looking at the painting in question.

The data was analyzed using ANOVA procedure in SPSS 20. Results have shown that groups differ in their estimation of the value of the paintings ($F(3)=5.603$; $p=.001$). Post hoc testing has been done in order to determine which groups differ one from another in the estimation of the artistic value of the paintings. The first group differed from the third group and this difference was in favor of the third group (Mean difference=-.356; $p=.041$). The first group also differed from the fourth group and this difference was in favor of the fourth group (Mean difference=-.543; $p=.000$). There weren't differences between other groups.

From the results it can be concluded that description of the painting influences estimation of artistic value of the painting as well as does the price. It can also be seen that group which new nothing and the group who knew only the name of the author don't differ one from another in estimation of artistic value of the painting. Further research, in order to determine other factors which influence the estimation of the artistic value of the paintings, is suggested.

Keywords: estimation, paintings, information, artistic value, art

DIVERGENT THINKING BETWEEN PERSONALITY AND COGNITION: THE ROLE OF VERBAL FLUENCY, WORKING MEMORY AND EXECUTIVE FUNCTIONING

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Relatively consistent results are provided regarding the link between divergent thinking (DT) and personality, showing that Openness to experience is the most important for creativity. However, the relationship between DT and cognitive abilities is still unclear. Therefore, the aim of our study was to explore if different components of DT may be predicted by some important cognitive variables over and above personality factors.

181 participants (female=87.3%; M age=20.09, SD=2.19) completed Alternative uses task in which they were asked to list as many possible uses for a brick in

time-limited setting. Based on this task, four components of DT – fluency, flexibility, originality and elaboration were calculated. Personality traits were measured with the Big Five Inventory (BFI). Verbal fluency was assessed using serbian adaptation of FAS phonemic fluency task. Digit span task from VITI, serbian adaptation of WAIS was applied for working memory capacity. Visual search speed, speed of processing and executive functioning were assessed using Trail Making Test (TMT), parts A and B.

Four hierarchical regression analyses were performed, with personality traits in the first step and cognitive abilities in the second. Analysis yields statistically significant model for DT fluency in the first step, ($F(5,175)=3.36, p<.01$), with Openness as the only significant predictor. Second set of variables led to statistically significant increase in prediction, ($\Delta R^2=.08, p<.01, R^2=.16$), with verbal fluency being additionally significant. For flexibility, ($F(5,175)=3.80, p<.01$), high Openness and low Agreeableness turned out to be significant predictors in the first step, while in the second, ($\Delta R^2=.08, p<.01, R^2=.17$), high verbal fluency was additionally significant. Originality in the first step was significantly predicted by high Openness and low Agreeableness, ($F(5,175)=3.42, p<.01$). Second step led to statistically significant increase in explained variance, ($\Delta R^2=.08, p<.01, R^2=.17$); lower working memory and high speed of visual search and processing turned out to be additionally significant predictors. For elaboration model was not significant.

Our results showed that cognitive abilities such as verbal fluency, working memory and speed of visual search and processing may be important predictors of DT components besides personality traits. It seems that different components of DT do not imply the same cognitive processes and that creativity even may be related to a weaker working memory. Components like originality and flexibility may be more representative for creativity, compared to elaboration.

Key words: divergent thinking, creativity, openness to experience, originality, fluency

ODNOS KONZERVATIZMA, POTREBE ZA KOGNITIVNOM ZATVORENOŠĆU I SKLONOSTI NADREALISTIČKIM UMJETNIČKIM DJELIMA

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Cilj ovog istraživanja bio je utvrditi odnos između potrebe za kognitivnom zatvorenosti, tolerancije na dvosmislenost, preferencije nadrealističke umjetnosti i konzervatizma. U tu svrhu upitničkim mjerama samoprocjene ispitano je 89 učenika trećih i četvrtih razreda Gimnazije Vladimira Nazora u Zadru. Upitnik se sastojao od Skale tolerancije na dvosmislenost, Ljestvice ključnih društvenih pitanja, Skraćene ljestvice potrebe za kognitivnom zatvorenosti i 10 umjetničkih djela kojima je trebalo ocijeniti privlačnost, (5 nadrealističkih i 5 figuralnih slikarskih umjetničkih djela). Visoka potreba za kognitivnom zatvorenosti odnosi se na potrebu za brzim donošenjem zaključaka o situaciji, a tolerancija na dvosmislenost na uživanje u novim, nepoznatim i kompleksnim situacijama. Konzervativizam je u ovom istraživanju definiran kao zbroj aritmetičkih sredina rezultata na podljestvicama Ljestvice ključnih društvenih pitanja: etnocentrizma, religioznosti, ograničavanja seksualnih sloboda i tradicionalizma. Utvrđeno je da postoji negativna povezanost tolerancije na dvosmislenost i potrebe za kognitivnom zatvorenosti. Osobe više potrebe za kognitivnom zatvorenosti sklonije su konzervativnim stavovima, osobito etnocentrizmu, religioznim stavovima i ograničavanju seksualnih sloboda. Osim toga, osobe više potrebe za kognitivnom zatvorenosti i konzervativnije osobe ocjenjuju nadrealistička umjetnička djela nižim ocjenama nego osobe niže potrebe za kognitivnom zatvorenosti i liberalnijih stavova. Ovakvi rezultati bi se mogli pripisati većoj podložnosti nadrealističkih umjetničkih djela interpretaciji promatrača te ne predstavljaju izravnu sliku okoline, a iznenađujući, kompleksni ili nelogični elementi na slici ne omogućavaju jednoznačnu interpretaciju djela. Tolerancija na dvosmislenost nije povezana s konzervativizmom, osim s podljestvicom etnocentrizma, niti s ocjenama privlačnosti nadrealističkih slika.

Ključne reči: tolerancija na dvosmislenost, potreba za kognitivnom zatvorenosti, konzervativizam, nadrealizam

High need for cognitive closure is the need for rapid conclusions in new situations, while tolerance for ambiguity means finding pleasure in unfamiliar situations. Conservativeness is defined as the sum of the subscales of ethnocentrism, religiosity, sexual freedom, and traditionalism. The aim of this

study was to examine the relationship between mentioned constructs and preferences to surreal art, measured as ratings of attractiveness of 10 paintings. It was found that people with high need for cognitive closure are more prone to conservative attitudes ($r=.36$, $p<.05$) and are less likely to be tolerant for ambiguity ($r=-.26$, $p<.05$), probably as some new social occurrences (religions, ethnicities) are perceived uncomfortable because of unfamiliarity. The more conservative people were, the less they found surreal paintings attractive ($r=-.32$, $p<.05$). It is assumed that this is because of the ambiguity of surreal artwork, it does not represent direct image of the surrounding and unables rapid conclusions.

KOGNITIVNA PSIHOLOGIJA

NAÏVE DISCRIMINATION LEARNING APPROACH TO POLYSEMY

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Polysemous words are those that refer to multiple related senses (e.g. paper as scientific paper, or paper as material). Processing advantage of polysemous words compared to unambiguous words was observed in numerous studies (Eddington & Tokowicz, 2015). Additionally it was shown that an increase in number of senses was followed by a decrease in processing latencies. Research in Serbian revealed that, in addition to number of senses, balance of sense probabilities also affected processing: the more balanced relative frequencies of individual senses were, the faster the processing was (Filipović Đurđević, 2007). Evidence from several lines of research suggested that the observed processing advantage of polysemous words was related to variability in contexts in which polysemous words appeared. In this research this hypothesis was tested by applying the discrimination learning approach (Baayen et al., 2011) to simulate the effects of polysemy in Serbian language. The simulation was run in R statistical software, in *ndl* package, on 130 Serbian polysemous words from Filipović Đurđević and Kostić (in press) database, following the procedure of Baayen et al. (2011). The input consisted of bigrams that constituted each word form (e.g. for word *linija*: #l, li, in, ni, ij, ja, a#). The output consisted of the lemma associated with the given word form and semantic vectors of that word form. These vectors were arrays of context words that co-occurred with the target polysemous word (three positions to the left, or three positions to the right). The simulated reaction time was positively correlated with reaction time observed in Filipović Đurđević (2007): $r=.334$, $t(128)=3.880$, $p=.0002$ 95% CI: $r=.17 - r=.48$). Additionally, regression model fitted to simulated reaction time revealed significant effect of lemma frequency ($\beta=-.085$, $t(121)=-3.045$, $p=.003$), word familiarity ($\beta=-.058$, $t(121)=-2.054$, $p=.042$), number of senses ($\beta=.061$, $t(121)=2.155$, $p=.033$), and redundancy of sense probability distribution ($\beta=1.486$, $t(121)=3.038$, $p=.003$).

These effects mirrored the pattern of the effects observed with empirical reaction time, the only exception being the reversal of the direction of the number of senses effect. Taken together, the results add to the body of research that links polysemy to context variability and additionally demonstrate how such link can be related to learning.

Keywords: polysemy, distributional semantics, naive discrimination learning

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PERCEPTUAL STRENGTH, EMOTIONAL VALENCE, CONTEXT AVAILABILITY AND AGE OF ACQUISITION NORMS FOR 2100 SERBIAN NOUNS

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Word concreteness has long been observed as a predictor of word processing times and recall (Roxbury et al., 2014; Paivio et al., 1994). Concrete words refer to objects that can be perceived. Nowadays, in accordance with Embodiment theories (Barsalou, 1999), concreteness is defined as a modality-specific perceptual strength (Connell & Lynott, 2009; Filipović Đurđević et al., 2016). Yet, concreteness effect has been questioned by some theories which considered other linguistic variables to have an influence on word processing, such as context availability (Schwanenflugel et al., 1999), emotional valence and arousal (Kousta et al., 2009), and age of acquisition (Brysbaert et al., 2014). Research in Serbian language confirmed concreteness effect and proposed additional measures of perceptual richness (Filipović Đurđević et al., 2016). However, as the pool of words in the research was bounded, the exclusion of effects of other variables was limited.

Our goal in this study was to collect norms for 11 dimensions: perceptual strength for five sensory modalities (vision, hearing, smell, taste, and touch), concreteness, context availability, familiarity, emotional valence, arousal and age of acquisition.

We collected ratings for 2100 Serbian nouns from 450 participants. Perceptual strength was defined as the extent of being able to perceptually experience an object by relying on individual sensory modality. Since we want to explore

whether the experience with the object is crucial for conceptual representation, we also collected per-modality ratings for actual perceptual experiences as introduced in Filipović Đurđević et al. (2016). All dimensions were rated on a seven-point scale, except for the age of acquisition for which participants evaluated at what age they had learned the given word.

We calculated inter-relations of variables for 900 words. The highest correlation was recorded between concreteness and context availability: $\rho(898)=.67$, $p<.001$. The smallest correlation was between arousal and concreteness: $\rho(898)=-.20$, $p<.001$. The strongest between modality correlations were recorded for olfactory and tactile modality ($\rho(898)=.84$, $p<.001$) and for visual and tactile modality ($\rho(898)=.81$, $p<.001$). The pattern of inter-correlations was similar for both per-modality rating instructions (for possible and actual experience with the concept). These norms should serve as the basis for the future research in which the role of perceptual strength in word representation, and its relations to other theoretically relevant variables will be explored.

Keywords: nouns, norming study, perceptual strength, concreteness

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GRAFEMSKE KARAKTERISTIKE ĆIRILIĆNOG I LATINIĆNOG PISMA

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Osnovni cilj ovog istraživanja je bio ispitivanje uloge grafemskih karakteristika na obradu dva alfabetska sistema srpskog jezika (ćirilice i latinice). Jedan od načina istraživanja tog problema jeste manipulacija količinom dostupnih informacija. U slučaju engleskog jezika je utvrđeno da je gornji dio grafema značajniji za obradu riječi nego njihov donji dio. Postavlja se pitanje da li se takva pravilnost može uočiti na oba pisma srpskog jezika.

U eksperimentu je bilo 6 situacija dobijenih variranjem dva faktora – pismo (ćirilica, latinica) i vizuelna dostupnost informacija (cijela riječ, gornja polovina, donja polovina). U zadatku leksičke odluke, u okviru svake situacije prikazano je

60 imenica muškog roda u nominativu jednine, dužine 6 različitih karaktera, različite frekvencije, te 60 pseudoriječi iste strukture. Stimulusi su bili crni, na bijeloj podlozi, napisani malim štampanim slovima, Arial fontom 48. Uzorak je činilo 60 studenata Univerziteta u Banjoj Luci, kojima je prvo naučeno pismo ćirilica, koji ne preferiraju određeno pismo pri čitanju i koji su napravili manje od 25% grešaka. Svi ispitanici kojima su prikazane donje polovine latiničnih stimulusa postigli su manju tačnost od pretpostavljene, zbog čega ova eksperimentalna situacija nije razmatrana.

Utvrđena je značajna razlika između eksperimentalnih situacija u brzini obrade (RT) riječi ($F(4)=141.1, p<.001$), pri čemu su Šefeovom post hoc analizom prosječna RT svrstana u tri grupe, i to: (1) cijele ćirilične (765.8ms); (2) cijele latinične (909.0ms) i gornja polovina latiničnih riječi (906.2ms); (3) ćirilične riječi kojima je prikazana gornja (1243.6ms) ili donja polovina (1298.7ms). Značajan efekat dobijen je i kod pseudoriječi ($F(4)=486.2, p<.001$), s tim da su razlike u pogledu prosječnih RT značajne između svih eksperimentalnih situacija. Priraštaj u vremenu obrade pseudoriječi u odnosu na obradu riječi kreće se između 75 i 400ms, zavisno od pisma i vizuelne dostupnosti informacija. Dobijeni rezultati ukazuju na to da eksperimentalna degradacija ćiriličnih riječi usporava obradu i ne potvrđuje pretpostavku o većoj informativnosti gornjeg dijela grafema. Kada je u pitanju latinično pismo, rezultati pokazuju da gornji dio riječi sadrži jednaku količinu informacija potrebnih za obradu kao i cijela riječ, dok donja polovina grafema ima veoma malu informativnu vrijednost. Dobijeni nalazi su djelimično u skladu sa modelom interaktivne aktivacije.

Ključne riječi: latinica, ćirilica, obrada riječi, grafemske karakteristike, vizuelna degradacija grafema

THE ROLE OF GRAPHEME CHARACTERISTICS ON THE PROCESSING OF LATIN AND CYRILLIC WORDS

The aim of this research is to examine the role of grapheme characteristics in the processing of Cyrillic and Latin alphabet. One way to study this problem is to manipulate the amount of available information. It was found that the upper part of the graphemes in English language is more important for word processing than their lower part. Factors of interest were alphabet (Cyrillic and Latin) and visual availability of information (visible whole word, visible upper part of the word and visible lower part of the word). A significant difference was found between experimental situations in the processing time ($F(4)=141.1, p<.001$). In Cyrillic alphabet, the results do not confirm the assumption of greater informativity of the upper part of graphemes.

In Latin alphabet, the results show that the upper part of the graphemes contains the same amount of information needed for processing as the whole graphemes, while the lower part has a very low informative value.

Keywords: Latin, Cyrillic, word processing, grapheme features, visual degradation of word

THE RELATIONS OF INHIBITION AND INTERFERENCE CONTROL FUNCTIONS WITH FLUENCY AND ORIGINALITY MEASURED BY UNUSUAL USES TASK

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Empirical evidence about role of inhibition in divergent thinking is inconsistent. There is, however, no consensus on measurement and definition of inhibition in these studies. Therefore, the aim of this study was a systematical examination of relations between three factors from Friedman's model of inhibition and interference control functions (Prepotent Response Inhibition, Resistance to Distractor Interference and Resistance to Proactive Interference) and measures of divergent thinking (fluency and originality).

Participants were psychology students (N=87, 75% female). We used two inhibition tasks to tap each factor respectively: 1) Numerical Stroop Task and Spatial Stroop Task; 2) A letter and an arrow versions of Eriksen Flanker Task; 3) Brown-Peterson Task and Cued Recall Task. Divergent thinking was assessed by Unusual Uses Task which required participants to come up with as many creative ideas for using a brick, a shoe and a knife. Time limit was 3 minutes per object. Additionally, task required participants to select three most creative answers for each object ("top 3"), and all answers related to uses that were not retrieved from experience and memory ("new"). We computed two fluency scores: 1) total number of answers given by each participant; 2) total number of answers that were selected as "new". To score originality, we administered lists of all answers per object to 10 independent raters who evaluated each answer on 5-point scales of association remoteness and cleverness. Final scores of originality were calculated as: 1) mean ratings of the "top 3" answers; 2) mean ratings of the answers selected as "new".

High inter-rater reliability of remoteness (ICC=.905) and moderate inter-rater reliability of cleverness (ICC=.534) suggested that these measures should be

analysed separately. Remoteness of the "top 3" answers showed a statistically significant correlation with performance on a letter version of Eriksen Flanker Task ($r=.275$, $p<.01$). Remoteness of the "new" answers correlated with performance on Spatial Stroop Task ($r=.226$, $p<.05$). The findings are congruent with a perspective which emphasizes the positive role of inhibition and executive control in blocking frequent and uncreative ideas and coming up with more creative and unusual answers. Further conclusions should be taken with consideration regarding limited metric properties and participant's potential subjectivity in selection of "new" answers.

Keywords: divergent thinking, inhibition, interference control, Unusual Uses Task, executive functions

THE EFFECT OF STIMULUS ONSET ASYNCHRONY BETWEEN DIFFERENT RESPONSE CUES ON REASONING IN A BASE RATE TASK

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Traditionally, Type 1 processes have been described as fast and automatic. On the other hand, Type 2 processing has been described as slower, analytical and cognitively demanding. Recent theories propose the existence of multiple Type 1 processes which cue responses to tasks which are presented to a person. If these responses do not point towards the same answer then that incongruence may be detected. After successful detection, Type 2 processing is initiated to resolve it. This study is concerned with the timeline and relative strength of different Type 1 processes. The goal was to assess the strength of two possible Type 1 responses in a modified base rate task. In the modified base rate task participants ($N=62$) were shown information about a person chosen at random from a group consisting of two subgroups (e.g. Person A is strong, Person A was chosen from a group of teachers and boxers). After that they were shown the base rate information (e.g. The group consists of 995 teachers and 5 boxers). Finally, participants had to decide which was more probable for the person (e.g. That the person is a teacher or a boxer). The task can cue congruent responses (the attribute and base rate cue the same answer) or incongruent responses (like in the example above). Additionally we varied the SOA (stimulus onset asynchrony) time between the attribute and base rate information. The study was a 2 (congruent/incongruent) \times 3 (200, 800, 1400ms SOA) experimental design. The analysis on the total data set showed a significant congruence effect regardless of SOA for both response

times ($F(1,61)=54.99$, $p < .01$, $\eta^2=.47$) and confidence ratings ($F(1,61)=64.92$, $p < .01$, $\eta^2=.52$). An additional comparison of stereotypical and base rate responses was conducted for each level of SOA. For response times there was a marginal response type by SOA interaction effect ($F(2,52)=3.10$, $p=.053$, $\eta^2=.11$) which shows response times decreasing for base rate, and increasing for stereotypical responses for longer SOA times. The same effect was not found for confidence ratings but there was a similar trend (an increase of confidence for base rate, and a decrease for stereotypical responses). The results imply the responses cued by the attribute decreased in strength when SOA between the attribute and base rate information was longer. This effect may lead to a conclusion that Type 1 process strength decays over time which impacts response times and confidence ratings.

Keywords: dual processing, reasoning, meta-reasoning, base rate task, stimulus onset asynchrony

THE INFLUENCE OF ITEM SIMILARITY AND CATEGORIZATION STRATEGY ON METACOGNITIVE MONITORING IN COMPLEX TASKS

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The aim of the study was to investigate the influence of item similarity and categorization strategy on classification accuracy and confidence judgments in tasks with two mutually exclusive categories defined by a complex three-dimensional rule.

Seventy psychology students at the University of Rijeka, Croatia, and the University of Mostar, Bosnia and Herzegovina, participated in the experiment.

The experiment consisted of category learning and transfer phases. In ten blocks participants were asked to learn category memberships of imaginary animals that varied on five binary-valued dimensions relying on feedback about the correctness of their responses. In the transfer phase, novel items that varied in similarity to items observed in the learning phase were introduced. Similarity was manipulated by altering one or two dimensions irrelevant for correct classification. Participants were asked to classify the presented items and to give confidence judgments about each classification. After the end of the transfer

phase, participants were asked to report the categorization strategy they used. We divided the participants into two groups: rule-abstractors and memorizers.

The analyses involved two separate 2×3 MANOVAs with the strategy as a between-participants factor and with similarity as a within-participant factor. The results showed that there were significant main effects of similarity on accuracy, $F(2,57)=5.18$, $p<.01$, and on confidence judgments, $F(2,57)=46.88$, $p<.001$. Although the strategy \times similarity interactions were not significant we performed separate trend analyses across strategies because of their theoretical importance. When analyzing accuracy, trend analysis revealed a linear trend as a function of similarity only for the memorizers, $F(1,58)=15.52$, $p<.001$. When analyzing confidence, the same linear trend was revealed for rule-abstractors, $F(1,58)=27.17$, $p<.001$, and for memorizers, $F(1,58)=88.00$, $p<.001$.

The results showed that the strategies used in the transfer phase influenced performance. Memorizers were less accurate and less confident when classifying stimuli that were more dissimilar from exemplars studied in the learning phase. Although the rule-abstractors employed the rule abstracted in the learning phase, they still showed the same linear trend in confidence as memorizers. This result suggests that confidence and classification decisions can rely on different processes.

Keywords: categorization; classification accuracy; metacognitive monitoring; item similarity; categorization strategy

RELATIONSHIP BETWEEN METACOGNITIVE JUDGMENTS FOR SELF AND OTHERS IN MEMORY TASK

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Metacognitive processes are important in enhancing the efficiency of one's learning. However, results of some previous research suggest that, under certain conditions, they play a role in understanding the ways in which other people think and learn. The results of recent research suggest that judgments of learning (estimates of likelihood of recall) are inversely related to the amount of study time invested in each item due to memorizing effort heuristic. On the other hand, when participants make judgments of learning for other individuals, the same pattern is obtained only if participants have previously made judgments of their own learning.

The aim of this study was to examine whether the same or similar processes are involved in the process of making judgments of learning for self and others. There were 65 participants in the study. Participants were randomly placed into one of

two independent groups. All participants went through two experimental conditions: self condition and other condition, but groups differed in order of conditions. In self condition, participants were presented with word pairs, and their task was to try to learn these words as quickly as possible. After each trial, they were asked to make judgments of learning. After they completed all trials, they started with a retrieval test. In other condition, participants were presented with video clips of a person learning word pairs, which differed in duration. Participants were, after each trial, asked to make judgment of learning for other person.

The expected negative correlation between study time and judgments of learning has been obtained ($\gamma(18)=-.82$; $p<.01$) in self condition. Furthermore, there was a significant main effect of video duration on judgments of learning ($F(1,63)=9.87$, $p<.01$) and the interaction between order of conditions and video duration ($F(1,63)=8.36$, $p<.01$). Namely, there was a difference in judgments of learning for others, but only in the group that first went through self condition. In this group, participants made higher judgments of learning for shorter video duration. In the group that first went through other condition there was no difference in judgments of learning considering video duration. Results of this study indicate that different processes mediate making judgments of learning for self and others, but that metacognitive processes can help in understanding others' minds.

Keywords: metacognition, metamemory, judgments of learning, theory of mind

THE EFFECTS OF DIFFICULTY AND VALIDITY OF SYLLOGISMS ON CONFIDENCE AND RESPONSE TIMES

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In the domain of reasoning, confidence judgments made after evaluating a conclusion or after producing a conclusion indicate the level of certainty with which the conclusion was endorsed. Previous studies found that reasoning accuracy and confidence were generally not correlated, and that confidence and accuracy were mediated by different variables. Based on the assumptions of the Self-Consistency Model of subjective confidence, it is proposed that confidence judgments should reflect the commonalities of the processes and contents of

reasoning shared among individuals. Therefore, when the incorrect responses are given by the majority of participants, those responses should be associated with high confidence. The aim of the study was to examine the effects of difficulty of syllogisms (easy, intermediate, and difficult) on confidence judgments and response times. We hypothesized that both easy and difficult syllogisms should be evaluated faster and with higher confidence than syllogisms of the intermediate level of difficulty. Forty-seven undergraduate psychology students evaluated 24 syllogistic problems, which varied in difficulty (easy, intermediate, and difficulty) and validity (valid and non-valid). Two-way repeated measures ANOVA revealed a significant effect of difficulty on confidence, ($F(2,92)=19.07$, $p<.01$). Tukey HSD post-hoc analysis showed that confidence judgments were higher for the easy and difficult syllogisms than for the syllogism of intermediate level of difficulty. There was no difference in confidence between valid and invalid syllogisms ($F<1$). Two-way repeated measures ANOVA revealed a significant effect of difficulty on response times, ($F(2,92)=5.58$, $p<.01$). Post-hoc analysis showed that RTs were faster for the easy and difficult syllogisms than for the syllogisms of intermediate level of difficulty. There was no difference in RT between valid and invalid syllogisms, ($F<1$). To conclude, difficulty of syllogisms is not monotonically related to confidence and response times. It is suggested that the obtained differences are based on commonalities of reasoning processes which determine the accuracy of reasoning.

Keywords: confidence judgments, syllogistic reasoning, meta-reasoning, Self-Consistency Model

METACOGNITIVE CONFIDENCE DURING DEONTIC REASONING OF MORAL AND CONVENTIONAL RULES

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The social-intuitionist model suggests that morality is mostly based on intuition. Primary evidence for this is the moral dumbfounding effect – high confidence in an irrational moral position. However, moral confidence may sometimes be justified. Typically, the component of “moral accuracy” tends to be left out from morality experiments, which partially limits insights into background cognitive processes. Deontic logic (logic of rules) was used as a normative framework for determining response accuracy in this study. The aim of the study was to determine the effect of moral content on confidence and performance in deontic tasks. The experiment ($N=78$) was carried out using deontic tasks, while manipulating three levels of content: moral, conventional, and abstract.

Participants were first asked to memorize a given law. Every law consisted of two distinct rules (e.g. “It is obligatory to write the homework”). After that, they were presented with a set of specific cases (“John did not write his homework”), and asked to determine the deontic relation to the memorized law (John is in violation). There were three possible deontic relations: (1) in violation, (2) in line, and (3) supererogatory (beyond the call of duty). It was considered normatively correct to punish violators, ignore those in line, and reward the supererogatory (John should be punished). Response time and accuracy were recorded, as well as confidence assessments after each set of “judgments”. There were twelve laws in total, four per content. Results indicate a significant effect of content on confidence levels ($F(2,154)=5.31, p<.01$) with highest level of confidence after moral reasoning. A similar pattern was found for the content effect on accuracy ($F(2,160)=19.16, p<.01$), while response times were shorter in the presence of concrete content ($F(2,160)=7.65, p<.01$). Additionally, three regression analyses were performed (for each rule content separately), where the criterion was metacognitive confidence, and the predictors were response time and accuracy. All three regression models were significant ($R^2(2,75)=0.22-0.26, p<.01$). Confidence levels correlated negatively with response time, and positively with accuracy. These results are in line with previous reasoning research within the dual processing paradigm. In conclusion, the presence of moral content increases both confidence and accuracy, and confidence levels correlate with performance on the deontic reasoning task.

Keywords: metacognition, moral reasoning, convention, deontic logic

NUMBER OF SENSES AND SEMANTIC SETTling DYNAMIC
MODEL – SPEED/ACCURACY FEEDBACK AS LONGER
PROCESSING INDUCTION STRATEGY

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Previous semantic ambiguity research typically found processing advantage for polysemous words (multiple related senses) and a disadvantage for homonymous words (multiple unrelated meanings), compared to unambiguous controls (Rodd, Gaskell, & Marslen-Wilson, 2002). However, any task change elicited different effects, so the traditional account needed revision. Semantic Settling Dynamics

model was developed in order to account for the observed effect variations (Armstrong & Plaut, 2016). Basic assumption of the model was that the apparent inconsistencies arose as a consequence of between-task differences in time spent in semantic processing. Shorter processing resulted in polysemy advantage and longer processing in weaker polysemy advantage and homonymy disadvantage. To test this prediction, authors applied a contrast reduction manipulation, where a low contrast condition was expected to prolong processing. In a factorial design (homonymy and polysemy compared at a group level) this manipulation was of a limited success. In an attempt to generalize model predictions to a finer measure of ambiguity, we have previously attempted employing the same manipulation in a correlational design where participants were presented with polysemous words (1-18 senses). Results showed number of senses effect, but the low contrast prolonging was marginal and had no influence on semantics. This indicated a need for an alternative manipulation which in this case was giving speed and accuracy feedback to participants compared to cases where such feedback was absent. This was expected to slow down average reaction time between groups, but its effect on the number of senses was previously unknown.

We presented 160 words with 1-18 senses and 160 pseudowords. Visual lexical decision task was administered to 71 participants, divided into two groups – one that received speed/accuracy feedback after trials and the one that did not. Linear mixed effect regression revealed a significant number of senses effect ($t(140.14)=-2.339, p=.021$), with no significant differences between two feedback conditions. No interaction between feedback conditions and number of senses was found.

Considering the manipulation failed to prolong overall reaction time and as a consequence, semantic processing, it is difficult to rely on these results in evaluation of the model. Further research is required to achieve significant slowdown and decisively assess SSD's ability to predict effect variation on a finer measure of ambiguity.

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

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ZIJEVANJE KAO TERMOREGULACIJSKI MEHANIZAM MOZGA: UTJECAJ TEMPERATURE NA INCIDENCIJU ZARAZNOG ZIJEVANJA

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Dosadašnjim istraživanjima iz područja biološke i evolucijske psihologije pokušalo se dati odgovor na pitanje svrhe i prirode zijevanja. Unutar okvira znanstvenih objašnjenja jedna od pretpostavki jest da zijevanje ima važnu biološku svrhu u organizmu te potpomaže termoregulacijskim procesima mozga. Razvoj teorije potječe iz opaženih posljedica zijevanja koje su na fiziološkoj razini potrebe za učinkovito hlađenje mozga pri povećanoj temperaturi. Termoregulacijska teorija predstavlja teorijsko polazište za provedeno eksperimentalno istraživanje u Laboratoriju za eksperimentalnu psihologiju Odjela za psihologiju zadarskog sveučilišta. Cilj samog istraživanja bio je utvrditi postoji li utjecaj čeonog temperature na učestalost pojavljivanja zaraznog zijevanja. Nezavisnim eksperimentalnim nacrtom 30 muškaraca i 30 žena slučajno je raspoređeno u dvije eksperimentalne i jednu kontrolnu skupinu te im je prikazan video uradak od 50 uzastopnih zijevanja ljudi različitih rasa, godina i spola u trajanju od 3 minute i 40 sekundi. Prikazano je samo lice i ramena iz perspektive portreta. Eksperimentalna manipulacija se sastojala od primjene obloga niske (9°C) i visoke (46°C) temperature na područje čela ispitanika. Na kontrolnoj skupini ispitanika primijenjen je oblog sobne temperature (20°C). U skladu s polazišnim hipotezama, utvrđeno je da hlađenjem čeonog dijela lubanje dolazi do manje učestalosti zaraznog zijevanja u usporedbi s kontrolnom i eksperimentalnom skupinom koja je bila izložena oblogu visoke temperature ($F(2)=5.85$, $p<.01$). Postotak sudionika koji su zijevali u skupini s hladnim oblogom bio je 30%, dok u skupini s oblogom na sobnoj temperaturi 70 % sudionika i skupini s toplim oblogom 75% sudionika. Razlika nije pronađena u incidenciji zijevanja između kontrolne skupine i skupine s oblogom visoke temperature. Nisu pronađene razlike s obzirom na spol ispitanika. Dobiveni rezultati uklapaju se u termoregulacijsku teoriju kojom se pretpostavlja da će postojati efekt temperature te da se efekt spola neće pokazati statistički značajnim.

Ključne riječi: zarazno zijevanje, termoregulacija, temperatura

MISLIM DAKLE JESAM: ODNOS REZULTATA INHIBICIJE I IMPULZIVNOSTI PROCIJENJENIH SAMOPROCJENOM I OBJEKTIVNIM TESTOVIMA

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Poznato je da su ljudi skloni svakodnevno procjenjivati sebe i vlastite sposobnosti u različitim situacijama. Međutim, unatoč vjerovanju da sami sebe najbolje poznajemo, postavlja se pitanje jesu li vlastite procjene istovremeno i točne? Kako bismo točnije spoznali određene psihološke fenomene, u ovom istraživanju inhibiciju i impulzivnost, osim subjektivnih procjena, važno je i objektivno opažanje ponašanja i djelovanja ljudi. Ovisno o konstrukt koji se mjeri, neki istraživači utvrdili su da povezanost između subjektivnih i objektivnih mjera postoji (Swann, Bjork, Moeller i Dougherty, 2002), dok drugi nisu dobili rezultate sukladne njihovima (Reynolds, Ortengren, Richards i Wit, 2006; Stanford i Barratt, 1996). Cilj ovog istraživanja je utvrditi stupanj slaganja rezultata inhibicije i impulzivnosti dobivenih dvjema vrstama mjerenja: samoprocjenama i objektivnim testovima. Dodatno, istraživanjem se želi utvrditi doprinose li dimenzije mračne trijade (makijavelizam, psihopatija, narcizam) neslaganju rezultata dobivenih samoprocjenama i rezultata na objektivnim testovima budući da do sada nije provedeno istraživanje s tim ciljem. U istraživanju je sudjelovalo 139 sudionika, 83 ženskog i 56 muškog spola u dobi od 18 do 30 godina ($M=21.99$; $SD=2.38$). Kao mjera samoprocjena korištena su dva upitnika: Barratova skala impulzivnosti (BIS-15, Patton, 1995) i Upitnik izvršnih funkcija (ESQ, Dawson i Guare, 2010), a kao mjera objektivnih testova inhibicije i impulzivnosti koristio se Stroop test. Također, za mjerenje dimenzija mračne trijade korištena je Kratka skala mračne trijade (SD3, Jones i Paulhaus, 2012). Rezultati istraživanja pokazali su da u slučaju inhibicije postoji statistički značajna niska povezanost samoprocjena i objektivnih testova ($r=-.19$, $p<.01$), dok kod impulzivnosti nije dobivena statistički značajna povezanost objektivnih i subjektivnih mjera ($r=.12$, $p>.01$). Nadalje, dobivena je statistički značajna

povezanost psihopatije i razlike u samoprocjenama i objektivnim testovima impulzivnosti ($r=.34$, $p<.01$), te statistički značajna povezanost makijavelizma i razlike u samoprocjenama i objektivnim testovima inhibicije ($r=.16$, $p>.01$). Dobiveni rezultati ukazuju da je podudarnost objektivnih i subjektivnih mjera nekonzistentna te je u daljnjim istraživanjima potrebno uključiti više različitih objektivnih i subjektivnih testova. Što se tiče osobina koje mogu utjecati na neslaganje između objektivnih i subjektivnih mjera, utvrđeno je da se pojedinim osobinama ličnosti mogu objasniti navedene razlike.

Ključne riječi: samoprocjene, objektivni testovi, mračna trijada, inhibicija, impulzivnost

I THINK, THEREFORE I AM: THE RELATIONSHIP BETWEEN THE RESULTS OF THE ESTIMATED INHIBITION AND THE IMPULSIVENESS MEASURED THROUGH SELF-ASSESSMENT AND OBJECTIVE TESTS

It is well known that people tend to evaluate themselves in various situations on everyday basis. However, despite the belief that no one knows us like we do, a question rises about the accuracy of our evaluations. In order of getting a clear comprehension of certain psychological phenomenons, in this research - inhibition and impulsiveness, both subjective estimates and objective observations of human behaviour and action are necessary. Depending on the construct being measured, some researchers have established a connection between subjective and objective measurements (Swann, Bjork, Moeller i Dougherty, 2002), while others haven't obtained such a result (Reynolds, Ortengren, Richards i Wit, 2006; Stanford i Barratt, 1996). The aim of this study is to determine the degree of concordance between the results of inhibition and impulsivity obtained through two types of measurements: self-assessments and objective tests. Another objective is to determine whether the Dark triad dimensions (machiavellism, psychopathy, narcissism) add to discrepancies in the results obtained through self-assessments and the results of the objective tests, since a study with this objective has not yet been conducted. The research included 139 participants, 83 female and 56 male, aged 18 to 30 years old ($M=21.99$; $SD=2.38$). In doing so, two types of questionnaires were used as a measure of self-assessment: the Barrat Impulsiveness Scale (BIS-15, Patton, 1995) and Executive Function Questionnaire (ESQ, Dawson and Guare, 2010), while the Stroop test was used as a measure of objective tests of inhibition and impulsivity. Also, the Short Dark Triad scale (SD3, Jones and Paulhaus, 2012) was used in order to measure the dark triad dimensions. The results indicated that there is a statistically significant low correlation between objective and subjective measures in the case of inhibition ($r=-.19$, $p<.01$), while there was no statistically significant correlation between objective and subjective measurements in the case

of impulsivity ($r=.12$, $p>.01$). Further on, a statistically significant correlation between psychopathy and the discrepancies in self-assessments and objective tests for impulsiveness was found ($r=.34$, $p<.01$) and so was a statistically significant correlation between Machiavellianism and discrepancies in self-assessments and objective tests of inhibition ($r=.16$, $p>.01$). The results obtained indicate that the correspondence between objective and subjective measurements is inconsistent, and that further researches need to include a greater number of various objective and subjective tests. Regarding the traits that can influence the discrepancy between objective and subjective measurements, it is determined that certain personality traits can be used to explain the given differences.

Keywords: self-assessment, objective tests, dark triad, inhibition, impulsivity

ABILITY OF ATTENTION AND MEMORY IN STUDENTS WITH CEREBRAL PALSY AND STUDENTS OF TYPICAL DEVELOPMENT

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Ability is a feature that determines the success of an individual in an activity, regardless of the amount of exercise and motivation. Attention and memory are the abilities that belong to the field of cognitive functioning. Attention is an important brain function, and concentration of attention is needed for remember and acquiring school knowledge.

In this paper an assessment of the ability of attention and memory in students with cerebral palsy and students of typical development was performed. The sample of the study was formed by 34 students (50% students with cerebral palsy and 50% students with typical development), of both sexes. The research was carried out in three schools in the territory of Belgrade, which among other things, educate children with disabilities. The test for assessing alertness attention, selectivity and focus and the test story for immediate repeat according to the mental status protocol were used. The data were analysed on the basis of average achievement in terms of sex and age in students with cerebral palsy and students of a typical development.

The obtained results point to the existence of a difference between students with cerebral palsy and students of typical development when it comes to assessing the ability of attention and memory. By using the t-test for independent samples, a statistically significant difference was obtained between the tested groups, both on the test for assessing alertness attention, selectivity and focus ($t(32)=3.771$,

$p=.002$) and on the memory test ($t(32)=3.024$, $p=.05$). The results of the study showed that students with cerebral palsy had lower achievement on tests for assessing the ability of attention and memory compared to students of typical development. However, in the group of subjects with typical development were recorded low achievements on applied tests.

Based on the results obtained, it can be said that attention and memory disorders are present both, in children with developmental disorders and in the children of typical development, and it is important to detect their presence in time to develop appropriate programs in order to improve the functioning of these children both in school, and social environment.

Keywords: students with developmental disorders, cerebral palsy, attention, memory

EVALUATION OF THE EVERYDAY MEMORY QUESTIONNAIRE – REVISED (EMQ-R)

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The goal of this research was to conduct an initial general sample validation of the EMQ-R questionnaire. The EMQ-R is a short (13-item) measure of personal beliefs about memory performance in everyday life. Previous research has shown that the EMQ-R contains two main factors: Retrieval and Attentional Tracking, with an additional 2-item factor with no name or clear interpretation. The sample comprised 504 participants (51.06% females) from Bosnia and Herzegovina, with ages ranging from 18 to 55 years ($M=27.79$, $SD=8.39$). Amongst the tested factor models, bifactor model has the best fit: $\chi^2(54)=150.61$, $p<.001$; $CFI=.990$, $TLI=.985$, $RMSEA=.060$, 90% CI [.048, .071], followed by a model with three correlated factors: $\chi^2(62)=355.27$, $p<.001$; $CFI=.968$, $TLI=.960$, $RMSEA=.097$, 90% CI [.087, .107], and a model with one factor: $\chi^2(65)=470.16$, $p<.001$; $CFI=.956$, $TLI=.947$, $RMSEA=.111$, 90% CI [.102, .121]. In a bifactor model, 88.16% of variance is accounted for by the general factor. General factor's internal consistency is good ($\alpha=.94$, $\omega=.88$), and similar to that of a factor from a one-factor model ($\alpha\approx\omega\approx.91$), with generally high factor loadings in both cases

(all items' Λ s are over .50). In a three-factor model, factors are highly intercorrelated (.89, .88, and .98, respectively). Factor scores of the bifactor's general factor, factor scores of a one-factor model, and a total scale summary scores are all highly correlated, with values being: .98, .96, and .97, respectively. This all implies that a total EMQ-R scale summary score is arguably sufficient and most convenient to use. The average total scale summary scores are roughly equal for males ($M=0.98$, $SD=0.67$) and females ($M=0.87$, $SD=0.73$): $d=0.16$, $p=.078$. Big 5 personality traits explain 17.14% of the EMQ-R's variance, with the significant predictors being lower Conscientiousness ($\beta=-.28$), and higher Neuroticism ($\beta=.17$). The EMQ-R significantly predicts depressiveness scores ($\beta=.31$) over and beyond the Big 5 personality traits, explaining an additional 7.80% of depressiveness' variance over the starting 35.32% accounted for by the Big 5. Note that specific EMQ-R factors do not incrementally predict depressiveness scores over and above the general EMQ-R factor. We conclude that EMQ-R has good psychometric properties, that a total EMQ-R score is the most appropriate operationalization of the EMQ-R (at least for a general sample), and that its correlations with other constructs are in line with the literature.

Keywords: everyday memory, Big 5 personality, depressiveness, questionnaire validation

A REFERENCE POINT IN COGNITIVE REFLECTION TASKS

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The Information leakage approach posits that solving formally equivalent tasks varies depending on the reference point (RP) implicit in a task; in other words, shifting the focal information by changing the RP, should lead to different answers. We tested this supposition through the Cognitive Reflection Test (CRT), which measures a tendency to override a heuristic response and to engage in further reflection to find a normative, correct answer.

An 8-item CRT was administered to 94 participants with every item followed by 7 point self-confidence scale. Two parallel versions of CRT were used: one was the original test (CRT_o), and the other was constructed for the experiment (CRT_r). To make this new version, every item of the CRT_o went

through additive changes; that is, an RP was introduced to each task, while the formal aspects of the tasks were kept constant. For example, at the very beginning of the question “A man buys a pig for \$60, sells it for \$70...” the clause “A man has \$80.” was added. In a counterbalanced repeated design, participants were randomly assigned to one of the two groups (CRT₀ or CRT_r). We hypothesized that adding the RP would lead to a higher score on CRT, that the RT would be shorter for CRT₀ than for CRT_r, and that the CRT₀ answers would be assessed with higher self-confidence. The average number of correct answers in two groups was different ($t(186)=2.49$, $p<.01$): CRT₀ ($M=3.52$; $SD=2.03$), CRT_r ($M=4.31$, $SD=2.24$). The item analysis for correct answers revealed that on four items (2, 3, 7, 8), the effect of adding an RP was significant and helpful; in other words, participants gave more correct answers when RP was added. Furthermore, the average number of heuristic answers was smaller when RP was added in three tasks (2, 6, 8). On the whole sample, self-confidence between the two conditions, as well as the average response time, did not differ. However, on 3 items, self-confidence was higher in CRT_r condition than in CRT₀, contrary to our hypothesis.

The results are in accordance with the information leakage approach - by changing the RP in formally equivalent tasks, different answers can be elicited, albeit only partially in CRT. These findings can also be expounded on through the dual process framework – adding an RP can serve as a cue to inhibit heuristic answer and to engage in System 2 processes.

Keywords: Reference point, information leakage approach, dual processes, cognitive reflection test, metacognitive self-assessment

COGNITIVE REFLECTION AND GENERAL KNOWLEDGE AS PREDICTORS OF OUTCOME BIAS

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Outcome bias is a systematic cognitive tendency to evaluate the quality of a decision based on its outcome. In order to avoid biased judgment, one must ignore irrelevant information, collected after the decision was already made. Similarly,

cognitive reflection refers to the ability to override quick, intuitive, and often wrong answer, and engage in further reflection in order to give a correct response. General knowledge is a relative measure of knowing facts from different areas of social life, broadly used as a selection criterion. General knowledge is positively associated both with need for cognition, and, with general intelligence. In line with this, the main goal of this study was to test and compare predictive abilities of both cognitive reflection and general knowledge in relation to outcome bias. Participants (N=94) were presented with 19 pairs of judgment tasks, each comprising the description of a situation which contains a dilemma, the decision makers' decision, and its final outcome. The outcomes of these decisions were twofold: positive and negative and the task was to evaluate the quality of the described decision on a 10 point Likert scale. Dependent variable was proneness to outcome bias (SOB) calculated as the absolute difference between pairs of evaluations for decisions with opposite outcomes. Independent variables were scores on an eight-item Cognitive Reflection Test (CRT), and on a test of general knowledge (GK), obtained as a selection criterion for enrollment to the faculty. Outcome bias was detected on all pair of items, and on in whole sample. that is Statistically significant difference between evaluations of decisions with opposite outcomes was detected ($t(93)=13.216, p<.01$). In order to test and compare predictive values of CRT and GK, we conducted two linear regressions. Linear regression with CRT as a predictor revealed that SOB can't be predicted by registered differences in cognitive reflection ($F(43)=.626, p>.05$), and same goes for KN ($p>.05$) However, since CRT and GK are correlated ($r=-.43, p=.01$), it can be proposed that the phenomenology of the outcome bias stems not only from cognitive mechanisms, but also from social or communicational ones, which is in accordance with the general approach of social cognition.

Keywords: cognitive reflection, general knowledge, outcome bias

PARENTAL DECISION-MAKING ON CHILDHOOD VACCINATION

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Suboptimal vaccination uptake rates, which are largely due to vaccine hesitancy (VH), pose a risk to herd immunity, and represent one of the greatest public health challenges. As parents are key consumers of anti-vaccination influences, and key propagators of VH, our goal is to describe psychological and demographic determinants that lead to VH in parents. Two related studies will be conducted in 8 countries in Europe and Asia.

In the first study, using a correlational panel design, we will explore demographic and psychological, parent-specific, vaccine-specific and external factors related to VH via an online battery. Participants will be parents or caretakers of children under the age of 12. Based on a power analysis for an effect size of .15, and 20 predictors in a linear multiple regression model, the sample will consist of 222 participants per country. We expect open-minded thinking, trust towards authorities, availability of relevant information, perceived social and scientific consensus to reinforce intention to vaccinate, and VH, perceived freedom, choice overload and the use of informal sources to reinforce delaying or omitting mandatory childhood vaccination.

In the second, experimental study, we will investigate the moderating role of parents' high involvement in vaccination decision making. Parental decision on vaccination is a special case of health-related decision made by proxy and is highly involving in terms of affect and expectation. We propose that high involvement leads to parents overemphasizing potential vaccine side-effects.

This leads to stronger focus on potential outcomes of vaccine-related decisions, allowing parents to be more prone to evaluating prior decisions based on their outcomes, a tendency labelled as the outcome bias (OB). The sample will consist of non-parents and participants from the first study from selected countries. Based on a power analysis, 20 subjects per experimental group will be needed for detecting a statistically significant effect by a bivariate F-test. Participants will be presented with a description of a health-related dilemma, actors' decision, and its outcome, with the task to evaluate actors' decision. Subjects will complete the experiment twice. We expect higher involvement among parents, to lead to greater proneness to OB, as well as greater mean measure of OB in the high involvement compared to the low involvement situation.

Keywords: vaccine hesitancy, outcome bias, involvement, parents, decision-making

PSIHOLOGIJA OBRAZOVANJA

INTERCULTURALISM IN THE TEXTBOOKS FOR PRIMARY EDUCATION IN THE REPUBLIC OF MACEDONIA

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The aim of the study was to inspect the representation and manner of presentation of the cultural features and interaction between the different ethnic communities living in the Republic of Macedonia, as well as the presence of multicultural content that relates to a wider context, in the textbooks for primary education. The subject of analysis were 140 textbooks and 36 workbooks for 14 compulsory and elective courses, used in teaching students from the first to fifth grade in the nine-year primary education. They are written in four languages of instruction: Macedonian, Albanian, Turkish and Serbian. Math and Science textbooks and workbooks are translated and adapted versions of the original editions of the International Cambridge Testing Center. Six categories were predefined for content analysis: 1.cultural identity; 2.interaction between different ethnic groups; 3. stereotypes and prejudices; 4. personal names and authors; 5. representation of the fatherland and 6.openness to the world. Fourteen teachers with Macedonian, Albanian or Turkish ethnic background were involved in the assessment process, and the criteria for allocating textbooks to each of them were the native language and the teaching subject. For the purpose of obtaining reliable data, they received a one-day training by the lead researcher, who was the supervisor of the whole process of analysis. The general conclusion is that mother tongue textbooks of all communities in the Republic of Macedonia are characterized by ethnocentricity, that is, the cultural identity of the respective community is predominantly represented. In all textbooks there are few topics that explicitly promote social interaction among members of different cultures. Except in the Society textbook, in any of the other textbooks the fatherland is not represented in a multicultural context. In most textbooks there are no content that indicates stereotypes and prejudices on any basis. The results provide directions for improving the quality of textbooks in terms of multiculturalism in order to sensitize pupils from the early school age to respect diversity of people belonging to different cultural groups living in the same territory.

Keywords: interculturalism, primary education, textbook analysis, Republic of Macedonia

PODRŽAVAJUĆA ŠKOLA - PODRŽAVAJUĆI UČENICI: PERCEPCIJA ŠKOLSKE KULTURE I STAVOVI UČENIKA PREMA VRŠNJACIMA MIGRANTIMA

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Posebnu ulogu u uključivanju dece migranata u škole imaju vršnjački odnosi i školska kultura. Stoga je cilj ovog istraživanja bio da se ispituju predstave učenika osnovnih škola iz Srbije o migrantima, socijalna distanca prema njima i njihova percepcija školske kulture, kao i odnosi između ovih varijabli.

Za potrebe istraživanja odabrane su dve škole koje su nominovane da u školskoj 2016/17. upišu decu migrante. Uzorak je činilo 195 učenika sedmog i osmog razreda (48.2% dečaka), a prikupljanje podataka je obavljeno pre upisa dece migranata. Korišćena je prilagođena Bogardusova skala socijalne distance koja je obuhvatila pet tipova odnosa sa migrantima. Upitnik je sadržao jedno pitanje otvorenog tipa o tome ko su migranti, kao i pitanje višestrukog izbora o izvorima informisanja o tome ko su migranti. Školska kultura je operacionalizovana preko dve skale Likertovog tipa – Skale podrške nastavnika i vršnjaka i Skale antidiskriminacije, dok je stepen zadovoljstva školom procenjen dvoajtemskom skalom Likertovog tipa.

Utvrđeno je da samo nešto više od polovine uzorka ima potpunu predstavu o tome ko su migranti (58.5%), dok 28.4% ima nepotpunu predstavu (opis migranata kao osoba koje su napustile svoju zemlju ili su došle u drugu, bez objašnjenja uzroka migracije). Ispitanici koji su odgovorili da ne znaju ko su migranti (13.1%) su isključeni iz daljih statističkih analiza. Većina učenika navodi da je o migrantima saznala preko televizije (79.2%) ili roditelja (42.8%), dok je samo 6.9% dobilo informacije od nastavnika, što upućuje na izostanak sistemske pripreme učenika od strane škole za prihvatanje dece migranata.

Socijalna distanca učenika prema migrantima u proseku iznosi 1.6 (raspon 1-2, gde 2 označava maksimalnu distancu). Negativne korelacije između socijalne distance prema migrantima, s jedne strane, i učeničke procene nastavničkog uvažavanja različitosti ($r = -.35$, $p < .01$), percepcije podrške nastavnika ($r = -.21$, $p < .01$) i zadovoljstva školom ($r = -.26$, $p < .01$), s druge, ukazuju na značaj nastavnika kao modela i škole kao okruženja u kom se učenici osećaju

prihvaćenim za razvoj pozitivnih stavova učenika prema marginalizovanim grupama. Navedeno nameće potrebu za razmatranjem ne samo individualnih razlika u stavovima pojedinih aktera, već i nastavničkih praksi i karakteristika škole kao organizacije pri uključivanju učenika iz marginalizovanih grupa u obrazovno okruženje.

Ključne reči: obrazovanje, socijalna distanca, migranti, školska kultura

The goal of this research was to explore how students perceive migrants, and to explore the relationship between students' perceptions of their school culture and their social distance towards migrants. Two Serbian schools that were nominated to enroll migrant children in the school year 2016/17 were selected and 195 seven and eight graders participated in the research before the migrants have been enrolled. Almost one half of the students had vague notions or did not know who the migrants were. Majority was informed about the migrants through television (79.2%). Negative correlations between social distance towards migrants, on one hand, and the teachers' respect for diversity ($r=-.35$, $p<.01$), teacher support ($r=-.21$, $p<.01$) and students' satisfaction with the school ($r=-.26$, $p<.01$), on the other hand, were determined. Teachers' discriminatory practices can be considered a risk factor, whereas supportive school culture can be considered a protective factor for successful inclusion of migrant children.

Ovaj rad je deo projekta Identifikacija, merenje i razvoj kognitivnih i emocionalnih kompetencija važnih društvu orijentisanom na evropske integracije

CONSTRUCTION OF A SCALE FOR HIGHER EDUCATION TEACHING— TEACHER-ORIENTED OR STUDENT-ORIENTED

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In didactic theory it is known that there are two types of teaching: oriented towards realization of the teacher's plan (directive teaching) and oriented toward student's achievements (i.e. teaching by discovery). This paper presents the construction of the scale "Higher education teaching – teacher-oriented or student-oriented" which measures the presence of both types of teaching in higher education. Actually, it is examined whether this questionnaire is reliable and which components of teaching it measures (distinguished in the factor analysis). To this end, the Cronbach Alpha statistic was used and factor analysis of items in the questionnaires was made. The questionnaire consists of two sub-scales: the

first one measuring teacher-oriented teaching, and the second one measuring student-oriented teaching. All claims are evaluated on the Likert scale from 1 – I do not agree to 4 – I completely agree. An example of teacher-oriented teaching is the claim: “In class, the teacher (the assistant) is the centre of knowledge, and the focus is almost exclusively on the content that is being taught.” On the other hand, an example of student-oriented teaching is the claim: “The teacher (the assistant) believes that students come with their own experiences and knowledge.” The two sub-scales have eighteen claims each which evaluate lectures and exercises in teaching separately. The respondents included students from three faculties: the Faculty of Philosophy (N=97), the Faculty of Philology (N=56) and the Faculty of Architecture (N=50), a total of 205 students from the first and second year of studies.

Results show that the reliability of the first sub-scale is Cronbach’s alpha .85, while the second one is .95. The results of the factor analysis separated four factors in the two sub-scales, namely: teacher-oriented or student-oriented teaching, the second factor is the learning outcomes, the third factor covers teaching strategies and the fourth one describes the environment in teaching.

According to teacher-oriented teaching theory (directive) and student-centred teaching theory (by discovery), it can be said that this instrument satisfies the statistical parameters for its application in higher education teaching.

Keywords: higher education teaching, teacher-oriented teaching, student-oriented teaching.

PREVAZILAŽENJE UČENIČKIH ALTERNATIVNIH KONCEPCIJA O PLIVANJU I TONJENJU TELA – UTICAJ NASTAVNOG PRISTUPA I NIVOA KOGNITIVNOG RAZVOJA UČENIKA

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Cilj istraživanja bio je poređenje efekata tradicionalne (predavačke) i interaktivne nastave fizike o sili potiska i pojavama vezanim za nju u pogledu prevazilaženja učeničkih alternativnih koncepcija o plivanju i tonjenju tela. Uzorak istraživanja činilo je 153 učenika VII razreda. Istraživanje je realizovano u formi pedagoškog eksperimenta sa paralelnim grupama koje su ujednačene u pogledu nivoa

kognitivnog razvoja učenika, šireg znanja izraženog preko ocene iz fizike i opšteg uspeha na polugodištu, kao i postignuća na uvodnom dijagnostičkom testu. Dijagnostički test sadrži pitanja kojima se ispituje prisustvo 10 najčešćih alternativnih koncepcija o plivanju i tonjenju tela i primenjen je kao pre/post test, a sama nastava o sili potiska i pojavama vezanim za nju trajala je tri nedelje.

Za svakog učenika određen je normalizovani napredak na dijagnostičkom testu kao odnos ostvarenog i mogućeg napretka. ANOVA je pokazala statistički značajne razlike prosečnog normalizovanog napretka učenika u kontrolnoj (K) i eksperimentalnoj (E) grupi ($F(149,1)=440.822$; $p=.00$). Prosečan napredak učenika izloženih tradicionalnoj nastavi bio je 0.04 ± 0.25 , dok su učenici izloženi eksperimentalnom modelu nastave usmerene na aktivno učenje ostvarili napredak 0.84 ± 0.21 .

Regresioni model koji je kao prediktore obuhvatio pripadnost učenika K ili E grupi, uticaj šireg znanja (opšti uspeh i ocena iz fizike na polugodištu) i nivoa kognitivnog razvoja izraženog skorom na BLOT testu statistički je značajan ($F(132,4)=107.556$; $p=.00$). Jedini prediktor koji statistički značajno doprinosi objašnjenju variranja na zavisnoj varijabli (normalizovani napredak) je pripadnost ispitanika K odnosno E grupi. Relativno blizu statističke značajnosti ($p=.092$) je i uspeh učenika na testu formalnih operacija. Daljim poređenjem grupa sa ekstremnim skorovima na BLOT testu (ispod 25. i iznad 75. percentila) ustanovljeno je da nema statistički značajnih razlika u vrednosti prosečnog normalizovanog napretka ovih grupa.

Rezultati istraživanja ukazuju na neophodnost promena u nastavnoj praksi, kao i na važnost inoviranja programa primarnog obrazovanja i stručnog usavršavanja nastavnika fizike uvažavanjem savremenog konstruktivističkog pogleda na prirodu učenja u nastavnom procesu, u prvom redu davanjem smernica za konkretne aktivnosti u učionici čiji je cilj identifikovanje i prevazilaženje učenčkih alternativnih koncepcija.

Ključne reči: Naučne i alternativne koncepcije; Plivanje i tonjenje; Formalno-operacionalno mišljenje

The research aim is comparison between effects of ex-cathedra and the interactive physics teaching model about buoyancy on overcoming students' alternative floating and sinking conceptions. The sample included 153 seventh grade students divided into two groups regarding teaching method, whose scores were measured on pre and post diagnostic test checking the alternative conceptions presence. Normalized gain was calculated as the relation between measured and possible student progress on the diagnostic test. Students taught by active method had higher normalized gain than those exposed to traditional one ($F(149,1)=440.822$; $p=.00$). The regression including control variables (cognitive development, school achievement) showed that teaching method was the only significant predictor of the gain. The results imply a need for improvement of

current teaching practice towards modern constructivist views on the physics learning in the teaching process, primarily by giving pointers for concrete classroom activities aimed at identification and overcoming of students' alternative conceptions.

KINESTETIČKA SENZITIVNOST DECE ŠKOLSKOG UZRASTA

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Kinestetička senzitivnost, kao svest o telu, položajima i pokretima delova tela, jeste veoma važna za pravilno izvođenje motoričkih radnji koje su veoma značajne za vaspitno-obrazovni proces i izvođenje raznih veština, kao što je veština pisanja. Kako bi se ispitala kinestetička senzitivnost učenika nižih razreda osnovne škole, izvršena je procena hvata olovke, jačine i konzistentnosti pritiska tokom pisanja i sposobnost imitacije položaja prstiju bez učešća vida. Istraživanjem je obuhvaćeno 1156 učenika razredne nastave beogradskih osnovnih škola, a procena je izvršena pomoću Protokola za procenu pisanja, Lurija-Nebraska neuropsihološke baterije i posebne metodologije za procenu jačine i konzistentnosti pritiska pomoću indigo papira.

Rezultati pokazuju da skoro polovina ispitanih učenika (44.2%) koristi zreli dinamični troprtsni hvat, dok je kao najlošiji hvat zabeležen hvat sa palcem preko olovke koji se javlja kod 1.6% učenika i on se ređe koristi nego ostali tipovi hvata ($t(1155)=7.26-27.54$, $p=.000$). Učenici su veoma uspešni prilikom rešavanja zadatka imitacije položaja prstiju (94% u prvoj probi i 96% u drugoj probi). Otisak pisanja je kod najvećeg procenata dece vidljiv do druge strane (43.1%), uz značajno višu učestalost od one u preostalim kategorijama ($t(1155)=6.24-19.46$, $p=.000$). Konzistentnost pritiska olovke konstatovana je kod 85.6% učenika i njihov broj je značajno viši od procenta učenika kod kojih konzistentnost nije prisutna ($t(1155)=34.48$, $p=.000$). Ukoliko se posmatra kompozitni skor sa ispitivanim aspektima kinestetičke senzitivnosti, korelacija je najviša sa probama imitacije položaja prstiju ($r=-.85$), zatim između kinestetičke senzitivnosti i hvata ($r=.70$), kinestetičke senzitivnosti i jačine pritiska tokom pisanja ($r=.66$) i konzistentnosti pritiska ($r=.51$).

Dobijeni rezultati pokazuju da su učenici razredne nastave uspešni u zadacima procene kinestetičke senzitivnosti. Međutim, detaljna procena snaga i sposobnosti učenika jeste važna zbog mogućnosti prilagođavanja nastavnog procesa potrebama, mogućnostima i potencijalima učenika koji imaju teškoća u

savladavanju školskog gradiva, kroz mere individualizacije i/ili individualni obrazovni plan, uz angažovanje defektologa kao člana stručnog tima.

Ključne reči: defektolog, kinestetička senzitivnost, pritisak pisanja, položaj prstiju, hvat olovke

The examination of the kinesthetic sensitivity of pupils lower grades of elementary school was performed with 1156 students of eight Belgrade primary school.

The results show that 44.2% students use a mature dynamic triple grip, and they are very successful in solving the finger position imitation problem (94% in the first trial and 96% in the second rehearsal). Printout of the writing is on the highest percentage of children visible to the second side (43.1%), and the consistency of pen pressure is found in 85.6% of students. If a composite score is observed with the examined aspects of kinesthetic sensitivity, the correlation is highest with finger position imitation tests ($r=-.85$).

Detailed assessment of the strengths and abilities of students is important because of the ability to adapt the teaching process to the needs, abilities and potentials of students who have difficulty in mastering writing skills.

EFEKTI NEKIH KARAKTERISTIKA UNIVERZITETSKIH NASTAVNIKA NA NJIHOVA IMPLICITNA UVERENJA O KREATIVNOSTI

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Ispitivanje implicitnih uverenja univerzitetskih nastavnika o kreativnosti značajno je zbog uticaja koji ova uverenja mogu imati na odnos nastavnika prema prepoznavanju i podsticanju kreativnosti studenata. U cilju boljeg razumevanja uverenja univerzitetskih nastavnika o prirodi i razvoju kreativnosti postavljeno je sledeće istraživačko pitanje: da li postoje razlike u uverenjima nastavnika s obzirom na njihov pol, starost, dužinu radnog staža, radni status i oblast nauke kojom se bave. Ispitivanje je izvedeno na prigodnom uzorku univerzitetskih nastavnika (N=46). Primenjen je upitnik sa otvorenim i zatvorenim pitanjima o tome šta je kreativnost, kako se ispoljava u toku studija i kako studije mogu doprineti razvoju kreativnosti. Prikupljeni podaci obrađeni su kvalitativno i kvantitativno. Prvo su kategorisani odgovori na otvorena pitanja, što je urađeno pomoću 4P modela kreativnosti i Ekspertskog modela za podsticanje kreativnosti. Kvantitativna analiza obuhvatila je ispitivanje značajnosti razlika u uverenjima nastavnika prema njihovim karakteristikama pomoću hi kvadrat testa. Utvrđeno

je da većina ispitivanih razlika u sadržaju i složenosti uverenja o kreativnosti između nastavnika različitog pola, uzrasta, radnog staža, radnog mesta i naučne oblasti kojom se bave ne dostiže statističku značajnost, što ukazuje na relativnu stabilnost iskazanih uverenja. Značajna je razlika između nastavnika sa višim i nižim radnim statusom u pogledu uslova za razvoj kreativnosti: vanredni i redovni profesori češće navode obrazovnu klimu od asistenata i docenata kao uslov za podsticanje kreativnosti u toku studija ($\chi^2=16.02$, $df=7$, $p=.025$). Nastavnici društvenih nauka češće od nastavnika prirodnih nauka opažaju kreativnost u toku studija kao višedimenzionalan fenomen ($\chi^2=6.38$, $df=2$, $p=.038$). Obrazovna klima odnosi se na uvažavanje mišljenja i ličnosti studenata, podsticanje njihove samostalnosti i samopouzdanja, adekvatno vrednovanje posebnosti i različitosti, stvaranje prijatne atmosfere na predavanjima. Višedimenzionalno koncipiranje kreativnosti obuhvata kombinovanje kreativne osobe, procesa, produkta i uticaja sredine. Dobijeni nalazi interpretirani su u kontekstu iskustva koje imaju nastavnici sa višim radnim statusom i uslovljenošću kreativnog izraza domenom ispoljavanja. U zaključku je diskutovano o tome kako unaprediti rad visokoškolskih ustanova u cilju stvaranja boljih uslova za ispoljavanje i razvoj kreativnosti njihovih nastavnika i studenata.

Ključne reči: implicitna uverenja, kreativnost, univerzitetski nastavnici, ispoljavanje i razvoj kreativnosti.

THE EFFECTS OF UNIVERSITY TEACHERS' CHARACTERISTICS ON IMPLICIT BELIEFS ABOUT CREATIVITY

The goal of this study was to examine the differences in university teachers' beliefs related to their gender, age, academic status and scientific domain. University teachers (N=46) targeted through convenience sampling completed a questionnaire. Most of the differences do not reach statistical significance, pointing to a relative stability in teachers' beliefs. However, teachers of higher academic status more frequently pointed to educational climate as a factor of creativity development in comparison to teachers of lower academic status ($\chi^2=16.02$, $p=.025$). Creativity was seen as a multidimensional phenomenon more often by social science teachers comparing to science teachers ($\chi^2=6.38$, $p=.038$). Opportunities for improving higher education institution as environments for creativity development were discussed.

The study was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia through the 47008 i 179034 research projects.

STUDENTS SOLVING STRATEGIES: CONTRASTING MATHEMATICS AND PROBLEM SOLVING COMPETENCIES IN PISA

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In the 2012 cycle of the Programme for International Student Assessment (PISA) students in Serbia were for the first time accosted with the problem solving domain. Their average score (473 points) was higher than in all other domains for about one quarter of the standard deviation ($M=500$, $SD=100$), opening debates on how this relative “success can be understood”.

Our previous analyses were dedicated to examining differences between the predictors on succeeding in the mathematics and/or the problem solving domain. The aim of this paper is to understand what can be learned by observing students’ solving two PISA items, one in mathematics (item Garage) and the other in problem solving (item Birthday party). Both items were classified by the PISA assessment framework as engaging the same cognitive function (i.e., application), whereas similar percentage of students in Serbia has solved the items in the 2012 cycle.

Nine students age 15 took part in the study (10 girls). Three students have solved the items individually, whereas the remaining six did this in pairs. For the students solving the items individually, a talk aloud protocol was used to prompt them to describe their process of thinking and chosen solving strategy. Students working in pairs were only observed and immediately after they completed the solving of the tasks interviewed.

Observations revealed that all participants were highly persistent and emotionally engaged when solving the item from the problem solving domain. The dominant solving strategy was through trial and error, constantly evaluating if in the suggested solution all task conditions are met. The students were able to solve this item. The mathematics item was solved using the formula for calculating the surface area, assuming that all of the values are given in the accompanying item illustration and that the solution should be a round number. The dominant solving strategy was to eliminate all the unnecessary information or choose the right one without fully understanding the problem presented in the item (i.e., calculate the roof surface using the dimensions of the walls of the house). Particular misconceptions held by students were visible during this process particularly related to the use of Pythagorean theorem. This item was solved faster than the previous one, but none of the students or student pairs was able to solve it

correctly. The results will be discussed relative to the seeming difficulty to apply mathematics knowledge

Keywords: student competences, mathematic literacy, problem solving, PISA, qualitative analyses

The paper is the product of the work on the Project “Identification, measurement and development of cognitive and emotional competences important for a society oriented towards European integrations” (No. 179018) conducted by the Institute of Psychology, University of Belgrade, and funded by the Ministry of Education, Science and Technological Development, Republic of Serbia

THE EXPERIENCE OF BOREDOM IN EVERYDAY ACTIVITIES OF HIGH SCHOOL STUDENTS

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The previous research on everyday life of Serbian high school students, as well as other studies, shows that high level of boredom is one of the biggest problems they are facing throughout the adolescent period. In this paper, we explore their intrapersonal experiences regarding different everyday activities, in order to see which of them are associated with boredom, to what extent and for what reasons. The data were collected by 24-hour time diary (students’ spontaneous comments on stated activities) and the thematic content analysis method was applied. The study was conducted on a sample of 922 high school students, structured by the region, age (I-IV grade) and the type of school. (grammar and vocational schools). The results revealed that the experience of boredom is reported within the context of almost all everyday activities, including going out or hanging out with friends and dating – unstructured leisure activities typically seen as the most enjoyable by adolescents. The only exceptions are extracurricular activities, hobbies and sport, all perceived as self-expressive, achievement-oriented and structured leisure activities. There are significant differences among the activities regarding the percent of comments referring to boredom ($\chi^2=96.782$; $df=4$; $p<.01$). Activities with the highest percent of such a comments are schoolwork (36% of all comments on this activity) and homework or learning for school (21%). Although students perceive these activities as demanding and exhausting, they also stress the lack of internal motivation, engagement and intellectual challenges, recognizing only the instrumental value of learning. The third most

boring activity is watching entertainment shows and movies (16.3%). Students either complain about poor quality of the program, or admit that they are not really engaged with it, merely relaxing or filling up the time they don't know how else to spend. It can be concluded that high school students' prevailing experience of boredom reflects the fact that their daily routine provides a few opportunities for engagement in a challenging, self-expressive and internally motivated activities – school activities and learning fail to create such an experiential context and leisure time is largely reduced to passive relaxation and unstructured social activities.

Keywords: youth, boredom, leisure, time-diary method, school learning

The paper is the product of the work on the Project “Identification, measurement and development of cognitive and emotional competences important for a society oriented towards European integrations” (No. 179018) conducted by the Institute of Psychology, University of Belgrade, and funded by the Ministry of Education, Science and Technological Development, Republic of Serbia

WHY DO SOME MORE COMPETENT STUDENTS FAIL AFTER THE INTERACTION WITH THEIR LESS COMPETENT PEER?

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Although Howe and Mercer (2007) claim that peer interaction in classroom is mainly unproductive, studies are dominantly oriented towards new competences development as a result of that interaction not analyzing regression phenomenon, particularly in more competent students. Despite the fact that there was no interaction effect on the formal operations development in majority of more competent students in our research (Stepanović Ilić, 2015), this work focuses on those who regressed in order to detect the reasons on the micro-level. Hence, we analysed dialogues in all dyads (5 out of 47) where more competent students regressed after the interaction with their less competent peer. During the interaction each dyad was solving 5 tasks of parallel version of BLOT test (Stepanović Ilić, Baucal & Bond, 2012) chosen in a way that those tasks from original BLOT (Bond, 1995, 1997) were solved by the more competent and not solved by the less competent student on the pretest. The instrument constructed in the previous research (Stepanović & Baucal, 2011), focused on less competent students, was used and little adapted for dialogues analysis. Hence, we tracked 5 productive (cooperation, shared socio-cognitive conflict, a-ha moment, answer justification, mediation) and 5 hindering dialogue characteristics (lack of

cooperation, inconsistent behaviour of more competent student, non-shared socio-cognitive conflict, domination/submissiveness, non-justified answer). The unit of the analysis was dialogue in solving process of each task. The results show that the hindering characteristics appear three times more frequently than the productive ones. The most salient hindering characteristics is the inconsistent behaviour of a more competent student, who gives a wrong answer or is insecure, which appeared in 12 out of 25 dialogues (5 dyads x 5 tasks). This in accordance with Tudge's finding (1989) about regression in more competent students who were not confident. The domination/submissiveness dimension occurred in 9 dialogues. It is, at least partially, consistent with research results regarding the impact of this dimension causing the lack of supportive interaction role (Psaltis, 2005, Psaltis & Duveen, 2007, Psaltis & Zapiti, 2014). These and other obtained results suggest possible reasons for the regression which need to be confirmed in the next study by comparison with the results of dialogue analysis in cases where more competent students progressed.

Keywords: peer interaction, dialogue analysis, regression of more competent students

DIFFERENT EDUCATIONAL SETTING IN DIFFERENT SECONDARY SCHOOLS: WHY PREDICTORS ARE LOSING THEIR PREDICTIVE POWER IN THREE YEAR VOCATIONAL EDUCATION

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The aim of the research is to examine whether there is a different influence of the predictors of achievements on mathematical literacy (PISA 2012) in different types of secondary schools in Serbia. The selection of the predictors for the SEM model was done by taking one predictor most related to mathematical literacy from three regression analyses, each of which included three conceptually different groups of predictors: 1) the material and social conditions in which students live and study, 2) psychological predictors and 3) teaching predictors. SEM analysis in which index of economic, social and cultural status (ZESCS), mathematics anxiety (ANXMAT) and the index of student experience with pure mathematics tasks (EXPUREM), directly influence mathematical literacy, with the indirect influence of index of economic, social and cultural status to the other two predictors, indicate that selected structural model is suitable for the obtained data, i.e. it can reproduce the covariance matrix obtained between the variables

tested on the whole sample of the respondents (N=4684) ($\chi^2(df) = 9.033 (1)$, $p=.003$; RMSEA=0.041, CFI=0.992, TLI=0.955, SRMR=0.012). By further testing of the invariance of the structural model parameters on three different samples - students attending gymnasiums, four-year and three-year vocational profiles, it has been seen that the predictors act differently in different secondary schools, primarily by predictors losing their predictive power in three-year educational profiles, reflected through significantly lower structural coefficients of direct influence of all three predictors, even the EXPUREM, on mathematical literacy in three-year secondary vocational schools. This can indicate the mutual similarity of students in the three-year profiles and the different educational context that exists in the three-year vocational schools. This secondary analysis of PISA 2012 data opened up questions of equity and quality of education related to the enrolment of different secondary schools.

Keywords: secondary schools, PISA, mathematical literacy, socio-economic status, mathematics anxiety.

CHILDREN MATH ANXIETY QUESTIONNAIRE: DIMENSIONALITY AND VALIDITY

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Math anxiety is defined as a feeling of tension, apprehension, or fear that interferes with math performance. It is determined that math anxiety is related to poor math performance on math achievement tests, problems during math learning and avoidance of situations in which person has to perform mathematical calculations. Some of previous research claims that math anxiety is developing from the primary school period, or earlier. Also, gender and age differences were detected in favour of girls and older students. The aim of this study was to examine dimensionality and validity of Children Math Anxiety Questionnaire (CMAQ), as well as to investigate gender and age differences on Serbian sample of students. Sample was consisted of 255 first and second primary school children from Serbia (50.3% male, mean age: 7.94 years). CMAQ (8 items with pictorial Likert scale), which measures math anxiety, and unidimensional Checklist of problems in learning mathematics (13 items assessed by the teacher), which

measures some of the typical problems during the learning math, were applied. Math achievement was operationalized as overall math grade point average which was calculated for each student by computing the average of his/her grades in math at the half term and at the end of the former school year. Parallel analysis suggests unidimensionality of CMAQ (52.75% of explained variance; $\alpha=.92$), and confirmatory factor analysis confirms this finding ($\chi^2 = 47.74$; $df=20$; $p<.01$; $CFI=.95$; $TLI=.96$; $RMSEA=.07$). Age differences in math anxiety were detected in favour of older students who attend the second grade ($t(154)=-2.87$, $p<.01$). Differences in regard to gender were not detected. Bivariate correlations of math anxiety were significant in both case of math achievement ($r=-.25$; $p<.01$) and problems during the learning of math ($r=.16$; $p<.05$). Results of this research indicate that the unidimensional measure of math anxiety shows good psychometric properties and adequate patterns of relations with other constructs in the context of divergent validity. It seems that CMAQ can be applied in Serbian schools by school psychologists in order to detect students, of both sexes, who developed high math anxiety in early primary school, and in order to help them to overcome this problem which is related to poor math performance.

Keywords: math anxiety, CMAQ, primary school children, dimensionality of CMAQ, validity of CMAQ

ADVERSE CHILDHOOD EXPERIENCES AND COLLEGE ACHIEVEMENT: THE MEDIATING ROLE OF DEPRESSIVENESS

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Adverse childhood experiences (ACEs) are distressful and potentially traumatic events from childhood. The ACEs predict many academic and school related problems in elementary school (e.g., academic failure, attendance problems, behavior concerns, etc.). In college students, ACEs are also linked to various problems, including a poor mental health, but the association with college level academic achievement is largely unknown. Thus, the goal of this research was to examine a link between the ACEs and college achievement (i.e., the average college grade, or the grade point average – GPA). Given the robust link between the ACEs and depressiveness, and a negative impact that depression can have on

academic achievement, we also wanted to explore a potential mediating role of depressiveness scores between the ACEs and the GPA. The sample comprised 142 college students (67.6% females; age: $M=22.62$, $SD=2.56$ years) from Bosnia and Herzegovina. The GPA was 7.86 ($SD=0.82$). The students reported only 0.87 ($SD=1.29$) ACEs on average. On a bivariate level, the ACEs correlated with depressiveness ($r=.34$, $p<.001$), but neither ACEs ($r=.12$, $p=.17$) or depressiveness scores ($r=-.12$, $p=.14$) correlated significantly with the GPA. However, when entered together in a mediation analysis (while controlling for gender due to higher depressiveness scores in females: $d=0.40$, $p=.03$) it was established that higher ACEs predict higher depressiveness: a: $\beta_{ACE \rightarrow Dep}=.33^{***}$, which, in turn, predicts lower GPA: b: $\beta_{Dep \rightarrow GPA}=-.18^*$, with the indirect effect of the ACEs on the GPA through depressiveness being significant: $a*b: \beta_{ACE \rightarrow Dep \rightarrow GPA}=-.06$ $[-.14, -.003]$. At the same time, there is a direct portion of the effect, which suggests that higher ACEs predict higher GPA, when depressiveness is accounted for: $c': \beta_{ACE \rightarrow GPA}=.18$ $[.002, .35]$. Thus, even though a total direct effect of the ACEs on the GPA is not significant ($c: \beta_{ACE \rightarrow GPA}=.12$ $[-.05, .29]$), the results imply that this might be due to the ACEs having both negative and positive conditional effects on the GPA. When the ACEs lead to negative mood states, such as depression, its impact on the GPA will be negative. However, when that is not the case, e.g., when a person has learned how to cope, the effects might even be positive. Thus, future research should examine the mechanisms by which overcoming adversity can have a positive impact on higher education achievements.

Keywords: adverse childhood experiences (ACEs), college achievement, college grades, depressiveness

EMOCIONALNE KOMPETENCIJE VASPITAČA U PREDŠKOLSKIM USTANOVAMA

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S obzirom na ulogu vaspitača u modelovanju ponašanja dece, jasan je značaj njihovih kompetencija. Ovaj rad se fokusira upravo na istraživanju kompetencija vaspitača, odnosno ima za cilj utvrđivanje stepena razvijenosti njihovih emocionalnih kompetencija.

Za istraživanje je korišćen upitnik koji sadrži 32 pitanja. Upitnik se pokazao adekvatno homogenim i teorijski zasnovanim. Podeljeno je 150 upitnika, od kojih je popunjeno 114 ili 76%, a validnih je bilo 108, odnosno 72%. To ukazuje na slabu motivisanost vaspitača za učešćem u empirijskim istraživanjima.

Kreirano je sedam indikatora (emocionalna svest; samopouzdanje; samokontrola; empatija i altruizam; istinoljubivost; adaptibilnost; inovativnost) na osnovu Suzićevih (2004) kompetencija za XXI vek.

Rezultati istraživanja su ukazali, između ostalog, da treba mnogo više raditi na edukaciji vaspitača za razvijanje emocionalnih kompetencija. Naime, čak 74.52% ispitanika je izjavilo da u zadnje 3 godine nije pohađalo ni jednu obuku iz oblasti emocionalnog razvoja.

Ključne reči: Emocionalne kompetencije, Empatija, Vaspitači, Predškolske ustanove

Considering the role of preschool teachers in shaping children's behavior, the significance of their competence is clear. That is the focal point of this paper, which has a goal to determine the level of development of teachers' emotional competence.

A questionnaire consisting of 32 questions has been used, and it has proved itself to be adequately homogenous and theoretically well-based. From 150 surveys that were handed out, 114, or 76%, were filled out, and 108, 72%, were valid. That goes to show low motivation in teachers to take part in empirical research. Seven indicators were created (emotional conscience, self-confidence, self-control, empathy and altruism, truthfulness, adaptability, innovation) based on Suzić's (2004) competence for the 21st century.

The results have shown that more work is required to help teachers emotional competence. Furthermore, 74.52% of teachers said that they did not attend any educational course on emotional development in the past 3 years.

KONSTRUKCIJE JASTAVA U UČENIČKIM NARATIVIMA O IZOSTAJANJU SA NASTAVE

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U radu se bavimo proučavanjem narativa kojima se koriste učenici kako bi obrazložili sopstveno izostajanje sa nastave. Dosadašnja istraživanja su apsentizam dominantno tretirala kao devijantno ponašanje, koje predstavlja posledicu individualnih, porodičnih i širih sistemskih slabosti i faktora rizika. Predlažemo novi pristup, polazeći od konstruktivističke ideje da osobe nastoje da se u svakoj socijalnoj situaciji ponašaju smisleno. Konkretnije, izostajanje

posmatramo kao lični izbor, a njegovo obrazlaganje kao primenu narativnih strategija pomoću kojih učenici nastoje da izgrade određeni doživljaj sebe i legitimizuju ga u skladu sa ličnim i kulturnim značenjima. Cilj istraživanja je empirijska provera ideje o izostajanju kao ponašanju koje je opravdano iz perspektive onih koji ga praktikuju. U istraživanju su učestvovala učenice drugog i četvrtog razreda jedne srednje stručne škole smestene u centralnoj beogradskoj opštini. Primenjen je nacrt višestruke studije slučaja. Podaci su prikupljeni konstruktivističkim intervjuom, koji podrazumeva postupno utvrđivanje nadređenih konstrukata pomoću kojih ispitanici osmišljavaju neki fenomen i sebe kao aktere. Na osnovu intervjua, „mapirani su“ najznačajniji konstrukti utvrđene međusobne relacije između njih. Ko-autori su nezavisno jedan od drugog analizirali podatke i sastavili zajednički nalaz na osnovu poređenja izvršenih analiza. Komparativnim pregledom slučajeva, kreirana je i u podacima testirana hipoteza da učenice u svojim konstrukcijama o izostajanju sa nastave nastoje da afirmišu odbranu određena jastva, imenujući ih kao „Pravo Ja“, „Pozitivno Ja“ ili „Privatno Ja“. To nas je navelo da se u interpretaciji podataka oslonimo na eksplanatorni model zajednice jastva, koja self konceptualizuje kao fragmentisan, višestruk i dijaloški. Pokazalo se da ispitanice opravdavaju odsustvo iz škole kroz kreiranje narativa o nemogućnosti aktualizacije poželjnih jastava u okvirima institucionalnog obrazovanja, koje im jedino dopušta da dožive sebe kroz niz negativnih konstrukcija označenih kao „Maska“, „Nikakvo Ja“, „Ambiciozno Ja“. Razmatrano je preduzimanje savetodavnog vođenja učenica sa ciljem da se otvore mogućnosti za zadovoljenje poželjnih jastava u školskom okruženju.

Ključne reči: izostajanje iz škole, konstruktivizam, zajednica jastva, studija slučaja.

The paper deals with the study of narratives used by five students in order to account their truancy behavior. While truancy has been so far dominantly treated as deviant behavior we propose the constructivist approach as an alternative (Kelly, 1955; Gergen, 2009). We consider truancy as a personal choice, and its accounts as the application of narrative strategies to create and legitimize a certain sense of self. The participants were the students of a secondary vocational school. A multi-case study research design was applied. The data were collected by the constructivist interview (Walker & Crittenden, 2012). The comparative analysis of students' narrative constructions suggests that they try to affirm a certain selves, such as "right self," "positive self," or "private self." The students justify the truancy by creating narratives about the conflicting relationship between these desirable selves and their unwanted or imposed adversaries, such as "ambitious I" and "mask".

Ovaj rad predstavlja rezultat rada na projektima Od podsticanja inicijative, saradnje i stvaralaštva u obrazovanju do novih uloga i identiteta u društvu (br.

179034) i Unapređivanje kvaliteta i dostupnosti obrazovanja u procesima modernizacije Srbije (br. 47008), koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

MUSIC PERFORMANCE SKILLS, DELIBERATE PRACTICE,
MOTIVATIONAL PATTERNS
AND SELF-EFFICACY IN MUSIC

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Theoretical background of the research is based on the Theory of Mind-set (Dweck) and research of self-efficacy and musical identity (O'Neill). We present a part of the wider pilot research that had intention to investigate attributes of deliberate practice at the level of higher music education. We intend to explore the relation between motivational patterns and practice strategies and self-efficacy in gaining high level of performance skills. The sample consisted of 57 students of the Faculty of Music. The three sets of variables were put into analysis: 1. Performance skills: Psychological, learning and musical; 2. Instrumental practice strategies: Process of practice, problem solving and practice disturbance factors; 3. Motivational patterns: Mastery and helpless orientation, as well as the measure of Self-efficacy in music. The questionnaires were constructed for the purpose of this research: Questionnaire of performance skills (26, Likert scale 1-5); Mindset and practice questionnaire (19 open-ended questions) and rating of self-efficacy in music (1-7). Data were analyzed by mixed method (quantitative and qualitative). The factor analysis (Varimax rotation method with Kaiser normalization) extracted five components of performance skills: Cognitive capacities and skills; Cognitive and emotional control; Memory; Self-regulation and Music skills (70.958% of variance explained). Qualitative data on mind-set as well as on practice strategies variables were classified into 4-5 categories. Some of performance skills factors (Cognitive/emotional control and Self-regulation) were significantly related to motivational patterns (Mastery, $F(2)=4.37$, $p<.02$; $F(2)=4.86$, $p<.01$) and Cognitive capacities and skills were related to practice strategies (Problem solving, $F(3)=2.84$, $p<.48$). Higher self-efficacy is significantly correlated with psychological ($r=.53$, $p<.01$) and learning skills factors ($r=.33$, $p<.05$), as well as to Mastery orientation in gaining achievements ($F(4)=4.45$, $p<.04$). Findings draw to conclusion that cognitive, learning, motivational and emotional control factors have a more significant role in building up performance capacities than musical skills. Mastery as motivational pattern is a key property to strengthen self-regulation and self-efficacy. More general, in particular cognitive capacities

and skills are condition sine qua non for achievements in learning and enhancing musical skills.

Keywords: music, performance skills, deliberate practice, motivation, self-efficacy.

RAZVOJNA PSIHOLOGIJA

AFFECTIVE EXPERIENCE OF MUSIC IN CHILDREN: STABILITY OF FACTOR STRUCTURES

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Previous findings show that the structure of affective experience of music stimuli in adults can be adequately explained by the three-dimensional model consisted of valence, arousal and cognitive evaluation. However, developmental aspect of the affective experience of music has not yet been fully established. The aim of this research was to examine the structure of music-induced affective experience in children of different ages and to determine the similarity of factorial structures in two age groups. The sample consisted of 81 participants attending third grade of primary school (9-year-olds) and 65 students attending eight grade of primary school (14-year-olds). After conducting a pilot study, 48 five seconds long musical stimuli with evened sound intensity were chosen for the main study. Stimuli were excerpts from original musical compositions of different genres, both vocal and instrumental. After listening to musical stimuli, participants were assessing their affective experience of each stimulus on a Connotative differential scale (CD-15, version 3.0). Results showed that three extracted factors accounted for 74.74% of the variance (valence 65.3%, arousal 5.0%, and cognitive evaluation 4.5% of the variance) in a group of 9-year-olds. Similarly, in the group of 14-year-olds, these three factors accounted for 75.40% of the variance (valence 64.0%, arousal 6.4%, and cognitive evaluation 5.0% of the variance). Tucker's coefficient of congruence was 0.91 and suggested that the structures of affective experience are very similar in two age groups. Values of Tucker's coefficients of congruence for each of the three principal components exceeded 0.90. Contrary to the findings of previous studies using visual stimuli that suggested a decline in the correlation of affective dimensions with age, in this study intercorrelation between components did not differ significantly in two different age groups. These results demonstrate stability of the three-factor structure of affective experience of music in the examined age groups. However, the lack of differences in intercorrelations between affective dimensions in two age groups might suggest different developmental trajectory of affective experiences of music comparing to visual stimuli.

Keywords: affective experience of music, children, three-dimensional model, musical stimuli

IZLOŽENOST PROVOKATIVNIM TV SADRŽAJIMA I STANDARDI LEPOTE KOD ADOLESCENATA

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Uzimajući u obzir aktuelni fenomen „reality“ emisija, kao provokativnih medijskih sadržaja koji se prikazuju u našoj sredini, cilj ovog eksplorativnog istraživanja bio je da utvrdi da li izloženost takvim sadržajima ima efekte na standarde lepote adolescenata. U okviru pilot sudije, procenjeno je 47 fotografija devojaka na dimenzijama lepote, prirodnosti, poznatosti i tipičnosti izgleda poput „starlete“. Za finalni uzorak, izdvojeno je po 7 najboljih predstavnika kategorija prirodno lepih devojaka i prototipskih „starleta“. Kao prirodno lepe devojke izabrane su one, čije fotografije su imale najviše skorove na skalama prirodnosti i lepote i najniže na skalama tipičnosti izgleda „starlete“ i poznatosti. Kriterijumi za izbor prototipa „starleta“ bili su visoki skorovi na skali izgleda poput „starlete“ i niski skorovi na prirodnosti i poznatosti. U finalnom istraživanju, učestvovalo je 285 ispitanika uzrasta 14-22 god. (189 devojaka; AS=17 god.). Upitnikom je procenjena izloženost provokativnim tv sadržajima (operacionalizovana pitanjima o praćenju i informisanosti o „rijaliti“ programima) i sklonosti rizičnom seksualnom ponašanju. Standardi lepote adolescenata operacionalizovani su pomoću dimenzija lepote i atraktivnosti izgleda prirodno lepih devojaka i „starleta“ na odabranim fotografijama. Na osnovu prosečnih vrednosti procena, dobili smo 4 mere standarda lepote: lepota prirodnih devojaka, lepota „starleta“, privlačnost prirodnih devojaka i privlačnost „starleta“. Pored navedenih varijabli, za ženski deo uzorka indikatori internalizacije standarda lepote operacionalizovani su i kroz stepen poželjnosti izgleda prirodnih devojaka ili „starleta“, zatim procenu privlačnosti takvog izgleda za muškarce, kao i spremnost da urade estetsku intervenciju na svom telu. Rezultati ukazuju na pozitivnu povezanost izloženosti provokativnim sadržajima i sa procenjenom lepotom „starleta“ ($r = .26, p < .01$), procenjenom privlačnošću „starleta“ ($r = .25, p < .01$), kao i sa poželjnošću izgleda „starleta“ u slučaju devojaka ($r = .31, p < .01$). Izloženost provokativnim sadržajima je negativno korelirala sa procenjenom lepotom prirodnih ($r = -.14, p < .05$), privlačnošću prirodnih ($r = -.20, p < .01$) i sa procenom koliko su prirodne devojke privlačne muškarcima ($r = -.18, p < .01$).

Kada je reč o spremnosti na estetsku intervenciju, više od trećine (39.7 %) tinejdžerki namerava da koriguje barem jedan deo svog tela. Zabrinjavajući nalaz predstavlja i veza izloženosti provokativnom sadržaju sa upražnjavanjem nezaštićenih seksualnih odnosa ($r = .19, p < .01$). Nalazi će biti prodiskutovani u svetlu efekata koje popularni TV sadržaji imaju na oblikovanje nerealnih i veštačkih standarda lepote i na osećaj povećanog pritiska po pitanju izgleda i seksualnog ponašanja mladih.

Ključne reči: standardi lepote, adolescenti, provokativni tv sadržaji

The aim of the study was to discover whether the exposure to provocative media content affects adolescents' beauty standards. Participants rated photographs of natural beauties and provocative female prototypes on dimensions of beauty and attractiveness. For female participants additional indicators of the beauty standards were: desired resemblance to “natural” or “provocative”, anticipated attractiveness for each and readiness to do a plastic surgery. Exposure to the provocative tv content and risky sexual behaviour were measured by questionnaire. Exposure to the provocative tv content is positively correlated to: rated beauty ($r = .26, p < .01$) and attractiveness of provocative prototypes ($r = .25, p < .01$), as well as desired resemblance to them ($r = .31, p < .01$) and negatively correlated to rated beauty ($r = -.14, p < .05$) and attractiveness of natural women ($r = -.20, p < .01$) and to the anticipated attractiveness of natural women ($r = -.18, p < .01$). 40% of girls intent to do a plastic surgery, whereas those spending more time exposed to the provocative tv content show higher tendency for risky sexual behavior ($r = .19, p < .01$).

FORMIRANJE SLIKE O SEBI: ULOGA SKRIPTNIH ZABRANA I RANIH ISKUSTAVA

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Prema teoriji afektivne vezanosti verovanja o sopstvenoj nedostojnosti i neadekvatnosti, kao i nesigurnost u sebe i svoje vrednosti određuju razvoj negativne slike o sebi. Transakciona analiza nudi koncept skriptnih zabrana, negativnih poruka kojima se detetu uskraćuju lična prava i koje ono integriše u sopstveni self. Cilj ovog rada jeste da ispita mogućnost predikcije dimenzija aktuelne slike o sebi na osnovu dimenzija afektivne vezanosti i skriptnih zabrana. U istraživanju je učestvovalo 257 ispitanika ($m = 95$; $ž = 162$), starosti od 18 do 48

godina ($AS=22.40$; $SD=4.22$). Instrumenti korišćeni u istraživanju su Skala procene skriptnih zabrana (Galvrilov-Jerković i sar., 2010), Upitnik za procenu afektivne vezanosti (UPIPAV2; Hanak, 2004) i Skala self-koncepta (Bezinović, 1988). Sprovedena je multipla regresiona analiza sa dva seta prediktora, koji čine 12 skriptnih zabrana (1) i 6 dimenzija afektivne vezanosti (2). Rezultati su pokazali da konačan model ostvaruje značajan doprinos na svih šest dimenzija self-koncepta. Percepciju lične nekompetentnosti ($R^2=0.77$; $F(19,228)=39.73$; $p<.00$) najbolje predviđaju zabrana Ne budi uspešan ($\beta=0.35$; $p<.00$) i Negativan self ($\beta=0.39$; $p<.00$). Samopoštovanje ($R^2=0.72$; $F(20,226)=28.37$; $p<.00$) najbolje predviđaju zabrana Nemoj da misliš ($\beta=-0.22$; $p<.00$) i Negativan self ($\beta=-0.48$; $p<.00$), a Usamljenost ($R^2=0.71$; $F(19,227)=28.58$; $p<.00$) zabrana Ne budi blizak ($\beta=0.28$; $p<.00$) i Negativan self ($\beta=0.54$; $p<.00$). Strah od negativne socijalne evaluacije ($R^2=0.49$; $F(18,228)=10.29$; $p<.00$) predviđa zabrana Nemoj da misliš ($\beta=0.23$; $p<.02$) i Negativan self ($\beta=0.45$; $p<.00$), a na Opštem zadovoljstvu ($R^2=0.61$; $F(19,228)=18.41$; $p<.00$) doprinos ostvaruju ostvaruju samo dimenzije afektivne vezanosti, od kojih najveći Negativan self ($\beta=-0.37$; $p<.00$) i Nerazrešena porodična traumatizacija ($\beta=-0.29$; $p<.00$), dok na Eksternalnosti ($R^2=0.29$; $F(19,228)=4.90$; $p<.00$) doprinos je najbolje izražen preko zabrane Nemoj da odrasteš ($\beta=0.25$; $p<.00$) i Negativni drugi ($\beta=0.18$; $p<.02$). Kontrolisan je i uticaj socioekonomskog statusa porodice koji je ostvario doprinos u predikciji svih dimenzija self koncepta izuzev Straha od negativne socijalne evaluacije, a varijabla obrazovanje u predikciji Samopoštovanja. Pretpostavka o tome da loše samovrednovanje i negativne poruke koje nam upućuju u najranijem detinjstvu igraju važnu ulogu u predikciji negativne slike o sebi – potvrđena je i u skladu je sa teorijskim postavkama teorije afektivne vezanosti i skriptnim zabranama kao osnovnim pojmom transakcione analize.

Ključne reči: slika o sebi, skriptne zabrane, afektivna vezanost

The main goal of this research is to examine the role of early experiences with close people and the messages they have sent us, in the development of various components of our self-concept. The sample consisted of 257 participants (m-95; f-162), aged 18-48 ($M=22.40$; $SD=4.22$). The instruments used in the research are the Injunctions scale (Galvrilov-Jerković et al., 2010), the Questionnaire of adult attachment (UPIPAV2; Hanak, 2004) and Self-concept scales (Bezinović, 1988). The results of multiple regression analysis showed that the final regression model has a significant contribution to all six dimensions of the self-concept. The influence of socioeconomic status and education status as external variables has been controlled also. The assumption that early experiences with close people and injunctions play an important role in predicting what kind of image we have about ourselves has been confirmed, with the need for additional research in this field.

ISPITIVANJE POVEZANOSTI POLA I UZRASTA SA MENTALNIM ZDRAVLJEM ISPITANIKA

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Mentalno zdravlje uključuje odsustvo tradicionalnih znakova psihopatologije, kao što su simptomi anksioznosti i depresije, kao i prisustvo psiholoških markera psihološkog blagostanja kao što radost i pozitivan pogled na život (Ware et al., 1993). Na osnovu ovoga Veit i Ware (1983) nude model mentalnog zdravlja koji se posmatra kroz dve dimenzije: psihološko blagostanje koga opisuju subskale: generalno-pozitivan afekat, emocionalne veze i zadovoljstvo životom i psihološki distres koga opisuju subskale: anksioznost, depresija i gubitak kognitivne i bihevioralne kontrole.

Pol i starost su dve varijable od kojih zavise anatomske karakteristike ljudskog organizma. Pretpostavili smo da su one u povezanosti sa mentalnim zdravljem ispitanika, jer svaki muškarac i svaka žena imaju različite uloge, kako u fizičkom, tako i u psihološkom smislu, tokom različitih starosnih dobi. Među brojnim istraživanjima mentalnog zdravlja, između ostalog, istraživači su izneli rezultate da pol značajno utiče na mentalno zdravlje. Khan i saradnici (2015) potvrdili su da pol utiče na razlike u psihološkom blagostanju i psihološkom distresu u korist žena, koje su postizale više skorove na psihološkom blagostanju. Oprečno ovim rezultatima dečaci su pokazali bolje mentalno zdravlje u odnosu na devojčice (Heubeck & Neill, 2000). Nas je zanimalo da li u ovoj epohi snažne patologizacije postoje razlike u pogledu mentalnog zdravlja i njegovih dimenzija u odnosu na ove dve varijable?

Istraživanje je sprovedeno u periodu od juna do avgusta 2014. godine na prigodnom uzorku ispitanika sa teritorije Vojvodine. Analizirani su odgovori 358 ispitanika, oba pola, starosti od 18 do 65 godina. Na osnovu modela mentalnog zdravlja (Ware et al., 1983) konstruisan je upitnik MHI-38 (Veit & Ware, 1983), čija se prilagođena verzija u našoj kulturi (UMZ-32, Sitarević) koristila za operacionalizaciju mentalnog zdravlja u ovom istraživanju. U novoj verziji, instrument meri mentalno zdravlje kroz psihološko blagostanje i psihološki distres.

Analizom aritmetičkih sredina, dobijenih primenom t-testa na nezavisnim uzorcima, utvrđeno je da među polovima nema razlika u pogledu date varijable. Starost nije statistički značajan prediktor ukupnog skora mentalnog zdravlja, ali i

njegovih dimenzija. Iako pol i starost predstavljaju najznačajnije faktore individualnih razlika u izraženosti psiholoških konstrukata, ovim istraživanjem utvrđeno je da oni nisu povezani sa ispitivanim aspektima mentalnog zdravlja, kao ni sa skalom u celini, te je u naredna istraživanja poželjno uključiti i druge varijable i istražiti njihov uticaj na mentalno zdravlje.

Ključne reči: mentalno zdravlje, pol, starost

This research explores are the gender and age related to the mental health? Researches have shown that gender and age are associated with mental health (Khan, et al, 2010; Heubeck & Neill, 2000).

The survey was conducted in the period from June to August 2014. We analyzed the responses of 358 subjects from the territory of Vojvodina, age 18 to 65. In this study, based on the model of mental health (Vare et al., 1983), we used a modified version of MHI-38 (Veit & Ware, 1983), adjusted to our culture (UMZ-32, Sitarević) for measuring the mental health. In the new version, the instrument measures mental health through psychological well-being and psychological distress.

The results have shown that there were not gender differences to the given variables. Age is not statistically significant predictor of the mental health, and its dimensions.

Keywords: mental health, gender, age

KAKO RASTU 'VELIKE RIBE'? ISTRAŽIVANJE EFEKATA HOMOGENOG GRUPISANJA MATEMATIČKI DAROVITIH UČENIKA

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U ovom radu fokus je na vidovima obrazovne podrške matematički darovitim učenicima, pre svega na grupisanju prema sposobnostima (homogenom grupisanju). Polazeći od pretpostavke o efektu „velike ribe u malom ribnjaku” (engl. Big-Fish-Little-Pond effect, BFLPE; Marsh & Hau, 2003) koji govori o nižem akademskom self-konceptu darovitih učenika u akademski zahtevnijim sredinama, cilj ovog istraživanja bio je ispitivanje efekata homogenog grupisanja na matematički self koncept i matematičku anksioznost učenika. Efekti homogenog grupisanja ispitivani su poređenjem grupa učenika u specijalizovanim odeljenjima za matematiku u odnosu na standardna odeljenja i

na tri uzrasta – u osmom razredu osnovne, drugom i četvrtom razredu srednje škole. U istraživanju je učestvovalo 135 učenika, 75 (55.4 %) učenika koji pohađaju standardni program i 60 (44.6 %) učenika koji se školuju prema specijalno-matematičkom programu. Koristeći MANOVA-u analizirane su pretpostavke o razlikama između ovih grupa u pogledu matematičkog self koncepta i matematičke anksioznosti, operacionalizovanih preko PISA instrumenata.

Kada je u pitanju osmi razred, dobijena je statistički značajna razlika u skorovima na linearnom kompozitu matematičkog self-koncepta i matematičke anksioznosti između učenika u standardnom i specijalno-matematičkom odeljenju ($F(2,44)=8.044$, $p=.001$; Wilks $\Lambda=.732$, parc. $\eta^2=.268$). Dobijeno je da učenici specijalno-matematičkog odeljenja imaju u proseku pozitivniji matematički self-koncept, ($F(1)=5.998$, $p=.018$; parc. $\eta^2=.118$), dok učenici koji se školuju prema standardnom programu imaju u proseku viši skor na matematičkoj anksioznosti ($F(1)=15.763$, $p=.000$; parc. $\eta^2=.259$). I u slučaju učenika drugog razreda dobijen je statistički značajan efekat školskog programa na linearni kompozit zavisnih varijabli ($F(2,40)=5.814$, $p=.006$; Wilks $\Lambda=.775$, parc. $\eta^2=.225$). Učenici iz standardnog odeljenja imaju u proseku više skorove matematičke anksioznosti ($F(1)=11.761$, $p=.001$; parc. $\eta^2=.223$), dok u slučaju matematičkog self-koncepta nisu pronađene značajne razlike. Na uzrastu četvrtog razreda srednje škole nije pronađena značajna razlika između grupa na klasifikacionom faktoru u odnosu na linearni kompozit zavisnih varijabli.

Dobijeni rezultati govore o različitim efektima školskog programa (specijalni/standardni) na različitim uzrastima, ali upućuju na neslaganje sa pretpostavkama modela BFLPE o nižem self konceptu učenika u homogenim odeljenjima.

Ključne reči: matematički daroviti učenici, homogeno grupisanje, matematički self-koncept, matematička anksioznost

WHAT HAPPENS WHEN 'BIG FISH' GROWS UP? RESEARCH ON THE EFFECTS OF HOMOGENEOUS GROUPING OF MATHEMATICALLY GIFTED STUDENTS

The aim of this research was to examine the effects of ability grouping of mathematically gifted students (homogeneous grouping) by comparing their mathematics self-concept and mathematics anxiety with students in standard classes. For this purpose instruments from PISA 2012 were applied on three age groups – students from eighth grade of primary and from second and fourth grade of secondary school. The sample consisted of 135 students – 75 (55.4%) from standard and 60 (44.6%) from mathematics classes.

The results of multivariate analysis of variance (MANOVA) show different effects of homogeneous grouping in different age levels, but they do not support

model of Big-Fish-Little-Pond Effect (BFLE; Marsh & Hau, 2003), which predicts that students in homogeneous and high-ability classes have lower academic self-concept.

MOTIVACIONA KLIMA KREIRANA OD STRANE SAIGRAČA KAO PREDIKTOR ODUSTAJANJA OD SPORTA

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Tokom adolescencije, vršnjaci imaju značajnu ulogu u formiranju identiteta individue, kao i u procesu donošenja odluka. U sportu, saigrači kao značajni vršnjaci u velikoj meri oblikuju stavove i vrednosni sistem adolescenta. Svojim ponašanjem saigrači mogu kreirati motivacionu klimu usmerenu na postignuće ili na učenje. Budući da u periodu adolescencije saigrači predstavljaju značajne figure, kao i da imaju značajan uticaj na stavove adolescenta, ovo istraživanje se bavi ispitivanjem prediktivne uloge motivacione klime koju kreiraju saigrači na nameru da se odustane od sporta u adolescenciji. Uzorak se sastojao od 383 mladih sportista (dečaka=191; devojčica=192), prosečnog uzrasta od 14 godina, sa teritorije Vojvodine, koji aktivno treniraju košarku, odbojku i rukomet. Tokom marta 2017. godine, popunjavali su Upitnik o opaženoj motivationoj klimi kreiranoj od strane saigrača (Peer Motivational Climate in Youth Sport – PMCYSQ, Ntoumanis & Vazou, 2005) koji se sastoji od dve subskale: motivaciona klima usmerena na postignuće (ego-involving) i motivaciona klima usmerena na učenje (task-involving). Namera da se odustane od sporta je procenjena na jednoajtemskoj petostepenoj skali. Rezultati regresione analize pokazuju da je ovakav prediktorski set, gde su motivaciona klima usmerena na postignuće i učenje prediktori, a namera da se odustane od sporta kriterijum varijabla, statistički značajan ($F(2)=9.57, p=.00$) i da objašnjava 5% varijanse. Motivaciona klima usmerena na postignuće izdvojila se kao značajan prediktor ($\beta=.150, p<.01$). Motivaciona klima usmerena na postignuće podrazumeva ponašanja saigrača koja su usmerena na rivalstvo sa saigračima, kritiku, ismejavanje, vrednovanje samo igrača koji su „zvezde“, gde cilj opravdava sredstvo, a cilj je biti najbolji i pobediti. Ne postoji socio-emocionalna podrška među saigračima, kao ni osećaj povezanosti. Ovakva ponašanja dovode do osećanja izolovanosti i neprihvaćenosti, kao i nekompetentnosti što rezultira namerom adolescenta da napusti sport. Prepoznavanjem faktora koji doprinose

odustajanju od sporta u adolescenciji mogu se kreirati preventivni programi, budući da sport ima značajnu ulogu u celokupnom razvoju adolescenta.

Ključne reči: motivaciona klima, saigrači, mladi sportisti, odustajanje od sporta, adolescencija

MOTIVATIONAL CLIMATE CREATED BY TEAMMATES AS PREDICTOR OF DROPPING OUT OF SPORTS IN ADOLESCENCE

Teammates can create motivational climate that is ego or task-involving. Each motivational climate consists from behaviors and social cues that shape adolescents own value system and behavior. The objective of this research was to determine the predictive role of motivational climate created by teammates on intention to drop out of sports in adolescence. The sample consisted of 383 young athletes (both genders), who train basketball, volleyball, and handball. Young athletes filled out Peer Motivational Climate in Youth Sport Questionnaire - PMCYSQ (Ntoumanis & Vazou, 2005) that consists of task and ego-involving motivational climate. Intention to drop out of sports was measured by one item on a five point scale. The results of regression analysis show that motivational climate created by teammates represent significant predictive model ($F(2)=9.57$, $p=.00$) of intention to drop out of sports, and explains 5% of variance. Ego-involving motivational climate has singled out as significant predictor ($\beta=.150$, $p<.01$).

PERCEPTION OF THE MOTIVATIONAL CLIMATE CREATED BY PARENTS OF YOUNG SERBIAN ATHLETES AS PREDICTOR OF SATISFACTION OF BASIC PSYCHOLOGICAL NEEDS IN SPORTS

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In adolescence, parents have a relevant role in young athlete's sports life. Parents of a young athlete, with their attitudes and behaviors, create a motivational climate regarding sports that can be ego or task-involving. Both motivational climates directly affect young athlete's perception about satisfaction of his basic psychological needs in sports: need for competence, autonomy, and relatedness. Satisfaction of these needs further influence athlete's performance as well as his well-being (Deci & Ryan, 2014). This research examines the predictive role of athlete's perceived motivational climate created by mother and father on

satisfaction of basic psychological needs of young athlete in adolescence. The sample consisted from 383 young athletes (male=191, female=192) average age of 14 years, from Vojvodina, who actively train handball, volleyball, or basketball. They've completed Basic Need Satisfaction in Sport Scale – BNSSS (Ng, Losdale, & Hodge, 2011) that measures the level of satisfied needs for competence, autonomy, and relatedness in sports; and Perceived Motivational Climate in Sport Questionnaire 2 – PMCQ-2 (White, Duda, & Hart, 1992) separately for mother and father, that (within this sample) consists from three subscales: task-involving motivational climate; effortless success, and concern about failure (two subscales that are in line with ego-involving motivational climate). Results of the regression analysis show that athlete's perceived motivational climate created by parents (mother's and father's) represent significant predictor of the need for competence ($F(6)=10.80, p<.00, R^2=.154$); and the need for relatedness ($F(6)=11.25, p<.00, R^2=.159$); but not for the need for autonomy. As the relevant predictors of the need for competence mother's ($\beta=.173, p=.01$) and father's ($\beta=.200, p=.00$) task-involving motivational climate singled out. In the case of the need for relatedness the same results were obtained, mother's ($\beta=.182, p=.01$) and father's ($\beta=.224, p=.00$) task-involving motivational climate singled out as significant predictors. When parents nurture behaviors and attitudes directed towards skill development, hard work, effort, support and understanding, young athlete has a greater sense of satisfied needs for competence and relatedness, as a result of internalized set of values that send message of self value and acceptance by others.

Keywords: motivational climate, parents, basic needs in sport, adolescent

DIFFERENCES IN ATTACHMENT PATTERNS IN CHILDREN OF FALLEN SOLDIERS AND THEIR PEERS FROM COMPLETE FAMILIES

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More than 20 years after the war in Bosnia and Herzegovina (1992-1995), the estimated overall number of victims is around 100000, while tens of thousands of children have grown up without their fathers. Families with infants born shortly before or during the war, who lost their fathers at such an early age, were particularly vulnerable. Women in these families were simultaneously exposed to multiple strong stressors. Continuous feeling of fear and despair of being a single parent of a small child in war times, emotional unavailability due to a traumatic loss, ambivalence and inconsistency due to extreme stress exposure, and similar reactions and behavior can potentially lead to the formation of disorganized attachment patterns.

Having this in mind, the aim of this study was to identify differences in attachment patterns between two groups: a group of young people born between 1988 and 1995 (aged 0 to 5 at the time of their father's death), and a group of young people born in that same period, but who grew up in complete families without traumatic loss. The sample consisted of 33 students of the University of Banja Luka, aged 20 to 27 years, 17 of which are children of fallen soldiers.

Adult Attachment Projective Picture System, by George & West, was used to identify attachment patterns. The dismissing attachment pattern is predominant in the complete family group (37.5% of participants), while the disorganized attachment pattern prevails in the group of children of fallen soldiers (47.1% of disorganized participants). However, no significant differences between the two groups were found in frequencies of attachment patterns ($\chi^2(3, N=33)=3.42, p=.332, \phi=.332$). Additionally, disorganized-specific markers pointing to the existence of an unresolved loss were found in 47.1% of cases in children of fallen soldiers group compared to only 25% of cases in the control group, although this difference is also not significant ($\chi^2(1, N=33)=1.73, p=.188, \phi=.229$).

These findings are in line with the theories of the formation of disorganized attachment, and partially in accordance with earlier results of attachment-related studies on various samples in this region.

SHAME AND GUILT AND THEIR RELATIONSHIP TO ANGER EXPRESSIVENESS AMONG MALE AND FEMALE YOUNG ADULTS

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This research paper assesses the correlation among gender, shame and guilt and anger expression amid young adults. 309 respondents (150 female, 159 male) took part. All of them were 20-25 years old. Data was gathered with on-line survey software, shared on several social networks. The tendency for feeling shame and guilt was measured with The Test of Self-Conscious Affect. This instrument consists of short scenarios and corresponding answers which indicate different tendencies for shame and guilt. The anger expression scale examined the dominant anger expression style. This scale contains three subscales marked as Anger/In, Anger/Out, and Anger/Control. There were statistically significant gender differences regarding the feeling of shame, $t(263)=3.16, p<0.01$, and guilt, $t(263)=2.39, p<0.05$. This would mean that women were more prone to feeling shame and guilt compared to men. This could be explained by the relationship between parents' protective behaviour and tendency for feeling shame

Gender differences regarding anger expression were analysed, but there was no significant difference. Further analysis showed positive correlation between feelings of shame and inward anger ($r=.152, p<0.01$), for both female and male participants, meaning that people who had tendencies for feeling shame, were also more prone to direct their anger inward, regardless of gender.

This partial inconsistency of current findings to previous ones might be a consequence of using instruments that are not standardized for this population. These are made for western culture which, even though lately has strong influence over our population, is not fully accepted yet. Most of the psychological processes are controlled by the long ago anchored mentality, much different from the western one.

However, the size and the type of the sample greatest disadvantage of this study. All the instruments were uploaded on an online software for data collection, and were shared on social networks, making the sample convenient.

Keeping everything in mind, the first suggestion for further research would be standardization of instruments measuring moral emotions and ways of anger expression. Even though it sounds ambitious, it is the first requirement for validating any research.

Keywords: shame, guilt, anger expression, young adults

KVALITETA PRIVRŽENOSTI RODITELJIMA KOD STUDENATA

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U novije vrijeme u postindustrijskim zemljama sve se više odgađa prelazak u odraslu dob, te se javlja novo razvojno razdoblje, predodraslost. Promjene u hijerarhiji privrženosti koje se događaju tijekom adolescencije i predodraslosti čine vršnjačke odnose važnima za psihosocijalni razvoj. Međutim, mnoga istraživanja su pokazala da su odnosi s roditeljima i dalje bitna odrednica psihološke dobrobiti. Tako je primjerice sigurna privrženost roditeljima povezana i s boljom prilagodbom na studij. Najčešće se ističu različite uloge majke kao emocionalnoga i oca kao instrumentalnog odgajatelja. Stoga se i naglašava da kvaliteta privrženosti može biti različita s majkom i s ocem. Cilj ovog istraživanja je bio ispitati kvalitetu privrženosti majci i ocu kod studenata, te ulogu nekih demografskih karakteristika. Istraživanje je provedeno putem društvenih mreža na 305 studenata (236 žena i 69 muškaraca) prosječne dobi 21.8 godina (SD=2.14). U istraživanju je korištena podskala privrženosti majci i ocu iz Inventara privrženosti roditeljima i vršnjacima (IPPA; Armsden i Greenberg, 1987).

Rezultati ukazuju da studentice percipiraju nižu razinu alijenacije s majkom ($t(236)=-2.58$; $p<.05$), što je moguće zbog općenito veće prisnosti djevojaka s majkama, pa je alijenacija u tom odnosu rijetkost. Studenti percipiraju manje povjerenja u odnosu s ocem ($t(69)=3.36$; $p<.05$), što je moguće jer, prema teoriji socijalnih uloga, očevisu ti koji vrše pritisak na studente da budu što nezavisniji i samostalniji. Nadalje, studenti koji rade tijekom studija percipiraju nižu razinu povjerenja ($t(262)=2.75$; $p<.01$) i komunikacije ($t(262)=2.49$; $p<.01$) s majkom. Moguće je da zbog majčine veće emocionalne vezanosti za djecu ona teže prihvaća osamostaljivanje, dok otac više naglašava nezavisnost i osobnu poduzetnost. Studenti koji rade i koje financiraju roditelji percipiraju i više alijenacije ($t(262)=-2.13$; $p<.05$) u odnosu s majkom. Činjenica da studenti rade ali da su dijelom i dalje ovisni o roditeljima možda dodatno doprinosi ambivalentnosti odnosa. U budućim istraživanjima bi trebalo detaljnije ispitati kako karakteristike poput promjene boravišta, financijske podrške i zaposlenosti utječu na odnos sa roditeljima, te uzeti u obzir i stupanj psihološke separacije koji je također važan za adaptivno funkcioniranje.

Ključne reči: privrženost, emocionalnost, majka, otac

Attachment is usually defined as a strong emotional connection with one or more significant others. Research has shown that mothers usually achieve greater emotional connection with children, whereas fathers give more of an instrumental

support. The aim of this study was to examine the quality of attachment with parents and the impact of some demographic factors. Research was conducted online on 305 respondents, with the average age of 21.8 years ($SD=2.14$). Subscales for parents from the Inventory of parent and peer attachment (IPPA; Armsden & Greenberg, 2009) were used. The results have shown that women feel less alienated in relationships with mothers ($t(236)=-2.58$; $df=19$; $p<.02$), whereas men feel less trust in relationships with fathers ($t(69)= 3.36$; $df=3$; $p<.04$). Having a job while studying was shown to be an important factor for the relationship with mothers. Future research should examine in detail how characteristics such as financial support and employment affect the relationship with parents, and also consider the degree of psychological separation.

KARAKTERISTIKE PORODICE I POLNE RAZLIKE U EMPATIJI, PROSOCIJALNOM I AGRESIVNOM PONAŠANJU KOD DECE NIŽEG OSNOVNOŠKOLSKOG UZRASTA

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Empirijski podaci o polnim razlikama u izražavanju različitih formi agresivnosti kod učenika, kao i u empatiji i prosocijalnom ponašanju, ovu temu čine kompleksnijom, te se čini da se tipični obrasci agresivnog i prosocijalnog reagovanja i njihove relacije sa empatijom ne mogu sagledati nezavisno od pola deteta. Postojećem korpusu radova doprinosi razmatranje polnih razlika u kontekstu demografskih karakteristika porodice, poput tipa (npr. jednoroditeljska) i broja dece. Cilj istraživanja jeste utvrđivanje specifičnih obrazaca povezanosti između karakteristika porodice, empatije, prosocijalnog ponašanja i agresivnog ponašanja u zavisnosti od pola dece nižeg osnovnoškolskog uzrasta. Uzorak čine 263 učenika (65% devojčica) nižih razreda osnovnih škola sa teritorije Vojvodine, prosečne starosti 8.27 godina. Instrumenti korišćeni u istraživanju su Skala za procenu specifičnih ponašanja, namenjena merenju agresivnog i prosocijalnog ponašanja deteta od strane učitelja i Ajzenbergova skala dečje samoprocene saosećanja. Rezultati upućuju na postojanje polnih razlika u izraženosti direktne agresivnosti u korist dečaka ($t(261)=15.28$; $p<.01$) i prosocijalnog ponašanja u korist devojčica ($t(261)=10.80$; $p<.01$). Rezultati korelacione analize upućuju na zaključak da su indirektna i

direktna agresivnost u visokoj korelaciji kako kod dečaka ($r=.75$, $p<.01$), tako i kod devojčica ($r=.76$, $p<.01$). Prosocijalno ponašanje je u negativnoj relaciji sa direktnom ($r=-.39$, $p<.01$) i indirektnom ($r=-.23$, $p<.05$) agresivnošću kod dečaka, dok je kod devojčica, osim toga, detektovana i pozitivna relacija sa empatijom ($r=.20$, $p<.05$). Rezultati MANCOVE ukazuju da ispoljavanju direktne agresivnosti pozitivno doprinosi život sa jednim roditeljem kod dečaka ($B=1.87$, $t=2.42$, $p<.05$) i kod devojčica ($B=.90$, $t=3.56$, $p<.01$), kao i situacija kada su dečaci jedinci ($B=.60$, $t=2.93$, $p<.01$), a devojčice ispoljavaju niže prosocijalno ponašanje ($B=-.10$, $t=-2.07$, $p<.05$) i imaju sibilinge ($B=.88$, $t=2.57$, $p<.05$). Indirektnoj agresivnosti kod devojčica pozitivno doprinosi samo život s jednim roditeljem ($B=.62$, $t=2.58$, $p<.05$), dok kod dečaka ne postoje značajni doprinosi prediktorskih varijabli. Kod oba pola detektuje se značajan doprinos interakcije života u jednoroditeljskoj porodici sa činjenicom da su jedinci u porodici u ispoljavanju obe vrste agresivnosti, dok se empatija ni u jednom slučaju ne pokazuje značajnim činiocem ispoljavanja agresivnog ponašanja. Obrasci povezanosti ispitivanih varijabli ukazuju da je za dalji preventivni rad neophodno uzeti u obzir polne razlike u agresivnom i prosocijalnom ponašanju i empatiji u kontekstu sociodemografskih karakteristika porodice.

The aim of study is to determine specific association patterns between family characteristics, empathy, prosocial and aggressive behavior in relation to gender of primary school-aged children. The sample was consisted of 263 students (65% girls, mean age: 8.27 years) from Vojvodina. Specific-Behavior Assessment Scale, designed for measuring aggressive and prosocial children's behavior by teachers, and Eisenberg's Child-Report Sympathy Scale, designed for measuring empathy, were applied. The results suggest that there are gender differences in the expression of direct aggression in favor of boys and prosocial behavior in favor of girls. Correlation analysis results indicate that indirect and direct aggressiveness are highly correlated, both within boys and girls. Prosocial behavior is negatively correlated to both direct and indirect aggressiveness among boys and among girls, while positive correlation with empathy is specific only for girls. MANCOVA suggests that life with one parent positively contributes to direct aggression in both gender groups, while prosocial behavior is significant only for girls. Indirect aggression in girls is only positively contributed by life with one parent, while there is no significant contributions of the predictor variables in group of boys. In both gender groups, empathy doesn't play significant role in manifestation of aggression, but there is detected contribution of family characteristics interaction.

Keywords: empathy, aggressive behavior, prosocial behavior, primary school age, gender differences

SOCIJALNA PSIHOLOGIJA

SUBJECTIVE VIEWS ON THE RECONCILIATION IN THE POST-YUGOSLAV COUNTRIES: ROLE OF THE ETHOS OF CONFLICT

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Previous research showed that societal beliefs, including lay people representations of the causes of conflicts, could be important for understanding the nature of conflicts and possibilities for reconciliation. This study aimed to explore the views on inter-group reconciliation in Serbs from central Serbia, northern Kosovo and Republic of Srpska, regarding the groups they were most recently in conflict with (Croats, Kosovo Albanians, and Bosnian Muslims), as well as the possible role of the Ethos of Conflict (EOC; a system of eight societal beliefs about justness of goals, unity, in-group victimization, delegitimization, patriotism, security, positive collective self-image, peace, emerging from protracted intergroup conflict) in their explanation. Participants were psychology students and their parents (N=643). Besides EOC questionnaire, open-ended questions about factors that hinder reconciliation and actions for achievement it were administered.

Content analysis of the answers on the question about factors which hinder reconciliation resulted in seven categories: 1) blame externalization; 2) mutual blame; 3) foreign factors; 4) politicians and media; 5) seeing mutual past; 6) the lack of positive capacities; 7) religion. When actions for the achievement of reconciliations were analyzed, seven similar categories were extracted: 1) no reconciliation; 2) externalization of responsibility; 3) economy; 4) education; 5) politicians and media; 6) coping with the past; 7) inter-group connection. These variables were coded as binary variables and set as criteria in binary logistic regressions. EOC societal beliefs were set as predictors. All of the regression functions were statistically significant (R^2 ranging from .04 for religion to .16 for blame externalization in the case of barriers for reconciliation and from .04 for education to .12 for coping with the past in the case of promoters of reconciliation). The best predictors were delegitimization and victimization, especially in the case of blame externalization ($b=.89$ and $b=.90$, respectively) from the first set of criteria, and negative attitudes toward reconciliation ($b=.49$

and $b=.59$) and the externalization of responsibility ($b=.52$ and $b=.87$) from the second set.

EOC is a valid concept for explaining the conflicts and reconciliation in the post-Yugoslav countries. But, only a small part of the views toward reconciliation can be explained by EOC, which suggests that subjective views on reconciliation could be context-dependent.

Keywords: Reconciliation obstacles, reconciliation facilitators, Ethos of Conflict, Yugoslav conflicts

A TYPOLOGY OF CIVIC AND POLITICAL ENGAGEMENT OF THE YOUTH AND ITS RELATION TO HEXACO PERSONALITY TRAITS

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General public discourse and some empirical data suggest that the youth in Bosnia and Herzegovina – an economically challenged country with high emigration rate – is meagerly interested in civic and political participation. With this study we wanted to explore this phenomenon by using a typological approach, which allows for distinct configurations of civic and political engagement that might stay undetected under the more usual dimensional procedures. Further, we tested to which degree the identified types could be predicted by broad personality traits.

We administered a battery of self-report measures to a convenience and purposive sample in 42 municipalities in the Republic of Srpska, Bosnia and Herzegovina, with a total number of participants of 1039 (52% females, age range: 19 to 26). Civic engagement was assessed with seven items targeting proactive behaviors intended to improve community conditions (e.g. collecting donations, signing petitions, reporting corruption; $\alpha=.82$, $\omega=.83$); similarly, political participation was assessed with 10 items related to activities intended to influence the distribution of political power (e.g. voting, participating in political protests, being a candidate in elections; $\alpha=.86$, $\omega=.88$). The HEXACO dimensions were assessed with 12 items from the HEXACO-PI-R 100 (Ashton & Lee, 2016), which were selected through a genetic algorithm procedure on the dataset from a previous study.

To identify the typology, we used latent class analysis on responses from 17 items related to civic and political engagement. Four-class solution was the best one in terms of information criteria used (AIC and BIC), and it was also substantially interpretable. "Inactives" constituted the largest group (54.9%), while other three groups were less represented in the sample: "political dabblers" (18.7%), "civic activists" (15.8%), and "political activists" (10.6%).

Out of six HEXACO traits, three were found to systematically discriminate among the types using the latent class regression. In summary, honesty-humility (negatively) and extraversion is associated with the overall engagement, while openness to experience is associated with civic participation. We discuss our findings in the context of previously conceptualized participation typologies and the relevance of personality for the participation.

Keywords: Civic engagement, political participation, youth, HEXACO, personality traits

ULOGA PREVENTIVNIH PROGRAMA U ZAJEDNICI U UNAPREĐENJU MENTALNOG ZDRAVLJA MLADIH U BOSNI I HERCEGOVINI

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U ovom istraživanju smo ispitivali da li edukativno-preventivni programi u zajednici mogu unaprijediti mentalno zdravlje mladih. U periodu od 2015. do 2017. godine je sprovedeno kvaziekperimentalno istraživanje na istom uzorku, sa ponovljenim mjerenjima. Nakon pretest mjerenja, sprovedena je dvogodišnja intervencija (tzv. „Program Y“), a nakon toga je izvršeno posttest mjerenje. Istraživanje je sprovedeno u okviru projekta „Promocija zdravih životnih stilova među mladima u Bosni i Hercegovini preispitujući rodne stereotipe“ koji je sprovela organizacija Care Balkan’s sa lokalnim partnerima.

Program je sproveden u 10 gradova BiH, a najviše učesnika je bilo u Banjaluci, Mostaru i Sarajevu. U obe faze testiranja upitnik je popunilo 1292 mladih (654 mladića, 638 djevojaka) uzrasta 15-18 godina. Mentalno zdravlje je u upitniku mjereno skraćenom verzijom MHI upitnika. Mjereni su i indirektni indikatori mentalnog zdravlja kao što su učešće u nasilju i konzumiranje alkohola, te socio-demografske karakteristike, socijalna podrška i nivo učešća u različitim aktivnostima preventivnog programa. Organizovano je i šest fokus grupa u kojima je učestvovalo ukupno 64 mladih. Dvogodišnji program intervencije je obuhvatao učešće u setu radionica, socijalnim kampanjama, te tzv. “budi muško

klubovima (BMK)”. Radionice su se odnosile na teme: ispoljavanje emocija, uzori mladih, suočavanje sa bijesom, vršnjačko i rodno zasnovano nasilje, rodne norme, seksualno zdravlje, stereotipi itd. U svakom gradu su uglavnom jednom mjesečno organizovane kampanje i događaji koji su se odnosili na zdravlje mladih, nenasilje, roditeljstvo, seksualnost, prosocijalna ponašanja itd. Kampanje su organizovane najčešće od strane BMK koji su činili najmotivisaniji mladi iz radionica.

Rezultati pokazuju da je indeks mentalnog zdravlja djevojaka pozitivnije procijenjen na kraju programa u odnosu na početno mjerenje ($z(616)=-2.775$; $p<.001$). Kod mladića nisu utvrđene značajne razlike u početnom i završnom istraživanju ($z(590)=-.579$; $p>.05$). Ukoliko ispitujemo razlike između gradova, pozitivnije promjene u indeksu mentalnog zdravlja mladića su utvrđene u gradovima u kojima se “Program Y” intenzivnije realizovao ($t(596)=1.923$; $p<.05$). Možemo zaključiti da je proces unapređenja mentalnog zdravlja složen poduhvat koji pored brojnih drugih faktora može biti determinisan i polom te intenzitetom preventivnih programa.

Ključne riječi: mentalno zdravlje, mladi, preventivni program.

Istraživanje je sprovedeno u okviru projekta „Promocija zdravih životnih stilova među mladima u Bosni i Hercegovini preispitujući rodne stereotipe“ koji je sprovela organizacija Care Balkan’s sa lokalnim partnerima

WEB DIALOGUE AND ITS EFFECTS ON IMPROVING POST-CONFLICT RELATIONSHIPS

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This study examines whether and how participating in online intergroup dialogue about contentious and everyday issues in a post-conflict context can influence the resulting discourse of conflict. We tested the effects of participation in the online dialogue on ingroup identification, justice demands and readiness for intergroup interaction, among others, that can have profound consequences for fostering harmony or justice. We prepared specific on-line platform for the dialogue, with

prepared topics (but open to new ones). The dialogue was observed and moderated (to stay in planned frame) and participants got a small material incentives to be active.

The sample consisted of 96 subjects completed a pre-survey on their socio-political attitudes, and 66 of them (37 Bosniaks and 29 Serbs; age between 18 to 44 years old – $M=25.69$, $SD=5.39$; 68.2% females) decided to participate actively and anonymously in an online intergroup dialogue for four weeks. There were 2.716 posts on 66 topics. After the dialogue, participants completed post-survey. We found that there was a significant effect of on-line dialog on justice demands ($F(1,64)=657.08$, $p=.001$ – justice demands were higher after the dialogue ($M_{Time 2}=7.33$) than before ($M_{Time 1}=6.95$)), a significant effect of on-line dialog for structural goals (to promote peace and justice activism, to increase intentions to challenge unjust system, to identify ways that we can work together to create equality between groups) during intergroup dialogue ($F(1,64)=451.05$, $p<.001$ – support for structural goals was higher after the dialogue ($M_{Time 2}=7.66$) than before ($M_{Time 1}=7.31$)), a significant effect of time on prioritizing commonality ($F(1,64)=49.00$, $p<.001$ – prioritizing commonality was lower after the dialogue ($M_{Time 2}=7.46$) than before ($M_{Time 1}=7.59$)), a significant effect of on-line dialog on prioritizing justice ($F(1, 64)=1595.34$, $p<.001$ – prioritizing justice was higher after the dialogue ($M_{Time 2}=7.07$) than before ($M_{Time 1}=6.00$)).

The results in both ethnic subsamples show similar patterns.

Therefore, the dialogue fostered a justice-oriented discourse among both Bosniaks and Serbs, who evidenced stronger ingroup identification, greater demands for justice, and more support for structural goals during intergroup dialogue, as well as higher priority for discussing ways to pursue justice. This finding implies that intergroup interaction not only shapes the way in which people relate to the outgroup(s) involved, but also how people relate to their ingroups.

The dialogue fostered interest in future intergroup dialogue around the pursuit of justice and structural change.

Keywords: intergroup dialogue, justice, reconciliation, intergroup conflict, online dialogue

PERCEPTION OF TEMPORAL DISTANCE IN INTER-GROUP CONFLICTS

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Victims' strong desire for redressing past injustices and perpetrators' tendency to disengage from collective harm-doing suggest that they may be motivated to have different subjective perceptions of temporal distance from the same past intergroup violence.

The main goal of this study was to examine how temporal distance (measured on the graphic scale, from very close 0 to very distant 100) plays a role in responses to intergroup violence from the perspectives of victim and perpetrator groups.

The sample consisted of 477 subjects. 54% of them Serbs (63% women; age $M=31.35$, $SD=11.98$). Both groups of participants were randomly assigned to read a news article about an atrocity, committed either by Serbs or Bosniaks. After the reading task, they completed series of scales (retributive justice, attitude towards offenders, collective guilt among perpetrators, empathy, dehumanization, social and political support for human rights for out-groups, ethnic identity, and, readiness to reconciliation).

Results showed a significant main effect of ethnicity on subjective temporal distance ($F(1,439)=24.14$, $p<.001$): Bosniaks perceived the described event as less distant (temporally closer; $M = 40.16$, $SD = 28.49$) compared to Serbs ($M=53.17$, $SD=27.24$). However, the ingroup-role manipulation did not significantly affect participants' subjective temporal distance $F(1,439)=.87$, $p=0.351$. The interaction between ethnicity and intergroup role also did not reach significance, $F(1,439)=2.03$, $p=.155$.

Among Bosniaks in the ingroup-victim condition, temporal distancing from the war positively predicted empathy toward the outgroup ($\beta=.25$, $p=.005$). Empathy, in turn, predicted demands for retributive justice negatively ($\beta=-.35$, $p<.001$), support for pro-outgroup policy positively ($\beta=.41$, $p<.001$), and willingness to reconcile positively ($\beta=.43$, $p<.001$). Among Serbs in the ingroup-perpetrator condition, in contrast, temporal distancing from the war negatively predicted empathy toward the outgroup ($\beta=-.18$, $p=.050$). Empathy, in turn, positively predicted demands for retributive justice ($\beta=.35$, $p<.001$), support for pro-

outgroup policy ($\beta=.64$, $p<.001$), favorable attitudes toward the ICTY ($\beta=.39$, $p<.001$), and willingness to reconcile ($\beta=.63$, $p<.001$).

This study showed that temporal distance is associated with attitudes toward justice and reconciliation via empathy and, importantly, that temporal distance has different implications for intergroup attitudes between victim and perpetrator group members.

Keywords: temporal distance, victims, perpetrators, justice, reconciliation

MILITANT EXTREMIST MIND-SET IN FOOTBALL FANS: RELATIONS WITH SUPPORT TO EXTREMIST SOCIAL MOVEMENTS

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Football supporters represent a specific social group which is prone to ideologically based violence and extremist behavior. In the present study we explored if football supporters are characterized by Militant Extremist Mind-Set (MEM), a set of beliefs characterized by terrorists and ideological extremists. MEM is constituted by three factors: Proviolence, Vile World and Divine Power; and it was measured by MEM questionnaire. The support for extremist social movements was measured via five items (Obraz, Nacionalni stroj, Srpski narodni pokret 1389, Srpski sabor Zavetnici & Srpski narodni pokret Naši), for which participants had to rate the level of their support. We hypothesized that all three factors are more pronounced in football fans than in control group of participants; furthermore, we assumed that MEM factors have independent contribution to the prediction of extremist social movements support.

The sample ($N=246$) was convenience and collected in two groups. The subjects ($N=128$) in the criterion group were collected at the stadiums of Belgrade's football clubs. The control group ($N=118$) consisted of respondents from the general population. Groups were even out by gender, education and age ($M=29.14$, $SD=6.84$).

We conducted the MANCOVA in order to analyze the group differences. The group membership was set as a factor, MEM beliefs and support for extremist groups were set as the dependent variables while participants' age and education were set as covariates. Group differences on all of the dependent variables were significant: Proviolence ($F(1,242)=16.31$, $p<.001$, $\epsilon^2=.06$), Vile World

($F(1,242)=44.35$, $p<.001$, $\epsilon^2=.16$), Divine Power ($F(1,242)=8.05$, $p<.01$, $\epsilon^2=.03$) and support for extremist social movements ($F(1,242)=46.37$, $p<.001$, $\epsilon^2=.16$). All of the examined measures were more pronounced in the group of football fans.

The results of regression analysis ($R^2=.40$; $F(6,240)=26.79$; $p<.001$) showed that all three beliefs independently predict the support for extremist social movements. Finally, there is significant interaction between the group membership and Vile World in the prediction of the extremist movements support: football fans with elevated Vile World belief are especially prone to affiliate with extremist movements.

Obtained results confirmed all hypotheses. Study findings provide additional insight into ideological characteristics of football supporters and contribute to identification of individuals who are particularly susceptible to violent extremism.

Keywords: football supporters, Militant Extremist Mind-Set, extremist social movements

LIFE-HISTORY ACCELERATES IN A POST-CONFLICT SOCIETY

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Two main life-history strategies of fitness optimization have been identified: "r" or fast strategy is based on earlier pubertal timing, earlier start of sexual activity, higher mating effort, early reproduction, higher number of offspring with decreased parental investment; "K" or slow strategy is based on the opposite pattern of life-history indicators. It has been theorized that violent inter-group conflict may represent one of the environmental factors which accelerate life-history. Goal of the present research is to examine life-history indicators in youth which grew up under the conditions of violent inter-group conflict. Study participants ($N=210$; $Mage=23$ years, $SD=2.87$; 48% females) were categorized into criterion group (participants who grew up on the northern Kosovo and thus have been exposed to violent inter-group conflict) and control group (their peers from central Serbia who have not been directly exposed to conflict between Serbs and Albanians). We measured several life-history indicators: mating success, onset of sexual activity, the desired timing of marriage, the timing of first reproduction and the total number of children they would like to have. We collected information about two additional indicators of harsh environment: economic Poverty in childhood and Family dysfunctions. This was done in order

to explore the congruence between the environment of inter-group conflict and these additional markers of environmental harshness.

First we conducted MANCOVA with group membership as a factor, life history indicators as dependent variables and participants' sex as a covariate. Participants from a post-conflict society showed indications of faster life-history strategy: higher mating effort ($F(1,207)=13.543$; $p<.01$), a tendency to marry ($F(1,207)=8.37$; $p<.01$) and have their first child sooner in their lifetime ($F(1,207)=6.794$; $p<.01$) and a higher desired number of children ($F(1,207)=4.717$; $p<.01$). Furthermore, the interactions between exposure to conflict and participants sex are found: females from a post-conflict society wanted to have their child earlier in their lifetime ($F(1,206)=6.27$; $p<.05$), while males had elevated mating behavior ($F(1,206)=7.16$; $p<.01$). Finally, the exposure to violent conflict turned out to be positively related to economic poverty ($r=.16$; $p<.05$) but not to troublesome family relations ($r=.09$; $p>.05$). The obtained findings showed accelerated life-history in the post-conflict society. They are in accordance with life-history theory and demonstrate the adaptiveness of human fitness-related behavior in hostile and dangerous environments.

Keywords: life-history strategy; violent conflict; harsh environment; fitness optimization

ING RELATIONSHIPS AND BASIC PSYCHOLOGICAL NEEDS AMONG FEMALE AND MALE YOUNG ADULTS, AGED 20-25

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This research paper examines the correlation between sibling relationships and basic psychological needs among young adults in Macedonia. Previous research put accent on sibling relations in childhood, but in the last three decades researchers have emphasized that this attachment affects adulthood experiences as well.

The sample is convenient and consists of young adults, aged 20-25. Data was gathered through on-line survey software shared on social media. The instrument used for assessing sibling relationships was 'LSRS – Lifespan Sibling Relationship Scale'. It contains 6 subscales and 48 items in the revised version. This scale evaluates participant's attitude towards their sibling in the childhood and adulthood. For evaluation of basic psychological needs satisfaction, 'BPNS – Basic Psychological Needs Scale', was used. It measures the level of satisfaction of autonomy, competence and relatedness through 21 items, 7 for each subscale.

Statistically significant difference was found between two extreme groups (based on the score of LSRS) of participants regarding their autonomy, ($F(1,110)=7.010$; $p<.01$), competence ($F(1,110)=14.000$; $p<.01$), as well as relatedness ($F(1,110)=7.000$; $p<.01$), as hypothesized. This hypothesis suggests that the young adults who have good relationships with their siblings have higher scores on satisfaction of the basic psychological needs than young adults who have bad relationship with their siblings. Furthermore, another hypothesis suggested that younger siblings have higher satisfactory level of the basic psychological needs than older siblings. However, results showed no significant statistical difference between older and younger siblings regarding basic psychological needs ($t(183)=0.58$, $p>.05$). Results regarding the final hypothesis suggest significant interactive effect between participant's and sibling's gender ($F(1,181)=4.000$; $p<.05$), meaning that females with brothers had higher scores on BPNS, compared to females with sisters, while males with sisters had higher scores on BPNS, compared to males with brothers.

All of the hypothesis are based on empirical studies which provide explanation of this complex relations. Even though there were several weaknesses recognized, this research paper tries to examine the meaning of the sibling relationships for the young adult's personality dynamics.

Keywords: sibling relationship, basic psychological needs, young adults

CAN WE MEASURE SUBTLE DISCRIMINATION OF HOMOSEXUALS?
THE EFFECTS OF LEARNING PERSONS' SEXUAL ORIENTATION AND
APPEARANCE ON INTERACTION INTENTIONS

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Although members of LGBT community are often faced with overt discrimination, they report being even more frequently exposed to subtle discrimination – non-obvious, often unintentional, however biased treatment. Due to its subtle nature, it is difficult to detect. One of its forms might be presuming gender-atypical appearance (feminine males or masculine females) to

be a predictor of homosexual orientation, as well as the behaviour that emerges from this biased presumption. Having in mind that deviations from male gender roles and typical appearance are more severely sanctioned than deviations from female roles, males could be more exposed to this type of bias.

In the current research, we focused on how (a) gender-atypical appearance and (b) information about sexual orientation (SO) affect the willingness to cooperate with the persons concerned. To test this, we devised a within-subjects design – 2 (appearance typicality: masculine/feminine) x 2 (sexual orientation: hetero/homosexual), with interaction intention as a dependent variable assessed before and after exposing SO. Gender-typicality of appearance was operationalized via photographs depicting the stimulus-persons in typically masculine or feminine sitting postures, while their SO was provided via short profiles. Firstly, the participants' task was to specify the extent to which they were willing to cooperate with the stimuli-persons regarding their physical appearance, and afterwards to provide the same estimation by combining the information about their SO. Willingness for cooperation was assessed on the 7-point Likert scale.

Drawing from a convenient sample of 41 heterosexual men, aged 19-47 ($M=21.463$, $SD=4.382$), we demonstrated that subjects initially preferred cooperation with people depicted in masculine posture as opposed to those in feminine posture ($M(m)=4.213$, $SD(m)=0.914$; $M(f)=3.567$, $SD(f)=1.095$; $F(1,40)=16.106$, $p=.000$, $\eta^2=.287$). As expected, after being provided with information about stimuli person's SO, subjects increased ratings of those who were pictured in feminine posture but labelled as heterosexuals ($M1=3.567$, $SD1=1.095$; $M2=4.232$, $SD2=1.230$; $F(1,40)=14.179$, $p=.000$, $\eta^2=.262$).

We interpreted this change as a subtle way of discriminating homosexuals – or to put it differently, of favouring heterosexuals. Their robustness needs to be further backed up with evidence, however, the paradigm we designed seems suitable to detect this type of bias.

Keywords: LGBT, gender identity, subtle discrimination, masculinity/femininity of appearance, sexual orientation

SAMOSAOSEĆANJE I SAMOPOŠTOVANJE KAO PREDIKTORI PSIHOLOŠKE DOBROBITI

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Osnovni problem ovog rada je ispitivanje kako različiti modeli slike o sebi, samosaosećanje i samopoštovanje, predviđaju različite ishode dobrobiti. Samosaosećanje je relativno nov psihološki konstrukt i alternativna konceptualizacija slike o sebi, koja naglašava važnost brižnog odnošenja prema sebi. Na osnovu ranijih istraživanja, očekivali smo da će samosaosećanje ostvariti nezavisni doprinos u predviđanju dobrobiti, a naročito aspekata koji se nazivaju eudamonička dobrobit. Eudamonička dobrobit podrazumeva nadilaženje hedonističkih zadovoljstava i doslednu samoaktualizaciju kroz koju se stremlji ka bogatom zadovoljstvu koje traje. Za sada su pomenuti konstrukti nedovoljno istraženi u našoj kulturi, te je ovim istraživanjem učinjen pokušaj da se odgovori na postavljena pitanja u lokalnom kulturnom kontekstu.

Istraživanje je sprovedeno na uzorku od ukupno 165 ispitanika, koji su ispitani putem sledećih instrumenata: Skale globalnog samopoštovanja/Skale dopadanja i kompetencija ($\alpha=.891$), Skale samosaosećanja ($\alpha=.927$), Skale bazičnih psiholoških potreba ($\alpha=.879$), Upitnika eudamoničkih aspekata dobrobiti ($\alpha=.859$) i Pemberton indeks skale sreće ($\alpha=.906$).

Rezultati sprovedenih hijerarhijskih regresionih analiza su vrlo konzistentni i ukazuju da su oba konstrukta jednako značajni prediktori različitih aspekata dobrobiti. Oba prediktora nam omogućavaju da objasnimo 36% ukupne varijanse eudamonije, dok samosaosećanje daje nezavisni doprinos predikciji od 3% ($\beta=.391$, $p=.000$; $\beta=.257$; $p=.004$). Takođe, oba modela slike o sebi su značajni prediktori zadovoljstva životom kojima je objašnjeno ukupno 51% varijanse, dok samosaosećanje ostvaruje inkrementalni doprinos u predviđanju opšteg zadovoljstva životom od 9% ($\beta=.354$, $p=.000$; $\beta=.417$, $p=.000$).

Iako su konstrukti samosaosećanja i samopoštovanja na teorijskom nivou vrlo jasno konceptualno razgraničeni (takođe, nije utvrđena multikolinearnost prediktora u regresionoj analizi ($VIF<5$)), treba napomenuti da konstrukti visoko koreliraju ($r=.696$, $p=.000$).

Premda samosaosećanje uvek ostvaruje mali inkrementalni doprinos u objašnjenju varijanse u odnosu na samopoštovanje, reč je o doprinosu na osnovu kog ne možemo da zaključimo da postoji jasna diferencijacija među samosaosećanjem i samopoštovanjem kao prediktorima dobrobiti u celini, kao i njenih pojedinačnih aspekata.

Ključne reči: samosaosećanje, samopoštovanje, dobrobit, eudamonija, zadovoljstvo životom

This paper examines how different models of self-concept, self-esteem and self-compassion relate to various aspects of well-being. Self-compassion is a relatively novel psychological construct which entails treating oneself with kindness, so we expected that self-compassion, as an alternative conceptualization of self, would predict unique variance in wellbeing, especially eudaimonic well-being. Eudaimonic well-being overcomes hedonic pleasure and refers to consistent self – actualization through which a person aspires to fullness of lasting pleasure.

The study was conducted on a sample of 165 participants. Overall, both, self-compassion and self-esteem, are equally important predictors of various aspects of well-being. Although self-compassion makes a small incremental contribution to explaining the total variance, the findings do not speak in favour of a clear distinction between self-compassion and self-esteem as predictors of well-being in general, nor in their separate aspects.

Keywords: self-compassion, self-esteem, well-being, eudaimonia, life-satisfaction

RODNA RAVNOPRAVNOST: UTICAJ TEATARSKE INTERVENCIJE NA MENJANJE STAVOVA

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Istraživanja pokazuju povezanost između rodne ravnopravnosti i socijalnog blagostanja. Ostvaren je izvestan globalni napredak kada je u pitanju rodna ravnopravnost tokom poslednjih decenija, ali još uvek izostaje potpuna rodna jednakost. Ista situacija važi i za Srbiju, u kojoj je razumevanje roda i dalje pod snažnim uticajem tradicionalnih uverenja.

Različite intervencije su sprovedene sa ciljem eliminisanja rodne diskriminacije. Neke od njih, poput teatarske intervencije, imaju transformacioni potencijal za menjanje stavova. Pomoću teatarske intervencije ciljano se preispituje pojam i stavovi vezani za rod. Zasnovana je na aktivnom učešću publike i sastoji se iz: a) zamene rodnih uloga u različitim scenarijima b) diskusije o odigranim situacijama. Učesnici postaju glumci u tri različite scene (TV emisija za parove, osmišljavanje scenarija za reklamu, „Čestitamo osamnaesti rođendan”), tokom kojih se menjaju rodne uloge, a potom sledi diskusija.

Istraživanje ima za cilj da izmeri uticaj teatarske intervencije na promenu stavova prema rodnoj ravnopravnosti. Ocenili smo stavove učesnika prosečne starosti $M=22.51$, $SD=7.08$, iz 3 grada u Srbiji (Beograd, $N=46$; Novi Pazar, $N=40$; Zaječar, $N=30$), u kojima je sprovedena teatarska intervencija u periodu od septembra do novembra 2017. Uzorak je prigodan za populaciju od 18 do 30 godina starosti, učesnici su regrutovani od strane lokalnih organizacija iz gradova u kojima se realizovala teatarska intervencija.

Ispitali smo stavove o rodnim ulogama kroz četiri dimenzije: 1) porodične uloge, 2) odnosi moći između polova, 3) seksualno ponašanje, 4) usklađenost s polom. Isti upitnik je dat učesnicima pre i posle učešća u teatarskoj intervenciji. Teatarska intervencija pokazala je statistički značajni efekat samo za jedan indikator – usklađenost sa polom ($F(180,1)=4.733$, $p=.031$), dok nema statistički značajnih efekata za druge indikatore (porodične uloge $F(179,1)=.923$, $p=.338$, odnos moći između polova $F(180,1)=.320$, $p=.572$, seksualno ponašanje $F(172,1)=2.201$, $p=.140$).

Ishod se može objasniti najvećim fokusom moderatora na varijablu usklađenost sa polom. Planirano je devet teatarskih intervencija širom Srbije, sa kontinuiranom evaluacijom, što može dovesti naknadnom analizom celokupne intervencije do snažnijih efekata.

Ključne reči: rodne uloge, teatarska intervencija, seksualno ponašanje, rodna ravnopravnost

GENDER EQUALITY: TRANSFORMATIONALE IMPACT OF THEATRE BASED INTERVENTION

Although great progress has been achieved over recent decades regarding gender equality, human society is still not universally gender-equal. The same situation is found in Serbia. This research aims to measure the impact of theater based intervention (TBI) on changing attitudes towards gender equality. TBI comprises of audience participation in different scenarios during the play and discussions after.

We assessed the attitudes of 116 subjects of average age $M=22.51$, $SD=7.08$, from 3 major cities in Serbia (Belgrade, Novi Pazar, Zaječar) in which TBI was performed from September to November 2017. We examined four main variables

before and after TBI: 1) family gender roles, 2) gender power dynamics, 3) sexual behavior and 4) gender compliance. TBI had a statistically significant impact for one indicator: the gender compliance variable ($F(180,1) = 4.733, p=.031$).

The above outlined research was conducted using the data originally collected for the ‘Reversing the roles for changing the attitudes’ project. This project is funded by the IPPF (International Planned Parenthood Federation) - an organization committed to fighting for sexual and reproductive rights around the world.

(NE)JEDNAKI PRED BOGOM: ODNOS IZMEĐU RELIGIOZNOSTI I STAVOVA PREMA RODNIM ULOGAMA U PARTNERSKIM ODNOSIMA

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Dosadašnja istraživanja stavova mladih u Srbiji pokazala su da se žene vide kao „slabiji pol”, ukazujući na snažno prihvatanje tradicionalnih rodni shvatanja. Ova studija se nadovezuje na te rezultate istažujući odnos između religioznosti i stavova o rodnim ulogama u partnerskim odnosima kroz tri dimenzije: porodične uloge, odnosi moći i seksualno ponašanje.

Dimenzija porodičnih uloga sadržala je četiri tvrdnje na likertovoj skali slaganja od pet stavki (npr. ‘Bilo bi bolje za decu kada bi žene ostajale kod kuće i brinule se o njima, a muškarci radili i zarađivali dovoljno za celu porodicu’) ($\alpha=.62$) kao i dimenzija seksualnog ponašanja (npr. ‘Muškarcima je seks potrebniji nego ženama’) ($\alpha=.82$), dok je dimenzija odnosa moći sadržala tri tvrdnje (npr. ‘Muškarac treba da ima glavnu reč kada se donose važne odluke u partnerskom odnosu’) ($\alpha=.79$). Za svaku dimenziju izračunat je sumarni skor, koji je dalje analiziran. Religioznost je merena na skali od 1 (‘Uopšte nisam religiozan’) do 5 (‘Veoma sam religiozan’). Varijable obrazovanja i socioekonomskog statusa su takođe analizirane.

Online uzorak mladih reprezentativan po dva parametra populacije (pol, region) za starosnu grupu od 18 do 30 godina ($N=501$) regrutovan je od strane istraživačke agencije, septembra 2017. godine. Multivarijatna analiza pokazuje značajnu vezu između religioznosti i stava ispitanika o rodnim porodičnim ulogama ($F(501,1)=5.483, p=.020$), odnosu moći između polova

($F(501,1)=13.443$, $p<.001$), i seksualnog ponašanja ($F(501,1)=9.598$, $p=.002$). Drugim rečima, izraženija religioznost kod mladih ljudi povezana je sa većom podrškom tradicionalnih shvatanja rodnih uloga (porodičnih uloga muškaraca i žena, odnosa moći među njima i seksualnog ponašanja) poput ideja: da je bolje za decu kada bi žene ostajale kod kuće, da muškarac treba imati glavnu reč kada se donose važne odluke u partnerskom odnosu, ili da je muškarcima seks potrebniji nego ženama. Ostale merene demografske varijable (stepen obrazovanja i socioekonomski status) nisu bile značajno povezane sa stavovima o rodnim ulogama.

Savremeno srpsko društvo suočava se sa problemima ekstremizma u raznim domenima. Religija predstavlja jedan od njih. Ovo istraživanje ukazuje na jedan potencijalni smer ispoljavanja religijskog ekstremizma u shvatanju rodnih uloga, pre svega u domenu interpersonalnih porodičnih odnosa.

U ovoj studiji su korišćeni podaci sa projekta 'Reversing the roles for changing the attitudes'. Projekat je finansiran od strane IPPF-a (International Planned Parenthood Federation).

Ključne reči: rodne uloge, religioznost, interpersonalni odnosi, stavovi o rodu

Previous studies on gender related views of young people in Serbia showed a high perception of women as the "weaker sex". This study builds onto such findings by investigating the relationship between religiosity and views of gender roles in personal relationships along three dimensions: family roles, power dynamics, and sexual behavior. A representative sample of Serbian youth ($N=501$), recruited via an online panel, indicated a significant relationship between the degree of religiosity (high vs. low) and views of gender roles along each of the three above listed dimensions. In other words, there is a higher tendency among religious Serbian youth to endorse traditional gender norms - such as that women should stay at home and take care of children, that men should have the final word in partner relations, and that men need sex more than women do.

Keywords: gender roles, religiosity, interpersonal relationship, gender attitudes

Reversing the roles for changing the attitudes' project. This project is funded by the IPPF (International Planned Parenthood Federation) – an organization committed to fighting for sexual and reproductive rights around the world.

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Osjećaj usamljenosti se smatra vrlo teškim i bolnim iskustvom i predstavlja veliki problem u mnogim razvijenim zemljama. Doživljaj i osjećanje usamljenosti se razlikuje među ljudima, javlja se u različitim situacijama i ima različite uzroke i posljedice. U periodu adolescencije se od svojih prijatelja očekuje prisnost i podrška, ukoliko se ne ostvari, može voditi razočarenju, nezadovoljstvu i osjećaju usamljenosti. Imajući u vidu da samoefikasnost uključuje procjenu vlastitih sposobnosti u nošenju sa različitim izazovima, da je usamljenost jedna od prepreka ostvarivanju zadovoljstva, te da nisko samopoštovanje može potaknuti mlade da koriste internalne atribucije koje mogu dovesti do usamljenosti kod adolescenata, ovim istraživanjem se imala namjera ispitati povezanost samopoštovanja, samoefikasnosti, zadovoljstva životom sa usamljenošću kod adolescenata, kao i prediktivne vrijednosti navedenih varijabli za usamljenost. Populaciju u istraživanju su činili mladi (od 16 do 19 godina) sa područja sjeveroistočne Bosne. Istraživanjem je obuhvaćeno $N=1172$ ispitanika (52.9% ženskih; dobi $M=17.02$, $SD=0.99$). Za utvrđivanje stepena usamljenosti korištena je skala usamljenost. U istraživanju su korištene i skale: samopoštovanja, samoefikasnosti i zadovoljstva životom. Prosječan stepen usamljenosti kod mladih iznosio je $M=38.68$ ($SD=11.95$). Istraživanjem je utvrđeno da je niži stepen usamljenosti povezan sa većim stepenom samopoštovanja ($r=-.481$; $p<.001$), niži stupanj usamljenosti je povezan sa većim zadovoljstvom životom ($r=-.524$; $p>.001$), a niži nivo usamljenosti povezan sa većim nivoom samoefikasnosti ($r=-.385$, $p<.001$). Zadovoljstvo životom (1), samopoštovanje (2) i samoefikasnost (3) su značajni prediktori usamljenosti kod mladih ($\beta_1=-.335$, $p<.001$; $\beta_2=-.275$, $p<.001$; $\beta_3=-.135$, $p<.001$). Set ovih prediktora zajedno objašnjava 35.8% varijance kriterija ($R=.60$; $F(3, 1169) = 218.90$, $p<.001$). Iako istraživanja ukazuju da je usamljenost ozbiljan problem današnjice, rezultati ovog rada ukazuju da nivo usamljenosti nije iznadprosječno izražen među mladima, te da značajnost korelata usamljenosti je dijelom u saglasnosti sa pređašnjim istraživanjima. Navedeno ukazuje da je pružanje socijalne podrške od izuzetne važnosti za mlade.

CORRELATES OF LONELINESS IN YOUNG PEOPLE

The feeling of loneliness is a major problem in many developed countries, which is particularly intense in adolescence when closeness and support are expected from friends. If those expectations are not met, that can lead to disappointment, dissatisfaction, and loneliness. This research intended to examine the connection between self-esteem, self-efficacy, and lifestyle satisfaction with loneliness in adolescents. The research was conducted among young people (ages 16 to 19) of north-eastern Bosnia (N=1172, 52.9% female; age M=17.02, SD=0.99). The research found that the lower degree of loneliness is associated with a higher degree of self-esteem, higher level of life satisfaction and higher level of self-efficacy. Life satisfaction, self-esteem and self-efficacy were found as significant predictors of loneliness in young people. Together they clarify 35.8% of the variance criteria. The results indicate that giving social support and strengthening interpersonal relationships are of paramount importance for young people.

Keywords: Loneliness, Self-efficacy, Self-esteem, Life satisfaction, Young people

SEBIČNI GENI ILI SEBIČNI MEMI

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Brojna istraživanja su pokazala da ljudi pre pomažu srođnicima nego strancima, kao i da pre pomažu bližim nego daljim srođnicima. Evoluciono objašnjenje ovog fenomena polazi od hipoteze o sebičnom genu koja pretpostavlja da geni teže da obezbede što više sopstvenih kopija u narednim generacijama tako što teraju nosioca da neguje druge osobe koje nose te iste gene. Analogno sa genima u biologiji, Dokins je predložio da postoje memi u kulturi. U ovom radu smo želeli da ispitamo da li srođnički altruizam, pored deljenih gena, proističe i iz deljenih mema. Za predstavnike mema smo odabrali važne životne stavove i vrednosti, koji se prenose kulturom i koji su verovatno bitni za preživljavanje grupe. Svaki učesnik (N=350; Muzrast=28.55; 66% žena) na slučajan način je dobijao zadatak da zamisli jednu od mogućih šest osoba koje su istog pola kao i on – nesrođnik odn. brat/sestra od ujaka, tetke ili strica odn. rođeni brat/sestra (koeficijenti srođstva, redom, $r=0$, $r=0.125$, $r=0.5$), kojima su veoma slični odn. od kojih se

veoma razlikuju po važnim stavovima i vrednostima. Procena memske sličnosti je, dakle, bila uopštena. Raspored u šest situacija je bio ujednačen po polu, uzrastu i obrazovanju učesnika. Učesnici su označavali stepen spremnosti da pomognu osobi; dva hipotetička scenarija su podrazumevala mali trošak (npr. emotivna podrška), četiri umereni (npr. pomoć tokom bolesti), a dva veliki (npr. rizikovanje života da se osoba spasi). Analizom varijanse smo proverili da li postoji povezanost spremnosti da se pomogne i, sa jedne strane, tri nivoa genetske sličnosti i, sa druge strane, tri nivoa memske sličnosti, koji su izvedeni na osnovu učesnikove procene sličnosti sa osobom. Postoji značajan efekat gena ($F(2,341)=26.39$, $p<.01$, $\eta^2=.13$), kao i veći, i takođe značajan, efekat mema ($F(2,341)=46.17$, $p<.01$, $\eta^2=.21$), a ova dva faktora su u interakciji ($F(4,341)=3.42$, $p<.01$, $\eta^2=.04$). Spremnost da se pomogne nije vođena samo logikom produžavanja gena, već i logikom „produžavanja mema“; pri tome, izgleda je stepen srodstva najbitniji za niske nivoe memske sličnosti, dok je memska sličnost manje bitna za rođenu braću i sestre. Efekti opstaju kada se kontroliše uzrast osobe koju su zamišljali, koliko udaljeno žive od nje, učestalost trenutnog i budućeg kontakta. Nakon kontrolisanja verovatnoće da će sa osobom za godinu dana biti kontaktu, interakcija gena i mema se gubi. Diskutovaćemo rezultate i s obzirom na trošak koji pomaganje iziskuje.

Ključne reči: sebični gen, sebični mem, altruizam, srodnički altruizam

A wealth of research shows that there is a greater willingness to help kin than to help non-kin. Evolutionary explanations rest on the hypothesis of selfish genes that want to increase the number of copies of themselves in subsequent generations. As an analogy to the gene, Dawkins coined the term meme to represent a unit of information that is transmitted culturally. We explored whether genes or memes give rise to kin altruism. Participants reported their willingness to help a same-sex sibling, first cousin or non-kin, who were either highly similar or dissimilar to them in terms of important values and attitudes. Overall, participants were more willing to help closer kin and they were more willing to help similar than dissimilar others. Effects remain significant when controlling for potential confounding factors, such as residential distance and contact frequency. We will also take into account the effects of the cost of helping.

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PSIHOLOŠKA OBJAŠNJENJA FENOMENA U SOCIJALNOJ EPISTEMOLOGIJI NAUKE: SLUČAJ FIZIKE VISOKIH ENERGIJA

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Savremena socijalna epistemologija nauke neguje interdisciplinarni pristup i bavi se optimizacijom naučnog procesa sa ciljem uvećavanja znanja na nivou istraživačke grupe. Različite metode koje uključuju formalne logičke modele, kompjuterske simulacije i analize zasnovane na podacima su primenjene u svrhu ove optimizacije. Konkretno, aplikacija algoritama za mašinsko učenje na velikom broju podataka iz laboratorije za fiziku visokih energija Fermilab, pokazala je da se sa povećanjem vremena utrošenog na projekat smanjuje njegova efikasnost, tj. da značaj njegovih rezultata opada. U ovoj analizi efikasnost je određena na osnovu odnosa između ulaznih parametara – dužine trajanja eksperimenta, broja istraživača i istraživačkih timova s jedne strane i rezultata eksperimenata izražene u broju i rangu publikacija s druge strane. Utvrđeno je da su eksperimenti koji traju više od 500 dana neefikasni. Rezultati ukazuju da posle određenog vremena ulaganje u eksperiment vrlo verovatno neće dovesti do novih rezultata, ali naučnici ipak nisu odustali od njega. Ono što je značajno razumeti jeste koja psihološka objašnjenja leže u pozadini ovog fenomena. U izlaganju ćemo predstaviti pomenute rezultate i analizirati njihova potencijalna psihološka objašnjenja. Primarno ćemo se fokusirati na princip posvećenosti i konzistentnosti sa prethodnim verovanjem. S obzirom da su prvobitno verovali da će određeni eksperimenti biti plodonosni i u njih investirali vreme i novac, zbog potrebe da budu konzistentni sa svojim prethodnim verovanjima, naučnici neće lako odustati od ispitivanja hipoteza koje nisu plodonosne. Ovde treba imati u vidu da zbog specifičnosti oblasti, čitavi timovi moraju da budu angažovani, kao i da su neophodna značajna finansijska sredstva da bi bilo koji eksperiment u fizici visokih energija otpočeo. Izlaganje ćemo završiti razmatranjem autoritarnosti unutar istraživačkih timova kao razlogom neefikasnosti određenih

PSYCHOLOGICAL EXPLANATIONS OF PHENOMENA IN SOCIAL EPISTEMOLOGY OF SCIENCE: THE CASE OF HIGH ENERGY PHYSICS

After a shift in applied epistemology from the single-agent perspective to the examination of the group knowledge acquisition, the interest in research of multi-agent dynamics arose. Social epistemology of science, as part of modern epistemology, is concerned with the optimization of scientific inquiry on the group level. Using data envelopment analysis on data from the high energy physics laboratory Fermilab, Perović et al. showed that longer experiments are inefficient in comparison to shorter ones. Specifically, projects that lasted longer than 500 days were marked as inefficient. Yet, they were continued. In this talk, we will present these results and analyze potential psychological mechanisms that can explain them. More specifically, we will focus on the principle of commitment and consistency with previous beliefs, and the authoritarianism within the teams in high energy physics as causes for continuation of inefficient experiments.

INTUITIVE AND ANALYTICAL COGNITIVE STYLES AS DETERMINANTS OF BELIEF IN CONSPIRACY THEORIES

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Research suggests that the belief in conspiracy theories (CTs) is so widespread, it cannot be seen as an anomaly but rather as typical; it can, however, lead to different behavioural consequences, from vaccination refusal to non-voting. In this study, we explored the relationship between CT beliefs and intuitive/analytical cognitive style. The empirical evidence about it has not been consistent so far: while some studies found a negative relation with analytical and positive with intuitive cognitive style, others failed to replicate both but found only positive relation with intuitive. We sought to gather more evidence on this with Serbian (non-English speaking) respondents, and both locally and internationally relevant conspiracy theories. To assess cognitive style, we applied REI-40 questionnaire, whilst we assessed CT belief with two instruments – one measured general conspiratorial belief (so-called conspiracy mentality), and the other comprised of six vignettes measuring belief in specific CTs (e.g. climate

change denial, “chemtrails”, dissolution of former Yugoslavia). In total, 121 participants completed the survey. Exploratory factor analysis of the new scale measuring belief in specific CTs yielded a one-factor solution (49.75% of variance explained) after excluding one item from the analysis. The scale has high internal reliability ($\alpha=.935$). The results corroborated both negative association between analytical style and belief in CTs ($r(119)=-.235, p<.01$), and a positive one between intuitive style and belief in CTs ($r(119)=.304, p<.01$). Regression analysis shows that these two cognitive styles explain about 15% of variance in belief in CTs ($R^2=.147, F(2,118)=10.133, p<.001$). As for the conspiracy mentality, the relationship with intuitive style was significant, but smaller than with specific CTs ($r(119)=.19, p<.05$), while the relationship with analytical style was not significant ($r(119)=-.15, p>.05$). Given that analytical and intuitive thinking are orthogonal dimensions, our results suggest that there are different processes through which different cognitive styles are related to belief in CTs and that both inducing analytical and reducing intuitive thinking could be experimentally tested for reducing belief in specific CTs; conspiracy mentality, as a general belief system, though, could be more resistant to the manipulations of thinking styles.

Keywords: conspiracy theories, analytical thinking, intuitive thinking, conspiracy mentality, cognitive styles

**RAZUMEVANJE PERSPEKTIVE DRUGIH I UNUTARGRUPNA
PRISTRASNOST: TEORIJA UMA NA PRIMERU POSTKONFLIKTNIH
ODNOSA U SRBIJI I BOSNI**

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Teorija uma, kao noviji istraživački koncept, objašnjava pomak od vlastite perspektive i stavljanje u poziciju druge osobe, kao i sposobnost razumevanja spoljašnjih manifestacija tuđih namera i želja.

U području međuetničkih odnosa važno pitanje je utvrditi koliko jedna takva sposobnost utiče na odnose prema pripadnicima tuđih grupa.

U ovom istraživanju ona je operacionalizovana Baron Koenovim Reading the Mind in the Eyes testom koji se sastoji od 36 slika predela oko očiju kod ljudi, gde se od ispitanika traži da pogode njihovo emocionalno stanje.

Osnovni cilj našeg istraživanja je bio utvrditi veze ovog koncepta sa glorifikacijom sopstvene grupe, kao i empatijom, infrahumanizacijom i težnjom za retributivnom pravdom u dve verzije: prema sopstvenoj i tuđoj grupi.

Uzorak je činilo 453 ispitanika, 57% Srba i 43% Bošnjaka, koji su slučajnim odabirom popunjavali date dve verzije upitnika.

Najznačajniji rezultati ukazuju na snažnu negativnu povezanost sposobnosti stavljanja u poziciju drugoga kroz razumevanje njihovih emotivnih stanja i glorifikacije sopstvene nacije ($r=-.44$, $p<.001$). Slično korelira i infrahumanizacija bez obzira na verziju upitnika ($r=.24$, $p <.001$). Međutim, empatija je povezana sa boljim prepoznavanjem emotivnih stanja ($r=.38$, $p <.001$) samo kada su u pitanju predstavnici sopstvene grupe, dok se u varijanti odnosa prema tuđoj grupi značajnost gubi.

Najsnažniji pokazatelj pristrasnosti jeste povezanost indikatora teorije uma sa težnjom za retributivnom pravdom. U varijanti sopstvene grupe korelacija je $-.39$, a tuđe $+.16$ (obe $p<.001$).

Ovo ukazuje da nije samo prepoznavanje emocija (pa i patnje) drugih ni približno dovoljno da poremeti snažan uticaj unutargrupe pristrasnosti.

Sudeći po našem uzorku, i kada razumemo unutrašnja stanja drugih, za počinioce iz tuđe grupe tražimo oštre kazne, dok za one iz svoje grupe tražimo čak i blaže. Biće diskutovani i neki složeniji medijacioni modeli odnosa među ispitivanim varijablama, kao i društvene implikacije ovakvih nalaza.

Ključne reči: teorija uma, empatija, retributivna pravda, infrahumanizacija, pristrasnost

Theory of Mind (ToM) is the ability to put yourself in other people's position and to understand what others may be thinking or feeling. In order to explore whether ToM plays a role in inter-ethnic relationships, we assessed it with Baron-Cohen's Reading the Mind in the Eyes Test, which involves

Guessing someone's emotional/mental state based only on an image of their eyes. A total of 453 Serbs (57%) and Bosniaks (43%) 'read the mind' either of an ingroup or an outgroup member. ToM negatively correlated with glorification of one's own nation ($r=-.44$, $p<.001$) and positively with infrahumanization ($r=.24$, $p<.001$). More empathizing correlated with better mind reading only for ingroups ($r=.38$, $p<.001$). ToM also correlated with the desire for retributive justice ($r=-.39$ for ingroups, $r=.16$ for outgroups, $p<.001$). We discuss mediational models of these intergroup aspects and socially relevant implications of the findings.

KONSTRUKCIJA, PSIHOMETRIJSKA PROVERA I VALIDACIJA TESTA ZAVERENIČKOG MIŠLJENJA

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Zavereničko mišljenje se definiše kao način razumevanja događaja i situacija od ličnog, društvenog i istorijskog značaja u kome je zavera dominantan ili operativni faktor. Cilj ovog rada je konstrukcija, psihometrijska provera i validacija Testa zavereničkog mišljenja (TZM). Ovaj upitnik za cilj ima merenje opšte sklonosti ka zavereničkom mišljenju, dok su dosadašnji upitnici uglavnom merili verovanja u konkretne teorije zavere. TZM sadrži 30 stavki u okviru faceta Kontrola informacija, Malverzacije na vlasti, Pretnja po sopstvenu državu i Pretnja po ličnu dobrobit (8 na svakoj subskali, sem Malverzacije na vlasti koja ima 6) u formi tvrdnji uz petostepene Likertove skale. Za proveru eksterne valjanosti korišćene su: skale iz inventara Delta-10 – Paranoja ($\alpha=.76$) i Magijsko mišljenje ($\alpha=.80$); Skala desničarske autoritarnosti – RWA ($\alpha=.91$); Skala orijentacije ka socijalnoj dominaciji – SDO ($\alpha=.86$); Test kognitivne refleksije – CRT ($\alpha=.87$); Skala religioznosti – R ($\alpha=.92$); Test konkretnih teorija zavere – KTZ ($\alpha=.86$). Uzorak je bio prigodan, sačinjen od 180 ispitanika (Ž: 45%) uzrasta 19-34 godine ($M=21$, $SD=2.131$). Konstruisani instrument pozakao je zadovoljavajuće interne metrijske karakteristike ($\alpha=.88$, $KMO=.94$, $H5=.50$). Eksploratornom faktorskom analizom izdvojila su se dva faktora: prvi je interpretiran kao zavereničko mišljenje usmereno na zdravlje i dobrobit osobe (ZM), a drugi kao stav prema aktuelnoj vlasti (SV). Dobijene su pozitivne korelacije ZM sa skalama Paranoja ($r=.30$, $p < .01$) i Magijsko mišljenje ($r=.23$, $p < .01$). Iako je u suprotnosti sa očekivanjima, dobijene su pozitivne korelacije sa RWA ($r=.43$, $p < .01$), SDO ($r=.29$, $p < .01$) i R ($r=.27$, $p < .01$), dok je korelacija između CRT i ZM izostala. ZM se pokazao kao dobar prediktor skora na KTZ budući da objašnjava 35% varijanse ($\beta=0.592$, $t(179)=9.377$, $p < .01$). Konvergentna i kriterijumska valjanost, koje su potvrđene u istraživanju, kao i dobre psihometrijske karakteristike ukazuju na to da se TZM može koristiti kao indikator zavereničkog mišljenja, pri čemu je neophodno proveriti diskriminativnu valjanost oslanjanjem na druge konstrukte poput bazičnih crta ličnosti otvorenosti i savesnosti. Iako ga prvobitne pretpostavke nisu predvidele,

pojava drugog faktora može se objasniti korišćenjem stavki čiji je sadržaj bio prevashodno politički. Ovaj faktor ne korelira ni sa jednim od spoljnih kriterijuma što govori u prilog tome da ne odražava zavereničko mišljenje.

Ključne reči: Test zavereničkog mišljenja, konstrukcija, psihometrijska provera, validacija

Conspiracy thinking is defined as a form of reasoning about complex events and situations of personal, social and historical significance where “conspiracy” is the dominant or operative factor. The CTI consists of 30 items arranged in 4 facets: Control of information, Government malfeasance, Threat towards one’s own country, Threat towards personal well-being. Psychometric characteristics of CTI are $\alpha=.88$, $KMO=.94$, $H5=.50$. After conducting exploratory factor analysis, a two-factor solution was extracted. The first factor was termed Conspiracy thinking aimed at personal health and well-being, whereas the second one was interpreted as Attitudes towards the current government. Previously confirmed convergent and criterion validity, as well as psychometric characteristics, show that CTI may be used as an indicator of conspiracy thinking. Nevertheless, discriminant validity still has to be confirmed by using some other constructs such as openness and conscientiousness.

RASPROSTRANJENOST VJEROVANJA U TEORIJE ZAVJERE KOD GRAĐANA BIH S OBZIROM NA NEKE SOCIO-DEMOGRAFSKE VARIJABLE

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Osnovni cilj istraživanja je utvrditi da li se građani Bosne i Hercegovine međusobno razlikuju u vjerovanju u teorije zavjere. Za potrebe istraživanja koristili smo skalu teorija zavjere koja se sastoji od 5 ajtema i 5-stepenom skalom Likertovog tipa. Istraživanje je provedeno u drugoj polovini maja 2017. godine na uzorku od 1498 punoljetnih građana BiH metodom anketiranja licem u lice. Prosječna ocjena dobijena na svim ispitanicima iznosi 3.77. S obzirom na socio-demografske varijable koji smo mjerili: pol, starost, obrazovanje, ukupan mjesečni prihod porodice i etnička pripadnost, nalazimo statistički značajne razlike samo na varijablama obrazovanje ($F=5,635$, $df=3;1484$, $p=.001$), ukupna porodična primanja ispitanika ($F= 10,115$, $df= 2,1110$, $p= .002$) i etnička pripadnost ($F=7$, $df=578,1423$, $p=.001$). Prihvatanje teorija zavjere je najizraženije kod ispitanika sa srednjom školom i oni se značajno razlikuju od

ispitanika sa završenom osnovnom školom ($p= 0.001$) i visokoobrazovanih ($p=.022$). Građani BiH sa ukupnim porodičnim primanjima od 250 do 499,5 eura najviše prihvataju teorije zavjere, a slijede ispitanici sa primanjima preko 500 eura i ispitanici sa primanjima ispod 250 eura. Unutar kategorije primanja nalazimo značajne razlike ispitanika sa primanjima ispod 250 eura i ispitanika sa primanjima od 250 do 499 eura ($p=.000$) i ispitanika sa ukupnim primanjima preko 500 eura ($p=.045$). Teorijama zavjere najviše su skloni Hrvati koji se značajno razlikuju od Srba ($p=.012$) i Bošnjaka ($p=.000$). Sklonost teorijama zavjere najviše je prisutna kod ispitanika sa srednjom školom i primanjima između 250 i 500 eura, a takvih je u BiH najveći broj. Trofaktorska analiza varijanse nije pokazala postojanje nekih važnih interakcija.

Ključne riječi: teorije zavjere, Bosna i Hercegovina.

THE INCIDENCE RATE OF BELIEF IN CONSPIRACY THEORIES AMONG THE CITIZENS OF BIH WITH RESPECT TO CERTAIN SOCIO- DEMOGRAPHIC VARIABLES

The basic aim of the research is to determine whether the citizens of Bosnia and Herzegovina differ in their belief in conspiracy theories. The survey was conducted in May 2017 on a sample of 1498 adult citizens of BiH. Given the socio-demographic variables we have measured, there are statistically significant differences in education variables, total family income, and ethnicity. Acceptance of conspiracy theories prevails with respondents with high school education and it is significantly different from respondents with completed elementary school education and university education. Highest incidence rate of theories of conspiracy is among citizens of BiH with the total family income of 250 to 499.5 euros, followed by respondents with more than 500 euros, and the smallest rate is among respondents with income lower than 250 euros. Croats are most prone to the the conspiracy theories, and differ significantly from Serbs and Bosniaks. The tendency to belief in conspiracy theories is most present among citizens with high school education and income between 250 and 500 euros, and this population in BiH is largest.

Keywords: conspiracy theories, Bosnia and Herzegovina.

DEVELOPMENT AND VALIDATION OF A QUESTIONNAIRE FOR MEASURING ATTITUDES TOWARDS THIRD WAVE FEMINISM

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Third wave feminism appears at the end of 20th century and compared to its antecedents, it is regarded as more liberal and recognizes interaction between gender and other forms of discrimination based on religion, race and nationality. This wave is founded on the idea that women aren't homogeneous group and that female identity can be constructed in various ways. The previous studies showed that positive attitudes towards feminist values and beliefs often coexist with negative attitudes towards the movement. This suggests that these two groups of attitudes are different psychological constructs. The aim of our study is to construct a questionnaire which will measure attitudes towards Third wave feminism. A pilot study was conducted through Facebook and it contained 48 items which were created after content analysis of the Facebook posts, articles, and comments read on forums. Last 18-item version of the questionnaire, with a 5-point Likert scale, was empirically tested in three Serbian high schools with a total of 292 student participants. The questionnaire (named STT) has good reliability (Cronbach $\alpha=.89$) while standardized skewness and kurtosis show normal distribution of scores. Factor analysis was used for testing construct validity and one factor was extracted ("Attitudes towards feminism"). Convergent and divergent validities were tested using FWM (Attitudes Towards Feminism and the Feminist Movement Scale), FEM (Attitudes Towards Feminism Scale) and HEXACO-60. We hypothesized that STT would show negative correlation with FEM since items are coded negatively on that scale. Furthermore, we expected high positive correlation with FWM as they measure the same construct. Previous research demonstrated positive correlation both

between basic personality traits of Openness and Liberalism, and Liberalism and attitudes towards feminism. With consideration to these findings, we make an assumption that Openness and attitudes toward the feminist movement will correlate positively. Results showed statistically significant correlation of extracted factor on STT with followed variables: FWM ($r=.818$, $p<.001$), FEM ($r=-.408$, $p<.001$), Emotionality ($r=.238$, $p<.001$) and Openness ($r=.183$, $p<.01$). Differences were found between males ($M=-0.645$, $SD=0.81$) and females ($M=0.292$, $SD=0.823$) where females had more positive attitudes toward the movement ($t(290)=-9.054$, $p<.001$). Findings of this and similar research could serve to the third wave of feminist movement in improving communication with the public and it could be valuable for further development of movement.

Keywords: feminism, attitudes, questionnaire

PREDVIĐANJE SOCIJALNOG BLAGOSTANJA NA OSNOVU VREDNOSNIH ORIJENTACIJA STUDENATA RAZLIČITIH PROFESIONALNIH USMERENJA

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Osnovni problem našeg istraživanja je da utvrdimo koje vrednosti studenata različitih profesionalnih usmerenja i na koji način su povezane sa socijalnim blagostanjem. Naša hipoteza se zasniva na teoriji samodeterminacije koja smatra da zdrave vrednosti pozitivno utiču na blagostanje. Cilj istraživanja je bio da utvrdimo da li postoji mogućnost predikcije blagostanja na osnovu vrednosnih orijentacija studenata različitih profesionalnih usmerenja. Određene vrednosti pozitivno doprinose mentalnom zdravlju, dok neke druge vrednosti štete. Osim toga, želeli smo da ispitamo doprinos socio-demografskih činilaca (materijalno stanje i starost ispitanika) socijalnom blagostanju. Uzorkom je obuhvaćeno 400 studenata, 200 studenta sa Filozofskog fakulteta u Kosovskoj Mitrovici i 200 studenta sa Tehničkog fakulteta u Kosovskoj Mitrovici. Od ukupno 400 ispitanika, bilo je 139 ispitanika i 261 ispitanica, prosečne starosti $M=21.48$, $SD=2.48$. U istraživanju su korišćeni sledeći instrumenti: Skala kontinuum mentalnog zdravlja-duga forma, Švarcova skala univerzalnih vrednosti i socio-demografski upitnik.

Za predviđanje socijalnog blagostanja mladih različitih profesionalnih usmerenja na osnovu vrednosnih orijentacija upotrebljena je linearna regresiona analiza. Preliminarnim analizama je dokazano da pretpostavke linearnosti, normalnosti, multikolineranosti i homogenosti varijanse nisu bile narušene. Rezultati pokazuju

da postoji mogućnost predikcije socijalnog blagostanja studenata različitih profesionalnih usmerenja na osnovu vrednosnih orijentacija. Preko vrednosti Sigurnost ($\beta=.372$) možemo objasniti 38.6% varijanse socijalnog blagostanja za studente humanističkih nauka, dok za studente tehničkih fakulteta prediktore socijalnog blagostanja predstavljaju vrednosti Usmerenost na sebe ($\beta=.914$), Univerzalizam ($\beta=.349$), Hedonizam ($\beta=-.223$) i Tradicija ($\beta=-.264$) koji objašnjavaju 55.9% varijanse. Veza između socio-demografskih pokazatelja i socijalnog blagostanja istražena je pomoću koeficijenta Pirsonove linearne korelacije. Nije utvrđena povezanost materijalnog stanja i starosti ispitanika sa socijalnim blagostanjem.

Dobijeni rezultati potvrđuje našu hipotezu da težnja ka zdravim vrednostima vodi stavovima i ponašanju koje utiče na blagostanje i zadovoljstvo životom, dok nezdrave vrednosti imaju suprotne efekte na blagostanje.

Ključne reči: socijalno blagostanje, vrednosti, studenti, profesionalno usmerenje

The aim of the research was to determine whether there is a possibility of prediction of well-being based on value orientations of students of different professional orientations. The sample included 400 students. The research used the following instruments: Scale Continuum of Mental Health-Long Form, Schwarz Scale of Universal Values and Socio-Demographic Questionnaire.

The results show that there is a possibility of prediction of social welfare of students of different professional orientations based on value orientations. Through the value of Security ($\beta=.372$), we can explain 38.6% of the variance of social welfare for students of humanities, while for the students of technical faculties the predictors of social well-being represent the values of Self-direction ($\beta=.914$), Universalism ($\beta=.349$), Hedonism ($\beta=-.223$) and Tradition ($\beta=-.264$) that explain 55.9% variance.

SOCIODEMOGRAFSKI KORELATI RAZLIČITIH MANIFESTACIJA AGRESIVNOSTI KOD UČENIKA

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Osnovni cilj rada jeste istraživanje povezanosti agresivnosti i sociodemografskih korelata kod učenika srednjih škola. Naime, istraživanjem želimo da utvrdimo u kom stepenu je agresivnost prisutna kod srednjoškolaca, koji tip agresivnosti je najizraženiji i kakva je njena povezanost sa sociodemografskim korelatima. Za

potrebe istraživanja korišćena je skala za merenje agresivnosti, koja se sastoji od četiri faktora: fizičke agresivnosti, verbalne agresivnosti, besa i neprijateljstva, Busa i Perija. Uzorak ispitanika je neslučajni, prigodan i činilo ga je 138 učenika srednjih škola u Vranju.

Rezultati istraživanja pokazuju prosečni stepen agresivnosti od $M=80.48$, sa minimalnim skorom 46, a maksimalnim 134. Kod pomenutih faktora u samoj skali, najizraženija je skala neprijateljstva ($M=22.28$), zatim skala fizičke agresivnosti ($M=22$), skala besa ($M=21.26$) i najslabije izražena verbalna agresivnost ($M=14.92$). Subskala „neprijateljstva” je povezana sa materijalnim stanjem ($F=3.1$, $df=136$, $p<.05$), najveći stepen izraženosti ima kod učenika niskog materijalnog stanja, a najmanji kod kategorije srednjeg materijalnog stanja. U korelaciji je sa prosečnom ocenom u školi ($r=-0.20$; $p<.05$). Subskala „besa“ nije značajno povezana ni sa jednim sociodemografskim korelatom. Verbalna agresivnost povezana je značajno samo sa jednim sociodemografskim korelatom – polom ($t=-2.14$, $df=136$, $p<.05$). Veću izraženost našli smo kod devojčica ($M=15.43$), a manju kod dečaka ($M=13.98$). Fizička agresivnost povezana je značajno samo sa korelatom potpunosti porodice, a najizraženija kod dece koja žive bez roditelja ($F=3.06$, $df=137$, $p<.05$). Skala u celosti statistički značajno kolerira sa prosečnom ocenom u školi, ($r=-0.20$; $p<.05$). Što se tiče odnosa između subskala one međusobno pozitivno koreliraju sem subskale verbalne i fizičke agresivnosti.

Dobijeni podaci govore da postoji različita izraženost manifestacija agresivnosti kod učenika sa različitim sociodemografskim karakteristikama, ali su te veze uglavnom slabe.

Kod devojčica je izraženija verbalna agresivnost, a neprijateljstvo je statistički značajno izraženije kod učenika niskog materijalnog stanja.

Ključne reči: sociodemografski korelati, agresivnost, učenici.

SOCIO-DEMOGRAPHIC CORRELATES OF DIFFERENT MANIFESTATIONS OF AGGRESSIVENESS IN HIGH SCHOOL STUDENTS

The primary aim of this paper is to investigate the relations between aggressiveness and socio-demographic characteristics of aggressive behavior in secondary school students. In this research, the degree to which aggression exists among secondary school students, the type of aggression, and the relations with socio-demographic features of secondary school students are examined. Buss and Parry's aggression scale was used for research purposes. The sample is non-systematic and convenient; it consisted of 138 secondary school students in Vranje (Economic, Medical and Chemical high school).

The results of the survey show an average of aggressiveness of $M=80.48$, with minimum score of 46, and maximum of 134. The subcategory of "hostility" is

related to material situation. Verbal aggression is related with only one socio-demographic correlate - gender, while physical aggression is related only with the correlate of complete family.

The obtained data indicate that there are different degrees of manifestations of aggression in students with different socio-demographic characteristics, but these relations are generally weak.

Keywords: socio-demographic correlates, aggression, high school students.

PSIHOLOGIJA LIČNOSTI

PERSONALITY TRAITS AND CONFLICT RESOLUTION: THE MEDIATION ROLE OF EMOTIONAL COMPETENCE

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Taking into account the equally important role of emotional competence and personality traits and the results from previous studies which showed that Personality traits are significant predictors of Emotional Competence, the aim of this research was to examine possible mediation role of Emotional Competence between Personality traits and Conflict Resolution Styles.

The sample consisted of 203 respondents (F=149; M=49) aged from 18 to 30 years (M=21.50; SD=2.91). Instruments used in this research were Big Five Inventory, short version (John, Donahue & Kentle, 1991); Conflict Management Styles Assessment (Adkins, 2006) which measures five Conflict Resolution Styles: Avoiding, Collaborating, Compromising, Competing and Accommodating style; and questionnaire for assessing Emotional Competence (UEK-15; Takšić, 2001).

On the basis of conducted mediation analysis (Hayes, 2013) results have shown that Personality traits have both direct and indirect effect, through Emotional Competence, on Conflict Resolution Styles. A full mediation effect of Emotional Competence has been shown between: Openness for experience and Compromising conflict resolving style (b=.109; 95% CI [.042, .191]); Openness for experience and Avoiding style (b=-.155; 95% CI [-.233, -.095]); Neuroticism and Avoiding style (b=.168; 95% CI [.098, .259]); Neuroticism and Collaborating style (b=-.211; 95% CI [-.301, -.137]); Conscientiousness and Compromising style (b=.125; 95% CI [.026, .241]); Conscientiousness and Avoiding style (b=-.241; 95% CI [-.344, -.16]); Conscientiousness and Collaborating style (b=.206; 95% CI [.119, .314]); Agreeableness and Collaborating style (b=.134; 95% CI [.073, .219]); Extraversion and Accommodating style (b=-.052; 95% CI [-.137, .017]); and Extraversion and Collaborating style (b=.018; 95% CI [.107, .275]). Results have shown part mediation effect of Emotional Competence between: Openness and Competing style (b=-.041; 95% CI [-.024, .108]); Openness and Collaborating style (b=.131; 95% CI [.072, .208]); Agreeableness and Competing style (b=.101; 95% CI [.038, .199]); Extraversion and Avoiding style (b=-.129; 95% CI [-.201, -.074]); and between Extraversion and Competing style (b=.052; 95% CI [.013, .126]).

The assumption regarding mediating role of Emotional Competence was partially confirmed. A suggestion for further research is to more precisely examine the domain of Emotional Competence to whom this mediation effect can be attributed, which would lead us to better understanding of this relation and it would also check the results given in this research.

Keywords: emotional competence, personality traits, conflict resolving, mediation

STATES OF EMOTIONAL REACTIVITY: INCREMENTAL VALIDITY OF DISINTEGRATION OVER BIG FIVE

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Current research on emotional reactivity shows that individuals possess a disposition to experience the feeling of being moved or touched accompanied by physical sensations such as tears, goose bumps, etc., in response to a sudden augmentation of communal relationships. The aim of the study was to investigate the incremental validity of Disintegration over Big five in the prediction of emotional reactivity states. The sample of 242 university students (197 females, man age 20.15, $SD=2.82$) was collected as part of the international KAVIAR project (<https://osf.io/cydaw/>). Respondents were asked to recall an episode in their lives in which they “got moist eyes or even shed a tear because of a positive feeling”, and to write about a second episode in which “they got moist eyes or even shed a tear because of a negative feeling”. After writing each episode participants completed several questionnaires assessing emotional reactivity states: Perspective taking, Fantasy, Empathic concern and Personal distress, measured by Interpersonal Reactivity Index, Feelings of nostalgia assessed with Southampton Nostalgia Scale (SNS), and the Experience of Being Moved measured with KamaMutaMultiplex Scale (KAMMUS). Basic personality traits were assessed using 10-item BFI, and 20-item DELTA-9 scale. Hierarchical regression analysis showed that Disintegration had incremental contribution over Big five in the prediction of emotional reactivity states. Specifically, Big five explained 22% of Perspective Taking variance, while Disintegration explained additional 8%. In case of Emphatic Concern Big five predicted 15%, and Disintegration 11%. When it comes to Personal distress, Disintegration explained 8% of variance over Big Five which explained 26%. Experience of being moved

was substantially explained with Disintegration (15%) over Big five (7%). Fantasy was predicted exclusively with Openness from Big five (12%), while Nostalgia was predicted solely by Disintegration (10%). All ΔR^2 were significant at the level of .01. Disintegration facets that had systematic contribution were increased Somatoform Dysregulation and decreased Flattened Affect, while General Executive Impairment, Perceptual Distortions, Enhanced Awareness, Depression and Mania had an occasional contribution and added to the explanation of specific emotional reactivity states. The results were consistent across both conditions. Results suggest that Disintegration has an important role in explaining different aspects of emotional reactivity above and beyond Big five traits.

Keywords: emotional reactivity states, feeling of being moved, basic personality traits, Disintegration

ACCURACY OF PERSONALITY JUDGMENTS IN THE SELECTION INTERVIEW

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Basic personality traits are one of the most often assessed constructs in the selection interview. Since the personality judgments play a significant role in the selection interview outcome, it is crucial to determine the degree of their judgment accuracy. The aim of this research is to examine the accuracy of personality judgments in the selection interview by using other-other agreement (between-experts) as a criterion for accuracy. In the real selection process, 202 semi-structured, one-on-one interviews with applicants (40% female, age $M=27.00$, $SD=5.00$) were conducted and audio-recorded. Four independent raters, who were experts with more than five years of experience in conducting selection interviews, listened to interviews and rated candidates' personality on the 24-item scale based on the HEXACO model of personality (mean $\alpha=.84$). The raters were presented with the descriptions of the facets of each personality dimension and rated candidates on a 5-point Likert-type scale. Results show that interclass correlation coefficient (Two way random model, Consistency type) for

Honesty is .518 [95% CI 0.399, 0.618], $p < .001$, for Emotionality .613 [95% CI 0.518, 0.694], $p < .001$, for Extraversion .796 [95% CI 0.746, 0.838], $p < .001$, for Agreeableness .597 [95% CI 0.498, 0.681], $p < .001$, for Conscientiousness .646 [95% CI 0.560, 0.720], $p < .001$ and for Openness .593 [95% CI 0.493, 0.677], $p < .001$. Findings demonstrate modest inter-rater agreement on personality judgments, implying that the personality judgments made by experts are on the same level of accuracy as the judgments made by nonprofessional zero acquaintances. However, it should be noted that experts were in a position to provide personality judgments in the situation with very few cues, i.e. solely based on the audio information. Following the criterion of inter-rater agreement, in the selection interview, raters most accurately assess candidates' Extraversion and Conscientiousness, followed by Emotionality, while judgments on Agreeableness, Openness, and Honesty are less accurate, which is in a line with previous findings on the visibility of personality traits.

Keywords: selection interview, personality traits, personality judgment, accuracy

AUTOSTOPERI – PO ČEMU SU SPECIFIČNI?

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Autostopiranje je način prijevoza u kojem putnik koristi besplatan prijevoz od drugog putnika. Stopiranje sa sobom nosi znatnu razinu rizika, stoga se očekuje da su autostoperi specifični po strukturi ličnosti. Pretpostavlja se da imaju više razine otvorenosti iskustvu, traženja uzbuđenja, ekstraverzije i zadovoljstva životom te niže razine anksioznosti od osoba koje ne stopiraju. Očekivani motivi za početak i prestanak stopiranja su praktični razlozi dok se podloga za nastavak ponašanja smatra unutarnja motivacija. U istraživanju je sudjelovao prigodan uzorak ispitanika prikupljen preko društvenih mreža i tehnikom snježne grude. Sudjelovalo je 87 autostopera te 87 ljudi koji nikad nisu stopirali. Oni su izjednačeni po dobi, financijskoj situaciji i razini obrazovanja. 57% ispitanika ima višu/visoku stručnu spremu ili doktorat, a 41% srednju stručnu spremu. 34% ispitanika raspolaže mjesečno s više od 3000kn, 21% „manje od 1000kn mjesečno“, 21% „od 1000 do 1500kn mjesečno“ i 24% „od 1501 do 3000 kn mjesečno“. Ispitanici su većinom bili u dvadesetim i tridesetim godinama. Varijable su se mjerile pomoću HEXACO subskala ekstraverzije i otvorenosti prema iskustvu, Zuckermanove skale traženja uzbuđenja, STAI upitnika anksioznosti te se tražilo od ispitanika da na skali od 1 do 7 odrede svoje zadovoljstvo životom. Motivi početka, održavanja i prestanka autostopiranja su obrađeni kvalitativno kroz analizu otvorenih anketnih odgovora. Razlika između

uzoraka se kod zadovoljstva životom, traženja uzbuđenja, ekstraverzije i otvorenosti prema iskustvu utvrđivala t-testom za nezavisne uzorke, dok se to s anksioznošću radilo pomoću rang testa. Rezultati ukazuju na dva razloga za početak stopiranja: potreba i želja. Često se počinje iz praktičnih razloga poput nedostatka financija ili nepostojanja pogodnog prijevoznog sredstva, a nastavlja se jer se stoperima sviđa sam taj čin. Autostoperi uglavnom imaju pozitivna iskustva, te se ne boje stopirati. Najčešći razlozi prestanka stopiranja su gubitci primarnih motiva za stopiranje i spoznaja o opasnosti. Autostoperi su generalno ekstravertiraniji $t(172)=2.5$, $p<.01$ i otvoreniji prema iskustvu $t(172)=2.07$, $p<.05$ od uzorka ispitanika koji ne prakticira autostopiranje. Autostoperi također imaju veću razinu traženja $t(172)=3.21$, $p<.01$ uzbuđenja, i nižu razinu anksioznosti kao crte ličnosti Zadjs $t=2.05$, $p<.05$ te prosječno ocjenjuju svoje životno zadovoljstvo većim od kontrolne grupe ispitanika $t(172)=2.51$, $p<0.01$.

Ključne reči: autostopiranje, motivacija, ličnost

Hitchhiking is defined as a method of transport in which a passenger tries to get a free ride from another passenger. The motives behind hitchhiking have been analysed qualitatively and the difference in certain personality traits quantitatively. There are two general incentives that can lead to the start of hitchhiking: necessity and desire. The usual start involves practical reasons while continuation happens because of enjoyment. The test subjects usually have positive experiences and report no fear. The most mentioned reasons for the cease of this activity are the loss of the primary motivation and having a realization of the danger of hitchhiking. Hitchhikers are generally more extroverted $t(172)=2.5$, $p<.01$ and open to experience than non-hitchhikers $t(172)=2.07$, $p<.05$. They also score higher on the sensation seeking scale $t(172)=3.21$, $p<.01$, have lower trait anxiety $Zadjst=2.05$, $p<.05$ and evaluate their life more satisfying than non-hitchhikers $t(172)=2.51$, $p<0.01$.

PERSONALITY TRAITS AS PREDICTORS OF GRATITUDE

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The aim of this study was to determine in what degree personality traits can explain the variance of gratitude. According to Emmons et al. (2003), gratitude has been described as a moral virtue, attitude, emotion, and personality trait and coping response. As an affective trait, it has been defined as a “generalized

tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains" (McCullough et al., 2002; as cited in Wilks et al., 2015).

Personality traits were measured with HEXACO-PI-R (Ashton & Lee, 2007) and gratitude was measured with Gratitude Questionnaire (GQ-6; McCullough et al., 2002).

The sample was convenient and it has consisted of 140 respondents, both sexes (M=32; F=108). The average age in the sample was 26.26 (SD=9.06).

The data was analyzed using the method of statistical correlation in order to examine the existence and nature of the correlation between personality traits and gratitude. The second method that was used in this research was a method of linear regression. This method was used in order to determine if personality traits can explain, and to what degree they explain, the variance of gratitude. In the linear regression, criterion variable was gratitude and predictors were personality traits (Honesty, Emotionality, Extraversion, Agreeableness, Conscientiousness, Openness to Experience).

Results have shown that gratitude is in a statistically significant positive correlation with extraversion ($r=.273$, $p<.01$) and emotionality ($r=.206$, $p<.05$).

Linear regression has shown following: Personality traits taken together account for 18.4% of the total variance of gratitude ($R=.429$, $R^2=.184$, $p<.01$). Statistically significant predictors were: extraversion ($\beta=.308$, $p<.01$) and emotionality ($\beta=.279$, $p<.01$).

Based on the results shown in earlier paragraphs it can be seen that both correlation and regression analysis show that the same personality traits are in statistically significant relation with gratitude: extraversion and emotionality. More precisely, extraversion and emotionality are both in correlating and predicting relation with gratitude. It can also be seen that extraversion has stronger correlation with gratitude and that it is also better predictor of the same construct (β value is higher). In order to check results given here further research using other personality traits questionnaires is suggested to see if this relation is specific for HEXACO personality model or it can be generalized to other personality models as well.

Keywords: gratitude, personality traits, HEXACO, GQ-6

**SELF-CONCEPT, DEFENSE STYLES AND COPING STRATEGIES:
MEDIATORS OF ACTIVITIES OF DAILY LIVING AND LIFE
SATISFACTION RELATIONSHIP AT DISABLED PERSONS**

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Activities of daily living is a measure of person's involvement in activities of daily living and mobility, and an indicator of person's capability to live alone with certain degree of independency from others. Its relationship with life satisfaction at people with disabilities depends on nature self-perceiving and evaluating processes. In this study the role of self-concept, defense styles and coping strategies were examined as mediate variables which define relationship between activities of daily living and life satisfaction.

Sample consisted of 205 patients with disabilities (58 woman), between 21 and 73 years old ($M=45.49$, $SD=12.53$).

Activities of daily living were measured with Barthel ADL Index, while life satisfaction was assessed with Life Satisfaction Scale, which contains of global and situational life satisfaction measures. SC-4 was used in estimation of self-concept primary domains (competence, family, social, physical, emotional, and academic). Defense styles were assessed by Defense Style Questionnaire (DSQ-40), which provides measures of mature, immature, and neurotic defense style. Coping strategies were estimated by Coping Inventory of Stressful Situations which includes three scales: task oriented, avoidance and emotional reaction scales.

In mediation analysis activities of daily living was independent, while self-concept primary domains, defense styles, and coping strategies were separately involved in a position of mediate variables. Life satisfaction dimensions were varied as dependent variable.

When self-concept primary domains are mediate variables, results show no significant direct and total effect of activities of daily living effect on both life satisfaction components. Competence (.91**) and social self-concept (.43*) show significant mediate effect on general life satisfaction, while competence (.21**) and family self-concept (.07*) significantly mediate situational life satisfaction. Mediate effect of coping strategies on general life satisfaction is significant for task oriented (-.26*) and emotional reaction (-.44**). Significant

effect on situational life satisfaction is registered for task oriented (.14**), emotional reaction (.05*), and avoidance (.05*).

Results indicate that self-concept and coping strategies are important link between activities of daily living and life satisfaction. Registered differences related to general and situational life satisfaction are to be discussed.

Keywords: Activities of daily living, life satisfaction, self-concept, defense strategies, mediation analysis.

STAVOVI PREMA HOMOSEKSUALNIM OSOBAMA

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Cilj ovog istraživanja bio je konstrukcija Skale homofobije (SH) s dvije subskale u svrhu razlikovanja stavova prema homoseksualnim muškarcima i ženama te provjera psihometrijskih karakteristika SH. U istraživanju je sudjelovalo 211 sudionica i 82 sudionika Osječkog sveučilišta. Sudionici su osim SH ispunjavali i Multidimenzionalnu skalu stavova prema lezbijkama i gej muškarcima (MSATLG), Multidimenzionalnu mjeru otvorenosti prema seksualnosti (MMCS1), Indeks tolerancije na nasilje (ITNH) i sociodemografski upitnik.

Faktorska analiza provedena je na 27 čestica po pojedinoj subskali SH pri čemu su korištene metoda glavnih komponenti i oblamin rotacija. Vodeći se Scree plot kriterijem izdvojena su po dva faktora na svakoj subskali: Otvorenost prema interakciji s homoseksualnim muškarcima/ženama i Stavovi prema jednakosti muških/ženskih homoseksualnih osoba. Sudionici su izražavali stupanj slaganja s tvrdnjama na Likertovoj skali od 1 do 4.

Pouzdanosti SH i njenih subskala su bile vrlo visoke i kretale su se u rasponu od $\alpha=.90$ do $\alpha=.97$. Za mjere konvergentne valjanosti izračunata je korelacija između rezultata na SH i MSATLG te se pokazalo da rezultati ovih dvaju upitnika visoko pozitivno koreliraju ($r=.93$, $p<.01$). Konvergentna valjanost SH nije postignuta.

MMCS1 korišten je kao mjera divergentne povezanosti kako bi se provjerilo mjeri li novokonstruirana skala dodatne konstrukte u području seksualnosti. S obzirom na visoku povezanost samo s jednim faktorom MMCS1 skale, Otvorenost prema seksualnim aktivnostima drugih ljudi ($r = -.70$, $p < .01$), može se pretpostaviti kako bi divergentna valjanost bila postignuta kada bi se zanemario taj faktor koji više odgovara mjeri konvergentne valjanosti.

ITNH korišten je kao kriterij dijagnostičke valjanosti te je dobiveno da je SH dobar prediktor navedenog kriterija ($r = .58$, $p < .01$).

Provjerom inkrementalne valjanosti pokazalo se kako SH pridonosi 3% objašnjavanju varijance kriterija. Otvorenost prema interakciji s homoseksualnim muškarcima/ženama ima veću dodatnu prediktivnu sposobnost (SH-M objašnjava 13.7%, SH-Ž objašnjava 5.9%) u usporedbi s drugim faktorom.

Konstruirana je dvofaktorska SH s dvije subskale s obzirom na spol objekta stava. Dok konvergentna i divergentna valjanost nisu bile postignute, dijagnostička valjanost je postignuta s obzirom na dobru prediktivnu sposobnost konstruirane skale, te je inkrementalna valjanost dijelom postignuta, s obzirom da dodatno doprinosi objašnjavanju varijance kriterija.

Ključne reči: homofobija, konstrukcija, validacija, skala

ATTITUDES TOWARDS HOMOSEXUAL PEOPLE

The aim of this research was to construct a Homophobia Scale (SH) and evaluate its psychometric properties. Participants filled the SH, Multidimensional Scale of Attitudes towards Lesbians and Gay men (MSATLG), the Multidimensional Measure of Openness towards Sexuality (MMCS1), the Index of Tolerance for Violence toward Homosexuals (ITNH) and the sociodemographic questionnaire. Factor analysis of SH identified two underlying factors in each subscale: Openness towards the interaction with homosexual men/women and Attitudes towards the equality of homosexual men/women. Convergent validity between SH and MSATLG was not demonstrated as the two measures used were very highly correlated. Furthermore, divergent validity with MMCS1 was not observed. ITNH was used as a criterion of diagnostic validity and it suggested that the newly constructed SH was a good predictor of the above criterion.

SHORT PSYCHOPATHY RATING SCALE (SPRS): PRELIMINARY VALIDATION RESULTS

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Since there are not sufficient rating measures of psychopathy, we constructed a short scale which operationalizes three psychopathy traits: 1) Deceitfulness – lying and conning followed by high self-evaluation (5 items); 2) Emotional coldness – lack of emotional empathy, guilt and general affective shallowness (3 items); 3) Recklessness – impulsivity, irresponsibility, elevated risk proneness (5 items). We administered these items to the sample of 521 individuals (34% males) who rated their parents on psychopathy markers. In order to explore the validity of psychopathy scales we collected several additional measures: 1) Mental health – measured by a single item; 2) Family dysfunctions – measured by six items from the Weak Socialization scale (AMORAL 9 inventory); 3) childhood Poverty – measured by self-reported socio-economic status of family during the participants' childhood.

We performed Maximum Likelihood explorative factor analysis, on males and females separately. The fit indices were satisfactory both for males ($\chi^2=105.53$; $p<.01$; GFI=.99; CFI=.97; RMSEA=.05) and females ($\chi^2=132.42$; $p<.01$; GFI=.99; CFI=.98; RMSEA=.06). However, the items loadings on respective factors show that one item both in females and in males have inadequate factor loading. Reliability estimates showed high reliabilities for Deceitfulness and Recklessness ($\alpha>.80$) with lower estimates for Emotional coldness ($\alpha=.57$ for females and $\alpha=.63$ for males). Paired samples t-test showed that males were higher on all psychopathy traits than females (Mmales=2.04; SD=0.99; Mfemales=1.85; SD=0.84; $t=3.70$; $p<.001$ for Deceitfulness; Mmales=2.35; SD=0.97; Mfemales=2.13; SD=0.89; $t=4.22$; $p<.001$ for Emotional coldness and Mmales=1.93; SD=0.99; Mfemales=1.69; SD=0.69; $t=5.19$; $p<.001$ for Recklessness). Correlation analysis showed systematic relations between psychopathy and external measures: 1) psychopathy traits are negatively correlated with mental health in children and 2) positively correlated with Family dysfunctions and childhood Poverty. Preliminary empirical evidence shows support for Short Psychopathy Rating Scale, which could advance the measurement of psychopathy in various research settings. However, future work on the scale is needed in order to further improve the factor structure of the instrument.

Keywords: psychopathy, rating method, psychometrics, sex differences, validity

RAZVOJ I VALIDACIJA ŠESTODIMENZIONALNOG INVENTARA ZA SAMOPROCENU PSIHO PATSKIH CRTA

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Cilj ovog rada bio je konstruisanje, psihometrijska procena i validacija Šestodimenzionalnog inventara za samoprocenu psihopatskih crta (6-PSHP). Pri konstrukciji pilot verzije instrumenta uzeto je u obzir više modela koji se pominju u literaturi na osnovu kojih su izdvojeni indikatori koji se odnose na afektivne, bihevioralne i interpersonalne deficite. Pilot istraživanje instrumenta sa 100 stavki je sprovedeno na 554 ispitanika putem interneta, nakon čega je broj stavki smanjen na 50. Validaciona studija izvršena je na 307 ispitanika koji su pripadali srednjoškolskoj (232 ispitanika, 51,7% ženskog pola, $M=18.5$, $SD=0.35$) i zatvorskoj populaciji (75 ispitanika, svi muškog pola, $M=45.3$, $SD=12.5$). Finalna verzija instrumenta se sastoji od 47 stavki. Faktorskom analizom izdvojeno je 6 faktora koji mere crte psihopatije: egocentričnost ($\alpha=.80$, $KMO=.90$, $H5=.67$), manipulativnost ($\alpha=.78$, $KMO=.90$, $H5=.79$), agresivnost ($\alpha=.80$, $KMO=.92$, $H5=1$), površinske partnerske veze ($\alpha=.74$, $KMO=.87$, $H5=1$), afektivitet ($\alpha=.74$, $KMO=.85$, $H5=.67$) i neustrašivost ($\alpha=.69$, $KMO=.81$, $H5=.78$). Konvergentna valjanost proveravana je korelacijama sa testom za samoprocenu psihopatije SRP-III i testom makijavelizma, kao i kanoničkom korelacionom analizom sa HEXACO-60 modelom ličnosti. Većina korelacija faktora 6-PSHP i faktora SRP-III je značajna i pozitivna, kao i većina korelacija faktora 6-PSHP sa ukupnim skorom MACH-IV. Kanoničkom korelacionom analizom pokazano je da su sve facete HEXACO-60 modela dobri prediktori faktora testa 6-PSHP što je u skladu sa teorijskim pretpostavkama. Instrument poseduje dijagnostičku valjanost s obzirom da uspešno predviđa pripadnost polu (75.6% tačnosti), kao i pripadnost školskoj ili zatvorskoj populaciji (77.2% uspešnosti). Dobra prognostička valjanost validiranog instrumenta pokazana je kvazikanoničkom analizom prema kojoj su svi faktori prediktori recidiva i socioseksualnosti kod zatvorske populacije ($Rho=.414$, $p<.001$). Na srpskom

govornom području još uvek nije konstruisan test za proveru konstrukta psihopatije koji bi se, osim u istraživačkoj delatnosti, koristio i u praktične svrhe. Šestodimenzionalni inventar za samoprocenu psihopatskih crta (6-PSHP) zadovoljava kriterijume valjanog testa koji bi mogao biti u upotrebi kao instrument za procenu psihopatskih crta na srpskom govornom području uz neophodnu replikaciju instrumenta i faktorske strukture na odraslim osobama.

Ključne reči: psihopatija, 6-PSHP, validacija, recidiv, socioseksualnost

The aim of this study was to construct, evaluate psychometrically and validate the Six-dimensional self-report inventory of psychopathic personality traits (6-PSHP). The pilot version consisted of 100 items arranged in 10 indicators related to affective, behavioral and interpersonal deficits. After dropping items that didn't have satisfactory psychometric characteristics the final version of the 6-PSHP was left with 47 items consisted within 6 factors. All of these factors have good metric characteristics: egocentricity ($\alpha=.80$, $KMO=.90$, $H5=.67$), manipulation ($\alpha=.78$, $KMO=.90$, $H5=.79$), aggressiveness ($\alpha=.80$, $KMO=.92$, $H5=1$), superficial relationships ($\alpha=.74$, $KMO=.87$, $H5=1$), affectivity ($\alpha=.74$, $KMO=.85$, $H5=.67$) and fearlessness ($\alpha=.69$, $KMO=.81$, $H5=.78$). Confirmed factor structure, convergent, discriminant and prognostic validity show that the 6-PSHP inventory can be used as a predictor of psychopathic personality traits.

THE PRELIMINARY RESULTS ON FACTORIAL VALIDITY OF THE MAXIMIZATION SCALE

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Maximization Scale (Schwartz et al., 2002) is an instrument for measuring individual differences in decision making, conceptualized as a general behavioral tendency to maximize or satisfice when making a choice: while some people try to choose the best option (maximizers), others try to choose the option which is good enough (satisfiers). The original scale contains 13 items, but after being used in numerous studies, authors come up with the shortened 6-item version with improved psychometric properties (Nenkov et al., 2006). The items are reported to represent 3 dimensions: high standards (HS, e.g. I never settle for the second

best), alternative search (AS, e.g. No matter how satisfied I am with my job, it's only right for me to be on the lookout for better opportunities), and decision difficulty (DD, e.g. I often find it difficult to shop for a gift for a friend). The scale has been widely used, but mostly without testing its proposed factorial structure.

As part of a larger study, a total of 189 participants (83% females, mean age $M=22.3$, $SD=2.5$), students of the University of Belgrade, completed the 13-item Maximization Scale, indicating how much they agreed with each of statements (ratings from 1 – Completely disagree to 7 – Completely agree). Using the Maximum Likelihood estimation method we tested the one- and three-factor models on both the whole scale (Models 1a and 2a) and the shortened version (Models 1b and 2b).

The fit of the one-factor models was rather poor, $\chi^2(65)=196.01$, $CFI=.72$, $RMSEA=.10$ for Model 1a and $\chi^2(9)=40.99$, $CFI=.76$, $RMSEA=.14$ for Model 1b. The three-factor model on the whole scale (Model 2a) was somewhat better, but still below the recommended fit values, $\chi^2(62)=138.99$, $CFI=.84$, $RMSEA=.08$. However, the fit of the three-factor model on the shortened version was quite good, $\chi^2(6)=13.98$, $CFI=.94$, $RMSEA=.08$ indicating a clear factorial structure of the six-item instrument. The average loading of the items on their respective factors was $w=.63$ and the correlations between factors were $r=.52$, $p<.001$ for HS and AS, $r=.69$, $p<.001$ for HS and DD and $r=.58$, $p<.001$ for AS and DD.

Our results support the recommendation to use shortened rather than the original version of the Maximization scale, due to its improved psychometric properties. In addition, results show that the shortened version of the scale measures three relatively highly correlated aspects of decision making maximization, namely high standards, alternative search and decision difficulty.

Keywords: Maximization scale, factorial validity, CFA

THE PRELIMINARY RESULTS ON FACTORIAL VALIDITY OF THE OBSESSIVE-COMPULSIVE INVENTORY–REVISED

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Obsessive-Compulsive Inventory–Revised (OCI-R, Foa et al., 2002) is one of the most commonly used self-report instruments for measuring obsessive–compulsive symptoms in both clinical and non-clinical populations. It contains 18 items, and in addition to the total score, it also provides six subscales: washing, checking, ordering, obsessing, hoarding, and neutralizing. OCI-R was mostly reported to have good validity and internal consistency in both clinical and non-clinical samples, but the supposed factorial structure was not always confirmed. The problem is even more intriguing since hoarding disorder is classified as an independent diagnosis in DSM-5, which has already inspired recent clinical studies to re-examine the validity of OCI-R in line with a five-factor model. We therefore aimed to assess the factorial structure of the OCI-R questionnaire on a non-clinical sample.

As part of a larger study, a total of 160 participants (79% females, mean age $M=22.3$, $SD=2.6$), students of the University of Belgrade, completed the OCI-R, i.e. indicated the OCD symptom prevalence during the last month, using the scale from 0 (not at all) to 4 (extremely). About one third of participants (32%) scored above the cut-off value for OCD (summary score 21 or higher). Following the ideas of the original authors, we tested a one-factor model (Model 1) as well as a six-factor model (Model 2). However, in line with the exclusion of hoarding from the OCD, we also tested a one-factor model without the hoarding items (Model 3) and a five-factor model (Model 4). All models were tested using a Maximum Likelihood estimation method.

Neither of the one-factor models fit the data well, with $\chi^2(135)=683.26$, $CFI=.60$, $RMSEA=.16$ for Model 1 and $\chi^2(90)=517.29$, $CFI=.64$, $RMSEA=.17$ for Model 3, while models including more factors provided fit indices that were closer to the recommended values, $\chi^2(120)=241.64$, $CFI=.91$, $RMSEA=.08$ for Model 2 and $\chi^2(129)=151.18$, $CFI=.94$, $RMSEA=.08$ for Model 4. The fit of Model 4 was, however, slightly better than for Model 2 which was also confirmed by the lower Akaike Information Criterion values, $AIC=335.64$ for Model 2 and $AIC=231.18$

for Model 4. The average item loading in Model 4 was $w=.76$ and the average correlation between factors was $r=.56$.

In line with recent clinical sample studies, our preliminary results obtained from a non-clinical sample indicate that not all behaviors related to the OCD stem from a single latent variable, as the five- and six-factor solutions fit the data much better than one-factor models. It should be noted, however, that the factor correlations in the five-factor model are relatively high, indicating closely related latent dimensions. Further, our results give some support to the decision to treat hoarding as an independent diagnosis in the category of Obsessive-compulsive related disorders (DSM-5), rather than a symptom of OCD.

Keywords: OCI, factorial validity, CFA

AFEKTIVNA VEZANOST I SAMOHENDIKEPIRANJE: MEDIJACIONA ULOGA ASERTIVNOSTI

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Samohendikepiranje opisuje ponašanje u situacijama u kojima je potencijalno ugroženo naše samopoštovanje i gde unapred obezbeđujemo izgovor za eventualni neuspeh, kako on ne bi bio pripisan nedostatku naših sposobnosti. Prema teorji afektivne vezanosti, bliski odnosi sa drugima formiraju obrasce ponašanja koji određuju da li ćemo se u takvim situacijama zauzeti za sebe ili prepustiti uticaju drugih. Cilj rada jeste ispitati odnos između dimenzija afektivne vezanosti (anksioznost i izbegavanje) i samohendikepirajućeg ponašanja (spoljašnji i unutrašnji hendikepi u interpersonalnim odnosima; spoljašnji i unutrašnji hendikepi u situacijama postignuća), odnosno da li će asertivnost, koja predstavlja našu spremnost da se samouvereno borimo za sebe i svoja prava, imati ulogu medijatora u pomenutom odnosu. Uzorak je prigodan, čini ga 364 studenta ($m=141$; $ž=223$) Univerziteta u Nišu starosti od 19 do 25 godina ($M=21.12$; $SD=1,45$). U istraživanju su korišćeni Upitnik iskustva u bliskim vezama (SM-ECR-R; Hanak i Dimitrijević, 2013), Skala asertivnosti (Tovilović i sar., 2010) i Upitnik samohendikepirajućeg ponašanja (Mitrović i sar., 2010). Na osnovu rezultata medijacione analize, sprovedene pomoću statističkog paketa Process (Hayes, 2013), uočava se veza između dimenzije izbegavanje i sva četiri tipa samohendikepirajućeg ponašanja koja nije direktna, već je delimično posredovana asertivnošću. Dimenzija izbegavanje ostvaruje direktni ($E=0.17$; $p<.00$) i indirektni efekat ($b=0.05$; 95% CI [0.02, 0.08]) na spoljašnje hendikepe u interpersonalnim odnosima, takođe, ostvaruje direktni ($E=0.23$; $p<.00$) i indirektni efekat ($b=0.06$; 95% CI [0.03, 0.11]) na spoljašnje hendikepe u

situacijama postignuća. Dimenzija izbegavanje ostvaruje i direktni efekat ($E=0.17$; $p<.00$) i indirektni ($b=0.14$; 95% CI [0.09, 0.20]) na unutrašnje hendikepe u interpersonalnim odnosima, takođe, direktni ($E=0.11$; $p<0.05$) i indirektni efekat ($b=0.06$; 95% CI [0.02, 0.10]) na unutrašnje hendikepe u situacijama postignuća. Dimenzija anksioznost ostvaruje delimičan efekat samo na dimenziju unutrašnjih hendikepa u interpersonalnim odnosima kroz direktni efekat ($E=0.35$; $p<.00$) i indirektni efekat ($b=0.15$, 95% CI [0.12, 0.20]). Iz navedenog zaključujemo da naša spremnost da se samouvereno borimo za sebe i svoja prava ostvaruje delimičan medijacioni efekat između izbegavanja i samohendikepirajućeg ponašanja, kao i između dimenzije anksioznosti i unutrašnjih hendikepa u interpersonalnim odnosima, dok se između anksioznosti i ostalih dimenzija samohendikepirajućeg ponašanja uočava isključivo direktna povezanost.

Ključne reči: afektivna vezanost, samohendikepiranje, asertivnost, medijacija

The aim of this paper is to examine the role of assertiveness in relation between dimensions of attachment (anxiety and avoidance) and self-handicapping behavior (outer and inner handicaps in interpersonal relations; outer and inner handicaps in achievement situations). The sample is convenient, consists of 364 subjects ($m=141$; $f=223$), students aged 19-25 ($M=21.12$; $SD=1.45$). We used questionnaires: SM-ECR-R (Hanak & Dimitrijević, 2013), A scale (Tovilović et al., 2010) and SH questionnaire (Mitrović et al., 2010). The results showed that relation between the avoidance and all four types of self-handicapping behavior is not direct, than partly mediated by assertiveness, best on inner handicaps in interpersonal relations ($b=.14$, 95% CI [.09, .20]), while anxiety has indirect effect, mediated by assertiveness, only on internal handicaps in interpersonal relationships ($b=.15$, 95% CI [.12, .20]). The assumed relations are partially confirmed, verifying that assertiveness has the role of mediator in this relationship.

STRATEGIJE RASKIDA LJUBAVNIH VEZA I OBRAZCI AFEKTIVNE VEZANOSTI

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Načini ponašanja tokom raskida mogu da variraju po stepenu direktnosti u obraćanju, saosećajnosti i negativnim/pozitivnih ishodima, a početna pretpostavka rada jeste da će pripadnici nesigurnih obrazaca afektivne vezanosti češće koristiti maladaptivne strategije raskida od sigurno vezanih. Cilj rada jeste

ispitati razlike u učestalosti korišćenja strategija raskida kod pripadnika različitih obrazaca afektivne vezanosti. Uzorak čini 378 ispitanika ($\bar{z}=310$; $m=68$), starosti 18-37 godine ($AS=23.48$; $SD=3.49$). Instrumenti korišćeni u radu su Upitnik strategija raskida (Baxter, 1982) i Upitnik za procenu partnerske afektivne vezanosti (Brennan i sar., 1998; modifikacija Kamenov i Jelić, 2003). Rezultati jednofaktorske analize varijanse pokazuju da su statistički značajne unutargrupne razlike identifikovane na svim stilovima: Izbegavanje ($F(3,374)=4.87$; $p<.00$), Pozitivan ton ($F(3,374)=3.93$; $p<.00$), Otvorena konfrotacija ($F(3,374)=4.16$; $p<.01$), Eskalacija ($F(3,374)=10.30$; $p<.01$), Manipulacija ($F(3,374)=6.38$; $p<.00$), Udaljena komunikacija ($F(3,374)=4.30$; $p<.01$) i Deeskalacija ($F(3,374)=3.55$; $p<.02$). Pripadnici sigurnog obrazca razlikuju se u učestalnosti korišćenja stilova Pozitivan ton i Otvorena konfrotacija, koje češće koriste od osoba sa preokupiranim i bojažljivim obrazcem. Osobe sa izbegavajućim obrazcem koriste samo strategiju Izbegavanje češće od ostalih i to samo u poređenju sa sigurno vezanima. Pripadnici preokupiranog obrazca razlikuju se od onih sa sigurnim po češćem korišćenju strategija Eskalacije, Deeskalacije, Manipulacije i Udaljene komunikacije, a od pripadnika bojažljivog po učestalijem korišćenju strategije Otvorena konfrotacija. Osobe bojažljivo afektivno vezane koriste češće strategiju Izbegavanje od pripadnika sigurnog i preokupiranog obrazca, a strategije Manipulacija, Eskalacija, Deeskalacija i Udaljena komunikacija od pripadnika sigurnog i strategije Eskalacija i Pozitivan ton od preokupirano vezanih. Dakle, maladaptivnim strategijama koriste se preokupirano i bojažljivo vezani, dok se izbegavajuće vezani služe samo jednom od nabrojanih. Ipak, najupečatljivija razlika javlja se između pripadnika sigurnog, sa jedne, i pripadnika preokupiranog i bojažljivog obrazca, sa druge strane, posebno kada je u pitanju korišćenje maladaptivnih strategija, kojima su nesigurno vezani skloniji. Pronađene razlike potvrđuju početne pretpostavke, posebno one o sklonosti nesigurno vezanih ka korišćenju indirektnih i nisko saosećajnih strategija, koje često mogu, ionako težak proces raskida, učiniti još težim.

Ključne reči: afektivna vezanost, strategije raskida, ljubavni odnosi

The aim of this research was to examine differences in the break-up strategies among members of various attachment styles. The sample consists of 378 participants ($f=310$; $m=68$), aged 18-37 ($M=23.48$; $SD=3.49$). The instruments used in the research are the Break-up strategies questionnaire (Baxter, 1982) and the Questionnaire of adult romantic attachment (Brennan et al., 1998). It can be concluded that maladaptive strategies are used by people with preoccupied and fearful attachment, while the members of the avoidance style use only one of them. Nevertheless, the most striking difference lies between the members of the secure style, on one side, and the members of the preoccupied and fearful on the other, especially when it comes to using the maladaptive strategies, towards

which the insecure ones are uncertainly/unlikely more inclined. The differences found confirm the initial assumptions, especially those about the tendency of insecure styles towards the use of the indirect and less compassionate strategies.

NEW MEASURE OF MANIPULATIVE BEHAVIOR

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Manipulative behavior refers to managing or influencing people for the one's purpose or goal achievement. The most common way to assess manipulative behavior is via self-report. The aim of this study is to offer a new measure of manipulative behavior via marketing task and to explore the effects of manipulation.

In the first phase, 56 students were given a marketing task. The task consisted of writing a commercial for a given product (shampoo, meal, or energy drink). Each participant randomly got one of three products and 10 pieces of information for the given product of which 5 referred to positive characteristics of the product and 5 referred to negative characteristics. The instruction for participants was that they should use minimum 7 and maximum 10 information when writing the commercial, but that they cannot add new information, change the meaning of the information, or heighten/reduce the intensity of given epithets in the information. The manipulative behavior was operationalized as ratio of used positive/negative information, the number of negative information which are presented as non-important and the number of transformed negative information into positive. Results showed that most of the participants (39 e.g. 69.9%) used only 7 information (5 positive and 2 negative), in line with the instruction regarding the minimum of used information. 16 (33.9%) participants used more than 2 negative information, and 6 (10.71%) used only 4 positive information. Further, only one participant heightened positive characteristic, but 16 (33.9%) reduced negative characteristics, and 24 (42.8%) transformed negative characteristic into positive. Overall, we could conclude that manipulative behavior is present in marketing task.

In the second phase of the study, other group of 59 students evaluated given commercials. Results showed that commercials in which manipulation was present were more negatively evaluated, and the products as more unattractive,

more harmful, less useful and as something that they wouldn't recommend to another person. The positive correlations were found only between one measure of manipulative behavior (negative information presented as non-important) and informativeness and level of trust. We could conclude that there is a distinction between various types of manipulative behavior and that while most of the manipulative behaviors were evaluated negatively, the positive evaluation obtained the changes of importance of information.

Keywords: manipulative behavior, marketing task, evaluation of manipulation

VALIDITY OF SERBIAN ADAPTATION OF THE AGGRESSIVE BELIEFS AND ATTITUDES - SHORT FORM

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Aggressive beliefs and attitudes represent justification mechanisms to rationalize aggressive behaviour. In the full form of Aggressive Beliefs and Attitudes Scale (ABAS), several aggressive biases are included: hostile attribution, potency, retribution, victimization by powerful others, derogation of target, and social discounting. However, in the short form, only three are included: retribution, victimization by powerful others, and derogation of the target. The main goal of this research was to validate Serbian adaptation of the short form of ABAS (Michel & Gitter, 2015).

On a sample of 443 (50.1 % men) participants from general population, ABAS – Short Form, HEXACO-60, and Aggressiveness Questionnaire AVDH were applied. Based on several criteria for determining the number of factors (parallel analysis, VSS, and MAP), two factors were extracted and principal axis method with promax rotation were applied. First factor (33.03% of common variance) referred to exploitation of weak and poor by rich people, along with humiliation of a victim, so it is named Attitudes about victimization ($n=5$, $\alpha=.79$). Second factor (15.62% of common variance) referred to justification of revenge, so it was named Retribution ($n=3$, $\alpha=.77$). Correlation between two factors was significant, but low (.32 on factorial and .29 on summative scores), indicated that factors are distinctive. Moreover, Retribution factor showed high positive correlation with all aggressiveness traits, especially with Vengefulness (r ranged from .40 to .82 and all are significant at the $p<.001$). Regarding the HEXACO traits, Retribution moderately and negatively correlated with Honesty-Humility ($r=-.40$),

Agreeableness ($r=-.39$), Conscientiousness ($r=-.25$), and Openness ($r=-.16$), but correlations with basic lexical traits are smaller than with aggressiveness. On the other side, Attitudes about victimization factor showed small to moderate correlations with aggressiveness traits, with the highest correlation with Hostility (r ranged from .19 to .34 and all are significant at the $p<.001$). Among HEXACO traits, this factor significantly and negatively correlated only with Agreeableness ($r=-.17$) and Honesty-Humility ($r=-.14$), but small in magnitude.

The results showed that there is conceptual distinction between extracted factors. Namely, the Retribution factor is more close to aggressiveness trait, while Attitudes about victimization factor is more close to what scale supposed to measure – aggressive attitudes and beliefs. Results questioned the use of short form of ABAS not only because of its limited informativity, but also because of construct validity, given that scale contains mixed traits and attitudes domains.

Keywords: Aggressive Beliefs and Attitudes, validation, HEXACO, aggressiveness

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THE ROLE OF COGNITIVE EMPATHY IN DISTINGUISHING SADISM FROM PSYCHOPATHY

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The Dark Tetrad represents the set of distinct but overlapping personality traits (Paulhus & Williams, 2002). Individuals high in these traits frequently inflict suffering to others and engage in other antisocial behaviours (Jones & Paulhus, 2010). Enjoyment from hurting others is one of the key features of sadism (Buckels, Jones, & Paulhus, 2013), which implies that those scoring high on sadism ought to have the ability to recognise and understand another's emotions – known as a cognitive empathy (Mitsopoulou & Giovazolias, 2015). Yet, psychopaths have no qualms about hurting others, as their goals are usually instrumental (Woodworth & Porter, 2002) and thus, it is assumed that a person

high on psychopathy doesn't necessarily need high level of cognitive empathy in order to manifest antisocial behavior. On the other hand, affective empathy - the ability to experience, internalise, and respond to the emotions of others (Baron-Cohen & Wheelwright, 2004) – is not expected to have an interactive effect neither with psychopathy nor sadism. Therefore, the aim of this study was to test moderation effect of both cognitive and affective empathy in relations between two dark traits, sadism and psychopathy, and antisocial behavior.

Data were obtained from 221 high school students (66.1% females), who completed a set of questionnaires, consisting of Antisocial Behaviour Questionnaire – ABQ, Basic Empathy Scale – BES, Psychopathy scale from Short Dark Triad – SD3 and Short Sadistic Impulse Scale – SSIS. Principal component analysis was conducted in order to explore the dimensionality of ABQ. Results showed that one component could be extracted, so the component score was used in further analysis. Results of moderation analysis showed that interaction between cognitive empathy and sadism is significant ($B=0.30, p<.01$), while affective empathy had unique negative contribution in the explanation of antisocial behavior ($B=-0.24, p<.05$), without significant interaction with sadism ($B=-0.07, p>.05$). Sadism had a significant positive effect on antisocial behavior on all levels of cognitive empathy, with the highest positive relation among those who score high in cognitive empathy. In the case of psychopathy, no significant effects were found. Results suggest that recognising and understanding another's suffering might be the feature that distinguishes sadism from psychopathy.

Keywords: antisocial behavior, sadism, psychopathy, cognitive empathy, affective empathy

IMPULSIVNOST I SAMOKONTROLA KAO PREDIKTORI IRACIONALNE PROKRASTINACIJE

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Usled sve bržeg tempa života i većeg broja obaveza sa kojima se ljudi susreću, prokrastinacija je postala jedna od češćih problema današnjice. Zbog toga važno je istraživati o faktorima koji doprinose odugovlačenju izvršenja obaveza. Cilj ovog rada bio je utvrditi kako dve osobine ličnosti, samokontrola i impulsivnost predviđaju prokrastinaciju. Iako je reč o osobinama koje određuju suprotne tendencije u ponašanju pojedinaca i obe su do sada analizirane kao prediktori

prokrastinacije, nije pronađeno ni jedno istraživanje gde je analiziran njihov relativni doprinos.

Istraživanje je sprovedeno 2017. godine na 193 ispitanika (23% muškaraca i 77% žena) prosečne starosti od 22.4 godine. Korišćene su UPPS skala impulsivnosti (Whiteside & Lynam, 2001), koja meri četiri facete (nepromišljenost, hitnost, traženje uzbuđenja i neistrajnost), Skala samokontrole (Tangney, Baumeister & Boone, 2004) i IPS skala iracionalne prokrastinacije (Steel, 2010).

Kako bi se prvenstveno ispitali pojedinačni doprinosi subdimenzija impulsivnosti u predikciji, a onda i inkrementalna validnost samokontrole uz njihovo prisustvo, sprovedena je hijerarhijska regresiona analiza. U prvom bloku dimenzije impulsivnosti značajno predviđaju prokrastinaciju ($R^2 = .32$, $F(4, 184) = 21.88$, $p < .01$). Kao značajni i pozitivni prediktori su se pokazale hitnost ($\beta = .24$, $p < .01$), traženje uzbuđenja ($\beta = .14$, $p < .05$) i neistrajnost ($\beta = .54$, $p < .01$). Uvođenje samokontrole u drugom bloku dovodi do značajne promene u koeficijentu determinacije ($R^2 = .43$, $F(5, 183) = 27.55$, $p < .01$). Od dimenzija impulsivnosti jedino neistrajnost zadržava značajnost ($\beta = .45$, $p < .01$), dok nepromišljenost postaje značajan negativan prediktor ($\beta = -.15$, $p < .05$). Ipak, u drugom bloku analize najveći inkrementalni doprinos i to negativan ostvaruje samokontrola ($\beta = -.44$, $p < .01$).

Može se zaključiti da samokontrola i impulsivnost zajedno objašnjavaju zaista veliki deo iracionalne prokrastinacije. Pritom, iako su negativno povezane, i impulsivnost se može ispoljiti i kao nedostatak samokontrole, obe osobine dele poseban deo varijanse sa odlaganjem ispunjenja obaveza. Takođe, bez obzira što pripadaju istom konstrukt, sve četiri dimenzije impulsivnosti daju i svoj specifičan doprinos u predikciji. Zbog toga, kao i zbog više supresorskih efekata koji su uočeni, može se reći da je odnos impulsivnosti i prokrastinacije veoma složen i da bi ga trebalo dalje istraživati. Ipak, treba biti oprezan sa generalizacijom rezultata, obzirom na veličinu i strukturu uzorka.

Ključne reči: Iracionalna prokrastinacija, impulsivnost, samokontrola

The purpose of the research was to determine how Impulsivity and Self-Control, closely related traits, predict Procrastination. 193 Respondents with an average age of 22.41 have completed the questionnaire. Self-Control scale and Irrational Procrastination scale IPS were used, while Impulsivity dimensions: Lack of Premeditation, Urgency, Sensation Seeking and Lack of Perseverance were measured with UPPS Impulsivity scale. The Hierarchical regression analysis was conducted and four sub-dimensions of Impulsivity have explained 32% variance of Procrastination. Urgency, Sensation Seeking and Lack of Perseverance have been shown as significant and positive predictors. In second model of regression analysis, Impulsivity dimensions together with Self-Control explained 43% of variance. Only Urgency kept its significance, but Lack of Premeditation became significant, negative predictor of Procrastination. It can be concluded that

Impulsivity and self-control share a distinct part of variance with Procrastination. Also, the relation of Impulsivity dimensions to procrastination is complex and should be further examined.

EXAMINING THE EFFECTS OF DISINHIBITION IN UNDERSTANDING EMPATHY AND ATTACHMENT

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According to Triarchic psychopathy model, psychopathy encompasses three distinct, elemental phenotypic constructs with psychological and neurobiological correlates, i.e. boldness, meanness and disinhibition. Disinhibition of affect includes poor emotional regulation, impaired regulation of affect and urges, impulsivity and negative affectivity, while behavioural disinhibition includes alienation and distrust, aggressive acting out (in particular, angry-reactive aggression), untrustworthiness, proneness to drug and alcohol misuse, and norm-breaking behaviour. The aim of this study was to explore the relationships between disinhibition and attachment dimensions (avoidance and anxiety) and cognitive and affective aspects of empathy (empathic concern, personal distress, perspective-taking and fantasy). Data was collected on 602 students (311 male) with a mean age of 21.00 years, (SD=4.41). from various faculties in Zagreb, using the Triarchic Psychopathy Measure (Patrick, 2010), Interpersonal Reactivity Index (Davis, 1983) and The Experiences in Close Relationships scale-Short Version, Inventory attachment to romantic partners (ECR; Brennan, Clark, & Shaver, 1998; Kamenov & Jelić, 2003). Two main analytic approaches were used. First, zero-order correlations (Pearson's r) were used to quantify basic bivariate relationships between TriPM scale variables and empathy and attachment subscales. Additionally, a further set of six hierarchical regression analyses was performed in order to assess for unique (incremental) variance in different aspects of empathy and attachment explained by the individual TriPM component. In these regression model, disinhibition was entered in Step 2 of the analysis, after controlling for age, gender and the two other TriPM components (boldness and meanness) at Step 1. Bivariate correlations showed that disinhibition correlated with attachment anxiety ($r=.27$, $p<.001$), avoidance attachment ($r=.28$, $p<.001$), and to a lesser degree with personal distress ($r=.17$, $p<.001$). Results from hierarchical regression analyses showed that disinhibition predicted personal distress ($\beta=.17$, $p<.001$) and empathic concern ($\beta=.23$,

$p < .001$). Also, disinhibition predicted attachment anxiety ($\beta = .23$, $p < .001$) and avoidance attachment ($\beta = .16$, $p < .001$). Furthermore, results showed that disinhibition did add incrementally to boldness and meanness in accounting for variance in empathic concern ($\Delta R^2 = .04$, $F(1,596) = 137.31$, $p < .001$), personal distress ($\Delta R^2 = .02$, $F(1,596) = 97.31$, $p < .01$), attachment anxiety ($\Delta R^2 = .04$, $F(1,596) = 27.67$, $p < .001$) and avoidance attachment ($\Delta R^2 = .02$, $F(1,596) = 18.16$, $p < .001$). The results are in line with the theoretical assumptions proposed in triarchic psychopathy model that disinhibition is associated with increased internalization.

Key words: psychopathy, disinhibition, empathy, attachment

OSOBI NE LIČNOSTI, SAMOEFIKASNOST I RADNI STRES KOD NASTAVNIKA SREDNJIH ŠKOLA

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Veliki broj dosadašnjih istraživanja nastavničke samoefikasnosti i radnog stresa kod nastavnika većinom akcenat stavlja na personološke činioce koji determinišu uspešnost nastavnika u izvođenju svog posla. Prethodni nalazi ukazuju na značajan doprinos određenih osobina ličnosti, kao protektivnih faktora ili faktora vulnerabilnosti, manifestaciji radnog stresa kod nastavnika ili ispoljavanju optimalne nastavničke samoefikasnosti, dok u slučaju pojedinih osobina ličnosti (npr. Otvorenosti) ta veza nije jednoznačna. Cilj ovog istraživanja bio je utvrditi doprinos osobina ličnosti nastavničkoj samoefikasnosti, kao i radnom stresu kod nastavnika srednjih škola. Uzorak je činilo 202 nastavnika srednjih škola sa teritorije Srbije, od kojih je 63% bilo ženskog pola. Prosečna starost ispitanika bila je 40.07 godina. Instrumenti korišćeni u istraživanju su: Inventar Velikih Pet (BFI-44), koji je namenjen merenju velikih pet osobina ličnosti (Ekstraverzija, Savesnost, Prijatnost, Neuroticizam i Otvorenost), unidimenzionalna Skala nastavničke samoefikasnosti namenjena proceni efikasnosti nastavnika u podučavanju učenika, kao i Inventar radnog stresa kod nastavnika, koji je namenjen merenju sveukupnog radnog stresa nastavničkog posla u školi. Rezultati višestruke regresione analize ukazuju na značajan pozitivan doprinos Prijatnosti ($\beta = .23$, $t = 2.14$, $p < .05$), Savesnosti ($\beta = .32$, $t = 3.15$, $p < .01$) i Otvorenosti

($\beta=.22$, $t=2.46$, $p<.05$) nastavničkoj samoefikasnosti. S druge strane, radnom stresu nastavnika srednjih škola značajno i negativno doprinose Ekstraverzija ($\beta=-.28$, $t=-2.71$, $p<.01$) i Savesnost ($\beta=-.40$, $t=-3.18$, $p<.01$), dok se u slučaju dimenzije Otvorenosti detektuje pozitivan doprinos ($\beta=.33$, $t=3.07$, $p<.01$). Rezultati ovog istraživanja većinom potvrđuju prethodne nalaze u vezi relacija osobina ličnosti sa ishodima i činiocima nastavničkog posla. Posebnu pažnju je potrebno posvetiti osobinama Otvorenosti i nisko izražene Ekstraverzije i Savesnosti, kao faktorima vulnerabilnosti koji doprinose doživljavanju većeg radnog stresa kod nastavnika srednjih škola.

Ključne reči: osobine ličnosti, samoefikasnost, radni stres, nastavnici, srednja škola

The aim of this research was to determine the contribution of personality traits to teacher self-efficacy and work stress in population of secondary school teachers. The sample was consisted of 202 secondary school teachers from Serbia (63% female, mean age: 40.07 years). The Big Five Inventory (BFI-44), which is designed to measure the big five personality traits (Extraversion, Conscientiousness, Neighborhood, Neuroticism and Openness), a unidimensional Teacher self-efficacy Scale designed to assess the teacher's efficiency in teaching, as well as Teacher Stress Scale, which is intended to measure the overall work stress at school, were applied. The results of the multiple regression analysis indicate a significant positive contribution of Agreeableness ($\beta=.23$, $t=2.14$, $p<.05$), Conscientiousness ($\beta=.32$, $t=3.15$, $p<.01$) and Openness ($\beta=.22$, $t=2.46$, $p<.05$) to teacher self-efficacy. On the other hand, the work stress of secondary school teachers is significantly and negatively contributed by Extraversion ($\beta=-.28$, $t=-2.71$, $p<.01$) and Conscientiousness ($\beta=-.40$, $t=-3.18$, $p<.01$), while there is a positive contribution in the case of Openness ($\beta=.33$, $t=3.07$, $p<.01$).

POVEZANOST OSOBINA LIČNOSTI I DOŽIVLJAVANJA POZITIVNOG I NEGATIVNOG AFEKTA PRILIKOM IZLOŽENOSTI VIRTUALNIM SIMULACIJAMA

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Cilj ovog istraživanja bio je ispitati povezanost osobina ličnosti i promjene u doživljavanju pozitivnog i negativnog afekta prilikom izloženosti stresnim situacijama. Povezanost ekstraverzije i bihevioralno aktivacijskog sustava (BAS) s promjenama u doživljavanju pozitivnog afekta, te neuroticizma i bihevioralno inhibicijskog sustava (BIS) s promjenama u doživljavanju negativnog afekta ispitivala se analizom putanje (PATH). Prije interpretacije rezultata, utvrđene su zadovoljavajuće vrijednosti CFI (Comparative Fit Index) i RMSEA (Root Mean Square Error of Approximation) pokazatelja. U istraživanju su korištene i subjektivne i objektivne mjere: upitnici ličnosti, PANAS, pulsni oksimetar te tri različite virtualne simulacije (morski psi, kanjon, vlak smrti). Krenulo se od pretpostavke kako će osobe visoko na skali ekstraverzije i osjetljivijeg BAS-a pokazivati veći porast u doživljavanju pozitivnog afekta, dok će, sukladno tome, osobe visoko na skali neuroticizma i osjetljivijeg BIS-a pokazivati porast u doživljavanju negativnog afekta. Rezultat promjene u afektu sudionika formirao se na način da se od zbroja samoprocjena na dvije čestice PANAS-a za vrijeme određene virtualne simulacije oduzima zbroj samoprocjena na te iste dvije čestice prije simulacija. Primjerice, ukoliko je sudionik za vrijeme pojedine simulacije označio pozitivan afekt sa 9, a prije simulacija pozitivan afekt mu je iznosio 4, tada za njega promjena pozitivnog afekta za tu simulaciju iznosi 5. Isti postupak ponovljen je za svaku simulaciju, te su razlike za sve tri simulacije zbrojene i formirani su ukupni rezultati doživljavanja pozitivnog i negativnog afekta za vrijeme virtualnih simulacija. Suprotno očekivanjima, ekstraverzija i BAS pokazali su se značajnim negativnim prediktorima promjene pozitivnog afekta (za ekstraverziju $r = -.27$, $p < .05$; za BAS $r = -.20$, $p < .05$). Isti trend uočen je i za neuroticizam, koji se pokazao značajnim negativnim prediktorom promjene negativnog afekta ($r = -.28$, $p < .05$), dok mjera BIS-a nije dosegla značajnost. Rezultati navode na zaključak kako ponašanje osobe u nekoj situaciji ne određuju isključivo osobine ličnosti, već je za njegovo određenje i razumijevanje potrebno

poznavati i okolinske uvjete situacije u kojoj se osoba nalazi. Važnost ovog istraživanja ogleda se u priznavanju doprinosa i dispozicijskih i situacijskih faktora u razumijevanju ponašanja te u korištenju virtualnih simulacija u svrhu izazivanja emocionalnih reakcija.

Ključne reči: pozitivan afekt, negativan afekt, virtualne simulacije, dispozicijski faktori, situacijski faktori

The aim of this study was to explore a correlation between personality traits and discrepancy in positive and negative affect while experiencing stressful stimuli. It was hypothesized that extraversion and behavioral activation system (BAS) would be positively correlated with change in positive affect and that neuroticism and behavioral inhibition system (BIS) would be positively correlated with change in negative affect. In order to explore this correlation, Path Analysis was used and, before continuing with the interpretation of results, it was assured that CFI (Comparative Fit Index) and RMSEA (Root Mean Square Error of Approximation) indexes were satisfactory. In order to gain a more profound insight into relations between the constructs, both subjective and objective measures were used, involving personality questionnaires, PANAS, pulse oximeter and three different virtual simulations. It was hypothesized that subjects high on extraversion, and those with a more responsive BAS would report larger change in positive affect, and, accordingly, that subjects high on neuroticism and those with a more responsive BIS would report larger change in negative affect. Individual's change in affect was calculated by summarizing results on two items of PANAS scale measured while person was experiencing certain simulation and then subtracting that number from the score on those same items before simulations. For example, if a subject scores 9 on positive affect while experiencing certain simulation, and his/hers score for positive affect before simulations was 4, then the change in positive affect for that simulation is 5. This procedure was repeated for each of the simulations, then affect discrepancies were summarized for all there simulations and that value was taken as total score for subject's positive/negative affect during virtual simulations. Contrary to expectations, extraversion and BAS were shown to be the negative predictors of change in positive affect (for extraversion $r=-.27$, $p < .05$; for BAS $r=-.20$, $p < .05$). Furthermore, neuroticism was shown to be the negative predictor of change in negative affect ($r=-.28$, $p < .05$), while BIS did not reach significance. Results indicate that in accounting for an individual's behavior in a specific situation, not only personality traits but also situational factors play an important role. The present study underscores the importance of acknowledging both dispositional and situational factors in understanding an individual's behaviour as well as of using virtual simulations in eliciting emotional responses.

SKLONOST RIZIKU SAMOUVJERENIH POJEDINACA

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Ovo istraživanje ispitalo je hoće li samouvjerenost utjecati na sklonost riziku pri donošenju odluka i na koji način. Budući da se pokazalo kako samouvjerenost velikim dijelom utječe na prihvaćanje rizika, svrha istraživanja je utvrđivanje odnosa samouvjerenosti i sklonosti riziku pomoću jednostavnog programa bacanja novčića. Ovo istraživanje razlikuje se od ostalih upravo zbog korištenja jednostavnog programa, koji mjeri i način na koji osobe reagiraju nakon što ne ostvare željeni dobitak, odnosno koliko su spremni mijenjati svoj način igre ukoliko im se on pokaže kao neuspješan. Kao metoda za istraživanje ovog problema korišten je program Bacanja novčića koji se sastoji od niza 55 podražaja u kojem ispitanik pristaje ili odbija klađenje na ponuđene oklade (hoće li pri bacanju novčića pasti pismo ili glava), a koje se razlikuju prema vjerojatnosti dobitka, odnosno gubitka. Prije svakog bacanja novčića, program prikaže koliki je postotak šanse da sudionik osvoji bodove te koliki je postotak da ih izgubi (npr. u jednom je bacanju šansa da će osoba pogoditi da će pasti glava 70%, i s time dobiti 20 bodova, a da će promašiti 30%, a onda izgubiti 40 bodova). Na kraju su sudionici odgovarali na pitanje koliko su zadovoljni ostvarenim bodovima (zadovoljstvo postignutim rezultatom) te bi li se kladili više ili manje ukoliko bi mogli igricu igrati ponovno. Istraživanje je provedeno na 160 pojedinaca, s jednakim brojem muških i ženskih sudionika u dobi od 18 do 28 godina. Dobiveni rezultati pokazali su kako postoji statistički značajna povezanost između samouvjerenosti, koja se mjerila pitanjem gdje sudionici prije same igre upisuju s kojim rezultatom bi bili zadovoljni, i sklonosti riziku ($r=.26$, $p<0.1$). Prema tome, može se reći kako su pretjerano samouvjereni pojedinci skloniji donošenju rizičnijih odluka. Nadalje, kod takvih osoba uočeno je nezadovoljstvo postignutim rezultatima ($r=-.27$, $p<0.1$) no isto tako i manjak volje za mijenjanjem ponašanja u budućim okladama, s obzirom da nema statistički značajne povezanosti između samouvjerenosti i varijable koja ispituje hoće li pojedinci igrati riskantnije ili manje riskantno, odnosno odgovarali su kako ne bi mijenjali svoje ponašanje ($r=.04$, $p>0.5$). Ovim istraživanjem ispitala se i povezanost spola i sklonosti riziku. Dobiveni rezultati ukazuju na to da je spol statistički značajno povezan sa sklonosti riziku nekog pojedinca ($r=.22$, $p<0.1$), a kada se u obzir uzimalo vrijeme reakcije klađenja, muškarci su brže odgovarali,

odnosno imali kraće vrijeme reakcije ($r=-.35$, $p<0.1$), što se povezuje sa niskim stupnjem samokontrole, odnosno impulzivnošću. Važnost dobivenih rezultata leži u korištenju objektivne metode za ispitivanje utjecaja samouvjerenosti na donošenje rizičnih odluka te utvrđivanja načina na koji se samouvjereni pojedinci ponašaju nakon doživljenoga poraza. Isto tako, ovo istraživanje daje nova pojašnjenja odnosa spola, sklonosti riziku te impulzivnosti.

Ključne reči: samouvjerenost, rizik, donošenje odluka, neuspjeh, kockanje

The purpose of this research was to examine the relation between self-confidence and ones tendency for risky behavior. Previous research has proven that those who are higher on self-confidence scale tend to engage in risky behavior more often. In accordance to that, we have examined the relation between these two factors using an online program named “Flip Coin” which also takes notice to the way person reacts after gaining less than they expected. The results show that there is a significant relation between self – confidence and tendency for risky behavior ($r=.26$, $p<0.1$). Also, those who are higher on self – confidence scale are less satisfied with the points they gained ($r=-.27$, $p<0.1$.) but are also less inclined to change their behavior after experiencing a loss ($r=.04$, $p>0.5$).

ALMOST EVERY WOMAN THINKS SHE’S “HOTTER” THAN THE
AVERAGE: DIFFERENCES IN SELF-ASSESSMENTS OF PHYSICAL
ATTRACTIVENESS BETWEEN WOMEN AND MEN

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“Better than average” (BTA) effect is a tendency of people to evaluate themselves more positively than they evaluate others. The goal of this study was to examine if women and men differ in a self-assessed physical attractiveness (PA), compared to other hypothetical people. Participants ($N=444$; 52.5% women; age: $M=26.85$, $SD=7.52$ years) rated their own PA on a 10-point scale using an average person of the same gender and age as a reference point. If we assume that most people are roughly of an average PA and that there is no BTA effect, the PA self-assessments should cluster around a mean of 5.5. However, a mean self-assessment score for men was 6.43 ($SD=1.70$; 26.4% of 7’s, with 67.9% of 6+), while the mean for women was 7.18 ($SD=1.56$; 31.8% of 8’s, with 84.1% of 6+).

Both self-assessments were significantly higher ($p < .001$) than a hypothetical mean of 5.5, with large effect sizes, especially for women (women: $d = 2.16$; men: $d = 1.09$). Self-assessments made by women were significantly higher than self-assessments made by men, with the effect size of a difference being slightly below the medium intensity ($d = 0.46$, $p < .001$). This gender difference persisted even after the Big Five personality, satisfaction with life, depressiveness, self-reported level of physical activity, and age were controlled for, although the effect size diminished ($d = 0.30$, $p = .002$). Note that these variables explained 24.2% of the PA self-assessment's variance, with the best predictors being higher satisfaction with life ($\beta = .23$), higher level of physical activity ($\beta = .17$), higher Extraversion ($\beta = .14$), and higher Openness to Experience ($\beta = .13$). In conclusion, the results suggest that there is an obvious BTA effect when self-assessing one's own PA, but the effect size is larger for women than men. In other words, both women and men overrate their own PA, but women overrate it more. This gender difference in BTA effect can only partially be explained by the personality characteristics and the levels of physical activity.

Keywords: better than average effect, physical attractiveness, gender differences, Big Five personality

PSIHOLOGIJA RADA

DO WE PREFER WORKING WITH FAMILY MEMBERS? A STUDY OF RELATIONS BETWEEN FREQUENCY OF WORKING WITH FAMILY MEMBERS AND JOB SATISFACTION

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Either in the form of nuclear families, like the ones we have today, nuclear families with multiple partners, extended families, family clans and tribes or the so-called kin-based corporate entities, most of the people through most of history have been working together with their family and kin. But in modern times, organization of productive enterprises has changed so that most of the people no longer work with their family members, thus creating the problem of work-family role synchronization. The goal of the current study is to explore if there is a relationship between the extent in which people do their jobs together with their family members on one side, and job satisfaction, work-family and family-work conflict and burnout on the other. The sample consisted of 1275 adult residents of Serbia of working age who reported being full-time employed either officially or without regulated legal status. This sample was a subsample of a geographical cluster sample of 2023 residents of Serbia collected in the scope of the “Study of diversity of family and job relations in Serbia. Participants were asked to complete the PORPOS battery, a compilation of short scales and marker questions created for this study. Data used in the current study included answers on the question about how frequently they do their job together with their family members and scores on job satisfaction, work-family and family-work conflict, as well as self-evaluation of relations with co-workers and with superiors. The results showed that there is a positive correlation between job satisfaction and frequency of working with family members ($\rho=.104$, $p<.01$), and that this correlation is somewhat higher in males ($\rho=.135$, $p<.01$), than in females ($\rho=.081$, $p=.04$). The frequency of working with family members is positively related with self-evaluation of relations with superiors ($\rho=.149$, $p<.01$) and also with co-workers on the male subsample ($\rho=.101$, $p=.02$). People working more frequently with family members reported experiencing somewhat higher levels of both work-family and family-work conflict, with this correlation being somewhat higher in females ($\rho=.138$, $p<.01$ and $\rho=.099$, $p<.01$). It can be concluded that working with family members is positively correlated with job satisfaction but also with increased work-family conflict, although the obtained correlations are low.

Keywords: family, job satisfaction, work-family conflict

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POJAVA PROKRASTINACIJE NA RADNOM MJESTU U REPUBLICI HRVATSKOJ

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Cilj je ovog rada bio ispitati pojavu prokrastinacije, sve češćeg kontraproduktivnog radnog ponašanja, u organizacijama u Republici Hrvatskoj. Prema popularnoj konceptualizaciji prokrastinacija na radnom mjestu ima dva faktora – prokrastinacija na poslu i prokrastinacija putem moderne tehnologije. Prokrastinacija na poslu odnosi se na odgađanje obaveza koje uključuje duge pauze za kavu, sanjarenje i druženje za vrijeme radnog vremena. Prokrastinacija putem moderne tehnologije odnosi se na korištenje modernih tehnologija i interneta za odgađanje obaveza pa može biti riječi o dopisivanju putem društvenih mreža i čitanju irelevantne literature. U ovom istraživanju sudjelovalo je 168 zaposlenika četiri organizacije u Republici Hrvatskoj, a korišteni su novokreirani Sociodemografski upitnik i Upitnik prokrastinacije na radnom mjestu. Rezultati istraživanja, statistički obrađeni u programu SPSS, pokazali su da između sudionika postoji statistički značajna razlika u razini i vrsti prokrastinacije s obzirom na dob i spol. U skladu s očekivanjima istraživača, rezultati su pokazali da žene u globalu manje prokrastiniraju na radnom mjestu ($M(m)=35.54 < M(ž)=33.16$; $t(168)=1.295$, $p < .01$) te manje prokrastiniraju putem moderne tehnologije ($M(m)=12.65 < M(ž)=11.76$; $t(168)=.904$, $p < .05$), dok razlike u klasičnom prokrastiniranju na poslu nije bilo. Nadalje, u skladu s očekivanjima istraživača, rezultati su pokazali da sudionici rane odrasle dobi (od 20 do 35 godina) najviše prokrastiniraju putem moderne tehnologije, a sudionici kasne odrasle dobi (stariji od 50 godina) najmanje ($M(rod)=15.3 > M(kod)=9.84$; $F(2,162)=12.887$, $p < .01$), dok statistički značajnih razlika između prokrastinacije na poslu te ukupne prokrastinacije na radnom mjestu nije bilo. Dobiveni rezultati mogu pomoći stručnjacima za upravljanje ljudskim potencijalima u točnijem planiranju aktivnosti za smanjenje prokrastinacije na radnom mjestu te oblikovanju optimalnih radnih uvjeta. Konačno, potrebno je provesti dodatna istraživanja koja bi provjerila utjecaj prokrastinacije na radna mjesta 21. stoljeća te povezanost prokrastinacije s drugim radnim ponašanjima.

Ključne reči: kontraproduktivna radna ponašanja, prokrastinacija, radno mjesto

DEMOGRAPHIC CHARACTERISTICS AND ORGANIZATIONAL CITIZENSHIP BEHAVIOUR OF EMPLOYEES

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Organizational Citizenship Behaviour is individual behaviour that is discretionary, not explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization. The aim of this study was to investigate if there are differences in Organizational Citizenship Behaviour depending on the gender, age, level of education and the length of service of employees. The sample consisted of 651 employees (50.8% male), aged 19 to 63 ($M=35.28$, $SD=10.01$), with different education level (49.9% university degree or higher) and length of service from 1 to 40 years ($M=10.89$, $SD=9.43$). We used the demographic checklist and Organizational Citizenship Behaviour Questionnaire (Coleman & Borman, 2000) which contains four subscales: Organizational citizenship performance, Interpersonal citizenship performance and Job/task citizenship performance. The multivariate analysis of variance and post-hoc tests Tukey-Kramer test and Dunett's C test were used for data processing. There was no statistically significant difference in Job/task citizenship performance considering gender, age, education level and the length of service of employees. Statistically significant difference has been determined in Interpersonal Citizenship Performance taking into account gender ($F(1)=3.89$, $p=.049$, $\eta^2=.006$) and education level of employees ($F(4)=2.726$, $p=.029$, $\eta^2=.017$). Women are more prone to Interpersonal Citizenship Performance. Employees who have obtained high school degree, college and university degree or higher are more prone to Interpersonal Citizenship Performance than the employees who have obtained elementary school degree. Also, statistically significant difference has been determined in Organizational Citizenship Performance considering age of employees ($F(4)=4.316$, $p=.002$, $\eta^2=.026$). Employees older than 56 are the most prone to Organizational Citizenship Performance, while employees younger than 25 are the least prone to Organizational Citizenship Performance. The results of this study suggest that gender, age and education level of employees significantly determine Interpersonal Citizenship Performance and Organizational Citizenship Performance.

Keywords: Organizational Citizenship Behaviour, demographic characteristics, employees

FOND KATARINA MARIĆ

ESTETSKI ASPEKT PROCENE KONGRUENTNOSTI MUZIKE I APSTRAKTOG SLIKARSTVA

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U ovom radu ispitivan je uticaj muzike na estetsku procenu slika. Cilj istraživanja bio je da ispita efekat stimulusnih faktora (*regularnosti i kompleksnosti*) kao i efekat kongruentnosti muzike i slike na estetsku preferenciju slika. Kongruentnost muzike i slike definisana je na osnovu procena muzičkih stimulusa (džez kompozicija) i apstraktnih slika u preliminarnom istraživanju. Stimulusi su bili procenjeni na skalama *regularnosti, kompleksnosti, prijatnosti i poznatosti*, s ciljem da se različite grupe stimulusa ujednače prema poznatosti i prijatnosti.

I slike i muzički isecci podeljeni su u 4 grupe prema kombinacijama: niska regularnost-niska kompleksnost, niska regularnost-visoka kompleksnost, visoka regularnost-niska kompleksnost i visoka regularnost-visoka kompleksnost. Kongruentna situacija formirana je istovremenim izlaganjem auditivnih i vizuelnih stimulusa koji pripadaju istoj grupi, dok su nekongruentne situacije podrazumevale izlaganje stimulusa sa suprotnim kombinacijama regularnosti i kompleksnosti. Glavni eksperiment, u kojem je učestvovalo 32 ispitanika, sastojao se iz dva dela: procene estetske preferencije slike, njene regularnosti, kompleksnosti i opaženog slaganja slike i muzike, *pri-simultanom izlaganju sa muzikom*, kao i procene estetske preferencije, regularnosti i kompleksnosti slike *u tišini*.

Dobijeni nalazi pokazuju da kongruentnost situacije u kojoj se procenjuje slika ne ostvaruje efekte na estetsku preferenciju. U procenama preferencije u tišini, u pratnji kongruentne, kao i u pratnji nekongruentne muzike nema razlike. Ipak, kongruentnost situacije je značajan faktor kada je reč o procenama slaganja slike i muzike. Osim što je ovo potvrda da su (ne)kongruentne situacije adekvatno konstruisane, može se reći da je sam doživljaj kongruentnosti svestan deo kognitivne procene audio-vizuelne stimulacije. Kontekst same muzike (nezavisno od kongruentnosti) nije ispoljio efekte na estetsku preferenciju. Između procena u tišini i u pratnji muzike nisu utvrđene razlike. Kada je reč o stimulusnim faktorima kao što su regularnost i kompleksnost, rezultati jasno ukazuju na linearan odnos estetske preferencije i kompleksnosti slika dok regularnost ostvaruje nelinearan odnos sa procenama svidanja. Uzimajući u obzir da su dobijeni efekti regularnosti mali, a da interakcija kompleksnosti i regularnosti nije utvrđena, može se reći da je kompleksnost slike presudan faktor u njenoj preferenciji. Ovakav nalaz može se objasniti time da veća složenost dela više provocira perceptivni sistem, pobuđuje posmatrača i pojačava doživljaj

zanimljivosti, što donekle utiče i na porast estetske preferencije. Kada je reč o izostanku efekata kongruencije i same muzike, moguće je da regularnost i kompleksnost nisu dovoljne dimenzije u odnosu na koje bi se oni ispoljili. Afektivna evaluacija i individualne razlike nisu uzete u obzir, a potencijalno bi mogle da budu značajni faktori.

POVEZANOST EGZEKUTIVNE FUNKCIJE INHIBICIJE I DIVERGENTNOG MIŠLJENJA

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Dosadašnji nalazi o povezanosti inhibicije i divergentnog mišljenja su nekonzistentni. U ovim studijama ne postoji konsenzus u pogledu definisanja i merenja inhibicije. Stoga, cilj ovog istraživanja je sistematsko ispitivanje povezanosti tri faktora modela inhibicije i funkcija kontrole interferencije Fridmanove i saradnika (1. inhibicija dominantnog odgovaranja 2. kontrola distraktorske interferencije i 3. kontrola proaktivne interferencije) sa merama divergentnog mišljenja (fluentnost i originalnost). Uzorak je sačinjavalo 87 studenata psihologije. Zadana su dva zadatka inhibicije po faktoru navedenog modela: 1) Numerički i Spacijalni Strupov zadatak; 2) Dve verzije Eriksen-Flanker zadatka (sa slovima i sa strelicama); 3) Braun-Peterson zadatak i Zadatak navođenog prisećanja. Divergentno mišljenje je mereno Zadatkom neuobičajene upotrebe u kojem je od ispitanika zahtevano da navedu što više kreativnih upotreba za ciglu, cipelu i nož. Vremensko ograničenje po predmetu je bilo tri minuta. Nakon isteka vremena, ispitanici su, za svaki predmet, zaokruživali po tri najkreativnija odgovora ("top 3") kao i sve odgovore koji su van njihovog iskustva i pamćenja ("novi"). Fluentnost je skorovana na dva načina: 1) Suma svih odgovora; 2) Suma svih "novih" odgovora. Za skorovanje originalnosti, deset nezavisnih procenjivača je na petostepenim skalama ocenjivalo koliko je svaki odgovor domišljat i udaljen od uobičajene asocijacije za upotrebu datog predmeta. Na osnovu toga, originalnost je skorovana na dva načina: 1) Prosek svih ocena za "top 3" odgovore; 2) Prosek svih ocena za "nove" odgovore.

Visoka saglasnost procenjivača na skali udaljenosti ($ICC=.903$) i umerena saglasnost procenjivača na skali domišljatosti ($ICC=.534$) ukazuju da ove dve mere treba analizirati odvojeno. Dobijena je trofaktorska struktura inhibicije sa umereno povezanim faktorima inhibicije dominantnih odgovora i kontrole distraktorske interferencije ($r=.237$, $p>.05$). Zadaci inhibicije koji mere pretpostavljene funkcije konvergiraju i visoko zasićuju odgovarajuće faktore. Mera udaljenosti "top 3" odgovora značajno korelira sa faktorima inhibicije dominantnih odgovora ($r=.244$, $p>.05$) i kontrole distraktora ($r=.244$, $p<.05$).

Udaljenost "novih" odgovora značajno korelira sa dobijenim faktorom inhibicije dominantnih odgovora ($r=.245$, $p<.05$). Dobijeni rezultati su kongruentni sa perspektivom koja naglašava ulogu inhibicije i egzekutivnih funkcija u blokiranju čestih i nekreativnih ideja i smišljanju kreativnih i neuobičajenih odgovora. Dodatne zaključke bi trebalo doneti sa rezervom usled ograničenih metrijskih karakteristika i potencijalnog upliva subjektivnosti ispitanika prilikom označavanja "novih" odgovora.

ASIMILACIJA I KONTRAST SVETLINE: PERIFERNI I/ILI CENTRALNI MEHANIZMI

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Cilj ovog istraživanja bio je da ispita uticaj faktora reflektanse mete, reflektanse induktora, specijalne frekvence induktora i dubine na pojavu efekata asimilacije i kontrasta svetline. Testirane su predikcije hipoteza iz prethodnih istraživanja, i izvršena je analiza mehanizama koji stoje u osnovi ovih fenomena. Poseban doprinos ovog istraživanja jeste u tome što su kontrolisani svi metodološki faktori (tip zadatka, broj meta, dužina ekspozicije, vizuelni uglovi, figura-pozadina) koji su bili različiti u prethodno pomenutim istraživanjima, a za koje smo pretpostavljali da mogu uticati na pojavu ova dva fenomena.

Kako bi smo odgovorili na postavljene ciljeve, napravili smo dve grupe stimulusa: oni koji su sadržali induktore i oni koji nisu (kontrolni stimulusi). Kontrolnih stimulusa je bilo 6 (2 reflektanse mete (12% i 27%) i 3 dimenzije zbog faktora dubine). Preostali stimulusi su imali 2 različite reflektanse za mete, 12% i 27%, i 3 različite reflektanse induktora: 6%, 20% i 33%. Specijalna frekvencija induktora je bila visoka, srednja ili niska. Induktore su uvek bili ispred mete ali je distanca između mete i induktora varirana na 3 nivoa: 0, 30 i 60 cm.

Rezultati istraživanja pokazali su da variranjem faktora reflektanse mete, reflektanse induktora, specijalne frekvencije induktora i dubine zaista možemo proizvesti efekte asimilacije i kontrasta svetline. Ovaj zaključak potkrepljen je rezultatima statističke analize (značajnost glavnih efekata i interakcija), ali i na osnovu analize dobijenih efekata u odnosu na kontrolne stimuluse. Potvrdili smo pretpostavku da se asimilacija i kontrast nalaze na dva kraja istog kontinuum, sa zonom veridčne percepcije u sredini.

Hipoteze diferencijalne stimulacije, specijalne frekvencije i asimetrije ne predviđaju dovoljno dobro dobijene rezultate. Iz dobijenih rezultata, jasno je da nije tačna pretpostavka da je jedini faktor koji utiče na pojavu asimilacije i kontrasta to da li su induktori svetliji ili tamniji od mete na kojoj se nalaze (h. asimetrije).

Takođe, ni pretpostavka da slični nivoi aktivacije fotoreceptora proizvode asimilaciju, a različiti kontrast (h. diferencijalne stimulacije), ne može biti potvrđena našim rezultatima. Pretpostavka da će induktori visoke spacijalne frekvence uvek proizvesti asimilaciju, a induktori niske spacijalne frekvence kontrast (h. spacijalne frekvence), takođe nije potvrđena na osnovu dobijenih rezultata. Hipoteza dubine dala je najtačnije predikcije: u situacijama kada su se induktori nalazili ispred mete zaista je došlo do smanjenja intenziteta dobijenih efekata, uprkos činjenici da proksimalna stimulacija ostaje gotovo nepromenjena. U literaturi navode se četiri grupe objašnjenja ovih fenomena. Razlike među njima potiču iz odgovora na dva pitanja: da li u osnovi ova dva fenomena stoje isti ili različiti mehanizmi i da li su ti mehanizmi centralnog (kortikalnog) i/ili perifernog (retinalnog) porekla. Dobijeni rezultati ne idu u prilog objašnjenjima koja ističu da u osnovi asimilacije i kontrasta svetline stoje različiti mehanizmi. U situacijama kada nije bilo razmaka između mete i induktora (centralni faktor), faktori reflektanse i spacijalne frekvence induktora (periferni faktori) uspešno su proizveli efekte i asimilacije i kontrasta. Ukoliko bi ova objašnjenja bila tačna, onda bi očekivali da u prethodno navedenoj situaciji (kada nema razmaka između mete i induktora), faktori reflektanse i spacijalne frekvence induktora isključivo proizvodili ili efekte asimilacije ili efekte kontrasta. Očito, to nije ono što naši rezultati pokazuju, te zaključujemo da u osnovi ovih fenomena stoje mehanizmi iste prirode. Sada se postavlja pitanje da li su ti mehanizmi perifernog i/ili centralnog porekla. Pošto rezultati ovog istraživanja pokazuju da smo efekte asimilacije i kontrasta dobili u situaciji kada nije bilo dubine (efekat perifernih faktora), ali i da ti efekti slabe sa povećanjem dubine, smatramo da su i za asimilaciju i kontrast svetline odgovorni i centralni i periferni mehanizmi.

RELACIJE IZMEĐU ANKSIOZNOSTI I PRISTRASNOSTI U PAŽNJI PREMA EMOCIONALNO ZASIĆENIM SADRŽAJIMA

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Osnovni cilj ovog istraživanja je bio ispitivanje efekta anksioznosti na pristrasnosti u pažnji, kada su u pitanju emocionalno zasićeni sadržaji. U prvoj studiji je ispitivan efekat anksioznosti na pristrasnosti prema stimulusima besa, straha i radosti u slučaju automatske i kontrolisane obrade. Uzorak se sastojao od 79 studenata koji su raspoređeni u tri grupe s obzirom na nivo anksioznosti, a primenjen je Test tačkom za ispitivanje pristrasnosti i to u odnosu na tri komponente pažnje: orijentacija, zadržavanje i skretanje pažnje. Rezultati pokazuju značajan multivarijatan efekat interakcije grupe anksioznosti, vremena

izlaganja stimulusa i vrste stimulusa na indeks zadržavanja i marginalno značajan isti efekat na indeks orijentacije pažnje. U slučaju kraćeg izlaganja, nisko anksiozni ispitanici više orijentišu i zadržavaju pažnju na stimulusima straha, dok u slučaju dužeg prikazivanja stimulusa oni duže orijentišu i zadržavaju pažnju na stimulusima radosti, održavajući na taj način pozitivan afekat. Ono što je zanimljivo je da su visoko anksiozni u slučaju dužeg izlaganja više orijentisani na signale straha i besa, u odnosu na signale radosti. U drugoj studiji je ispitivan isti efekat, ali usled indukcije različitih afekata (besa, straha, radosti i neutralnog afekta).

Uzorak je činilo 87 studenata koji su podeljeni u tri grupe s obzirom na nivo anksioznosti i u četiri grupe s obzirom na indukciju afekta. Ostatak procedure je bio isti kao i u prvoj studiji. Rezultati u vezi sa indeksom zadržavanja pažnje ne uključuju efekat anksioznosti, već uglavnom potvrđuju efekat manipulacije. Naime, dobijeno je da je usled indukcije odedenog afekta, zadržavanje pažnje veće na stimulusima koji su kongruentni indukovanom afektu. U slučaju indeksa skretanja pažnje, dobijen je značajan efekat četvorostruke interakcije vrste stimulusa, vremena izlaganja, grupe anksioznosti i indukovanog afekta. Teže skretanje pažnje na nivou kontrolisane obrade je i u ovom slučaju povezano sa stimulusima koji su kongruentni indukovanom afektu, ali je to više karakteristično za visko anksiozne, i to u slučaju indukcije besa i radosti. Može se zaključiti da su visoko anksiozni posebno senzitivni na emocionalni ton situacije, usled čega teže skreću pažnju sa afektu kongruentnih sadržaja. Izuzetak je indukcija straha, u okviru koje je skretanje pažnje otežano sa svih emocionalnih sadržaja. Emocionalno obojeni stimulusi su generalno informacije od značaja za anksiozne, što je dodatno pojačano indukcijom negativnog afekta. Iako nismo dobili jednoznačne odgovore, rezultati su dali bitne smernice za dalje istraživanje pristrasnosti u pažnji.

PRIMENA PRISTUPA ZASNOVANOG NA AGENTIMA U MODELOVANJU ORGANIZACIONIH PROMENA

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Organizacione teorije su do danas pružile različite perspektive razumevanja promena, i najboljih načina da menadžeri adekvatno reaguju na njih, ili strateški sprovedu reorganizaciju radi održanja kompetitivne prednosti. Uprkos velikom broju konceptualnih modela koji pružaju smernice o tome kako upravljati organizacionim promenama, do danas se najveći broj njih završava neuspehom. Promenom perspektive od planiranja promena do razumevanja promena kao

rezultat samo-organizujućih procesa u okviru kompleksnog sistema, otvara se mogućnost korišćenja nove metodologije izučavanja organizacionih promena. Ova promena perspektive upućuje na razumevanje organizacije kao mreže odnosa njenih članova, odnosno izučavanje razvoja organizacije kroz promene struktura formiranih mreža, kao i karakteristika aktera koji je čine. Umesto poređenja statične strukture različitih organizacija radi pronalaženja optimalne forme za suočavanje sa promenama, izučavanje toga na koji način nastaju i od čega zavise formirane strukture pruža veće mogućnosti za razumevanje toga zašto nekada promene ne uspevaju, i kako je moguće osvestiti kompleksno međudejstvo faktora koji na ove ishode utiču. Oslanjajući se na Teoriju firmi zasnovanim na znanju u odabiru oblika promena, i na Teorije kompleksnih sistema u odabiru metodologije, cilj ovog rada je demonstracija korišćenja pristupa zasnovanog na agentima u modelovanju organizacionih promena. Konstruisan je model koji demonstrira međudejstvo dve odabrane karakteristike agenata u kreiranju komunikacione mreže u organizaciji. Agenti u modelu razlikuju se s obzirom na inicijativnost u kontaktiranju drugih agenata u mreži radi dobijanja informacija, i s obzirom na to da li imaju snažnu preferenciju kontaktiranja isključivo agenata sa kojima su do datog trenutka najčešće saradivali. Iniciranjem kontakata formiraju se veze među agentima koje čine organizacionu mrežu. Struktura organizacije s obzirom na inicijalan broj agenata različitih karakteristika povezivan je sa nastalim karakteristikama mreže. Poređenjem uspeha tri odabrane forme mreže u situacijama pre i posle izazvanih kriznih situacija, daje se uvid u efekte samo-organizujućih procesa na mikro nivou, na makro ishode – strukturu organizacije i njenu otpornost na neočekivane promene. Predstavljene su prednosti kao i nedostaci modelovanja u kontekstu organizacionih nauka, ograničenja konstruisanog modela, i prostori za njegovu nadogradnju. Skrenuta je pažnja na kontekste za koje ishodi modela mogu biti najrelevantniji, i istaknuto da model ne predstavlja idealan model realnosti, i da bez prilagođavanja specifičnim realnim organizacijama, ne može imati veliku vrednost u praksi. Uz adekvatnu validaciju i dodatne modifikacije, ovaj model ima značajan potencijal u testiranju drugih teorijskih pretpostavki, ili kao oruđe u praksi sa svrhom osveščivanja menadžera o osetljivosti različitih karakteristika komunikacije mreže na neočekivane prekide veza i odlazak nekih od njenih najcentralnijih članova