BOOK OF ABSTRACTS OF THE
XXXII INTERNATIONAL SCIENTIFIC CONFERENCE

EMPIRICAL STUDIES IN PSYCHOLOGY

APRIL 24–26, 2026
FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE



INSTITUTE OF PSYCHOLOGY
LABORATORY FOR EXPERIMENTAL PSYCHOLOGY
FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE

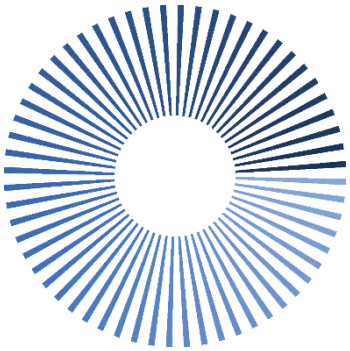
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BELGRADE, 2026

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From the Collection of Old Scientific Instruments of the Laboratory of Experimental Psychology, Faculty of Philosophy, University of Belgrade
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KEYNOTE LECTURES

EARLY DEVELOPMENT OF EXECUTIVE FUNCTIONS IN THE EVERYDAY LIFE

Cintia Rodríguez*
Universidad Autónoma de Madrid, Spain

Towards the end of the first year, children begin to intentionally control their behavior to pursue significant goals. This intentional control implies an organization of action often referred to as self-regulation or Executive Functions.
Despite extensive research, the origins of EF remain largely elusive, particularly prior to the age of 3, when language has not yet consolidated as the main tool for communication and behavior control. Increasingly, researchers claim that EFs begin at the end of the first year of life through forms of pre-verbal semiotic mediation.
Grounded in these ideas, we have focused on studying the construction and development of EFs through a pragmatic lens. We have conducted longitudinal studies focusing on children's actions (between 8 and 18 months) in their everyday contexts at early-years-school. These investigations show that children set goals of increasing complexity for themselves from the end of the first year of life, employing creative strategies to achieve them. To focus on children's own goals supposes a shift from the traditional study of EFs, which typically involves researcher-defined objectives.
Children's primary goals largely revolve around being able to use objects by their function. Mastering these uses is not obvious; they entail varying levels of difficulty, posing genuine challenges for children. To achieve these, children must persist in their actions, inhibit distractions and irrelevant behaviors, flexibly switch between strategies, and sometimes plan and evaluate their own performance. Children self-regulate through (1) their own action, when they use objects and tools, and (2) their gestures, when they produce private gestures as ways of reflecting on their actions.

*corresponding author e-mail: cintia.rodriguez@uam.es

HOW WE APPROACH INTERPERSONAL CONFLICTS: STYLE OR SKILL?

Tamara Džamonja Ignjatović*
University of Belgrade, Faculty of Philosophy, Department of Psychology

Although extensive theoretical and empirical knowledge exists on interpersonal conflicts and their resolution, those insights are insufficiently applied in practice and everyday life. The current context of pervasive violence and deep social polarization underscores the importance of advancing our understanding of the factors that facilitate or hinder constructive approaches to conflict.

Within the framework of the ICARS project, we conducted a comprehensive cross-cultural study examining the factors that predict various conflict resolution strategies. Basic personality traits from the HEXACO model, complemented by the Disintegration disposition, along with additional variables such as social competencies, specific beliefs and attitudes, perceptions of parenting styles, need for cognitive closure, and emotional regulation, were included in the study. The research also aimed to compare the prevalence of these strategies and contributions of their predictors among young adults from Italy and Serbia—two geographically proximate European countries that differ in history, tradition, religion, and their positions along the individualism–collectivism continuum.

The results confirmed the significant influence of specific personality traits as key predictors of distinct conflict management strategies, with similar effects observed across cultures. Other factors, more strongly shaped by societal context, also affected responses to conflict situations but contributed less to the overall prediction.

The findings may inform the creation of evidence-based educational programs aimed at fostering cooperation and constructive conflict resolution, emphasizing the importance of considering relational and contextual factors in addition to individual contributions, which should not be overlooked.

Keywords: interpersonal conflicts; conflict resolution strategies; personality traits; communication skills

*corresponding author e-mail: tamara.dzamonja@f.bg.ac.rs

NENAD HAVELKA LECTURE OF HONOR:

AWARD FOR OUTSTANDING ACHIEVEMENT IN THE EARLY STAGE OF SCIENTIFIC CAREER

ON THE PSYCHOLOGY OF INTERACTIONS OF HUMANS WITH OTHER ANIMALS

Marija Branković[*]
Institute for Philosophy and Social Theory, Belgrade and
Singidunum University, Faculty of Media and Communications

The relationship between humans and animals is not straightforward: animals are our friends, beings we admire, beings we fear, and ultimately beings we use for our own purposes. Social psychology views animals not only as part of nature, but also as part of the social world - as social actors with whom humans engage in a wide range of interactions. This relationship is shaped by strong social influences, although it is affected by individual differences. This lecture aims to present less common perspectives and to encourage further reflection on how we interact with animals. Research on human–animal interactions substantially expand psychological insights into key issues of social categorization and intergroup relations, particularly unequal ones, as well as into psychological well-being and mental health. Human–animal interactions are of great importance to both parties, affecting animal welfare, recognition, and protection, and helping prevent violent treatment and exploitation. These interactions are also significant for various aspects of human life, as contact with animals can foster attachment, provide support, and offer corrective experiences that substantially contribute to psychological well-being. The shared well-being of humans and other animals is reflected in the environment, with the use of animals for food being a crucial issue.

[*]corresponding author e-mail: *marija.brankovic@fmk.edu.rs*

SYMPOSIUM

LIGHTNESS SYMPOSIUM

Historically, two aspects of colors were considered: chromatic (red, blue, yellow etc.) and achromatic (black, white, and various shades of gray). Although lightness perception (perception of achromatic colors) may seem like a trivial visual task, it is in fact a difficult scientific problem that has challenged vision researchers for more than 150 years. In this symposium, we will present various lightness phenomena, describe challenges that confront researchers in their attempts to develop theories and construct models of such effects, and lastly introduce a novel explanatory framework that builds on previous theories in this field.

In the first talk, Dejan Todorović will provide an introduction to the topic of lightness perception. He will first briefly review several basic relevant physical aspects of light, such as illumination, luminance, and reflectance, as well as their perceptual counterparts, such as perceived illumination, brightness, and lightness. He will then describe and demonstrate a number of lightness phenomena, including lightness constancy and various compelling and intriguing lightness illusions.

Elias Economou will introduce the major elements of the Anchoring Theory of lightness perception and its Gestalt approach to lightness encoding. Since its publication in 1999, this theory has influenced the field, has been widely tested, and has proven to be a useful tool for generating new experiments. At the time of its publication, it claimed to account for a wide range of the most relevant phenomena and the majority of published experimental findings in the field.

In the following talk, Sunčica Zdravković will review the empirical data acquired over the past 25 years that now pose serious challenges to some of the core propositions of Anchoring Theory. These challenges concern failures of constancy that arise both from changes or differences in illumination and from variations in background and surface arrangements within a scene.

The last two talks will outline a new unified approach, consisting of two complementary components, that we have been developing with the previously mentioned challenges in mind. This approach builds on the foundations of Anchoring Theory and the general Gestalt framework, while also introducing novel and improved formulas that could account for phenomena that the original theory could not explain.

In his talk, Predrag Nedimović will introduce the new computational formula and the main assumptions of the new model, and will demonstrate how it explains illumination-related errors. Anna Riga will then show how the model accounts for lightness illusions arising from different backgrounds and surface arrangements.

The symposium will conclude with a summary of the model's strengths and weaknesses. The new approach accounts for both illumination and background-dependent failures of lightness constancy, and phenomena that posed a challenge to the Anchoring Theory (Hypercompression and Maniatis variation of Simultaneous Lightness Contrast illusion). Current weaknesses of the model concern the prediction of failures of constancy under different shadow intensities and certain illusions, such as Helson-type assimilation.

BASICS OF LIGHTNESS PERCEPTION: PHYSICS AND PHENOMENOLOGY

Dejan Todorović[*,1], Anna Riga[2] & Predrag Nedimović[1]

[1]Laboratory for Experimental Psychology, Faculty of Philosophy, University of Belgrade

[2]Department of Cognitive Science, University of Malta, Msida, Malta

In this introductory talk to the symposium, several notions basic for the understanding of lightness perception (and presupposed in subsequent talks) will be introduced, and a number of illustrations of lightness phenomena will be presented and discussed.

The topic of lightness perception is the study of perception of achromatic surfaces. Physically, such surfaces have uniform reflectance, that is, they reflect approximately equal percentages of light of all wavelengths; phenomenally, they are perceived as having various shades of gray, including black and white. However, the relationship between the relevant physics (reflectance percentage, which usually varies between 3% and 90%) and corresponding phenomenology (lightness or perceived reflectance or shade of gray) is surprisingly complex and still not fully understood.

There are two main factors that complicate our understanding of this field. One is that the luminance of a surface (the amount of light reflected from it and entering our eyes) does not depend only on its reflectance but also on the amount of illumination falling on it, according to a simple formula: luminance = illumination * reflectance. Thus, surfaces of equal reflectance, when illuminated differently, can have different luminances and vice versa. Nevertheless, our perception in such cases is usually more in accord with reflectance than with luminance; that is, we tend to perceive that surfaces of equal reflectance have approximately equal gray levels, even when they are under different illumination. This is the phenomenon of lightness constancy, which is still under investigation.

The other complicating factor is that there are cases in which surfaces of equal reflectance, which are under equal illumination and thus have equal luminance, are perceived to have different shades of gray. As a rule, such cases involve equal surfaces embedded in different contexts. There is a large and bewildering variety of such phenomena, which are usually called ‘lightness illusions’. They constitute a source of diverse challenges for any theory whose goal is a broad and general account of lightness. In this talk, many examples of such effects will be presented and briefly discussed. They include versions of the following phenomena: simultaneous contrast, remote contrast, gradient effects, assimilation, induced glare and mist, White’s effect, Cornsweet’s illusion, Adelson’s checker shadow, and others.

Keywords: lightness; lightness constancy; lightness illusions

[*]corresponding author e-mail: dtodorov@f.bg.ac.rs

A REVIEW OF THE ANCHORING THEORY OF LIGHTNESS

Elias Economou[*,1] **& Alan Gilchrist**[2]

[1]Psychology Department, Lab of Experimental Psychology, University of Crete

[2]Psychology Department, Rutgers The State University of New Jersey, NJ USA

Since its publication 25 years ago, the Anchoring Theory of Lightness (1999) has provided a very successful framework for understanding the computations involved in the perception of white, black, and gray surfaces. At the core of Anchoring Theory, two key concepts can be identified: a luminance ratios and not absolute luminance values constitute the input of lightness encoding processes, and b. surfaces in the scene are grouped together based on Gestalt organizational principles. These lead us to propose that an Anchoring Rule is needed in order to convert luminance ratio into lightness values and that the final lightness of any single surface in the visual field is "Co-determined" by its relationship to the several perceptual groups to which it belongs.

In this talk, we will explain the major computational components of the Theory. With respect to the Anchoring Problem, we will review both the theoretical and empirical work that led us to identify the rule that the system uses: the Highest Luminance Rule (i.e. Highest luminance in the framework is assigned the value of White). With respect to the Co-determination problem, we will describe the way we think the system parses the image into groups of surfaces that we call "Frames of reference", the subsequent computations that take place within those Frames or Frameworks, and the way these are combined to provide the final lightness value of a surface.

In the final part of the presentation, we will apply Anchoring Theory to some very well-known lightness illusions, and we will also review how the theory explains major errors that occur when large illumination differences are present in the visual field at the same time.

Keywords: lightness; Anchoring theory

[*]corresponding author e-mail: *elias@psy.soc.uoc.gr*

EMPIRICAL CHALLENGES TO THE ANCHORING THEORY

Sunčica Zdravković[*,1,2], Elias Economou[3] & Dejan Todorović[2]

[1]Laboratory for Experimental Psychology, Department of Psychology,
Faculty of Philosophy, University of Novi Sad, Serbia

[2] Laboratory for Experimental Psychology, Department of Psychology,
Faculty of Philosophy, University of Belgrade, Serbia

[3]Psychology Department, Lab of Experimental Psychology, University of Crete

The previous talk presented the Anchoring Theory (AT) and its main concepts. The theory was able to account for a very wide range of lightness phenomena. But the original publication (1999) already noted several lightness effects that were not explained.

One of them was the compression of the perceived range under intense illumination. When a group of grey surfaces is suspended in midair and illuminated by a spotlight, the perceived range of greys is compressed relative to the presented physical range. The theory predicted that the compression should increase as the intensity of the spotlight increases, but stopped when the spotlight was 30 times higher than the prevailing illumination. Empirical results, however, showed that the compression increases beyond this point, and all the shades start to appear white and very light grey. Authors were immediately aware that such hypercompression of perceived range cannot be explained by AT.

Another problem concerned the variation of the classical simultaneous contrast illusion (SLC). In SLC, the two equal grey targets appear different due to their black and white backgrounds. The theory attributed the effect to the difference in the highest luminance (HL) in each half of the display, i.e., framework; white as HL on one side and middle grey on the other. But Maniatis (2015) noted that the illusion persists even when a white patch is added to the black background. According to AT, this should have eradicated the illusion, since there is a real white on both sides of the SLC. Our own experiments showed that the illusory effect is only weakened in Maniatis' variation (*Cohen* d_{SLC} = 1.057, *Cohen* $d_{MANIATIS}$ = 0.899), and the theoretical consequences of such findings will be discussed.

Further, the model was practically structure-blind, which means that it could not account for the change in the organization of the visual scene, or the impact of the elements differently positioned in relation to the target. Finally, several core concepts (such as belongingness, grouping, framework, and framework strength) needed to be made more precise.

Keywords: lightness; lightness constancy; lightness illusions; Anchoring theory

[*]corresponding author e-mail: *suncica.zdravkovic@ff.uns.ac.rs*

NEW MODEL EXPLAINS ILLUMINATION-DEPENDENT ERRORS IN LIGHTNESS PERCEPTION

Predrag Nedimović[*,1], Anna Riga[2], Elias Economou[3] & Alan Gilchrist[4]

[1]Laboratory for Experimental Psychology, Faculty of Philosophy, University of Belgrade, Serbia

[2]Department of Cognitive Science, University of Malta, Msida, Malta

[3]Psychology Department, Lab of Experimental Psychology, University of Crete

[4]Psychology Department, Rutgers The State University of New Jersey, NJ USA

Lightness, which refers to our perception of the percentage of light that an object reflects, remains relatively unchanged when the object's luminance changes due to a change in illumination. This phenomenon is known as lightness constancy. However, experiments show that the constancy is not perfect. When objects are brightly illuminated (i.e., under a spotlight), they appear somewhat lighter. Moreover, objects with low reflectance increase in lightness more than objects with higher reflectance, and thus the perceived range is compressed. Additionally, the amount of compression is positively related to the intensity of the spotlight. Our previous studies show that the amount of compression is predicted by the ratio between the highest luminance in the spotlight and the highest luminance in the prevailing illumination ($R^2 = .94$, $p < .001$).

The New model accounts for this compression by segmenting the scene into different illumination frameworks and by calculating the lightness of all surfaces with regard to each framework. First, the visual scene is segmented into frameworks that are defined by the boundaries of illumination. The framework of illumination that contains the target is called the Relevant framework, while the rest of the scene is the Foreign framework. Lightness values are then determined with regard to each framework by linear regression with fixed point (Anchoring) and slope (Scaling). Anchoring translates relative luminance values into specific lightness values, and it assumes that the highest luminance within each framework appears white. Lightness of other surfaces within a framework is determined by a Scaling component, which produces a slope that varies with the ratio between the highest luminance in the Relevant framework and the highest luminance in the foreign framework.

This approach predicts constancy when there is only one illumination in the visual scene, by assuming a Slope of 1. It also accounts for and predicts increasing amounts of compression as a spotlight becomes brighter or a shadow becomes darker.

Keywords: lightness; lightness constancy

[*]corresponding author e-mail: predrag.nedimovic@f.bg.ac.rs

LIGHTNESS ERRORS AND PERCEPTUAL GROUPING

Anna Riga[*,1], Predrag Nedimović[2], Dejan Todorović[2] & Alan Gilchrist[3]

[1]Department of Cognitive Science, University of Malta, Msida, Malta

[2]Laboratory for Experimental Psychology, Faculty of Philosophy, University of Belgrade, Serbia

[3]Psychology Department, Rutgers University, Newark, NJ, USA

Errors in lightness perception can arise from changes in illumination (illumination-dependent) or from changes in the background (background-dependent). The most renowned example of the latter is the Simultaneous Lightness Contrast illusion (SLC): a gray square placed on a black background is perceived to be lighter than a square of equal luminance on a white background. This difference in the appearance of the shade of gray of the two squares demonstrates how perceptual grouping influences lightness.

We propose that grouping affects lightness through anchoring. The highest luminance within a perceptual group is assigned the value of white in that group, while other surfaces within that group are assigned values relative to their luminance ratio with the anchor. In SLC, the gray square belonging to the white background appears veridical, as the white background serves as the anchor. In the case of the square that belongs to the black background, the gray square itself becomes the highest luminance and gets a value of white in that framework. Since all four surfaces belong to the same single-illumination framework, they will be assigned veridical values in that framework. Through codetermination, however, the final value for the part belonging to the black background will be slightly higher than that belonging to the white background. Lightness computations within perceptual groups can also account for the Maniatis variation of SLC, reverse contrast, and various other illusions.

Grouping can also mediate errors caused by illumination changes (i.e., illumination-dependent errors). In the 5 square paradigm, the error pattern produced by the spotlight placed on the display will vary depending on the spatial arrangement of the squares (orderly vs scrambled versions). Despite the robust effects of perceptual grouping on lightness perception, important computational questions remain open.

Keywords: lightness; lightness illusion

[*]corresponding author e-mail: anna.riga1357@gmail.com

WORKSHOP

SCIENCE COMMUNICATION 101: FROM RESEARCH TO REACH

Katarina Stekić Stojanović[*]

University of Belgrade, Faculty of Philosophy, Department of Psychology,

Laboratory for Neurocognition and Applied Cognition

Science communication is becoming increasingly important in an era when distinguishing truth from misinformation is more challenging than ever. As highlighted during the COVID-19 pandemic, the role of academics and researchers has become central in helping broader audiences understand a rapidly changing world and navigate complex scientific information. At the same time, funding bodies are placing greater emphasis on applied research and expect researchers to clearly communicate how their work contributes to addressing real-world challenges. This workshop will provide practical tools and guidance for communicating research ideas and findings effectively. Participants will learn how to tailor messages for specific audiences, present information concisely without compromising accuracy, and convey complex concepts in ways that are simple, clear, and impactful.

[*]corresponding author e-mail: *katarina.stekic@f.bg.ac.rs*

ROUND TABLE

ETHICAL CHALLENGES IN EMPIRICAL RESEARCH IN PSYCHOLOGY

Moderator:

Ksenija Krstić*

University of Belgrade, Faculty of Philosophy, Department of Psychology

Panelists:

Ana Radanović[1], Danka Purić[2], Dobrinka Kuzmanović[3], Ivana B. Petrović[2] & Teodora Vuletić Joksimović[4]

[1]The Institute for Educational Research, Belgrade, Serbia

[2]University of Belgrade, Faculty of Philosophy, Department of Psychology

[3]University of Belgrade, Faculty of Philology, Social Science Department

[4]University of Belgrade, Faculty of Philosophy, Institute of Psychology

This roundtable will address key ethical challenges in empirical research in psychology, with a focus on both foundational principles and practical procedures for ensuring ethical conduct throughout the research process. The discussion will outline core ethical standards such as respect for participants, informed consent, confidentiality, minimization of harm, and responsible data management. Special attention will be devoted to research involving children, where issues of assent, parental consent, vulnerability, and protection from potential psychological risk require particularly careful consideration. Ethical complexities arising in clinical research contexts will also be examined, including dual roles of researchers and clinicians, risk assessment, and safeguarding participants experiencing psychological distress. The roundtable aims to encourage critical reflection on how ethical guidelines are applied in real research settings and to promote good practices that balance scientific rigor with participant well-being. Through shared experiences and discussion, panelists will explore ways to strengthen ethical awareness and decision-making in contemporary psychological research.

*corresponding author e-mail: kkrstic@f.bg.ac.rs

PERCEPTION

OUT OF THE DARK- PERCEIVED DISTANCE ANISOTROPY BETWEEN REDUCED AND FULL CUE SITUATION

Oliver Tošković[*]
Laboratory for Experimental Psychology, Faculty of Philosophy, Belgrade

Upward distances are perceived as larger than physically equal downward distances or distances in front of us. This anisotropy of perceived distance is considered to be a model of perceived space, and it is related to perception-action interactions since distances are perceived as larger in directions requiring more effort for action performance. The effect of perceived distance anisotropy is mainly shown in situations with a reduced number of depth cues (dark room). Does perceived distance anisotropy depend on the number of depth cues, and would it change in a full-cue situation? Three experiments were performed, in which participants matched distances of stimuli in two directions, toward the horizon and zenith, but in situations with different amounts of depth cues present. In the first experiment, 29 participants matched distances of two dim light stimuli in a large dark room, monocularly and binocularly. In the second experiment, 17 participants matched distances of two red spheres in virtual reality, in two situations: empty dark space or with a brick wall surface on both directions. In the third experiment, 30 participants matched the distances of two white circles in an outdoor condition in the forest. Results of the first experiment showed a significant effect of direction ($F1$; 27 = 57.9, $p < .01$, $\eta^2 = .66$) on distance estimates, and no interaction with the viewing condition (monocular or binocular). In the second experiment significant difference in perceived distance in two directions is also detected ($F1$; 16 = 13.9, $p < .01$, $\eta^2 = .47$), with no interaction with the situation (empty dark space or brick wall present). Also, in the third experiment significant effect of direction on distance estimates is observed ($F1$; 29 = 211.7, $p < .01$, $\eta^2 = .88$). In all three experiments, the effect of perceived distance anisotropy is observed in the same direction; distances toward zenith were perceived as larger than physically equal distances toward the horizon. Although effect sizes vary, it is probably due to different conditions (physical or virtual reality, indoor or outdoor space) rather than due to the number of depth cues, since within the first two experiments, no interactions were observed with the depth cues. Taken all together, we can conclude that perceived distance anisotropy is invariant to the amount of depth cues.

Keywords: perceived distance anisotropy; depth cues; reduced cue; full cue

[*]corresponding author e-mail: otoskovi@gmail.com

INHIBITION IN VISUAL SEARCH TASK DOES NOT REQUIRE PRECISELY DEFINED DISTRACTOR TEMPLATE

Nataša Mihajlović[*,1] & Sunčica Zdravković[2]

[1]Laboratory for Psychological Research, Department of Psychology,
Faculty of Media and Communications, Singidunum University, Belgrade, Serbia

[2]Laboratory for Experimental Psychology, Department of Psychology,
Faculty of Philosophy, University of Novi Sad, Serbia

Top-down attentional control in visual search enables not only localisation of the target but also inhibition of the distractor. Target templates can tune attention to precisely defined features (e.g., find the green item) or to broader relational or computational properties (e.g., find the greenest item). Still, it is unclear what allows us to ignore salient distractors. The signal suppression hypothesis proposes that specific distractor features are learned and proactively inhibited (e.g., always ignore the red item). Yet recent studies show that salient distractors can be inhibited even when their features unpredictably vary. Our study was designed to test the hypothesis that cognitive control can operate flexibly to inhibit distractors with features not known in advance.

We conducted two experiments using a feature search task in which participants (58 in total) searched for one target shape while ignoring a salient but irrelevant color singleton distractor (present on 50% of trials). In Experiment 1, the distractor randomly assumed one of the two possible colors, while in Experiment 2, it was randomly assigned one of eight possible colors. In both experiments, response times were significantly shorter when the distractor was present than when it was absent (E1: $t(27) = 2.18$, $p = .038$, $d = .21$; E2: $t(29) = 2.41$, $p = .022$, d = .24). Distractor presence also significantly improved accuracy in both experiments (E1: $t(27) = 2.24$, $p = .030$, $d = .16$; E2: $t(29) = 3.91$, $p = .001$, $d = 1.05$).

The results clearly show that cognitive control was established, with inhibitory processes contributing to improved performance. Importantly, this did not require prior knowledge about the specific features of the distractor being inhibited. We conclude that inhibition does not have to rely solely on reducing the priority of predefined and unchanging distractor features. Both target enhancement and distractor inhibition can operate based on global and relational information. We emphasize the need to redefine attentional control as a highly flexible and adaptable mechanism.

Keywords: attentional control; distractor inhibition; distractor templates

[*]corresponding author e-mail: natasa.mihajlovic@fmk.edu.rs

A NEURAL MODEL OF TOP-DOWN FEATURE GUIDANCE OF SPATIAL ATTENTION

Dražen Domijan[*,1] **& Nataša Mihajlović**[2,3]

[1]Department of Psychology, Faculty of Humanities and Social Sciences,
University of Rijeka, Croatia

[2]Department of Psychology, Faculty of Media and Communications,
Singidunum University, Serbia

[3]Laboratory for Experimental Psychology, Department of Psychology,
Faculty of Philosophy, University of Novi Sad, Serbia

The deployment of visual attention reflects a complex interaction between top-down control settings and bottom-up saliency computations. Although behavioral studies have significantly advanced our understanding of this interaction, comprehensive computational models that include bottom-up and top-down influences are still lacking. To this end, we developed a neural model of attentional selection that resists distraction by suppressing salient distractors. The model was inspired by eight experiments in which availability of target template and salience of both target and distractor were varied. Participants (196) searched for one target shape while ignoring a salient but irrelevant color/lightness singleton distractor (present on 50% of trials). The results showed that top-down attentional control with distractor suppression was applied when the target template was available and the distractor was highly salient. When no template was available and distractor saliency was low, bottom-up influences prevailed.

The model consists of three processing stages that emulate interactions between area V4, inferotemporal (IT) cortex, and posterior parietal (PP) cortex. The first stage is top-down attentional modulation from IT to feature maps in V4. Top-down attention interacts multiplicatively with feature maps, facilitating relevant feature when a target template is present or suppressing irrelevant feature when a salient distractor is present. Such feature feedback provides re-entry signals to V4 that bias processing in the feedforward pathway from V4 to PP cortex and consequently guides spatial attention. The second stage is divisive normalization, which computes the contrast or saliency of locations within each feature map in V4. The third stage is a decision-making circuit in PP cortex that selects a location based on the summed output from all feature maps computed in the second stage. Decision-making is modelled as a leaky competitive accumulator, which accumulates noisy evidence over time until a threshold is reached. There are eight feature maps and five locations within each map, mimicking typical properties of stimuli used in experiments. Computer simulations showed that the model correctly predicts the pattern of response times from all eight experiments considered. This is achieved using a single set of parameters. We propose comprehensive, yet parsimonious model of attentional deployment under both top-down and bottom-up influences.

Keywords: spatial attention; neural model; feature suppression; salient distractor; visual search

[*]corresponding author e-mail: *drazen.domijan@uniri.hr*

USING EYE MOVEMENTS TO NAVIGATE REMOTE MOBILE SYSTEMS

Sunčica Zdravković[*,1,2], Sanja Mandić[3], Đorđe Novaković[3], Nemanja Gazivoda[3], Bojan Vujičić[3], Dragan Pejić[3] & Platon Sovilj[3]

[1]Laboratory for Experimental Psychology, Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia

[2]Laboratory for Experimental Psychology, Department of Psychology, Faculty of Philosophy, University of Belgrade, Serbia

[3]Department of Power, Electronics and Telecommunications Engineering, Faculty of Technical Sciences, University of Novi Sad, Serbia

We developed a robotic system that would be navigated by eye movements through the incorporation of the Eye Tracking measurement method (ET). Driving using eye movements is not an intuitive task, but once it turns into a job of piloting remote robots and drones, it will also be tiring and boring. Hence, we wanted to optimize the interface that would allow humans to rapidly master it, but that would also be easy for prolonged use.

We developed four different interfaces, each with two processing modalities (robotic movements in the environment and camera movements for navigation purposes) and four to six commands (moving straight, back, left, or right, and speed up and slow down buttons). As driving also requires constant observation of the terrain, the control buttons were made transparent and superimposed on the picture of the environment.

Four male participants (M_{age} = 27.7) with normal or corrected to normal vision took part in a 16-hour training, divided into 4 sessions. Although previously exposed to ET technology, our participants did not have significant experience with driving using eye movements. Each participant tested each interface in a randomised order. Prior to and after the interface testing, we run a short attention test to confirm that they did not pilot while initially tired (prior test) and to measure the level of exhaustion with the task (posterior test). To avoid learning of the terrain, we did not use the natural environment, but we gamified the task and developed different virtual environments. Within the environments, we scattered artificial objects and developed a series of tasks for the participants. Therefore, they had to constantly move and follow the task instructions. We measured how successful they were with each of the tested interfaces.

Our results show that the two interfaces with four buttons (moving straight, back, left, or right) were initially more difficult to learn but produce stable results with prolonged use. The observed and measured differences in pilot strategies will be discussed. Though these were just preliminary testing of these types of interfaces, we can already advise on better solutions when these tasks are no longer implied in games, but they need to be optimized for future jobs. Within our project, we developed scenarios that might be used in smart agriculture, as our robot was collecting data on temperature, pressure, and humidity.

Keywords: Eye Tracking; interface testing; navigation

[*]corresponding author e-mail: szdravko@f.bg.ac.rs

ROBUSTNESS OF BASIC EMOTION RECOGNITION UNDER VISUAL DEGRADATION AND LIMITED EXPOSURE TIME

Stanislava Kozakijević[*,1,2,3] & Milica Popović Stijačić[2,3]

[1]Faculty of Philosophy, University of Novi Sad

[2]Department of Psychology, Faculty of Media and Communications, Singidunum University

[3]FMK Lab - Laboratory for Psychological Research of the Faculty of Media and Communications, Singidunum University, Belgrade

The robustness of the ability to recognize basic emotion under challenging conditions is underexplored. This study examined the stability of this ability by introducing visual degradation and temporal constraints, and explored the role of emotion type, model gender, and observer characteristics in shaping recognition accuracy. The experiment used photographs of facial expressions depicting 6 basic emotions (happiness, sadness, anger, fear, disgust, and surprise) and a neutral expression, displayed by 6 models (3 female), with each combination presented once for 2s at each of the 2 levels of visual degradation (84 stimuli in total). Participants selected 1 of 8 labels (6 basic emotions, neutral, or other), presented in randomized order. The sample consisted of 189 adult participants (55.6% women; *Mage* = 34.62). Results indicated that the type of emotion expressed is the most robust and consistent effect on recognition accuracy ($F(6, 1110) = 95.07$, $p < .01$, $\eta^2 = .17$). Happiness was recognized most accurately (in 93% cases), while fear showed the lowest accuracy (in 57% cases). Visual degradation had no significant effect. However, in combination with emotion type, it produced a significant effect on performance ($F(6, 1110) = 6.52$, $p < .01$, $\eta^2 = .002$), with harder to recognize emotions being more sensitive to degradation. In contrast, highly recognizable emotions (happiness, sadness) showed relative resilience. Model gender significantly influenced recognition ($F(1, 185) = 37.63$, $p < .01$, $\eta^2 = .003$). The interaction of model gender with emotion was significant ($F(6, 1110) = 60.68$, $p < .01$, $\eta^2 = .03$), with fear, anger, and neutral expressions better recognized on male faces, and sadness and surprise more accurately recognized on female faces at lower degradation levels. Higher-order interactions between model gender, emotion type, and degradation were also significant ($F(1, 1110) = 7.48$, $p < .01$, $\eta^2 = .008$), revealing selective patterns of perceptual robustness. Emotions that were harder to recognize were more susceptible to the effects of degradation and model gender. Participant gender showed no significant main effect, but demonstrated emotion-specific interactions ($F(6, 1110) = 2.78$, $p < .01$, $\eta^2 = .005$). These findings support the view that emotion recognition relies on a selectively robust ability that varies across emotion categories and stimulus properties, rather than representing a uniformly stable perceptual ability.

Keywords: emotion recognition; facial expressions; visual degradation; model gender; basic emotions

[*]corresponding author e-mail: *stanislava.kozakijevic.20231501@fmk.edu.rs*

THE EFFECT OF COLOR ON THE PERCEIVED OBJECTS' PRÄGNANZ

Aleksa Filipović* **& Oliver Tosković**
Laboratory for Experimental Psychology, Faculty of Philosophy, Belgrade

The aim of this study was to examine whether the same shapes are perceived as having more or less good figure (prägnanz) depending on the color in which they are presented. The sample consisted of 61 first-year psychology students. Eight shapes (4 good figures and 4 without a good figure) taken from previous studies were used, each presented in monochromatic and dichromatic versions. In the dichromatic condition, each shape contained two colors, with color positions counterbalanced (each color appeared both at the edge and in the center). This was done for all five colors and their pairwise combinations. In total, 200 stimuli were used: 40 monochromatic (8 shapes × 5 colors) and 160 dichromatic stimuli (the same 8 shapes rendered in all 20 two-color combinations derived from five colors). Three within-subject factors were manipulated: Color (red, green, blue, yellow, and black), Chromatic composition (monochromatic, dichromatic), and Prägnanz (good figure, poor figure). The dependent variables were harmony ratings (1–5) and reaction time (ms). A three-factor repeated-measures ANOVA on harmony ratings showed a significant three-way interaction, $F(4,240) = 19.41$, $p < .001$, $\eta^2 = .24$. Sidak post-hoc tests indicated that good figure shapes were rated as more harmonious than poor figure shapes, and monochromatic stimuli as more harmonious than dichromatic. Among monochromatic good figure stimuli, black was rated as the least harmonious, whereas among monochromatic poor figure stimuli color did not affect harmony ratings. For dichromatic stimuli, combinations containing black were rated as most harmonious. For reaction time, the three-way interaction was not significant, $F(4,240) = 0.84$, $p = .50$. The only significant two-way interaction was between Prägnanz and Chromatic composition, $F(1,60) = 15.50$, $p < .001$, $\eta^2 = .21$. Monochromatic good figure stimuli were evaluated faster than dichromatic ones, whereas the opposite pattern appeared for poor figure stimuli. Overall, results indicate that chromatic colors enhance perceived harmony when shapes are simple and symmetric (good figure), whereas black is perceived as most harmonious when shapes are complex and asymmetric (poor figure). These findings suggest that color contributes to harmony judgments primarily when conditions of good figure are met.

Keywords: principles of grouping; perceptual organization; prägnanz; colors; good figur

*corresponding author e-mail: *filipaleksa123@gmail.com*

COGNITIVE PSYCHOLOGY

WHEN HEURISTICS DUNK ON BAYES: A NOVEL PARADIGM REVEALS POSTERIOR PROBABILITY NOT UTILIZED IN THE BASE RATE TASK

Pavle Valerjev[*,1] **& Marin Dujmović**[2]

[1]Department of Psychology, University of Zadar

[2]School of Physiology, Pharmacology and Neuroscience, University of Bristol

Classic reasoning tasks pit heuristics against processes that give rise to normatively correct responses. Depending on experimental conditions, outputs from these processes can be congruent or in conflict. Conflict is particularly interesting as further processing is required to resolve it, and the computation is poorly understood. In the modified Base Rate task, probability can clash with heuristics (e.g., "A randomly selected person from a group of 1000 is very tall. The group consists of 850 mathematicians and 150 basketball players."). People more often conclude that the person is likely a basketball player (a heuristic response), and this is routinely treated as normatively incorrect. However, if participants' prior distributions of the characteristic (being very tall) in the populations are vastly different (e.g., 10% of mathematicians; 90% of basketball players), and if they correctly compute posterior probability, then "basketball player" is the correct response. In this experiment, participants (N = 77; 71 female; M_{age} = 21.95) provided prior distributions of various characteristics in different populations. Conflict Base rate tasks (n = 8) were then constructed so that the posterior probability induced maximal conflict (e.g., 900 mathematicians and 100 basketball players resulting in 90 very tall people from each group). In congruent tasks (n = 8), base rates and heuristic outputs matched with a 90% posterior probability for the response. Results showed that the proportion of heuristic response was significantly higher in congruent than in conflict conditions (Z = 5.56, p < .001, r_{pb} = .90) confirming that conflict was successfully induced. However, heuristic responses accounted for 73% of all conflict trials, whereas we would have expected 50% if responses relied on posterior probabilities. Responses were faster (t(77) = 6.76, p < .001, d = 0.77) and metacognitive confidence higher in congruent trials (t(77) = 8.92, p < .001, d = 1.01) confirming a strong effect of conflict. Analysing only conflict trials, we found that 28 participants (35.90%) exclusively provided heuristic responses, while only 6 (7.69%) provided exclusively base rate-based responses. The high proportion of participants providing exclusively heuristic responses further provides evidence against Bayesian-style computation. However, those participants still experienced some conflict as they were still slower (t(27) = 2.07, p = .048, d = 0.39) and less confident (t(27) = 3.63, p = .001, d = 0.69) in conflict trials. These findings indicate that inputs from heuristic and probability-based processes are not weighed by a Bayesian-style computation. However, the novel approach to constructing tasks could provide further insights by testing other hypothesized computations that govern the dynamics of these processes.

Keywords: reasoning; dual process; metacognition; Bayesian computation; base rate task

[*]corresponding author e-mail: valerjev@unizd.hr

ANSWER CHANGING IN INTELLIGENCE TESTS - METACOGNITIVE CONTROL AND THE INTERPLAY BETWEEN INTELLIGENCE, PERSONALITY AND RETROSPECTIVE CONFIDENCE

Milica Manojlović[*,1,2] **& Goran Opačić**[1,2]

[1]Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]LIRA lab, Faculty of Philosophy, University of Belgrade

Answer changing (AC), an act of metacognitive control, refers to the act of revising already provided responses in testing situations. It is a direct product of metacognitive monitoring as the decision to change the initial response reflects lower levels of confidence in the first answer. Previous studies show moderate relationships between AC and different aspects of monitoring, while less is known regarding its conative determinants. The main goal of this study was to disentangle the contribution of retrospective confidence judgements (RCJ), fluid and crystalized intelligence and basic personality traits to the decision to revise the initially provided response in context of intelligence testing. A total of 2674 participants (M_{age} = 22.1, SD_{age} = 2.1, 55.8% female) took part in this study. They filled out one general knowledge test (Perdu Non-Language Adaptability Test; PNLAT, 48 questions, α = .866). For each item of the PNLAT we recorded the number of instances participants changed their mind and, to measure metacognitive monitoring, the retrospective confidence that the final answer they provided was correct (11-point scale, α = .952). Participants filled out ALF7 (39 items α = .746) and AL4 (40 items, α = .273) as indicators of serial processing and IT2 (39 items, α = .873) and S1 (30 items, α = .897) as indicators of parallel processing from the KOG-9 battery, and basic personality traits derived from HEXACO and Delta models. Correlations between AC and monitoring varied drastically depending on the type of monitoring accuracy measure we used (raw RCJs, metacognitive bias, or gamma correlations). Hierarchical linear regression modeling (F(1933, 11)=39.83, p < .001, R^2 = .19) showed fluid (β = .23, t = 11.15, p < .001), crystalized intelligence (β = .14, t = 5.32, p < .001), RCJ accuracy bias (β = -.07, t = -2.95, p = .003), Honesty-Humility (β = .24, t = 6.45, p <.001), Agreeableness (β = .08, t = 2.41, p = .046), and Impulsiveness an aspect of Conscientiousness (β = -.12, t = -2.82, p = .005) to predict answer changes. This surprising constellation of results implies that monitoring accuracy has less substantial impact on metacognitive control processes than previously postulated. The role of basic personality traits, mainly that of Honesty-Humility, even surpasses the predictive power of intelligence domains. We discuss how this constellation of results questions the conceptualization of answer changing and its relationships to related constructs.

Keywords: answer changing; metacognitive control; metacognitive monitoring; intelligence testing; basic personality

[*]corresponding author e-mail: milica.manojlovic@f.bg.ac.rs

SIMULATING PHRASE FREQUENCY EFFECTS FROM A PICTURE NAMING TASK USING DISCRIMINATIVE LEARNING

Filip Nenadić[*,1], Ksenija Mišić[2], Audrey Bürki Foschini[3] & Petar Milin[4]

[1]University of Potsdam, Germany

[2]University of Belgrade, Serbia

[3]University of Lausanne, Switzerland

[4]University of Birmingham, United Kingdom

Speakers utilize previous experience with word combinations when producing multi-word utterances. For example, speakers are faster to name a picture representing a frequent phrase, such as "old house," than an infrequent phrase, such as "green stadium" (Janssen & Barber, 2012; Jeong et al., 2021; Shao et al., 2019). We test the ability of discriminative learning (DL), an error-driven learning mechanism, to explain these phrase frequency effects. Specifically, we use DL measures to predict phrase picture naming response latencies in the Jeong et al. (2021) study. We trained the model using the pyndl package (Sering et al., 2022) on over nine million instances of over 2.5 million unique adjective-noun phrases from the German deWaC corpus (Baroni et al., 2009). Phrases were represented as sets of meaning and form cues (representations of what the speaker intends to express) and as sets of triphone outcomes (representations of the speech sounds that the speaker produces). The model learns the connection weights between cues and outcomes. For each of the 178 phrases in the Jeong et al. (2021) dataset, we calculated three numeric measures from learned network connection weights: activation, diversity, and prior (Chuang & Baayen, 2021; Milin et al., 2017). Prior was predictive of phrase picture naming response latency. Outcome prior is the sum of absolute values of the weights of all existing cues (present in a phrase or not) for that outcome. For the entire phrase, we calculated the prior as the sum of priors for all outcomes in that phrase. Therefore, prior is a product of long-term support for the triphone to be (not) produced in certain contexts, correlates highly with the frequency of occurrence of the triphone, and is often taken to represent network entrenchment. In our case, larger prior values predicted longer response latencies ($b = 0.13$, $t = 5.77$; $p < .001$). This is in line with previous simulations of behavioral data on production duration (Tomaschek et al., 2021). With regard to the lack of an effect of activation (calculated as the sum of weights for all the expected outcomes given a set of cues present in the trial), we conclude that training the model on a very large number of phrases in which the target phrases occur relatively rarely may have diluted the strengths of connections and disabled the model from producing estimates for the specific small set of cues that would be predictive of participant performance.

Keywords: speech production; discriminative learning; error-driven learning; phrase frequency; picture naming task

[*]corresponding author e-mail: *filip.nenadic@uni-potsdam.de*

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THE EFFECT OF BOOSTING SENSORY INFORMATION ON THE PRIMING EFFECT BETWEEN TWO POLYSEMOUS SENSES

Sara Božić[*,1,2] **& Dušica Filipović Đurđević**[1,2,3]

[1]Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]Laboratory for Experimental Psychology, Faculty of Philosophy, University of Belgrade

[3]Laboratory for Experimental Psychology, Faculty of Philosophy, University of Novi Sad

Polysemous words benefit from the related nature of their multiple senses (e.g., a letter), resulting in the stronger priming effect between senses (e.g., Klepousniotou et al., 2008), compared to homonyms (i.e., bank). The concept of overlapping mental representations (MR) of senses and a shared core is questioned by studies failing to find the difference between polysemy and homonymy (e.g., Klein & Murphy, 2001). In order to tackle this, we relied on the embodied cognition framework and the assumption that MR is partly constituted by traces of previous sensorimotor (SM) experience with an object. The SM features that are shared (e.g., seeing a sealed letter and an italic letter) should be represented in the core (representation shared by different senses). Consequently, the priming effect should benefit from boosting of the core's activation, compared to the non-shared features (e.g., touching a sealed letter but not an italic letter). We tested this hypothesis by creating prime-target pairs of three-word phrases. The critical stimuli were 42 prime-target pairs of phrases depicting polysemous (related) senses (a sealed letter – an italic letter). The targets were always presented in the same form (an italic letter), whereas the prime was manipulated by adding a verb denoting sensory experience to either boost the sensory modality shared between the prime and the target (to see a sealed letter – an italic letter) or the modality uniquely present in the prime, but not the target (to touch a sealed letter – an italic letter), while also including a control condition without the verb (a sealed letter – an italic letter). Additionally, we created 42 prime-target pairs consisting of unrelated words (e.g., a park bench – a natural light), while also mimicking the manipulation of the prime. Participants (N = 112) were instructed to read each phrase and respond by button press whether it was semantically plausible (continuous priming in the sensicality judgement task). In order to balance the proportion of yes and no responses, we included pairs of nonsensical filler phrases (a printed taste). In our crucial test, RTs to targets in polysemous pairs primed by the shared modality were shorter compared to the unique modality condition, as predicted (β = -0.04, t(65.38) = 3.34, p < ,01). Crucially, this holds for the polysemous pairs only, and not for the unrelated pairs (β = -0.06, t(61.85) = 1.49, p = .14). Surprisingly, the control (no modality) group in polysemous pairs elicited the shortest reaction latencies (shared: β = 0.04, t(511.5) = 3.69, p < .001; unique: β = 0.08, t(59.53) = 6.62, p < .001), which is possibly due to the syntactic priming, which we plan to address in our next studies. These results unequivocally showed that the polysemous senses benefit from boosting the activation of the shared core compared to the activation of the unique, non-shared SM features. This was additionally confirmed by the difference being present in the polysemous pairs only. Taken together, our results speak in favor of the models that argue for the existence of a shared core in representations of polysemous words.

Keywords: word ambiguity; polysemy; embodied cognition; sensory modality; priming paradigm

[*]corresponding author e-mail: sara.andjelic@f.bg.ac.rs

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STABILITY OF THE EMOTIONAL EXPERIENCE OF WORDS: THE INFLUENCE OF INDUCED COGNITIVE CONTROL AND LOCAL CONTEXT

Aleksandra Stanimirović[*,1,2] & Dušica Filipović Đurđević[2,4,5]

[1]Department of Psychology, Faculty of Media and Communications, Singidunum University

[2]Laboratory for Experimental Psychology, Department of Psychology, Faculty of Philosophy, University of Belgrade

[3]FMK lab - Laboratory for Psychological Research, Department of Psychology, Faculty of Media and Communication, Singidunum University

[4]Department of Psychology, Faculty of Philosophy, University of Belgrade

[5]Laboratory for Experimental Psychology, Department of Psychology, Faculty of Philosophy, University of Novi Sad

Control processes help us regulate our thoughts, actions, and behavior toward achieving goals (Friedman & Miyake, 2017). When these processes target cognition, they are referred to as cognitive control (CC), and when they regulate emotional reactions, as emotion control (EC; Gross, 1998). We can regulate various emotional reactions, including the emotional experience of words—the emotional response evoked when reading a word, which can shift depending on the emotional context (Popovic Stijacic et al., 2023). Research has also examined whether CC and EC rely on a shared underlying mechanism (Ochsner et al., 2012), yet evidence remains inconclusive. This study examined whether higher CC activation can initiate EC during the evaluation of words presented within differently valenced emoji contexts, and whether contextual valence itself influences emotional experience of words (emotional valence and arousal; EV, A). A total of 236 psychology students (M = 22.4) completed 11 blocks, each consisting of a CC task followed by an EC task. The CC task was a modified flanker paradigm with either a high-conflict condition (75% incongruent trials, N = 109) or a low-conflict condition (25% incongruent trials, N = 127). In the EC task, both participant groups rated 108 words (36 positive, 36 negative, 36 neutral, and 36 pseudowords) on EV and A, each paired with a positive, negative, or neutral emoji. Emotional context influenced EV (F(2, 98.79) = 31.04, p < .001, η_p^2=.77), where negative context reduced EV ratings and positive context increased EV ratings across word categories, while additionally increasing EV ratings for positive words and pseudowords (F(6, 88.65) = 3.00, p < .001, η_p^2 = .14). Ratings of A were also affected (F(2, 12.78) = 7.99, p < .001, η_p^2=.56), with negative emojis producing higher A. Although the high-conflict condition of induced CC did not alter contextual valence effects, it did influence response times (RT; the time to evaluate words). RTs decreased across experiment sequence trials (F(1, 10963.50) = 404.66, p < .001, η_p^2 = .04), indicating task adaptation, with an additional RT reduction for congruent stimuli in the high-conflict group (F(1, 11031) = 7.46, p < .001, η_p^2 = .00068). Overall, the results demonstrate that the emotional experience of words is sensitive to the valence of the local context. Although traditional accounts (Grützmann et al., 2022; Vanderhasselt et al., 2020) suggest that CC does not transfer to EC, as reflected in changes in emotional experience, our fine-grained analyses revealed subtle transfer effects, offering new insight into their relationship.

Keywords: cognitive control; emotion regulation; emotional experience; words; emoji

[*]corresponding author e-mail: aleksandra.stanimirovic26@gmail.com

ARE WE AS MORAL AS WE CLAIM? TESTING THE HYBRID MODEL OF DUAL INTUITIONS IN THE CONTEXT OF TWO-DIMENSIONAL UTILITARIANISM

Anđela Milojević* **& Iva Lazić**

Department of Psychology, Faculty of Philosophy, University of Belgrade

Traditional dual-process theories of moral cognition suggest a sharp distinction between intuitive, deontological judgments and deliberative, utilitarian reasoning (Greene et al., 2001). Recent findings, however, challenge this dichotomy by proposing that both deontological and utilitarian intuitions can arise automatically, as suggested by the hybrid model of dual intuitions (DeNeys, 2023). In addition, recent findings question the prominently used sacrificial dilemmas, which capture only the instrumental-harm component of utilitarianism and overlook impartial beneficence as its positive dimension (Kahane et al., 2018). This study aimed to address these gaps by testing the hybrid model of dual intuitions, factoring in both dimensions of utilitarianism. Using the dual-response paradigm, participants (N= 206) solved both greater-good and sacrificial dilemmas in conflict and non-conflict versions, allowing assessment of both intuitive and deliberative responding. Additionally, we investigated the relationship between pre-existing moral tendencies and participants' responses, as well as their confidence in initial responses. Results show that confidence in initial responses was higher for non-conflict dilemmas ($F(1, 205) = 14.041$; $p < .001$; $\eta^2 = .064$), whereas on conflict dilemmas it increased after deliberation ($F(1, 205) = 1040.622$; $p < .001$; $\eta^2 = .0835$). Participants' confidence in their initial response significantly predicted their response after deliberation as well ($\beta = -0.746$, $p < .001$, $OR = 0.516$). Prior moral tendencies predicted participants initial responses: instrumental harm predicted a utilitarian response on sacrificial dilemmas ($\beta = .478$, $p = .008$, $OR = 1.418$,), while impartial beneficence predicted a utilitarian response on the greater good dilemmas ($\beta = .342$, $p = .024$, $OR = 1.296$), and unexpectedly, on the sacrificial dilemmas as well ($\beta = .390$, $p = .025$, $OR = 1.337$). Confidence in the initial response, when solving both conflict and non-conflict dilemmas, correlated significantly with instrumental harm ($r = 0.174$, $p = .012$), as well as confidence level when solving only non-conflict dilemmas ($r = 0.227$, $p = .001$), which we did not expect. These findings support the foundational premises of the Hybrid Model of dual intuitions but do not fully validate the proposed conceptualization of the strength of moral intuitions within System 1, underscoring the need for further theoretical refinement.

Keywords: moral cognition; utilitarianism; impartial beneficence; dual intuitions; dual response paradigm

*corresponding author e-mail: andjelaamilojevic@gmail.com

COGNITIVE STYLES AND STATISTICAL MINDWARE AS PREDICTORS OF PERFORMANCE AND CONFIDENCE IN REASONING PROBLEMS

Pavle Valerjev[*,1], Igor Bajšanski[2] & Patrik Mandić[3]

[1]Department of Psychology, University of Zadar

[2]Department of Psychology, Faculty of Humanities and Social Sciences, University of Rijeka

[3]Faculty of Humanities and Social Sciences, University of Mostar

Individual differences in reasoning and meta-reasoning are shaped by multiple factors, among which cognitive styles, especially preferences for analytic thinking, are often highlighted. However, analytic tendencies and mindware are not uniformly predictive across different reasoning tasks. This study examined how cognitive styles and mindware instantiation relate to performance and metacognitive judgments across four reasoning domains. A sample of 176 students from the Faculty of Humanities and Social Sciences in Mostar completed categorical syllogisms, base-rate problems, conjunction fallacy tasks, and modified Cognitive Reflection Test (CRT) items. After each item, participants rated confidence in the accuracy of their answer. Need for Cognition (NFC) and Actively Open-Minded Thinking (AOT) inventories were used as indicators of cognitive style, while the Statistical Reasoning Test (SRT) indexed mindware. Multiple regression analyses showed that predictors significantly explained performance on CRT items (R = .49; R^2 = .24; $F(3,172) = 17.66$, $p < .01$), syllogisms (R = .31; R^2 = .10; $F(3,172) = 6.17$, $p < .01$), and conjunction fallacy tasks (R = .23; R^2 = .05; $F(3,172) = 3.19$, $p = .025$). Prediction for base-rate tasks was marginal (R = .20; R^2 = .04; $F(3,172) = 1.95$, $p = .06$). The three predictors (NFC, AOT, and SRT) differed in their effectiveness across task types. To analyse metacognitive judgements of confidence, hierarchical multiple regressions were performed with accuracy entered first, followed by cognitive styles and mindware. After controlling for accuracy, cognitive styles and SRT showed small but significant positive effects on confidence in CRT, syllogism, and base-rate tasks, but not for conjunction fallacies. The additional explained variance after isolating accuracy was 5% for CRT, 6.7% for syllogisms, and 5% for base-rate tasks. Overall, the findings indicate that cognitive styles and statistical reasoning skills predict both reasoning performance and meta-reasoning, though their influence varies across tasks. This highlights the task-specific nature of analytic tendencies and mindware activation in reasoning and confidence judgments.

Keywords: reasoning tasks; metacognition; actively open-minded thinking; need for cognition; mindware

[*]corresponding author e-mail: valerjev@unizd.hr

EPISTEMIC AUTHORITY TYPE AND RISKY DECISION-MAKING: ARE WE MORE RATIONAL WHEN ADVISED BY AI OR A SCIENTIST-PHYSICIAN?

Maša Andrić[*,1] & Kaja Damnjanović[1,2]

[1]Laboratory for Experimental Psychology, Department of Psychology,
Faculty of Philosophy, University of Belgrade

[2]Institute of Philosophy, Faculty of Philosophy, University of Belgrade

Risky choice framing is a well-established cognitive bias where different descriptions of identical outcomes lead to divergent choices. This effect stems from a reference point shift: a preference for safety in gain frames and risk-seeking in loss frames. This research examines how variation in surface structure — specifically, the recommendation source's epistemic authority — shapes this effect. The goal was to investigate the impact of different authority types (scientist-physician, AI, and their combination) on the magnitude of the framing effect. Using the classical Asian Disease Problem, participants chose between safe and risky options of equivalent expected utility. In a between-subjects design, participants (community sample, $N = 401$, $M_{age} = 44.3$) were randomly assigned to one of four source conditions: (1) Control (unspecified); (2) Scientist-Physician (SP); (3) Artificial Intelligence (AI); and (4) Scientist-Physician using AI (SPAI). The framing manipulation (gain vs. loss) was applied within each condition. The primary dependent variable was the choice between the safe and risky option. Results confirmed the presence of risky-choice framing across all groups, indicating that option framing significantly influences decision-making. The overall effect was significant, χ^2 (1) = 4.01, $p = .045$, $\varphi = .08$. However, detailed analysis revealed that epistemic authority type did not significantly influence the magnitude of the effect. Although bivariate analyses did not directly compare authors' risk frequencies, univariate analyses provided indications. For instance, in the SP group (negative frame), a significant tendency towards the risky option was observed, χ^2 (1) = 5.12, $p = .024$, $\varphi = .18$. This suggests certain authors may encourage specific risk patterns. The study confirms the robustness of framing; the bias persists regardless of the identified high-status authority, human or technological. The mechanism is primarily driven by the reference-point shift induced by linguistic formulation rather than by source expertise. Thus, the principles of Prospect Theory remain predictive in this context. Future research should explore additional aspects of surface structure to understand the boundary conditions of this robust effect.

Keywords: framing effect, risky decision-making, epistemic authority, artificial intelligence, prospect theory

[*]corresponding author e-mail: andric.masa@gmail.com

MODELING THE SENSE UNCERTAINTY EFFECT IN POLYSEMY USING LDL: EVALUATING CONTEXTUAL CUES AND OUTCOMES

Ksenija Mišić[*,1,2] **& Dušica Filipović Đurđević**[1,2,3]

[1]Laboratory for Experimental Psychology, University of Belgrade, Faculty of Philosophy

[2]Department of Psychology, University of Belgrade, Faculty of Philosophy

[3]Laboratory for Experimental Psychology, University of Novi Sad, Faculty of Philosophy

The sense uncertainty effect for polysemous words (multiple related senses; Filipović Đurđević & Kostić, 2023) was previously successfully simulated within the error-driven learning based NDL approach (Baayen et al., 2011). In NDL, word-form cues are mapped onto localist representations of the meaning as outcomes. To learn multiple senses of polysemous words, previous NDL simulations revealed that introducing multiple outcomes reflecting the context in which the polysemous word appears (as suggested by Filipović Đurđević & Kostić, 2023) was necessary for the uncertainty effect to emerge (Mišić, 2025). The NDL algorithm treats outcomes as unrelated to one another, reducing the ability to quantify sense relatedness crucial for polysemy. An extension of NDL, LDL (Baayen et al., 2019), replaces discrete outcomes for continuous ones using word embeddings, which allow for accounting for relations among outcomes. We aimed to test an optimal simulation setup for the uncertainty effect to arise in polysemous words in LDL, varying the position of the contextual information in three simulations: Gc2V introduced context at the cue level while using static (fastText) outcome embeddings; G2Vc used contextual (BERT) embeddings to introduce context at the outcome level; and Gc2Vc included context at both levels. Each was done separately for nouns, verbs, and adjectives. Simulations were run on the corpus data, but due to computational constraints in calculating contextual embeddings, the sample was reduced significantly. We calculated average cosine (CS) and Euclidean similarities (ES) for predicted outcomes and tested whether they improved model fit and significantly predicted processing times (Mišić et al., 2024). Only Gc2Vc did both (all $\Delta ML > 60$), but only for verbs (CS) and adjectives (ES). Although Gc2Vc measures were not correlated with exterior uncertainty measures, we observed significant correlations between the distance measures calculated within the embeddings used for learning and those calculated within the predicted outcomes ($r = .21 – .42$). This suggests that the uncertainty effect may have arisen from the simulations, but whether LDL-based measures capture uncertainty arising from polysemous words remains an open question until a full-scale simulation is performed. This would validate the measures derived from learning against already established uncertainty indicators.

Keywords: error-driven learning; polysemy; NDL; LDL; contextual embeddings

[*]corresponding author e-mail: *ksenija.misic@f.bg.ac.rs*

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RECOGNIZING EMOTIONAL FACIAL EXPRESSIONS: THE ROLE OF ACADEMIC PROGRAMME AND THE INFORMATIONAL VALUE OF FACIAL REGIONS

Dragana Vučenović[*,1] **& Svetlana Borojević**[2]

[1]Addiko Bank Banja Luka

[2]University of Banja Luka, Faculty of Philosophy, Department of Psychology, Laboratory of Experimental Psychology – LEP-BL

Facial expressions are a fundamental channel of nonverbal communication and play a key role in interpreting emotional states in interpersonal interactions. The ability to accurately and rapidly recognize facial expressions of basic emotions is particularly relevant in academic and professional fields that rely on effective social communication, emotional assessment, and behavioural interpretation. The present study aimed to investigate the accuracy and reaction time in recognizing facial expressions of basic emotions among students from three academic fields: Psychology, Acting, and Security and Criminology, while also examining the informational value of different facial regions under conditions of stimulus degradation. The study employed a quasi-experimental design. The sample consisted of 36 female students in their final years of study at the University of Banja Luka, divided into three equally sized groups (Psychology: n = 12; Acting: n = 12; Security and Criminology: n = 12). Emotional competence was assessed using the UEK-15 questionnaire, while accuracy and reaction time were measured using a computer-based emotion recognition task developed in SuperLab 4.5. The task included 48 stimuli presented for 450 ms, depicting full or partially degraded facial expressions of six basic emotions (happiness, sadness, anger, fear, disgust, and surprise). Psychology students demonstrated slightly higher overall recognition accuracy (61%) compared to Acting and Security and Criminology students; however, these differences were not statistically significant. Recognition accuracy varied across emotions, with happiness being the most accurately recognized (81%) and fear the least accurately recognized (22%). Significant differences were observed in reaction time, with Psychology students responding fastest, followed by Security and Criminology students, and Acting students responding slowest. Given the quasi-experimental nature of the study, these differences in reaction time cannot be interpreted as evidence of superior emotion-recognition ability, but may also reflect general response speed or familiarity with experimental reaction-time tasks. Facial degradation had a significant negative effect on reaction speed, particularly when the forehead and eyebrow region was concealed, indicating that upper-face cues carry high informational value in decoding emotional facial expressions. Overall, the findings suggest that academic background is associated with differences in performance on emotion recognition tasks. However, future research including control conditions with neutral stimuli is needed to disentangle emotion-specific processing from general response speed.

Keywords: emotional facial expressions; emotion recognition; academic background; reaction time; informational value of facial region

[*]corresponding author e-mail: *dragana.vucenovicc@gmail.com*

PERSONALITY PSYCHOLOGY

THE MODERATING ROLE OF SEX IN THE RELATIONSHIP BETWEEN DARK TETRAD TRAITS AND PSYCHOPATHOLOGY

Matija Gvozden[*,1,2], Jana Dimoski[1,2,3] & Janko Međedović[2,4]

[1]Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]LIRA lab, Faculty of Philosophy, University of Belgrade

[3]Psychosocial Innovation Network, Belgrade, Serbia

[4]Institute of Criminological and Sociological Research

Despite growing interest in Dark Tetrad (DT) traits, their associations with psychopathology and potential gender differences therein remain underexplored. This study examined DT–psychopathology relationships and the moderating role of gender. The study employed a cross-sectional design and included a sample of 963 Serbian participants (61.2% women, M_{age} = 44.07, SD_{age} = 13.5), sampled by a market research agency. Measures were taken of DT traits (Psychopathy, Narcissism, Machiavellianism (DTDD) and Sadism (VAST)), depression (PHQ-9), anxiety (GAD-7), suicidal ideation (SIDAS), obsessive-compulsive symptoms (OCI-4), somatization (PHQ-15), eating disorders (EDE-QS), posttraumatic stress disorder (PTSD) (PCL-5), dissociative symptoms (DES-B) and prodromal symptoms (PQ-B). Network analysis was used to explore the relationships between DT variables and psychopathology measures for both men and women separately. Hierarchical regression analyses were used to examine DT traits as predictors of psychopathology, while interactions between DT traits and participants' gender were entered on the second level of regression. Positive correlations were observed between almost all measures. DT traits and psychopathology manifestations formed separate and coherent clusters in the network analysis, with the models being relatively similar for both genders. Sadism showed markedly higher values on all centrality indices for men. All first level hierarchical regression models were significant (R^2 = 2%–18%), while second levels which contained interactions were significant for Depression ($F(4, 950) = 3.47$, $p = .008$), Anxiety ($F(4, 950) = 3.14$, $p = .014$), PTSD ($F(4, 950) = 2.97$, $p = .019$), Dissociation ($F(4, 950) = 4.62$, $p < .001$), and Mania ($F(4, 950) = 6.07$, $p < .001$) (R^2 change = 1%–2%). Sadism demonstrated the most non-additive contribution to the predictions via its interactions with participants' gender, with higher Sadism elevating the chances of Depression (β = -.31), Anxiety (β = -.34), Dissociation (β = -.37), and Mania (β = -.34) among men, while elevated Narcissism facilitated symptoms of Depression (β = .37), PTSD (β = .35), and Dissociation (β = .3) among women while buffering them in men. DT traits are shown to be relatively separated from psychopathology indicators, confirming their different psychological content. Specific DT traits are shown to interact differently with manifestations of psychopathology among men and women, warranting further investigation.

Keywords: dark tetrad; psychopathology; sex

[*]corresponding author e-mail: matija.gvozden@gmail.com

PSYCHOSIS-PRONENESS AND FERTILITY: THE MEDIATING ROLE OF REPRODUCTIVE MOTIVATION

Dunja Vujošević[*,1], Isidora Đorđević[1] & Janko Međedović[2]
[1]Faculty of Media and Communications
[2]Institute of Criminological and Sociological Research

Schizotypy/psychosis-proneness represents a multidimensional behavioral trait reflecting a stable disposition toward psychosis, expressed through subclinical psychotic-like experiences that exist in both the general and clinical populations. Life-history theory suggests that schizotypy can be adaptive via fast life-history strategies, while the mutation–selection balance model anticipates negative fitness consequences for individuals exhibiting higher levels of schizotypy. The aim of the present research was to examine these predictions by analyzing the relations between schizotypy, fertility (as a crucial component of evolutionary fitness), reproductive motivation, as well as the potential mediating role of reproductive motivation in the link between schizotypy and fertility. The research included 632 adults from Serbia (M = 43.88, SD = 11.37), recruited through snowball sampling, with a relatively balanced sex distribution (59.5% female). Schizotypy was measured by trait Disintegration via the DELTA 10-item short-form scale, reproductive motivation was assessed via the Childbearing Motivations Scale (with Positive and Negative childbearing motivation subscales), and fertility was operationalized through age of first reproduction and the number of offspring. The results revealed a significant negative association between Disintegration and the number of children (r = -.13, p < .01), while the correlations with Positive (r = .16, p < .01) and Negative childbearing motivations (r = .32, p < .01) were positive. The structural model testing the indirect effects of Disintegration on the number of children via reproductive motivation (with participants' sex, age, and education controlled for) showed good fit indices ($\chi^2(218)$ = 712.122, p < .001; TLI = 0.902, CFI = 0.916, RMSEA = 0.060, SRMR = 0.048). Although both mediators, Positive and Negative motives, were significant (indirect effects: β = 0.034, p < .01 for Positive motives, β = - 0.055, p < .01 for Negative motives), the mediation effect was partial, as Disintegration remained a significant direct predictor of the number of children (β = - .09, p < .05). The results suggest that psychosis-proneness is not associated with a fast life-history strategy; although it is positively associated with both types of childbearing motivation, its main associations (both direct and indirect) with fertility are negative. Hence, the findings imply that psychosis-proneness is under mild negative selection and support the mutation-selection balance model.

Keywords: schizotypy; Disintegration; fertility; reproductive motivation; natural selection

[*]corresponding author e-mail: *dunja.vujosevic.20231084@fmk.edu.rs*

ROLE OF HIGH SENSITIVITY IN PREDICTING PEER VIOLENCE AND VICTIMIZATION IN ADOLESCENTS

Elena Vitomir[*,1], Bojana M. Dinić[2] & Isidora Rajić[3]

[1]Grammar School "Jovan Jovanović Zmaj"

[2]Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia

[3]Department of Psychology, Faculty of Law and Business Studies Dr Lazar Vrkatić, Union University, Novi Sad, Serbia

Peer violence remains a significant concern affecting children and adolescents globally. Various individual and social factors shape involvement in peer violence. One such individual factor is sensory processing sensitivity, a temperament trait characterized by deeper cognitive processing of sensory input and heightened emotional and physiological reactivity to environmental stimuli. Individuals high on this trait are often referred to as highly sensitive persons. Given that highly sensitive adolescents are more emotionally reactive, they may face greater challenges when responding to interpersonal conflicts and social environments such as schools, potentially placing them at greater risk for victimization. The aim of this study was to examine whether sensory processing sensitivity predicts peer violence. A total of 356 high school students (57.3% female; M_{age} = 16.38) completed the Peer Violence and Victimization Questionnaire (Dinić et al., 2014), which measures three forms of violence and victimization (physical, verbal, and relational), and the Highly Sensitive Child (HSC) scale (Pluess et al., 2018), which assesses three dimensions of the sensory processing sensitivity trait (ease of excitation – EOE, low sensory threshold – LST, and aesthetic sensitivity – AES). After controlling for gender and grade, the results showed that EOE emerged as a significant positive predictor of all forms of victimization: physical (β = .18, p < .01; ΔF(3, 350) = 3.54, p = .015, ΔR^2 = .03), verbal (β = .19, p < .01; ΔF(3, 350) = 5.61, p = .001, ΔR^2 = .05), and relational (β = .18, p < .01; ΔF(3, 350) = 3.89, p = .009, ΔR^2 = .03), but not of perpetration (βs = .06 – .12, all ps > .05). In contrast, LST consistently negatively predicted all forms of victimization: physical (β = -.12, p < .05), verbal (β = -.18, p < .01), and relational (β = -.14, p < .01), as well as physical violence (β = -.15, p < .01; ΔF(3, 350) = 2.46, p = .063, ΔR^2 = .02) and verbal violence (β = -.23, p < .01; ΔF(3, 350) = 6.59, p < .001, ΔR^2 = .05), but not relational violence (β = -.09, p > .05; ΔF(3, 350) = 2.10, p = .101, ΔR^2 = .02). These findings provide new insight into the role of sensory processing sensitivity in peer violence, suggesting that different aspects of this trait show distinct patterns of association with victimization. Future research should explore the mechanisms underlying these relationships to inform targeted interventions.

Keywords: sensory processing sensitivity; highly sensitive adolescents; peer violence; peer victimization

[*]corresponding author e-mail: vitomir.elena@jjzmaj.edu.rs

"WITH A LITTLE HELP OF MY FRIENDS": PREDICTING ANTISOCIAL OUTCOMES WITH SELF AND FRIENDS' DARK TRAITS

Đorđe Volarević*, Svetlana Pavlović, Nikola Drndarević, Marija Čolić & Janko Međedović

Institute of Criminological and Sociological Research

Dark personality traits (DT)—Machiavellianism, narcissism, psychopathy, and sadism—are established predictors of antagonistic and socially harmful behaviours. Most research, however, has focused on individuals' self-reported traits, neglecting whether perceptions of close friends' DT contribute to antisocial tendencies. Since individuals high in DT tend to affiliate with similar peers, perceptions of friends' dispositions may influence antisocial orientations. The present study examined whether self-perceived and ratings of friends' DT traits predict two antisocial outcomes: antisocial behaviour (AB) tendencies and rape myth acceptance (RMA). Specific objectives were: (1) to examine associations between self-reported DT and antisocial outcomes; (2) to test whether ratings of friends' DT explain additional variance; (3) to explore regression interactions between self- and ratings of friends' traits; and (4) to examine the structural patterns of associations using network analysis. We expected that higher levels of DT would be associated with stronger antisocial outcomes (both AB and RMA). Data were collected from a Serbian community sample of 522 adults (40.2% female; M_{age} = 25.92, SD = 11.07). Participants completed self- and ratings of a friend's DT using the Dirty Dozen and the Core Sadism subscale of the Comprehensive Assessment of Sadistic Tendencies. AB was measured with the Subtypes of Antisocial Behavior Questionnaire, and RMA with the 8-item Illinois Rape Myth Acceptance short form. For antisocial behaviour, regression analyses showed that self-reported psychopathy (β = .183, $p < .001$), sadism (β = .153, $p \leq .001$), and Machiavellianism (β = .100, $p < .05$) were significant positive predictors. After adding ratings of friends' traits, friends' perceived Machiavellianism (β = .166, $p < .01$) and friends' perceived psychopathy (β = .139, $p < .05$) were also significant predictors. Ratings of friends' DT had trait-specific effects: friends' perceived sadism strengthened the link between self-sadism and AB (β = .126, p = .014), whereas friends' perceived Machiavellianism attenuated the association between self-Machiavellianism and AB (β = -.126, p = .009). For RMA, the overall model was significant, but no self- or ratings of friends' traits emerged as predictors. Network analysis supported the central role of psychopathy and sadism across antisocial indicators. These findings suggest that antisocial tendencies are explained not only by individuals' dark dispositions but also by the traits they perceive in close peers. Interventions aiming to reduce AB may benefit from considering these interpersonal dynamics alongside individual personality traits.

Keywords: dark tetrad; antisocial behavior; rape myths; perceived peer influence; psychopathy; sadism

*corresponding author e-mail: volarevic.djordje@gmail.com

COMPUTER MOUSE AS A PROXY FOR GAZE? SACCADE IDENTIFICATION AND STRATEGY ASSESSMENT IN AN UNINSTRUMENTED VISUAL SEARCH

Anastasija Mladić[*,1,2], Smilja Stokanović[1], Jaka Sodnik[3] & Nadica Miljković[1,3]

[1]University of Belgrade - School of Electrical Engineering

[2]Faculty of Media and Communications, Singidunum University

[3]Faculty of Electrical Engineering, University of Ljubljana

Psychological research often relies on reaction time and accuracy, which capture only endpoint performance rather than the temporal unfolding of cognitive processes. Conversely, eye tracking enables continuous measurement of attentional dynamics, yet it remains methodologically challenging. This raises the question: can fine-grained computer mouse trajectories serve as a low-cost proxy for oculomotor events, and whether combining these Measurement Modalities (MMs) could reveal the hand-eye relations? In this study, a custom web application is developed to examine whether fine-grained mouse trajectories can approximate saccadic activity assessed by an eye tracker device in two attentional tasks: modified Flanker (mF) and modified Visual Search (mVS). Data from 16 participants, who completed both tasks with simultaneous computer mouse and eye tracking, are preprocessed and analyzed using an identification–velocity threshold algorithm to extract movement parameters. The following features are calculated: saccade amplitude, peak saccade velocity, duration-related measures (saccade and fixation duration), along with their standard deviations and number of detected saccades for data from both MMs. Statistical comparisons are performed between the two MMs and across both tests. Parameters related to saccade amplitude differ significantly between MMs (e.g., for median saccade amplitude for mF: $t(11) = -7.71$, $p < .001$, $d = –2.23$; which is similar for mVS: $t(13) = -12.82$, $p < .001$, $d = -3.43$), suggesting different ranges of measured data. Also, the standard deviation of the saccade duration is significantly higher for computer mouse trajectories ($t(11) = –2.26$, $p = .09$, $d = -0.65$) during the mF task, which probably originates from different movement strategies related to the task, indicating a more complex and diverse hand-eye relationship in mF than in mVS task. Saccade and fixation durations remained unchanged across MMs for both tasks (e.g., for median saccade duration for mF: $t(11) = 1.58$, $p = .22$, $d = 0.46$; which remained unaltered for mVS as well: V = 21.50, p = .91, rb = -0.59). When comparing mF with mVS, mouse tracking data reveal broader differences, mainly in peak velocity- and duration-related measures, measures of variability, and count-based measures (overall 10 out of 13 parameters). In contrast, eye tracking differences are more selective (the only significantly different parameter is a variability-related measure), which may reflect variability in gaze behaviour and greater sensitivity of eye tracking to measurement noise. Obtained results indicate that both eye and computer mouse tracking show promise for attention assessment. The apparent sensitivity to the task-related differences suggests potential for application of computer mouse in attentional research and in exploration of individual differences.

Keywords: computer mouse; eye tracker; eye movements; saccades; visual search

[*]corresponding author e-mail: *a1stasija@gmail.com*

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WE'RE ALL JUST TWO BAD SCORES AWAY FROM WRECKAGE: HOW PERSONALITY TRAITS PREDICT DRIVING BEHAVIOURS

Arijana Radić[*,1], Aleksandar Tošić[1], Anastasija Jerinić[1], David Čajić[1] & Svetlana Borojević[2]

[1]Psychology MSc Programme, Faculty of Philosophy, University of Banja Luka

[2]Department of Psychology, Faculty of Philosophy, University of Banja Luka

Traffic accidents remain a critical public health and societal issue in Bosnia and Herzegovina, highlighting the need to understand the factors contributing to risky driving behaviors. The present study aimed to examine the relationships between basic personality traits, sensation seeking (SS) and driving styles (DS) in predicting risky driving behaviours. Data were collected from a sample of 112 adult drivers from B&H (M_{age} = 27.77, *SD* = 9.54; 62% female) via the 1KA online platform. Participants completed the Arnett Inventory of Sensation Seeking (AISS; 20 items; α = .72) the Big Five Inventory-2-Extra Short Form (BFI-2-XS; 15 items); and the Multidimensional Driving Style Inventory (MDSI; 44 items; α = .72), which assesses eight styles: Risky, Angry, High-Velocity, Anxious, Dissociative, Careful, Patient, and Distress-Reduction. Demographic variables (age, gender, driving experience, license category, average monthly mileage, and history of traffic violations or accidents) were also recorded. Data were analyzed using hierarchical linear regression. Gender, age, driving experience, and mileage were entered in the first block, while personality traits and sensation seeking were entered in the second block. Results showed that the personality and sensation seeking model significantly predicted 6 out of 8 MDSI styles, with an incremental variance contribution ranging from ΔR^2 = .130 to .227 (*p*s < .001 - 018). Maladaptive styles (High-Velocity, Risky, Angry) were primarily associated with lower Agreeableness (β= –.29 to –.38, *p*s < .001). Beyond this shared predictor, High-Velocity was further associated with lower Conscientiousness (β = –.28, *p* < .001) and higher Extraversion (β = .30, p < .001), Risky with higher sensation seeking (β = .22, *p* = .026), and Angry with higher Negative Emotionality (β = .19, *p* = .030). Additionally, Negative Emotionality significantly predicted the Dissociative style (β = .23, *p* = .019). Adaptive styles were associated with higher Openness (Careful; β = .27, *p* = .005) and higher Conscientiousness (Patient; β = .30, *p* < .001). The Angry style significantly predicted the number of traffic accidents in the full model (IRR=1.60, *p* = .035), with the effect being significant only for men (β = .53, *p* < .001). Overall, the results suggest that individual differences in personality significantly shape driving styles and have real-world safety implications, emphasizing the need to consider these traits in driver assessment and targeted interventions to prevent traffic accidents.

Keywords: sensation seeking; driving styles; personality traits; risky driving behaviour

[*]corresponding author e-mail: *arijana.radic@student.ff.unibl.org*

ACADEMIC STAGE AND ACADEMIC PROCRASTINATION: THE ROLE OF MAXIMIZING–SATISFICING TENDENCIES

Pavle Mačkić*

Singidunum University

Academic procrastination is commonly conceptualized as a multifaceted phenomenon involving temporal delay, a discrepancy between intention and action, the irrationality of delay, negative affect, poor performance outcomes, and the type of task being delayed, as formalized in Haghbin's model. While some of these components describe observable features of delayed behavior, others—particularly irrationality, negative affect, and outcome evaluation—may vary with how individuals assess success, failure, and rational action. This study examined whether procrastination differs across academic stages, operationalized as year-of-study status (first–second year, third–fourth year, and apsolvent status—an extended completion status beyond the nominal program duration). This operationalization was used as an institutionally defined marker of academic progression (rather than grades) and was expected to relate to procrastination via changes in academic demands across study stages; however, it also overlaps with age/time-in-program, so age was recorded (M = 22.59, SD = 2.75). We additionally included maximizing–satisficing as a dispositional decision-making style (seeking the "best" option vs accepting "good enough") because it should influence procrastination reports primarily through perceived irrationality. In a quantitative, non-experimental online survey, 78 university students were recruited via convenience snowball sampling. Procrastination was indexed using the MMAP Procrastination Behaviour Scale (PBS) (10-item "academic tasks" frequency component; Cronbach's $\alpha = 0.936$), and decision style was measured with the Maximization Scale (Cronbach's $\alpha = 0.79$). To test whether year-of-study groups differ in procrastination after adjusting for decision style, we used ANCOVA to estimate adjusted group differences while controlling for the covariate. Year of study was not significantly related to procrastination, $F(2,74) = 0.53$, $p = .59$, $\eta p^2 = .01$, whereas maximizing was positively associated with procrastination, $F(1,74) = 4.63$, $p = .035$, $\eta p^2 = .06$; the interaction was not significant, $F(2,74) = 1.48$, $p = .23$. Findings should be interpreted cautiously because convenience snowball sampling and $N = 78$ mean the study is poorly powered for small between-group effects ($\eta p^2 = .01$) and because year of study overlaps with age/time-in-program; future studies should assess additional components of procrastination beyond frequency to test the proposed mechanism.

Keywords: academic procrastination; year of study; maximizing–satisficing; decision-making style; ANCOVA

*corresponding author e-mail: *pmackicbgd@gmail.com*
The research was supervised by Dr Oliver Tošković.

BODY IMAGE, HEALTH-RELATED BEHAVIOURS, AND THE DARK TRAITS AS PREDICTORS OF OBJECTIFIED BODY CONSCIOUSNESS

Teodora Gligorić*, Milica Klajn, Katarina Mašić Đonlić & Bojana M. Dinić

Faculty of Philosophy, University of Novi Sad

According to objectification theory, individuals may internalize an observer's perspective on their bodies, leading them to monitor and evaluate their physical appearance from an external standpoint. Although sociocultural influences are often emphasized in the development of self-objectification, research also points to the role of individual characteristics. The aim of this study was to identify predictors of self-objectification derived from: (1) demographics (gender, age, education), (2) body image and health characteristics (Body Mass Index—BMI, satisfaction with physical appearance, overall physical activity, nutrition, health responsibility, diagnosed eating disorder, greater weight change in the last three months, difference between perceived and ideal body image), and (3) individual differences reflected in Dark Tetrad traits. The sample included 426 participants (53% women, M = 34.42, SD = 13.88). As part of their pre-exam activities, students recruited participants in line with the predefined gender and age quotas. Self-objectification was measured using the Objectified Body Consciousness Scale, which assesses three dimensions: surveillance, body shame, and appearance control beliefs. Hierarchical regression analysis was conducted with three blocks: demographics, body image and health habits, and dark traits. In the final model, surveillance [R^2 = .28, F(15,379) = 9.98, p < .01] was predicted by female gender (β = –.18, p < .01), younger age (β = –.21, p < .01), lower BMI (β = –.16, p < .05), lower satisfaction with physical appearance (β = –.26, p < .01), and lower physical activity (β = –.11, p < .05), while it was positively predicted by health responsibility (β = .13, p < .05) and Machiavellianism (β = .16, p < .01). Body shame [R^2 = .22, F(15,379) = 7.21, p < .001] was negatively predicted by satisfaction with physical appearance (β = –.27, p < .01) and positively predicted by Machiavellianism (β = .19, p < .01) and sadism (β = .17, p < .01). Finally, appearance control beliefs [R^2 = .09, F(15,379) = 2.59, p < .001] were predicted by male gender (β = .21, p < .01), younger age (β = –.15, p < .01), and greater weight change in the last three months (β = .12, p < .05). The results indicate that psychological and behavioral predictors of self-objectification are important and that they relate differentially to its dimensions. Specifically, Machiavellianism is linked to more strategic, monitoring-based self-objectification, with body shame emerging when instrumental or evaluative standards are not met, whereas sadism appears to be associated with the internalization of harsh self-evaluations reflected in body shame.

Keywords: objectified body consciousness; self-objectification; health behavior; body image; Dark Tetrad

* corresponding author e-mail: tegligoric@gmail.com

THE ROLE OF DARK PERSONALITY TRAITS IN PREDICTING HIGH SENSITIVITY

Isidora Rajić[*,1], Luna Radević[2], Anastasija Mitrović[2] & Selka Sadiković[2]

[1]Department of Psychology, Faculty of Law and Business Studies Dr Lazar Vrkatić, Union University, Novi Sad, Serbia

[2]Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia

Dark personality traits have received substantial empirical attention across diverse psychological domains. Given that sensory processing sensitivity (SPS) trait is considered to be a significant factor impacting well-being and quality of life, it would be important to examine its connection with these personality dimensions. The main goal of this study was to determine the extent to which dark personality traits predict SPS trait after accounting for age and gender. The study included 1,920 participants (72% women, 28% men), aged between 18 and 85 years (M = 31.96; SD = 12.53). Participants were recruited via psychology students who distributed the study link to their acquaintances in exchange for course credits, with informed consent obtained prior to participation. The instruments used in this study were the Highly Sensitive Person Scale – Revised (HSP-R), which measures the SPS trait and demonstrated good internal consistency in the present study (α = .85); the Short Dark Triad scale (SD3), which assesses three dimensions of personality: narcissism (α = .68), Machiavellianism (α = .75), and psychopathy (α = .66); and the Short Sadistic Impulse Scale (SSIS), which evaluates sadistic tendencies and demonstrated acceptable internal consistency in the present study (α = .61). Hierarchical regression analysis was conducted as the primary analytic approach, with gender and age entered as predictors in the first block, and the Dark Tetrad factors added in the second block. The criterion variable was high sensitivity. Findings indicate a significant contribution of the model to explaining high sensitivity variance at both steps ($R1^2$ = .074, F = 76.97, p < .001 and $R2^2$ = .086, F = 30.03, p < .001). Significant predictors included gender (β = .05, p < .05) in the first block, indicating that women reported higher SPS than men, whereas psychopathy emerged as a negative predictor in the second block (β = –.14, p < .001). These findings suggest that individuals with higher levels of psychopathic traits tend to report lower SPS trait, even after accounting for demographic factors. However, given that dark traits as a whole explained only a small proportion of the variance in SPS, caution is warranted in interpreting these results. Overall, these findings suggest that SPS may represent a modest, but potentially informative, factor in research examining dark personality traits, warranting further investigation in future studies.

Keywords: dark tetrad traits; sensory processing sensitivity; hierarchical regression analysis

[*]corresponding author e-mail: isidorarajic5995@gmail.com

DARK TRIAD TRAITS AND THE PREVALENCE AND RELATIVE PROPORTION OF FRIENDS WITH BENEFITS RELATIONSHIPS AMONG EMERGING ADULTS

Katarina Živković*, Anđela Krivokapić, Ana Ivanov & Sanda Stanković
University of Belgrade, Faculty of Philosophy, Department of Psychology, LIRA Lab

Friends with benefits (FWB) relationships involve friendships that include a sexual component and are viewed as a permissive form of sexual behavior lacking romantic commitment (Lehmiller et al., 2011). Among emerging adults, FWB are increasingly prevalent alongside a decline in traditional romantic relationships (Jonason et al., 2012). Individuals with elevated dark traits tend to prefer instrumental, low-commitment dating contexts, consistent with evidence that many young adults engage in FWB arrangements (e.g., Mayshak et al., 2023). Building on prior findings linking dark traits to moral disengagement, unrestricted sociosexuality, and poorer relationship quality (Ferreiros & Clemente, 2022), this study examined whether Dark Triad traits are associated with engagement in FWB among young adults and whether alternative operationalizations of FWB involvement yield distinct explanatory outcomes. The convenience sample comprised 818 participants (78.1% women; M_{age} = 22.12, range = 18–28). FWB involvement was measured using categorical indicators: (a) lifetime prevalence of FWB relationships (i.e., categorized as never or once, two to five times, and more than five times) and (b) relative proportion of FWB to formal romantic relationships (i.e., more romantic relationships, approximately equal, or more FWB). Dark Triad traits were assessed using the Serbian adaptation of the Short Dark Triad questionnaire (Dinić et al., 2018). Group differences in Dark Triad traits across levels of FWB involvement were examined using multivariate analyses of variance. Results revealed significant multivariate differences in Dark Triad traits across levels of FWB involvement. Psychopathy emerged as the most robust discriminator (F = 30.54, p < .001, partial η^2 = .070), followed by Machiavellianism, whereas Narcissism showed weaker effects. Group differentiation was clearer when FWB was indexed as the relative proportion of FWB versus romantic relationships (Wilks' λ = .947, $F(6,1622)$ = 7.41, p < .001) than when based on lifetime prevalence of FWB (Wilks' λ = .926, $F(6,1620)$ = 10.59, p < .001). The association between Psychopathy and FWB likely reflects impulsive, sensation-seeking tendencies aligned with short-term sexual behavior, distinguishing it from the more strategic or validation-oriented profiles of Machiavellianism and Narcissism. Our findings highlight the importance of dark traits and FWB involvement operationalization in non-romantic sexual contexts.

Keywords: Friends with benefits (FWB), Machiavellianism, Narcissism, Psychopathy, Sociosexual behavior, Dark Triad

*corresponding author e-mail: katarinazvk01@gmail.com

EXPLORING THE RELATIONSHIP BETWEEN PERSONALITY NUANCES AND OFFENCES USING NETWORK ANALYSIS

Anja Wertag[*,1], Ines Sučić[1] & Bojana M. Dinić[2]

[1]Ivo Pilar Institute of Social Sciences, Zagreb, Croatia

[2]Department of Psychology, Faculty of Philosophy, University of Novi Sad, Serbia

Researchers have long been intrigued by the connection between personality and crime. Generally, low conscientiousness, low agreeableness, and high neuroticism were found to be the best predictors of antisocial and criminal behavior. Still, there are some differences in the relations between personality traits and different crimes. Moreover, as the associations between personality and behavioral outcomes may be driven less by broad trait domains and more by specific facets and items that capture personality nuances, this study examined the structural organization of relations between personality and different types of criminal offences and recidivism using an item–offence approach and network analysis. Network analysis can provide insight into which items are central to various crimes and which act as bridges connecting personality and offences. Data were collected from a convenience sample of 592 male prisoners in Croatia (M_{age} = 39.55, SD_{age} = 11.16) as part of the larger project. Personality was assessed using the Big Five Inventory-10 (BFI-10). Given the limited domain coverage of the BFI-10 and the low scale alphas in this study, we used BFI item scores, in line with our goal. Prisoners indicated criminal offences for which they had served sentences, and the number of sentences they had previously served, which was used as a measure of recidivism. As our primary goal was to estimate exploratory network structure with the focus on centrality, we used a least absolute shrinkage and selection operator (LASSO) for relationship estimation to test three networks: items and 1) six violent offences; 2) five non-violent offences; 3) recidivism and summed violent and non-violent offences. The results showed a central role of the Neuroticism item – nervousness in offending and recidivism, as well as its importance in distinguishing between violent and non-violent offences. This item was positively associated with violent offences but negatively associated with non-violent ones. Moreover, trustworthiness (Agreeableness) emerged as a central item for violent offences, while items from Conscientiousness were key for non-violent offences. Overall, this study offers valuable insight into the relations between personality and criminal behavior using an item-level approach.

Keywords: network analysis; Big Five Inventory-10 items; criminal offences; recidivism; violence

[*]corresponding author e-mail: anja.wertag@pilar.hr

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THE ASSOCIATIONS BETWEEN BASIC PERSONALITY DIMENSIONS, COPING STYLES, AND LEVELS OF DEPRESSION, ANXIETY, AND STRESS AMONG STUDENTS

Kristina Milutinović* **& Miljana Pavićević**
University of Pristina with a temporary seat in Kosovska Mitrovica,
Faculty of Philosophy, Department of Psychology

This study examined how the basic dimensions of the Five-Factor Model of personality (neuroticism, extraversion, openness, conscientiousness and agreeableness) relate to preventive and proactive coping, as well as depression, anxiety and stress. The sample included 366 participants (291 females, 75 males) aged 18–30. Data were collected using the NEO-FFI, Proactive and Preventive Coping Scales, and DASS-21. Few studies integrate personality, coping and psychological distress by simultaneously including preventive and proactive coping and measures of depression, anxiety and stress. The results of multiple regression analyses showed that personality dimensions explained 9% of the variance in preventive coping ($F(5, 360) = 7.210$, $p < .001$), with conscientiousness emerging as a significant predictor ($\beta = .258$, $t = 5.898$, $p < .001$). Personality dimensions explained 43% of the variance in proactive coping ($F(5, 360) = 55.159$, $p < .001$), with significant predictors being neuroticism ($\beta = -.139$, $t = -4.362$, $p < .001$), extraversion ($\beta = .192$, $t = 4.672$, $p < .001$), openness ($\beta = .135$, $t = 3.435$, $p = .001$), conscientiousness ($\beta = .356$, $t = 9.236$, $p < .001$) and agreeableness ($\beta = -.128$, $t = -3.257$, $p = .001$). Furthermore, personality dimensions explained 48% of the variance in depression ($F(5, 360) = 68.244$, $p < .001$), with neuroticism ($\beta = .331$, $t = 12.171$, $p < .001$) and conscientiousness ($\beta = -.146$, $t = -4.433$, $p < .001$) as significant predictors. Regarding anxiety, personality dimensions explained 42% of the variance ($F(5, 360) = 52.890$, $p < .001$), with neuroticism as the only significant predictor ($\beta = .398$, $t = 12.913$, $p < .001$). Finally, personality dimensions explained 40% of the variance in perceived stress ($F(5, 360) = 49.628$, $p < .001$), with neuroticism ($\beta = .333$, $t = 11.447$, $p < .001$), extraversion ($\beta = -.102$, $t = -2.716$, $p = .007$) and agreeableness ($\beta = -.077$, $t = -2.145$, $p = .033$) as significant predictors. Findings indicate that basic personality dimensions contribute to coping strategies and psychological distress. Conscientiousness predicted preventive coping, while high-neuroticism individuals rarely used proactive strategies. Socially active, energetic, conscientious, and open individuals more often controlled stress outcomes, whereas agreeable individuals seldom did. Emotionally unstable individuals were prone to helplessness, nervousness, and physiological stress responses. Conscientiousness reduced depressive symptoms, while extraversion and agreeableness mildly buffered stress.

Keywords: Five Factor Model; preventive and proactive coping; depression; anxiety and stress

*corresponding author e-mail: kristina.milutinovic@pr.ac.rs

APPLICATION OF MACHINE LEARNING METHODS TO THE CLUSTERING OF BFI-2 PERSONALITY PROFILES

Isidora Gatarić*
Department of Psychology, Faculty of Philosophy, University of Novi Sad

The aim of this research was to computationally examine the number and structure of personality profiles derived from respondents' scores on the Serbian version of the BFI-2 Personality Inventory. Two machine learning methods, K-Means and Hierarchical Clustering, were applied to identify latent personality profiles. Based on previous findings, it was hypothesized that both methods would extract four stable personality types (Average, Reserved, Self-Oriented, and Exemplary), and that comparable structures would emerge across the two approaches. The data used for modeling were obtained from a dataset collected by Smederevac and colleagues in 2024 (Smederevac et al., 2024), publicly available on the authors' OSF profile. The results indicate that both machine learning techniques converged toward a set of theoretically coherent and empirically stable personality groupings, although they differed in the level of abstraction and segmentation they produced. The K-Means algorithm identified three dimensions as most relevant for cluster formation, while Hierarchical Clustering yielded the same number of dimensions but with lower interpretability. In line with previous research, three replicable personality profiles emerged in the Serbian sample: (i) emotionally stable and socially engaged, (ii) introverted and somewhat neurotic, and (iii) conscientious and self-disciplined. Overall, the findings suggest that machine learning methods hold substantial potential in personality psychology - not only for reliably reproducing classical typologies, but also for uncovering more nuanced personality structures that traditional analytical approaches may fail to detect.

Keywords: Machine learning; Personality profiles; BFI-2; K-Means; Hierarchical clustering

*corresponding author e-mail: isidora.gataric@uns.ac.rs

THE RELATIONSHIP BETWEEN GRANDIOSE AND VULNERABLE NARCISSISM AND HEXACO PERSONALITY DIMENSIONS IN HIGH SCHOOL ADOLESCENTS

Nenad Lazarević[*]
Union University, Faculty of Law and Business Studies Dr Lazar Vrkatić,
Independent Researcher

Distinguishing grandiose and vulnerable narcissism in adolescence is important for understanding their social and emotional functioning. Grandiose narcissism reflects an outwardly confident, dominant, and socially assertive style, whereas vulnerable narcissism is characterized by internalized insecurity, heightened sensitivity to evaluation, and a tendency toward emotional distress and withdrawal. This study examined their associations with HEXACO personality dimensions in high school students (N = 232, age 15–18, M = 16.1; 52% male) from three Belgrade schools. Data were collected in person during one class period per group, using the Pathological Narcissism Inventory (PNI) (α = .89 for grandiose; α = .91 for vulnerable) and HEXACO-60. The PNI assesses both grandiose and vulnerable aspects of pathological narcissism, enabling their examination as distinct dimensions. Pearson correlations showed that grandiose narcissism correlated negatively with Honesty–Humility (r = –.42, p < .001) and positively with Extraversion (r = .16, p < .05) and Openness (r = .26, p < .001). Vulnerable narcissism showed negative correlations with Honesty–Humility, Extraversion, Agreeableness, and Conscientiousness (r = –.34, p < .001; r = –.14, p < .05; r = –.15, p < .05; r = –.28, p < .001), and positive correlations with Emotionality (r = .23, p < .001). ANOVA indicated higher grandiose narcissism in girls (M = 55.25, SD = 11.66) than boys (M = 51.71, SD = 12.01), F(1, 230) = 4.95, p < .05, and higher vulnerable narcissism in girls (M = 95.78, SD = 24.20) than boys (M = 88.64, SD = 22.91), F(1, 230) = 5.09, p < .05; small effects indicate weak gender differences (η^2 = .02 each). Overall, associations between narcissism and HEXACO traits largely parallel those in adults: grandiose narcissism relates to higher Extraversion and Openness and lower Honesty–Humility, whereas vulnerable narcissism relates to higher Emotionality, lower Extraversion, lower Agreeableness and Conscientiousness, and lower Honesty–Humility. These patterns indicate distinct associations of grandiose and vulnerable narcissism with basic personality traits in adolescence, reflected in differences in emotional regulation and social functioning. The finding that both forms are characterized by low Honesty–Humility, despite distinct emotional and interpersonal patterns, points to a common antagonistic core and supports early identification of risk in adolescent functioning.

Keywords: grandiose narcissism; vulnerable narcissism; adolescence; HEXACO; socio-emotional functioning

[*]corresponding author e-mail: *nenad.lazarevic86@hotmail.com*

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RELATION BETWEEN THE DARK TRIAD TRAITS AND HEXACO PERSONALITY DIMENSIONS IN HIGH SCHOOL ADOLESCENTS

Nenad Lazarević[*]
Union University, Faculty of Law and Business Studies Dr Lazar Vrkatić,
Independent Researcher

Examining dark personality traits in adolescence is relevant because this developmental period involves emotional change, increased social competition, and active identity formation that shapes behavior. Accordingly, this study aimed to examine associations between Dark Triad traits—Machiavellianism, psychopathy, and narcissism—and HEXACO personality dimensions in high-school adolescents. A convenience sample of 232 students from three Belgrade high schools (aged 15–18 years; M = 16.1; 52% male) participated in the study and completed the Short Dark Triad (SD3) questionnaire (α = .71–.77) and the HEXACO-60 inventory. Data were collected in person during a single class period under school administration supervision. Pearson correlation analyses revealed moderately strong negative associations between all Dark Triad traits and Honesty–Humility and Agreeableness, all significant at $p < .001$: Machiavellianism (r = –.43 and –.30), psychopathy (r = –.49 and –.27), and narcissism (r = –.45 and –.26). Narcissism showed a positive association with Extraversion (r = .28, $p < .001$). Machiavellianism and psychopathy were negatively related to Emotionality (r = –.14, $p < .05$; r = –.17, $p < .05$), while psychopathy was additionally negatively associated with Conscientiousness (r = –.21, $p < .001$) and Openness (r = –.23, $p < .001$). The observed pattern of correlations closely replicates findings from adult samples, indicating that the structural relations between Dark Triad traits and HEXACO dimensions are already clearly differentiated among high school students. Associations with Conscientiousness, Emotionality, and Openness further suggest that these domains represent meaningful developmental correlates of dark personality traits during this period. The findings underscore the importance of early identification and guidance regarding antagonistic trait configurations—primarily reflected in low Honesty–Humility and Agreeableness—during high school adolescence, particularly within educational and social contexts, and highlight the need for further research on the developmental mechanisms of antagonism in family, peer, and broader cultural environments.

Keywords: Dark Triad; HEXACO; personality; adolescents; antagonism

[*]corresponding author e-mail: *nenad.lazarevic86@hotmail.com*

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DEVELOPMENTAL PSYCHOLOGY

EMOTIONAL REGULATION IN YOUNG MEN: THE ROLE OF MASCULINITY NORMS AND EMOTIONAL SOCIALIZATION

Jana Pavlović* **& Biljana Stanković**
University of Belgrade, Faculty of Philosophy

Men face difficulties expressing their emotions and showing vulnerability. This is frequently linked to the internalization of dominant ideals of hegemonic masculinity through emotional socialization, which has significant consequences for their mental health. Emerging adulthood (EA) brings additional developmental challenges. Existing interpretations of men's vulnerability and emotional expression have insufficiently examined the role of dominant discourses and gendered socialization processes shaped by hegemonic masculinity norms, or the possible role of alternative constructions and practices. The aim of this research was to deepen the understanding of how young men relate their experiences of expressing – or avoiding – emotions to dominant masculine norms, and which socialization influences they recognize as relevant in shaping their emotional experiences. We used qualitative methodology starting from interpretative phenomenological position. Snowball sampling was used, with the sample balanced by participants' capacity to articulate their emotional experiences. Semi-structured interviews were conducted with 10 cisgender heterosexual men aged 21-26, who grew up and currently live in Serbia and have previously experienced romantic relationships. We analysed the data using interpretative phenomenological approach through an iterative engagement with the material. Research findings are organized into four main themes. The first theme, Patriarchal Man as a Dominant Normative Model, captures participants' dominant representation of masculinity as competent, financially stable, reliable, competitive and individualistic. The second theme, Emotional Regulation in the Service of the Masculine Gender Role, shows how the masculine role selectively restricts emotional expression to align with dominant norms. The third theme, The Role of Significant Others in Emotional Socialization, portrays the role of family members, male friends, and girlfriends. The final theme, Positioning towards Dominant Norms of Masculinity, illustrates a spectrum of responses – from uncritical adoption, through deliberate adaptation and experiences of contradictions (e.g. between girlfriends' explicitly stated expectations and their reactions to men's emotional expression, or between public performance and private behaviour), to active resistance towards dominant norms. The findings are interpreted through the lens of available discourses on masculinity and existing knowledge on the emotional socialization of young men within the Serbian cultural-historical context, and practical implications are discussed.

Keywords: emotional expression; hegemonic masculinity; emotional socialization; emerging adulthood; interpretative-phenomenological analysis

*corresponding author e-mail: janapavlovic@gmail.com

NAVIGATING EMOTIONAL EXPRESSION AND VULNERABILITY: EXPERIENCES OF YOUNG MEN IN ROMANTIC RELATIONSHIPS

Jana Pavlović* **& Biljana Stanković**
University of Belgrade, Faculty of Philosophy

Men often face difficulties in expressing emotions and showing vulnerability, which can have significant implications for their psychological and physical health. Emerging adulthood (EA) men face specific developmental challenges, especially in the context of romantic relationships. To date, this topic has been insufficiently examined in the Balkan contexts, despite its relevance for young men's wellbeing. The aim of this study was to explore how young men in Serbia experience expressing – or avoiding expressing – emotions and vulnerability, and what challenges they face across different phases of the romantic relationship. We used qualitative methodology and approached the research question from an interpretative phenomenological position. Snowball sampling was used, with the sample balanced by participants' capacity to articulate their emotional experiences. Semi-structured interviews were conducted with 10 cisgender heterosexual men (aged 21–26) who grew up and currently live in Serbia and have prior experience with romantic relationships. We analysed the data using interpretative phenomenological analysis through a cyclical and iterative engagement with the material. Findings are organized in three main themes: 1) Inhibitors and Facilitators of Emotional Expression, 2) Modalities of Emotional Expression, and 3) Mechanisms for Coping with Unpleasant Emotions. First, EA men refrain from expressing emotions when they fear their emotions won't be reciprocated or respected; when they feel inexperienced or insecure; or when they believe emotional visibility won't contribute to their own, their girlfriend's, or the relationship's wellbeing. Conversely, they are more likely to express emotions when they feel encouraged by their partner, when they feel confident, or when they judge that emotional sharing will strengthen the relationship. They also regulate emotional expression depending on what they consider appropriate at each phase of the relationship. Second, they combine subtle and direct modes of expressing emotions and tend to prioritise behavioural over verbal forms of communication. Third, their coping strategies rely primarily on individual regulation, focusing on positive aspects of the situation, and suppressing unpleasant emotions. We interpreted the findings in light of the previously identified discourses about masculinity available to young men in the Serbian cultural-historical context and data on their emotional socialization. Finally, practical implications are outlined.

Keywords: emotional expression; vulnerability; emerging adulthood; romantic relationships; interpretative-phenomenological analysis

*corresponding author e-mail: janapavlovic@gmail.com

SOCIAL AND MEDIA PRESSURE AND BODY IMAGE SATISFACTION IN ADOLESCENCE: THE MEDIATING ROLE OF SELF-ESTEEM

Tanja Brcan* **& Jasmina Pekić**
Department of Psychology, Faculty of Philosophy, University of Novi Sad

The Tripartite Influence Model of body image and eating disturbances proposes that three primary sources of influence—parents, peers, and media—contribute to the development of body image. Accordingly, the present study aimed to examine the relationships between social pressures from family members, peers, media, and significant others on the one hand, and adolescents' body image on the other. The aforementioned theoretical framework was partially modified by including global self-esteem as a mediating variable in the relationship between multiple types of social pressures and adolescents' body image. The study was conducted on 197 adolescents aged between 15 and 19 years (M = 16.8; 80.7% female participants). In this study, the following instruments were used in data collection: Sociocultural Attitudes Toward Appearance Questionnaire–4 Revised (SATAQ-4R) to evaluate perceived social pressures from the media, family, peers, and significant others, Rosenberg Self-Esteem Scale (RSES) to measure global self-esteem, and Stunkard Figure Rating Scale (FRS) to assess body image satisfaction, by calculating the discrepancy between perceived and ideal body size. A hierarchical regression analysis was conducted to examine whether global self-esteem mediates the relationship between social pressures and body image satisfaction in adolescents. The first model, including the four types of social pressures, was significant (R^2 = .164; $F(4, 122) = 5.99$; $p < .001$), with all four types of social pressures being significant predictors, particularly peer pressure (β = -.532; t = -4.401; $p <$ .001). Adding global self-esteem in the second model resulted in a minimal and non-significant increase in explained variance (ΔR^2 = .006; $F(5, 191) = 7.858$; $p < .001$), indicating that self-esteem does not serve as a mediator in the relationship between the examined variables (β = -.089; t = -1.208; p = .228). The findings suggest that within the framework of the Tripartite Influence Model, peer pressure was the strongest negative predictor of adolescents' body image, while other types of social pressures were positive predictors with somewhat smaller contributions to the explained variance in the criterion variable. The obtained results highlight that practical interventions should focus on reducing negative peer influences by both helping adolescents manage peer pressure and fostering supportive peer networks. Other types of social pressures, such as those from media, family, and significant others, may be utilized in interventions to help reduce adolescents' discrepancy between perceived and ideal body size.

Keywords: adolescence; body image satisfaction; media pressure; social pressure; self esteem

*corresponding author e-mail: tanjchi5@gmail.com

PREDICTING LIFE SATISFACTION IN ADOLESCENTS: THE ROLE OF SOCIO-EMOTIONAL COMPETENCIES

Marija Trajković[*, 1], Branislava Popović-Ćitić[2], Lidija Bukvić[2], Dragana Bogićević[2] & Marina Kovačević Lepojević[1]

[1]Institute for Educational Research

[2]University of Belgrade, Faculty of Special Education and Rehabilitation

Life satisfaction (LS), defined as an overall positive evaluation of one's own life, represents the cognitive component of subjective well-being, and plays an important role in positive youth development (PYD). Socio-emotional competence (SEC), understood as abilities to regulate emotions, establish relationships, and solve problems effectively, are increasingly recognized as key predictors of various aspects of well-being. This study aimed to examine the contribution of SEC to LS among adolescents. The sample included 860 students (58.4% female), aged 15–19 years (M = 16.37; SD = 1.05), from six high schools in Belgrade (one grammar school and five vocational schools). SEC was assessed using the Delaware Social-Emotional Competency Scale (α = .82), consisting of 12 items measuring four SECs: responsible decision making (RDM), relationship skills (RS), self-management (SM), and social awareness (SA). LS was measured with the Brief Multidimensional Students' Life Satisfaction Scale (α = .81), which includes six items assessing global LS and satisfaction with specific domains: family, friendships, school, self, and living environment. Data were analyzed using multiple regression analysis. Results show that SEC significantly predicts LS and its domains. SEC accounted for the largest share of variance in satisfaction with school experiences (F = 52.67, df_1 = 4, df_2 = 765, p < .001, r^2 = .21). More specifically, for satisfaction with family significant predictors are SM (β = .13, t = 2.89, p = .004) and RS (β = .28, t = 6.57, p < .001); satisfaction with friendships is significantly predicted by SA (β = .08, t = 2.15, p = .032) and RS (β = .40, t = 9.65, p < .001); satisfaction with school experiences is predicted by SA (β = .09, t = 2.35, p = .019), SM (β = .17, t = 3.95, p < .001), and RS (β = .31, t = 7.57, p < .001); the same predictors emerged for self-satisfaction: SA (β = –.17, t = –4.5, p < .001), SM (β = .20, t = 4.49, p < .001), and RS (β = .33, t = 7.77, p < .001). RS (β = .32, t = 7.25, p < .001) is the only significant predictor of satisfaction with one's living environment. Finally, for LS in general, the significant predictors are SM (β = .23, t = 5.34, p < .001) and RS (β = .24, t = 5.64, p < .001). These findings indicate that SECs, particularly RS, are important contributors to LS. Interestingly, RDM did not predict any LS domain life, nor for LS in general. The results provide implications for designing interventions aimed at improving LS as an indicator of PYD.

Keywords: socio-emotional competence; life satisfaction; positive youth development; adolescents

[*]corresponding author e-mail: marija.stojanovic@ipi.ac.rs

MEASURING EARLY SOCIAL COGNITION IN TÜRKIYE: A PSYCHOMETRIC STUDY

Burcu Soy Telli[*,1], Yesim Yavaslar Dogru[2], Gizem Koc-Arik[3] & Elena Hoicka[4]

[1] Nevsehir Haci Bektas Veli University

[2] Karabuk University

[3] Tekirdag Namik Kemal University

[4] University of Bristol

Social cognition refers to the mental processes that enable individuals to perceive, understand, and interact with others. The Early Social Cognition Inventory (ESCI) is a parent-report measure designed to assess early social cognitive abilities, including joint attention, imitation, and the understanding of mental states. Although the ESCI has demonstrated strong psychometric properties in English-speaking populations (Hoicka et al., 2022), its applicability in non-Western contexts remains limited. The present study aimed to adapt the ESCI for Turkish children aged 4 to 39 months and to examine its psychometric properties in a non-WEIRD sample. Study 1 tested the proposed factor structure of the ESCI in a Turkish sample using confirmatory factor analysis and evaluated its construct validity. The analysis conducted with 124 participants (N = 124; M_{age} = 22.35 months, SD = 10), supported a one-factor structure, differing from the original two-factor model. Two items with insufficient factor loadings were removed, resulting in a 19-item version with high internal consistency, with values ranging from .62 to .98. Study 2 (N = 122; M_{age} = 22.20 months, SD = 10.31) examined convergent validity and revealed strong associations between the ESCI scores and the Modified Checklist for Autism in Toddlers–Revised with Follow-Up (M-CHAT/R-F) (r' =.52, p < .001), controlling for age in days. Study 3 (N = 52; M_{age} = 19.56 months, SD = 10.36) assessed test–retest reliability, with results indicating stability over a one-month interval (r' =.73, p < .001). Finally, Study 4 combined samples from Studies 1 and 2 (N = 246; M_{age} = 22.28 months, SD = 10.14) to evaluate internal consistency across demographic subgroups, and the findings supported the robustness of reliability across diverse backgrounds. Overall, the Turkish version of the ESCI demonstrates strong validity and reliability, offering a valuable tool for assessing early social cognition in young children and supporting cross-cultural research in non-Western populations.

Keywords: social cognition; early childhood; psychometric characteristics; Turkish Early Social Cognition Inventor

*corresponding author e-mail: burcusoytelli@nevsehir.edu.tr

HOW STUDENTS WORK TOGETHER: CLUSTER-BASED INSIGHTS INTO EFFECTIVE AND INEFFECTIVE COLLABORATIVE PROBLEM SOLVING

Marina Videnović[*, 1], Smiljana Jošič[2] & Ivana Stepanović Ilić[3]

[1]University of Belgrade, Faculty of Philosophy, Institute of Psychology

[2]The Institute for Educational Research, Belgrade, Serbia

[3]University of Belgrade, Faculty of Philosophy, Department of Psychology

Collaborative Problem Solving (CPS) is increasingly emphasized as an essential competence for adolescents, contributing both to their cognitive development and to their preparedness for future job demands. Effective CPS requires the coordination of cognitive processes (exchanging ideas, co-constructing understanding) and socio-emotional processes (managing emotions, ensuring balanced participation). Drawing on research from organizational psychology and studies examining reasons for productive or unproductive group work, we can expect distinct collaboration profiles to emerge (for example, groups that perform well on cognitive tasks but show poor emotional dynamics among members). This study investigates how high school student groups interact while solving CPS tasks and whether meaningful, empirically identifiable collaboration profiles can be distinguished. A total of 84 same-sex dyads and triads of 16-year-old students from six grammar schools and six vocational schools participated. Half of the groups received training based on the PEER model, while the others worked without prior intervention. All groups completed two CPS tasks: one focused on scientific literacy and one on civic literacy. Interactions were evaluated using the CPS Observational Grid (CPS-OG), which assesses four dimensions of collaboration (socio-cognitive exchange, socio-emotional regulation, task management, and group regulation) on a 5-point scale. Group products were scored independently using the CPS Product Assessment Protocol. To identify collaboration patterns, we conducted a hierarchical cluster analysis using Ward's method with Euclidean distance, which yielded three distinct profiles of group interaction. These clusters differed significantly across all CPS-OG dimensions. The findings indicate strong interdependency among CPS dimensions: profile that score low in one dimension tend to score low in others. The highly effective profile achieved higher scores on the civic literacy task, $F(2, 115) = 32.71$, $p < .001$, $\eta p^2 = .36$, indicating a large effect size. In addition, this profile was more likely to include groups that had received training, χ^2 (2, N = 84) = 13.50, $p < .001$, Cramér's V = .40, indicating a moderate-to-large effect, and was predominantly composed of female groups, $\chi^2(2, N = 84) = 6.31$, $p = .043$, Cramér's V = .27, indicating a small-to-moderate effect. Regarding practical implications, because the dimensions of collaboration are interdependent, CPS training and scaffolding should adopt a holistic approach that targets multiple dimensions simultaneously rather than focusing on any single aspect of collaboration.

Keywords: collaboration; profile; adolescents; dimensions

[*]corresponding author e-mail: *marina.videnovic79@gmail.com*

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"YOU DID [X], NOW I'LL SPANK YOUR ASS": PARENTAL REASONS FOR ENDORSING CORPORAL PUNISHMENT OF CHILDREN

Jelena Bačić[*, 1, 2], Lana Aničić[1], Milica Ćurčija[1], Anđela Popović[1], Andrijana Arnaut[1], Arijana Radić[1] & Siniša Subotić[3]

[1]Psychology MSc Programme, Faculty of Philosophy, University of Banja Luka

[2]Project Manager, Development Agency of Gradiška, RS/BiH

[3]Department of Psychology & Faculty of Natural Sciences and Mathematics, University of Banja Luka

Parents tend to justify corporal punishment (CP) by assuming misbehavior or aggression "deserve" physical consequences to teach obedience and maintain parental authority. This study examined which child behaviors parents view as deserving CP and how this relates to parents' CP attitudes, experiences, and practices. The sample included 190 parents (76.8% mothers; age: $M = 39.05$, $SD = 7.57$) who rated how "deserving" of CP (1 = "never" to 6 = "always") are 40 child behaviors, and self-reported (5-point scales) their CP attitudes (33 items), childhood CP exposure (single item), and their CP use (single item). Factor analysis (EFA) was used to test if the 40 CP-reason list could be viewed as unidimensional. A single-factor solution (52.47% of the common variance) was essentially unidimensional (UniCo = .986, ECV = .922, MIREAL = .181); most items met I-UniCo > .95, I-ECV > .85, and I-REAL.05) or gender ($r = .12$, $p > .05$), with fathers slightly more endorsing some aggression, defiance, or public misbehavior categories ($r \approx .15–.23$). Positive general attitudes toward CP were strongly related to CP-reasons endorsement ($r = .70$, $p < .001$), with robust item-level correlations across most categories (typically: $r \approx .50–.70$), especially for aggression, rule-breaking, defiance, and danger. Parents' childhood CP was modestly related to CP-reasons endorsement ($r = .24$, $p < .001$), namely for aggression, anger, and deliberate misbehavior categories ($r \approx .20–.30$). Parents' CP use showed a stronger correlational pattern (overall: $r = .49$, $p < .001$), highest for overt aggression, danger, and persistent disobedience ($r \approx .30–.50$). Overall, aligning with past research, parents mainly endorse CP for dangerous or aggressive behaviors, and stronger CP justification is linked to more approving CP attitudes, greater childhood CP exposure, and higher CP use.

Keywords: Corporal punishment; Spanking; Parents; Disciplinary attitudes; Parenting practices

[*]corresponding author e-mail: *jelena.bacic13@gmail.com*

DELAY OF GRATIFICATION: REPLICATION OF AN ONLINE PROCEDURE AND ASSOCIATIONS WITH BMI AND QUALITY OF LIFE

Zorana Zupan[*, 1], Lenka Protić[1], Kristina Dukić[1], Milica Mitić[1] & Marina Videnović[2]

[1]Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]Institute of Psychology, Faculty of Philosophy, University of Belgrade

Delay of gratification (DoG) is a central component of self-regulation, yet its relation to children's current well-being remains insufficiently understood. The aim of this study was to examine how behavior in a delay-of-gratification task and a spontaneous-intake (SI) condition relates to health-related quality of life (HRQoL), body mass index (BMI), and developmental factors in 5- to 10-year-old children. This procedure was previously conducted online in a cross-cultural sample. A total of 130 participants aged 5 to 10 years (M = 88.73 months, SD = 14.60) were randomly assigned to a DoG or an SI condition. Children completed a Go/No-Go task as a measure of inhibition, and parents reported HRQoL. The primary outcome was the number of M&Ms consumed. We analyzed data using Poisson GLMs. Children in the SI condition consumed significantly more than those in the DoG condition, z = 9.83, p < .001. HRQoL positively predicted consumption in the DoG condition, B = 0.061, z = 8.35, p < .001, whereas it was nonsignificant in the SI condition. This pattern suggests that children with higher HRQoL may experience lower reward salience or reduced motivational engagement rather than weaker inhibitory control. BMI also showed condition-specific effects: higher BMI predicted lower intake in DoG, z = –2.86, p = .004, but not in SI. Inhibition negatively predicted consumption across both conditions, z = –2.80, p = .005, and older age was associated with slightly lower intake, z = –2.15, p = .032. The Age × Inhibition interaction was significant, z = 2.09, p = .037, indicating that inhibition played a stronger regulatory role in younger children. The study replicates earlier results of a cross-cultural version of this task, and extends the results by highlighting that self-regulation is multidimensional and shaped by both cognitive factors and everyday well-being.

Keywords: delay of gratification; self-regulation; quality of life; BMI; inhibition

[*]corresponding author e-mail: zorana.zupan@gmail.com

"TRUE COLORS": MUSIC GENRE PREFERENCES AND WELL-BEING IN SERBIAN ADOLESCENTS

Anđela Milošević[*,1] **& Marko Vesić**[2]

[1] Department of Psychology, Faculty of Philosophy, University of Belgrade

[2] Department for Composition and Orchestration, Faculty of Music, University of Arts in Belgrade

Adolescence is a critical developmental period marked by heightened emotional and social reactivity, and music listening has been consistently identified as a powerful tool for supporting developmental needs in this stage. Musical preferences have been linked to specific personality traits and developmental challenges (Bogt et al., 2021; Schwartz & Fouts, 2003). However, no previous studies have directly examined the relationship between adolescents' music genre preferences and their social, emotional, and psychological well-being; this study aims to do so. A convenience sample of 164 Serbian adolescents (15–18 years; M = 16.5, SD = 0.9; 69.5% female) participated. Mental well-being was measured using the Serbian MHC-SF (α = .90), for which principal axis factoring with promax rotation yielded two factors: social well-being and emotional/psychological well-being. Genre preferences were assessed through open-ended questions on music listened to alone and with others, favorite genres, artists, songs, and emotion-related music choices. Participants were classified into genre-based groups according to dominant response patterns, with closely related genres grouped due to their frequent co-occurrence in adolescents' listening practices. Based on these responses, seven genre-based listener groups were formed and used as independent variables in subsequent analyses. The effect of genre group on emotional/psychological well-being was not significant, $F(6, 157) = 1.93$, $p = .079$. In contrast, there was a significant effect of genre group on social well-being, $F(6, 157) = 2.32$, $p = .035$, partial $\eta^2 = .082$. Tukey HSD post hoc tests indicated that adolescents who listen to multiple genres and commercial/recently composed music reported higher social well-being than those who prefer rock/metal/punk. Adolescents who listen to multiple genres or commercial popular music may be seen as "cultural omnivores," demonstrating openness, flexibility, and inclusiveness in their musical engagement. Such broad musical taste may facilitate social connections, reflected in higher social well-being. Cultural globalization and digital accessibility further explain these patterns: contemporary adolescents have easy access to diverse music and often take pride in their eclectic tastes, rather than identifying with rigid musical subcultures. This context may support their social engagement while leaving emotional and psychological well-being relatively unaffected by genre preference.

Keywords: adolescents; music genre preferences; social well-being; cultural omnivore

[*]corresponding author e-mail: *milosevicka012@gmail.com*

SOCIAL PSYCHOLOGY

BACKFIRE EFFECT OF A PERSPECTIVE-TAKING NARRATIVE INTERGROUP INTERVENTION

Una Branković*, Tamara Milić, Ivana Milenković, Katarina Stošić, Ana Krtolica, Natalija Jovićević, Milica Ninković & Iris Žeželj

University of Belgrade, Faculty of Philosophy, Department of Psychology, and LIRA lab

Narrative intergroup interventions are based on the idea that inciting empathy and perspective-taking by exposure to the outgroup (OG) members' narratives will reduce bias toward them. For example, exposure to minority (e.g., Roma in Serbia) narratives about discrimination they experienced should promote majority members' (Serbs') empathy, thus reducing the OG bias. Similarly, learning that the ingroup (IG) members are discriminated against in another country (e.g., Serbs in Bulgaria) can spill over into empathy towards minorities in general and promote positive intergroup relations. In this study, we compared the effects of two types of perspective-taking interventions on the support for policies against institutional discrimination of Roma in Serbia. Participants in IG and OG conditions read a story about a minority group being discriminated against by the majority by suppressing their ethno-religious customs. In the IG condition, participants learned about discrimination of Serbs in Bulgaria; in the OG condition, they learned the same about Roma in Serbia. The control group read about wild animals. We hypothesized that, compared to the control condition, support for policies against discrimination of Roma will be higher in both the OG condition (H1) and IG condition (H2). A between-subject design was used to examine this in a sample of Serbian high schoolers (N = 149; 70% female), aged 15-18 (M = 16.6; SD = 0.96). After the interventions, participants assessed their support for policies against discrimination of Roma (α = .88). Univariate ANOVA indicated between-condition differences in support for anti-discrimination policies ($F(2,146) = 3.75$, $p = .026$, $\eta^2 = .05$). Contrary to H1, we observed no differences between the OG condition ($M = 4.62$, $SE = 0.20$) and control group ($M = 4.98$, $SE = 0.19$), ($t(146) = -1.32$, $p = .188$, $d = .28$). Moreover, opposite to H2, we observed the reversed pattern of support for anti-discrimination policies with lower scores in the IG condition ($M = 4.22$, $SE = 0.21$) compared to the control ($t(146) = -2.74$, $p = .007$, $d = .51$). Results suggest that the IG perspective-taking intervention backfired, decreasing support for Roma-related policies, whereas the OG one did not produce any effect. The IG intervention might have elicited the participants' impression of IG exclusive victimhood, preventing them from generalizing empathy to the discriminated OG. Further research of mechanisms underlying the effects of these interventions and their potential to backfire is needed.

Keywords: narrative intergroup interventions; intergroup bias; perspective-taking; Roma; institutional discrimination

*corresponding author e-mail: brankovic.una2002@gmail.com

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"BRAĆA JUGOSLOVENI": THE ROLE OF PERSONAL CONTACT AND NATIONALISM IN PREDICTING NEGATIVE STEREOTYPES ABOUT OTHER NATIONS

Žan Lep[*,1,2] & Žiga Mekiš Recek[1]

[1]Social Psychology and Policy Lab, Department of Psychology, Faculty of Arts, University of Ljubljana, Slovenia

[2]Centre for Applied Epistemology, Educational Research Institute, Slovenia

After the dissolution of Yugoslavia, where people, at least nominally, had ample contact with members of other »brotherly« ethnicities, at least young people in the region seem to have less and less contact with citizens of other former entities. This sparser personal contact (PC) can be a breeding ground for negative stereotypes, especially for individuals with high nationalism. On the other hand, patriotism, which posits no superiority claims in relation to other ethnicities, emerges as favourable to inter-group contact in literature. In a representative sample of 1243 Slovenians (45.0% male and 51.3% female, M_{age} = 51.66, *SD* = 17.41), we wanted to explore how the relationship between the amount of PC and negative stereotypes of Slovenians towards Croats, Bosniaks, Serbians, Montenegrins, Macedonians, and Kosovars is mediated through nationalistic attitudes. Nationalism (perceived national superiority) and patriotism (pride in being Slovenian) were each measured with one item, negative stereotypes with 11 items stating various traits, and then summarized by PCA, and personal contact frequency with one self-reported item. Moreover, we explored whether patriotism can moderate the PC–nationalism relationship, possibly weakening the negative impact of sparse contact on nationalistic tendencies. In six moderated mediation models, four patterns emerged. Lower amount of PC with all ethnicities was predictive of higher nationalism (as: .06 – .12, *p*s: < .001–.04, R^2 = .01–.02). Patriotism emerged as a significant moderator only regarding Croats (β = .28, *p* = .007), but contrary to our expectations, it reinforced the relationship between PC and nationalism. Referring to Bosniaks, Serbs, and Kosovars, nationalism, in turn, predicted more negative ethno-stereotypes (*b*s: .09–.12, *p*s: .001–.04; R^2 = .01–.04) and less PC was predicted more negative stereotypes towards the former two (*c*s: .11 and .13, *p*s: .002 and .001), but not for Kosovars. Referring to Montenegrins and Macedonians, the direct effect of PC on stereotypes was insignificant, but nationalism was predictive of more negative stereotypes (both *b*s: .10, *p*s: .020 and .030; R^2 = .01 for both models). While acknowledging that the cross-sectional design precludes us from considering this path as unidirectional (more nationalism can also lead to less PC), the results show that the contribution of PC to stereotypes varies with the degree of average contact (for Slovenians, this is most frequent with Croats and least frequent with Montenegrins and Macedonians). Furthermore, the role of patriotism seems to be more nuanced than what we could infer from negative correlations with stereotypes (*r*s between –.09 and –.14, *p*s: < .001–.010), especially in ethnicities with a strained history of (political) relations.

Keywords: personal contact; nationalism; patriotism; national stereotypes; Southeastern Europe

[*]corresponding author e-mail: zan.lep@ff.uni-lj.si

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ETHNO-RELIGIOUS AND SUPRANATIONAL IDENTITY CONFIGURATIONS AMONG YOUTH IN THE REPUBLIC OF SRPSKA: A PERSON-CENTERED EXPLORATION

Siniša Lakić*, Srđan Dušanić & Vladimir Turjačanin
University of Banja Luka, Faculty of Philosophy

Person-centered approaches have recently emerged in identity research to reveal qualitatively distinct configurations often obscured by traditional variable-centered analyses. Among Serb youth in the Republic of Srpska—a Serb-majority entity within Bosnia and Herzegovina where Serbs constitute a demographic minority at the country level—strong ethno-religious identification is normative. However, substantial heterogeneity exists in the endorsement of the (ex-)Yugoslav supranational identity and that of the country of Bosnia and Herzegovina. This variation may differentiate exclusive ethno-religious orientations from bridging profiles that facilitate intergroup coexistence, while also revealing segments of identity disengagement. Our study aimed to establish an empirically derived identity typology that could serve as a blueprint for prevalence estimation in similar post-conflict populations. The sample comprised 261 high school and university students (age 17–29, 81.5% female), all self-identified as ethnically Serb. Participants rated the personal importance of membership in four social categories using 5-point scales (1 = insignificant, 5 = extremely significant): ethnic, religious (98.1% self-declared Orthodox Christians), national (Bosnia and Herzegovina), and supranational (ex-Yugoslavia). Identity profiles were identified using Partitioning Around Medoids (PAM) clustering with Gower's distance. PAM is a distance-based approach that uses actual observations (medoids) as cluster prototypes rather than abstract centroids, making it less sensitive to outliers and well-suited for ordinal variables. Four distinct identity clusters emerged (optimal solution through silhouette analysis): Exclusivists (15.3%; maximal ethno-religious identification with complete Yugoslav identity rejection), Inclusive Nationalists (29.9%; maximal ethno-religious identification with moderate Yugoslav identity acceptance), Conventionals (24.1%; high ethno-religious identification with low Yugoslav identity), and Ambivalents (30.7%; low to moderate scores across all identity variables). While the national (Bosnia and Herzegovina) identity showed less discriminatory power across clusters, it was endorsed significantly higher than the ex-Yugoslav identity ($d = 0.31$, $p < .001$), though both had below-midpoint means ($M_{_BH} = 2.74$, $M_{_YU} = 2.36$). External validation revealed significant between-cluster differences in authoritarianism, traditionalism, collective narcissism, life satisfaction, epistemic styles, and attitudes toward science (all ps $< .01$). We observed a consistent pattern whereby Ambivalents scored lowest, followed by Conventionals, while Exclusivists and Inclusive Nationalists exhibited the highest average scores on these variables. Despite diverging sharply on Yugoslav identity, the latter two groups showed only small differences on the external variables, suggesting that the acceptance versus rejection of supranational identity may be independent of other relevant dispositions.

Keywords: social identity; youth; typology; post-conflict society

*corresponding author e-mail: sinisa.lakic@ff.unibl.org

ENGAGING CONFLICTING HISTORICAL NARRATIVES: EFFECTS OF MULTI-PERSPECTIVE INTERVENTION ON YOUTH INTERGROUP ATTITUDES AND HISTORICAL THINKING

Jovan Ivanović[*,1,2], Iris Žeželj[1,2] & Aleksandar Baucal[2]

[1]LIRA Lab, Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]Department of Psychology, Faculty of Philosophy, University of Belgrade

Conventional approaches to history teaching in post-conflict environments frequently reinforce existing intergroup divides. Conversely, emerging evidence suggests that multi-perspective pedagogy—namely, learning through coordinating divergent historical perspectives—may improve historical thinking and intergroup relations. Thus, we recruited adolescents aged 16 to 19 residing in Serbia to examine whether a history-learning intervention grounded in a multi-perspective approach would: (1) reduce the inclination to uncritically endorse the ingroup's historical narrative measured by Firmly Entrenched Narrative ClosurE (FENCE) scale (Klar & Baram, 2016), and (2) enhance the multi-perspective quality of students' joint essay rated by two independent researchers who coded how well participants coordinated historical perspectives on a 6-point scale. In post-conflict Serbia, history teaching promotes the perspective of the Serb majority, while minority perspectives such as Bosniak are excluded from official curricula and textbooks. We implemented a pretest–intervention–posttest design, involving one experimental group and two control groups. In both the experimental group (N = 58) and control group 1 (N = 58), participants worked in dyads, reading both ingroup and outgroup narratives (Serb or Bosniak) describing the same event about Yugoslavia during the Second World War, with the task to produce a joint essay. Participants assigned to the experimental condition received brief training on the constructive use of multiple perspectives in history learning and collaborated with an outgroup peer (majority Serb or minority Bosniak). In contrast, participants in control group 1 worked with an ingroup peer on the same task but received no training. Control group 2 (N = 36) mirrored traditional mono-perspective history learning, whereby participants read only the majority ingroup version and individually completed multiple-choice items. The results revealed that, after controlling for pretest scores, participants in the experimental condition exhibited significantly lower uncritically endorsement of the ingroup's historical narrative compared to those in control group 1 (t = 2.80, p = .02, d = .52) and control group 2 (t = 3.96, p < .01, d = .84). Additionally, dyads in the experimental group who explicitly applied the provided multi-perspective guidelines during their discussions produced the highest-quality joint essays—surpassing both dyads in control group 1 (b = 0.47, SE = .22, CI95% [.03, .91], p = .04) and even experimental-group dyads who did not use the guidelines (b = 0.54, SE = .16, CI95% [.23, .86], p = .001). Overall, the study demonstrates that even a brief, one-off multi-perspective intervention in an intergroup setting can improve historical thinking and reduce ingroup bias, indicating its potential as an educational tool that could be further upscaled.

Keywords: multi-perspectivity; history teaching; former Yugoslavia; Firmly Entrenched Narrative Closure Scale; historical thinking

[*]corresponding author e-mail: jovan.ivanovic@f.bg.ac.rs

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COMPARISON OF THE EFFECTS OF DISCRIMINATION ON THE SOCIAL CONNECTEDNESS OF YOUNG ROMA AND MIGRANTS FROM SOCIETY

Sanja Batić Očovaj[*,1] **& Milisav Milinković**[2]
[1]Faculty of Law and Business Studies Dr Lazar Vrkatić
[2]EDIT centre, NGO

The study explores the differences between the discrimination experiences of Roma and migrants and their implications on social connectedness. The sample consisted of 129 subjects (50% males), of whom 84 were young Roma, and 45 were refugees and migrants. The mean age of respondents was 27 years (*SD* = 6 years). Respondents completed the Perceived Ethnic Discrimination Questionnaire (PEDQ), Social Connectedness Scale-Revised, and Internalization of Discrimination Scale, which had adequate reliability. Migrants were more exposed to discrimination based on gender ($\chi^2(2) = 9.70$, $p < .01$), sexual orientation ($\chi^2(2) = 6.87$, $p < .05$), religion ($\chi^2(2) = 14.70$, $p < .01$), and age ($\chi^2(2) = 11.76$, < .01) while Roma only to ethnicity-based discrimination ($\chi^2(2) = 7.92$, $p < .05$). According to Mann-Whitney tests there were no significant differences between groups in scores on PEDQ scores nor on its subscales. Positively skewed distributions of overall scores of both groups indicated that respondents rarely perceived discrimination. Slightly less skewed distributions of the disvaluing, verbal rejection, and avoidance indicated that these types are more often perceived. Overall score on discrimination ($\rho(82) = -.66$, $p < .01$) as well as scores on the subscales Disvaluing action ($\rho(82) = -.65$, $p < .01$), Avoidance ($\rho(82) = -.63$, $p < .01$), Verbal rejection ($\rho(82) = -.47$, $p < .01$), Threat ($\rho(82) = -.43$, < .01), Aggression ($\rho(82) = -.37$, $p <$ .01) were negatively correlated with Social Connectedness in the Roma group. Moreover, internalization was positively correlated with Verbal rejection ($\rho(82) = .45$, $p < .01$), Avoidance ($\rho(82) = .43$, $p < .01$), and Disvaluing action ($\rho(82) = .34$, $p < .01$), also just in the Roma group. Internalization of ethnicity-based discrimination negatively affected social connectedness in both groups (Roma, $\rho(82) = -.46$, $p < .01$; migrants, $\rho(43) = -.41$, $p < .01$). Even though the groups equally perceived discrimination, its effects on internalization and social connectedness were more pronounced in the Roma group. This differential impact could be attributed to the actual and prolonged discrimination that the Roma group faced. The study showed that internalization of ethnicity-based discrimination is accompanied by lower social connectedness and thus can lead to social exclusion of both groups. Generally, the results indicate that social inclusion of both groups would be supported by the decontamination of their internalized ethnicity-related prejudices.

Keywords: discrimination; internalization; social disconnectedness; young; Roma; migrant

[*]Corresponding author e-mail: sanja.batic@gmail.com

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DEMOGRAPHIC AND EMOTIONAL PREDICTORS OF STUDENT INVOLVEMENT IN UNIVERSITY BLOCKADES (2024/25)

Vojin Simunović[*,1], Biljana Jokić[2,3], Ljiljana B. Lazarević[1], Milica Manojlović[1], Matija Gvozden[1] & Tamara Džamonja Ignjatović[1]

[1]University of Belgrade, Faculty of Philosophy, Department of Psychology, LIRA Lab

[2]FEFA, Metropolitan University

[3]Faculty of Media and Communication, Singidunum University

A prolonged wave of student blockades and protests in Serbia began in late 2024 following the collapse of the railway station canopy in Novi Sad on 1 November 2024, which resulted in the deaths of 16 people. The event triggered large-scale civic mobilization, drawing tens of thousands of citizens across cities, representing one of the most extensive youth-led civic movements in recent Serbian history. Within this socio-political context, the present study examined whether students' age, gender, and study program, together with the intensity of emotional responses to the canopy collapse, predicted the degree of involvement in university blockades. Drawing on research on event-driven mobilization and grievance-based collective action, we expected that stronger negative emotional reactions to the tragedy would be associated with higher levels of involvement, above and beyond demographic and academic characteristics. Using the snowball sampling method, we recruited 504 students (69.6% women, M_{age} = 21.76, SD_{age} = 2.76) who reported active participation in the blockades. Participants completed a battery of questionnaires, including a modified version of the Social Identity Model of Collective Action (SIMCA) assessing emotional responses to the Novi Sad canopy collapse, and provided information on their age, gender, study program, and level of involvement in the blockades. The SIMCA-based regression model was statistically significant ($F(4, 499) = 22.153$, $p < .001$, $R^2 = .151$). Among emotional responses to the canopy collapse, moral outrage ($\beta = -0.157$, $p < .05$) and identification with students participating in the blockades ($\beta = 0.411$, $p < .001$), as conceptualized within the SIMCA framework, emerged as significant predictors of involvement in the blockades. When it comes to the sociodemographic variables, age was the only one associated with the level of involvement in the student movement ($\beta = -0.18$, $p < .05$). Overall, these findings suggest relatively even participation in the blockades across age groups, genders, and study programs, while involvement intensity was primarily driven by moral outrage related to the Novi Sad canopy collapse and strong moral and identity-based motivations, as reflected in the adapted SIMCA items. This pattern indicates that the student mobilization was both broadly inclusive and deeply personal, with engagement shaped more by event-specific emotional and moral-identity factors than by demographic or academic characteristics.

Keywords: Student blockades (2024/25); Collective action; Social Identity Model of Collective Action (SIMCA); Moral outrage; Group identification

[*]corresponding author e-mail: vojin.simunovic@f.bg.ac.rs

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LEXICAL SOCIAL ATTITUDES AND AMBIVALENT SEXISM IN SERBIA AND CROATIA

Sanda Stanković[*,1], Ljiljana B. Lazarević[1,2], Asmir Gračanin[3] & Goran Knežević[1]

[1]University of Belgrade, Faculty of Philosophy, Department of Psychology, LIRA Lab, Belgrade, Serbia

[2]University of Belgrade, Faculty of Philosophy, Institute of Psychology, Belgrade, Serbia

[3]University of Rijeka, Faculty of Humanities and Social Sciences, Department of Psychology, Rijeka, Croatia

Ambivalent sexism theory posits two types of sexism jointly upholding gender inequality. Hostile sexism reflects negative and derogatory beliefs about women, while benevolent sexism contains seemingly positive but patronising attitudes, favouring the traditional image of women. Both are related to right-wing authoritarianism and social dominance; however, less is known about how they map onto a broader range of social attitudes. To address this, we examined the associations between ambivalent sexism and basic lexical social attitude dimensions. The study was conducted in two countries to account for potential regional differences: Serbia (N = 315, 87.3% female; M_{age} = 23.5, SD = 5.21) and Croatia (N = 371, 83% female; M_{age} = 25.9, SD = 10.5). Participants completed the LSS/S-60 scale, assessing six social attitudes derived from the Serbian language (Petrović, 2020), and the short Ambivalent Sexism Inventory (Rollero et al., 2014). We first tested a full path model in which all attitudes and sociodemographic variables predicted two forms of sexism in the Serbian sample. A multigroup analysis of a trimmed model containing only significant predictors showed excellent fit across both samples (χ^2 (8) = 9.36, p = .31, CFI = .999, RMSEA = .016). Constraining paths to equality did not significantly reduce model fit ($\Delta\chi^2$ (10) = 4.03, p = .95, ΔCFI < .001), indicating structural invariance. Hostile sexism was positively predicted by selfish interests (.50), traditionalism (.30) and nationalism (.21). Benevolent sexism was also positively predicted by selfish interests (.35), traditionalism (.34) and nationalism (.33), but had additional positive small effects of humanism (.16) and egalitarianism (.16). These findings show that ambivalent sexism relates to broader social attitudes similarly in two post-Yugoslav countries. As expected, both sexism types were rooted in core conservative attitudes, with hostile sexism most strongly linked to selfish interests, the dimension resembling social dominance orientation. Nationalism, a salient conservative attitude in the region, was more closely tied to the traditional gender role content of benevolent sexism. Interestingly, benevolent sexism was also modestly related to egalitarian and humanistic views. While egalitarianism in the Serbian lexical model is a conservative attitude, the link to humanism suggests a somewhat mixed local meaning and potential of benevolent sexism. The predominance of female participants in both samples is a limitation to be considered when interpreting the generalizability of the findings.

Keywords: lexical social attitudes; ambivalent sexism; traditionalism; nationalism; selfish interests

[*]corresponding author e-mail: sanda.stankovic@f.bg.ac.rs

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VIRTUE TRUST: THE DEVELOPMENT OF THE SCALE

Milica Vdović[*,1], Selena Vračar[2] & Enrico Rubaltelli[1]

[1]University of Padova, Department of Developmental and Social Psychology

[2]Singidunum University, Faculty of Media and Communications

Trust is very important both for social systems and individuals' lives. Existing theories generally converge on two foundations of trust, experience-based trust and predisposition-based trust. Experience-based trust is grounded in concrete interactions and observations of another's trustworthiness, while predisposition-based trust views trust as a stable psychological tendency, innate or formed early in life. While both foundations contribute to different trust domains, neither represents a full account. One largely overlooked aspect is the moral foundation, in which we look at trust as an acquired trait that guides individuals in acting trusting, which they perceive to be of moral significance. While some scholars have discussed trust as a moral value, there is currently no direct measurement of trust's moral foundation. We attempt to address this gap by conceptualizing and measuring virtue trust using virtue ethics as a foundation. Guided by the STRIVE-4 model (Cokelet & Fowers, 2019) constructed specifically to study virtues, otherwise referred to as moral characteristics. The model posits that virtues need to be studied in terms of four factors: cognitive (C), emotional (E), behavioural (B), and practical wisdom (PW). In this study, we will present the results regarding the pilot version of the scale (N = 200). The method was the following: 1) analysis of existing scales, 2) sorting the items into four factors, 3) formulation of new items in missing domains, 4) qualitative assessment of item clarity and consistency of factors by experts in the field, 5) quantitative assessment of reproducibility and validity of the scale. The initial scale consists of 77 items (C: n = 29; E: n = 10; B: n = 8; PW: n = 30). We conducted an exploratory factor analysis (EFA) using oblimin rotation. Parallel analysis indicated a four-factor solution, further supported by factor extraction based on polychoric correlations. The four factors demonstrated adequate to strong factor loadings (λ = .36–.88), with no substantial cross-loadings. We retained only items that showed clear primary loadings and did not cross-load on multiple factors (N = 43; f1: α =0.89, f2: α = 0.86, f3: α = 0.61, f4: α = 0.87). The four factors explained 48% of the cumulative variance. The assumption of virtue ethics that virtues predict flourishing was consistent in our study (β = 0.653, p < .01). We discuss the potential of the concept of virtue trust as a means to integrate different trust measures.

Keywords: scale construction; trust; virtue; flourishing

[*]corresponding author e-mail: *milica.vdovic@studenti.unipd.it*

IN JOY AND SORROW – RELATIONSHIP DYNAMICS FROM THE PERSPECTIVE OF WOMEN GOING THROUGH IVF

Milica Skočajić*
Faculty of Philosophy, University of Belgrade, Department of Psychology

In vitro fertilisation (IVF) is a medical procedure developed to treat infertility. Experiencing infertility affects personal and relationship identity as it delays future plans for the struggling couple. Additionally, IVF's demands have shown to put a strain on the relationship, affecting intimacy, emotional connection and daily life. Research objective presented here was to explore the quality of the relationship dynamics in couples undergoing IVF, from the perspective of women. The participants were 20 women trying for their first child through IVF in Serbia. These findings are a part of a larger study exploring women's perspectives on their IVF experiences. Women were chosen since societal pressures in regards to becoming a parent and IVF demands are substantially more complicated for women than men. Method was qualitative. Semi-structured interviews were conducted once (if treatment was stopped voluntarily or due to health complications) or multiple times (if treatment led to new outcomes such as pregnancy or miscarriage). Interpretative phenomenological analysis was applied. Five identified themes were: intimacy; life as usual for men; discipline; emotional availability and the absolution. Tasking couples with having intimate relations at a specific time, with the burden of conceiving, takes a toll on their relationship, leaving women feeling like their sexual life is programmed and stripped of actual intimacy. During IVF, women perceive their partner's lives as continuing as usual. Even though women recognize that men rarely get absence from work in case of IVF, they share some resentment towards the dynamics which puts women at the frontline of the treatment and spare their partners of physical, logistical and psychological investment. If women are put on bed-rest, male partners actively discipline women's bodies, limiting their movement and keeping them away from housework. This engagement of male partners is welcomed, although it can be considered burdensome if it strips women of their agency. If faced with loss or prolonged treatment, women perceive their partners as being emotionally unavailable, which forces them to observe their behaviour and interpret their feelings, instead of openly communicating. Finally, male partners have an important role in absolving women of responsibility and guilt when it comes to infertility, as well as opening up towards alternatives in family planning. These findings can inform changes in medical protocols, suggesting a higher inclusion of men and allowing access to psychological counselling during infertility treatment.

Keywords: Infertility; IVF; relationship dynamics; experience

*corresponding author e-mail: skocajiccm@gmail.com

CIVIC ENGAGEMENT OF MENTAL HEALTH EXPERTS: A DELPHI CONSENSUS STUDY

Sara Dojčinović[*,1,2], Jana Dimoski[1,2], Marija Milovanović[3], Jasmina Bogdanović[3], Lena Matković[3], Milutin Kostić[3] & Maša Vukčević Marković[1,2]

[1]LIRA Lab, Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]Psychosocial Innovation Network – PIN

[3]Institute of Mental Health

In recent years, it has become clear that mental health (MH) cannot be sustainably improved only by addressing gaps in MH protection without tackling wider societal factors, raising the question of whether civic engagement (CE) should be considered part of MH professionals' work. This study aimed to examine whether MH experts in Serbia hold a consensus on the role, scope, and acceptable forms of CE within their professional mandate. We applied a three-round Delphi method, preceded by Round 0 in which the initial 71 statements were developed through structured meetings and iterative feedback from a multidisciplinary group of 11 mental health professionals and service users. In Round 1, participants expressed agreement with statements on a 10-point Likert scale and provided qualitative feedback; in Rounds 2 and 3, they re-evaluated statements that didn't reach consensus in previous rounds. Round 1 was completed by 139 MH experts (M_{age} = 38.3, SD = 9.7; 85.6% women); 108 (77.7%) completed all rounds (M_{age} = 38.5, SD = 11.1; 86.1% women), including psychologists (27.8%), social workers (18.5%), psychiatrists (17.6%), nurses (16.7%), special education professionals (14.8%), and psychotherapists (with primary training outside MH disciplines) (4.6%), working in public, private, or civil society settings across Serbia. Analyses covered descriptive measures, coefficient of variation (CV), and attrition checks indicating no selective dropout (e.g., civic engagement across career: $t(137) = 0.112$, $p = .911$). Consensus threshold was defined as CV < .20. Twenty-five statements reached consensus, mainly those supporting civic engagement in general, with strong agreement that CE should be part of MH experts' professional role and that it may target both direct MH issues and wider societal determinants, such as poverty (CV = .16). Yet, experts did not reach consensus on specific or politically inclined strategies, nor whether CE should be part of their professional work. The least consensus was seen for statements about perception of civically engaged MH experts, e.g., "Decision not to address broader social issues is an indication of good professional boundaries of mental health experts." (CV = .72), and those questioning its' purpose, e.g., "Civic engagement is not worth pursuing because the changes it brings are so slow and uncertain." (CV = .75). The study offers the first local evidence on perspectives regarding the scope and boundaries of CE within MH professions.

Keywords: mental health; Delphi method; civic engagement; expert consensus

[*]corresponding author e--mail: *sara.dojcinovic@gmail.com*

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FACTORIAL VALIDITY OF THE THREE-DIMENSIONAL POLITICAL ORIENTATION QUESTIONNAIRE IN THE SERBIAN CONTEXT

Katarina Stošić*, Una Branković, Tamara Milić, Ivana Milenković & Milica Ninković

University of Belgrade, Faculty of Philosophy, Department of Psychology, and LIRA lab

There are several perspectives on the number and nature of dimensions underlying political beliefs. Previous research has questioned the suitability of the left–right dimension of political orientation (PO) among youth. A majority of youth in Serbia face difficulties in positioning themselves on the left–right spectrum. Questionnaire-based approaches offer an alternative way to assess PO. One such questionnaire, developed in Slovenia, is based on a three-dimensional model of PO, encompassing social (nature, lifestyle, social justice), economic (state- vs. market-controlled economy), and international (migrations, security, national identity) dimensions. In this study, we tested the factorial validity of this three-dimensional model in the Serbian context. We expected to replicate a three-factor structure with moderately correlated factors and to examine its relationships with the self-placement model of social and economic, expecting moderate correlations between the corresponding dimensions. The questionnaire has been translated from English by the bilingual research team. A total of 149 high school students (66.9% women), aged 15-18 (M = 16.6, SD = 0.96), participated in the study. A Confirmatory Factor Analysis showed inadequate fit of the three-factor model (χ^2 (32) = 80.34, p < .001, CFI = .884, TLI = .838, RMSEA = .10, 95% CI [.07, .13]). After fixing the correlations between the international dimension and the other two dimensions to zero, fit slightly improved, but remained unacceptable (χ^2 (34) = 80.39, p < .001, CFI = .889, TLI = .853, RMSEA = .095, 95% CI [.07, .12]). Modification indices suggested that an item related to social justice should be reassigned from social to the economic dimension. This resulted in an adequate model fit (χ^2 (34) = 65.75, p < .001, CFI = .924, TLI = .90, RMSEA = .079, 95% CI [.05, .11]). These results suggest that, in the local context, social security and justice may align more with economic than social issues. All dimensions, social, economic and international, showed low to moderate correlations with social (rs = –.48, –.17, .35, respectively; ps < .05) and economic self-placement PO (rs = –.36, –.32, .25, respectively; ps < .01). Overall, results suggest that the three-dimensional Political orientation questionnaire is generally adequate for young population, but that it needs to be contextually adapted. Future studies should explore cross-cultural adaptations of this model, especially in the context of societies with complex political landscapes.

Keywords: political orientation; three-dimensional political orientation scale; youth; Serbia; CFA

*corresponding author e-mail: katarina.stosic55@gmail.com

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WELL-BEING, RELIGIOSITY, AND SPIRITUALITY AS PREDICTORS OF LIFE SATISFACTION IN ADOLESCENTS

Milana Damjenić Mihaldžić*, Lana Vujaković & Srđan Dušanić
Faculty of Philosophy, University of Banja Luka

Adolescence represents a critical developmental period marked by psychological vulnerability amid rapid social changes and digital saturation. While well-being is a proximal indicator of mental health and captures primarily affective and psychological functioning, we examined whether spirituality (as a personal quest for meaning) and religiosity (as adherence to institutional beliefs) represent distinct psychosocial resources that may uniquely contribute to adolescents' life satisfaction. The sample comprised 1289 high school students from the Republic of Srpska (63.8% female; M_{age} = 15.67, SD = 1.28), predominantly Serbian Orthodox (93.6%). Students completed the Cantril Ladder, WHO-5 Well-Being Index, Spiritual Health Scale, and Centrality of Religiosity Scale. Males reported higher life satisfaction ($t(997.65) = 6.53$, $p < .001$, $d = 0.37$) and well-being ($t(972.13) = 12.86$, $p < .001$, $d = 0.74$), whereas females reported higher spirituality ($t(773.76) = -4.68$, $p < .001$, $d = -0.29$) and religiosity ($t(898.64) = -5.94$, $p < .001$, $d = -0.35$). After controlling for age and gender, life satisfaction correlated strongly with well-being ($r = .54$, $p < .001$) and weakly with spirituality ($r = .09$, $p = .001$) and religiosity ($r = .10$, $p < .001$). Well-being showed modest associations with spirituality ($r = .11$, $p < .001$) and religiosity ($r = .07$, $p = .008$). Hierarchical regression predicting life satisfaction revealed that demographics (gender and age) explained 3.5% of variance ($R^2 = .035$), well-being added 28.0% ($\Delta R^2 = .280$, $F(1,1285) = 524.90$, $p < .001$), and spirituality plus religiosity contributed an additional 0.4% ($\Delta R^2 = .004$, $F(2,1283) = 3.56$, $p = .029$). In the final model ($R^2 = .319$, adjusted $R^2 = .316$), only well-being ($\beta = .56$, $p < .001$) and religiosity ($\beta = .07$, $p = .017$) were significant predictors, while spirituality ($\beta = -.01$, $p = .700$) and gender ($\beta = .01$, $p = .833$) were not, suggesting that gender differences in life satisfaction are largely explained by differences in well-being. Overall, the findings suggest that religiosity plays a modest supportive role in adolescent life satisfaction. The absence of an independent spirituality effect contrasts with recent Eastern European evidence, suggesting that the relationship of religiosity and spirituality with life satisfaction in adolescents is context-specific.

Keywords: adolescents; spirituality; religiosity; life satisfaction; well-being

*corresponding author e-mail: milana.damjenic@ff.unibl.org

FIFTY-FIFTY? OR NOT?: PATRIARCHAL VALUES AND HOUSEHOLD LABOR AS PREDICTORS OF WOMEN'S MENTAL HEALTH

Ivana Tisma[*,1], Aleksandra Prokić[1] & Marija V. Čolić[1,2]
[1]Singidunum University, Faculty of Media and Communications, FMK lab - Laboratory for Psychological Research, Department of Psychology
[2]University of Belgrade, Institute of Criminological and Sociological Research

Participation of women in the labour market has not reduced their household work, affecting women's well-being. This study examined how patriarchal values relate to the distribution of household labor and share in parenting, as well as women's mental health. The sample consisted of 890 participants from the general population (78% women, Mdn_{age} = 32, with 128 couples). We used the Attitudes Toward Gender Roles scale (ATGRS), to assess patriarchal attitudes (Traditional attitudes towards gender roles, α = .86; Favorable attitude towards egalitarian success α = .83; Favorable attitude towards gender equity, α = .78; Non-traditional attitudes towards gender roles, α = .82) and DASS-21 to measure depression (α = .88), anxiety (α = .85) and stress (α = .87) in women. Household labor was measured by self-reported hours (absolute involvement) and perceived relative involvement, using a continuous slider. Women perceived their involvement in household labor as greater than that of their male partners (M_{diff} = -74, $t(127)$ = -2.233, p = .03), but not their parenting involvement (M_{diff} = -87, $t(127)$ = -1.92, p = .057. Women spent more hours on household work (U = 32915.50, Z = −10.93, p < .001) and were more involved in childcare (U = 17202.50, Z = −8.53, p < .001) compared to men. We found that women had less traditional attitudes ($t(127)$ = 6.60, p < .001, M = 0.52) and more positive attitudes toward gender equality than men ($t(127)$ = 7.20, p < .001, M = 0.31). Three hierarchical regression models predicted depression, anxiety, and stress with sociodemographic variables, patriarchal attitudes, and hours of parenting/household labour as predictors. Depression (R^2 = .09, $F(3,522)$ = 5.94, p = .04) was predicted by financial status (β = -.260, p < .001) and non-traditional attitudes (β = .094, p = .04). Anxiety (R^2 = .08, $F(2,516)$ = 5.26, p = .04) was predicted by financial status (β = -.194, p < .001), favorable attitude towards egalitarian success (β = .105, p = .03), non-traditional attitudes (β = .094, p = .04) and hours spent on household tasks (β = .113, p = .01). Stress (R^2 = .08, $F(2,516)$ = 5.26 , p = .04) was predicted by age (β = -.147, p = .003) financial status (β = -.208, p < .001), favorable attitude towards egalitarian success (β = .094, p = .06) and hours spent on household tasks (β = .09, p = .03). Couple analysis showed that the more egalitarian the women's attitudes compared to the men's, the greater the perceived difference in their household task sharing (R^2 = .040, $F(1,126)$ = 5.26, p = .023). Based on the findings, it can be assumed that women have achieved greater equality in the public sphere, especially in the labour market, but these changes have not been matched within the household. Increased participation in paid work means women have gained an additional role, without a corresponding reduction in traditional household responsibilities. As an alternative explanation, possible methodological limitations of the scale should also be considered. Both perceived differences in parenting (r = .19, p = .05) and household involvement (r = .26, p = .01) are related to the level of reported stress in women. Women still do more household work, linked to gender-role attitudes and higher stress in women, highlighting the need for balanced household and parenting responsibilities.

Keywords: patriarchal values; housework; parenthood; depression; anxiety; stress

[*]corresponding author e-mail: tisma.ivana@gmail.com

WHAT SHAPES PHYSICAL APPEARANCE SATISFACTION? THE EFFECTS OF BODY SHAPE, BODY IMAGE, AND SELF-OBJECTIFICATION

Kristina Puzović* **& Bojana M. Dinić**
University of Novi Sad, Faculty of Philosophy, Department of Psychology

Physical appearance satisfaction is an important aspect of body image and is shaped not only by actual physical characteristics but also by individual and sociocultural influences. Based on Self-Discrepancy Theory and Objectification Theory, the aim of this study was to examine how body composition, ideal–actual body image discrepancy, and self-objectification contribute to satisfaction with physical appearance. The sample included 360 participants (52.7% females) who reported their current and ideal body image, body measurements, and objectified body consciousness indicators. A hierarchical regression analysis was conducted with appearance satisfaction as the criterion variable. In the first block, body mass index (BMI), waist circumference, and hip circumference were entered. These predictors explained 12.1% of the variance, $F(3,356) = 16.41$, $p < .001$, with BMI being the only significant predictor ($\beta = –.36$, $p < .001$). In the second block, ideal–actual body image discrepancy was added, which significantly improved the model, $\Delta R^2 = .146$, $F(1, 355) = 70.76$, $p < .001$. Body image discrepancy was the strongest predictor ($\beta = –.50$, $p < .001$), while body composition indicators were no longer significant. In the final block, internalization of cultural beauty standards and body surveillance were included, further improving the model, $\Delta R^2 = .071$, $F(2,353) = 18.82$, $p < .001$. Both internalization ($\beta = –.13$, $p = .014$) and body surveillance ($\beta = –.18$, $p = .001$) significantly predicted lower appearance satisfaction, alongside body image discrepancy, which remained the strongest predictor ($\beta = –.43$, $p < .001$). Overall, the final model explained 33.8% of the criterion variance. These findings show that a greater discrepancy between ideal and perceived body image plays the most important role in predicting physical appearance dissatisfaction. Additionally, sociocultural pressures, such as internalizing beauty ideals and monitoring one's body, also contribute to dissatisfaction. The results suggest that both perceived body image and cultural expectations should be considered when addressing body image concerns.

Keywords: body image; physical appearance satisfaction; ideal–actual body discrepancy; sociocultural pressures

*corresponding author e-mail: kristinapuzovici6@gmail.com

DO REAL MEN EAT SAUERKRAUT: GENDERED PERCEPTIONS OF FOOD IN THE BALKANS

Anja Anđela Pantić[*,1], Ana Atanasković[1] & Marija Branković[1,2,3]

[1]Faculty of Media and Communications, Singidunum University

[2]University of Belgrade, Institute of Philosophy and Social Theory

[3]University of Belgrade, Faculty of Philosophy, LIRA lab

This research examines whether food is associated with gender stereotypes within Balkan culture. Previous studies indicate that foods high in fats, proteins, and calories (e.g., sausages) are typically perceived as "masculine," whereas fiber-rich, low-fat foods (e.g., oatmeal) are perceived as "feminine." The aim of this study was to examine whether these findings can be replicated in the local context and to further investigate whether traditional dishes are also perceived in such gendered terms. To test these assumptions, a study consisting of two independent experimental parts conducted on the same sample was carried out (N = 160). In the first experiment, participants were presented with thirty-three photographs of dishes and were asked to rate the extent to which they perceived each dish as masculine, neutral, or feminine. Participants viewed images from three categories: masculine food (e.g., steak, fried chicken), feminine food (e.g., oatmeal, grilled chicken), and traditional food (e.g., sauerkraut, burek). Participants' ratings supported the idea that gender stereotypes shape food perception. Results showed significant differences between food categories, $F(2,318) = 329.92$, $p < .001$, $\eta_p^2 = .68$. Traditional food was rated as the most masculine (M = 7.07), followed by masculine food (M = 6.48), while feminine food was rated as the least masculine (M = 4.58). Within traditional cuisine, meat-based dishes were judged as more masculine (M = 7.90) than dishes without meat (M = 6.36), $t(159) = 15.92$, $p < .001$, $d = 1.26$. The second part of the study also employed an experimental method. Participants read short vignettes describing the daily routine and diet of a male character (Marko). His activities remained constant, while his diet varied: one version reflected a typically masculine diet, while the other reflected a more feminine diet. The vignettes were randomly assigned to participants. After reading the vignette, participants rated Marko on traits associated with masculine and feminine stereotypes. Results showed that "masculine Marko" was perceived as rougher (M = 6.30) and less sensitive (M = 6.73) than "feminine Marko" (M = 5.44; M = 4.79), $t(155) = 3.39$, p = .001, d = 0.54, and $t(155) = 6.69$, $p < .001$, $d = 1.07$, respectively. No other traits differed significantly between conditions. Overall, the findings indicate that gender stereotypes are reflected in how people perceive food. The novelty of this study lies in the inclusion of traditional Balkan cuisine and in the finding that this type of food is perceived as the most masculine. For future research, clearer vignettes and more balanced samples are recommended.

Keywords: gender stereotypes, food perception, masculinity, traditional cuisine, Balkans

[*]corresponding author e-mail: anja.andjela.pantic.20241522@fmk.edu.rs

PARENTS' AND TEACHERS' MEDIATION OF ADOLESCENT GENERATIVE ARTIFICIAL INTELLIGENCE (GENAI) USE IN SERBIA

Tijana Milošević* **& Dobrinka Kuzmanović**
University of Belgrade, Faculty of Philology, Social Science Department (Seminar)

Adolescents are increasingly using Generative Artificial Intelligence tools (GenAI) for a range of purposes: From asking for help with learning and homework, to seeking socialisation and discussing mental health problems. While the body of research on children's AI use is expanding swiftly, relatively little is still known about how parents and educators in Southeast Europe engage in mediation practices of adolescent use of GenAI, as well as where and how young people acquire knowledge and advice about GenAI use. Mediation is a theoretical framework that broadly refers to strategies that parents, caregivers, and educators use to guide, monitor, or restrict adolescent use of digital technologies such as GenAI tools. The goal of this article is to understand adolescent perspectives in Serbia about how parents and educators engage in mediation practices of their GenAI use; as well as what implications such involvement has for adolescent understanding, use and attitudes towards GenAI tools and AI-based technologies more broadly. We rely on semi-structured in-depth interviews with 16 adolescents in Serbia about their use of GenAI, including parental/caregiver and teacher mediation. We leveraged Braun and Clarke's thematic analysis (2023), using a combination of deductive and inductive coding for the qualitative analyses. This research was part of an international comparative project involving 14 countries, and we received ethics approval from the lead partner's institution, Ethics Committee at the London School of Economics (LSE), Ref. 439180. Participation was voluntary, and the research was conducted with informed consent from one parent/caregiver as well as the adolescent. Participants perceived relatively scarce mediation of their GenAI use from parents/caregivers and schools. There appears to be a lack of systematic GenAI rules at the school level. In young people's view, the responses from teachers tend to be ad hoc and vary from attempts to detect GenAI-related "cheating" to encouraging GenAI understanding and intentional use. Children whose caregivers discussed the use and social implications of GenAI technologies with them tended to have a more nuanced understanding and interest in these technologies and their social impact. We examine to what extent mediation frameworks developed for digital technology use apply to GenAI use, and we contextualise these findings by referring to empirical results in other European countries. We discuss the implications for educational policy responses in Serbia, such as the introduction of AI literacy curricula for teacher and adolescent education.

Keywords: adolescents, Generative Artificial Intelligence (GenAI), mediation, parents/caregivers, educators

*corresponding author e-mail: *tijana.milosevic@fil.bg.ac.rs*

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FREE SPEECH-TO-TEXT SOFTWARE FOR SERBIAN: A STEP-BY-STEP TUTORIAL AND EVALUATION USING NOISY INTERVIEW RECORDINGS

Nevena Mijatović[*]
Institute for Philosophy and Social Theory, University of Belgrade

This technical note has two contributions. First, we introduce a free, cloud-based solution for automatic speech recognition (ASR) in Serbian, accompanied by a short step-by-step video tutorial (https://bit.ly/3KTHx8K). The solution uses OpenAI's ASR called Whisper, the strongest model (called large-v3), which is otherwise typically accessible only to researchers with programming skills. Second, we evaluate this free Whisper-based solution in a common social science use case: transcription of interviews professionally recorded in noisy environments. Using an experimental design, we compared (1) the free Whisper solution, (2) a paid ASR service by ElevenLabs called Scribe (paid approx. $5 per 1-hour interview), and (3) manual transcription. Audio stimuli ($N = 9$) consisted of 1% randomly sampled segments from nine interviews. Dependent variables were: (a) transcription accuracy, quantified as word error rate (WER) by comparing ASR output to the same output corrected to full accuracy; (b) the proportion of meaning-altering errors (e.g., plan instead of plenum) among all errors; and (c) the time required to obtain a fully accurate transcript, operationalized as the ratio of transcription/correction duration to audio duration. One researcher manually corrected both ASR outputs and produced the manual transcript. Whisper produced a higher WER than ElevenLabs across the sample of interviews, $t(8) = 5.47$, $p < .001$ (Whisper: $M = 0.204$, $SD = 0.082$; ElevenLabs: $M = 0.062$, $SD = 0.025$). The proportion of meaning-altering errors did not differ reliably between systems, $t(8) = 1.35$, $p = .107$ (Whisper: $M = 0.497$, $SD = 0.164$; ElevenLabs: $M = 0.384$, $SD = 0.328$). Time requirements differed substantially across conditions, $F(2,16) = 86.64$, $p < .001$, $\eta^2 = .915$, with all pairwise comparisons significant ($p \leq .01$). Manual transcription required the most time ($M = 6.11$, $SD = 1.80$), followed by Whisper correction ($M = 2.47$, $SD = 0.91$), while ElevenLabs required the least time ($M = 1.31$, $SD = 0.50$). Overall, this evaluation suggests that the free Whisper-based solution can be a useful option for researchers who cannot afford paid ASR services. Although Whisper was less accurate than ElevenLabs in terms of WER, both systems produced meaning-altering errors, indicating that human inspection against audio remains necessary. Nevertheless, post-correction of machine output is likely to save substantial time compared to full manual transcription.

Keywords: Whisper; Automatic Speech Recognition; Transcription; Word Error Rate; Human in the Loop

[*]corresponding author e-mail: *nevena.mijatovic@ifdt.bg.ac.rs*

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BIASES IN EMPATHIC RESPONSE BASED ON VICTIM GENDER

Violeta Mihajlovska* **& Kaja Damnjanović**
Laboratory for Experimental Psychology, Department of Psychology,
Faculty of Philosophy, University of Belgrade

Research on empathic responses toward victims commonly highlights two forms of bias: the gender empathy gap, referring to greater empathy expressed toward women, and ingroup empathy bias, a tendency to show more empathy toward members of one's own gender. The study aimed to assess the relative strength of these phenomena in ratings of victim suffering and sadness, and to investigate how victim agency shaped these evaluations. In an experimental design, the victim gender (female/male) and agency level (high/low) were varied across 16 vignettes. After each vignette, participants (N = 139) rated the victim's suffering and sadness. The study used a mixed design, with participant gender as a between-subjects factor and victim gender and victim agency as within-subjects factors. The analysis revealed a robust main effect of victim agency, $F(1,137) = 47.77$, $p < .001$, with a small effect size $\eta_p^2 = .026$. This indicates that the level of agency explains approximately 2,6% of the variance in ratings, with low-agency victims being evaluated as experiencing greater suffering. A comparable main effect of victim agency was also observed for sadness ratings, $F(1,137) = 78.97$, $p < .001$, with a small to medium effect size $\eta_p^2 = .038$. Additionally, a statistically significant effect of participant gender on suffering ratings was found, $F(1,137) = 5.98$, $p = .016$. The main effect of victim gender was used as an indicator of the gender empathy gap, whereas the interaction between victim gender and participant gender served as an indicator of ingroup empathy bias. However, neither a significant main effect of victim gender nor a significant interaction between victim gender and participant gender was observed, providing no evidence for a gender empathy gap or an ingroup empathy bias. In this experiment, the victim agency shapes empathic reactions, with greater empathy directed toward victims perceived as passive, vulnerable, and less capable of self-defense. This pattern aligns with the concept of the "ideal victim". Future research should examine the stability of this effect across different domains of empathic responding.

Keywords: gender empathy gap; ingroup empathy bias; empathy; victim's agency; gender roles

*corresponding author e-mail: vmihajlovska96@gmail.com

THE RELATIONSHIP BETWEEN MONEY MANAGEMENT STYLES AND THE SUBJECTIVE PERCEPTION OF RELATIONSHIP SATISFACTION AMONG COHABITING PARTNERS IN SERBIA

Magdalena Pistolić[*]
Faculty of Philosophy, University of Belgrade

Financial management in romantic relationships is a sensitive yet important aspect that shapes daily dynamics, mutual trust, and partners' subjective relationship satisfaction. International studies suggest that full income pooling may foster closeness, while separate finances often reflect autonomy or lower commitment. This online study used a snowball sample of 349 participants living with their partner in Serbia (M = 33.97, SD = 10.27; 79.9% female), either married (44.1%) or cohabiting (55.9%) for at least three months, with an average relationship length of 8.72 years. The criterion, relationship satisfaction was measured using the 10-item Relationship Satisfaction Scale. Financial management, the predictor, was assessed with a single question and operationalized either as a three-category model—fully pooled, partially pooled, or separate—or dichotomously as joint versus separate, depending on analysis. Demographics and financial context variables were also collected. The study aimed to examine whether financial management predicts relationship satisfaction and to explore differences between married and cohabiting couples. Results showed a small but significant correlation between marital status and financial pooling, r = .15, $p < .05$, with married couples more likely to pool finances. Linear regression indicated that full pooling significantly predicted higher relationship satisfaction, $F(1,347) = 8.37$, $p < .001$, explaining 13% of the variance, with place of residence as the only significant covariate. Married status was significantly associated with pooling, $\chi^2(2, N = 349) = 41.2$, $p < .001$, Cramer's V = 0.316. Overall, full financial pooling was associated with higher satisfaction, suggesting that everyday practices reflecting trust, transparency, and joint decision-making may matter more than formal relationship status. Married couples more frequently fully pooled finances, while cohabiting partners often partially pooled, indicating early adoption of shared financial practices. These findings highlight collaborative financial management as a potential avenue to enhance satisfaction, with implications for relationship counseling. While the gender imbalance and self-selected online sample limit generalizability, future research should explore more diverse and longitudinal samples to better understand how financial integration affects relationship satisfaction over time.

Keywords: money pooling; romantic relationships; relationship satisfaction; cohabitation; marriage

[*]corresponding author e--mail: magdalena.pistolic@gmail.com
The research was supervised by Dr Mina Šoljaga.

LIFE SATISFACTION OF MEDIA WORKERS IN BOSNIA AND HERZEGOVINA

Srdjan Puhalo*
Pro Educa, Bosnia and Herzegovina

Life satisfaction of journalists in Bosnia and Herzegovina is important because it reflects broader psychosocial consequences of working in a politically polarized, economically insecure, and often hostile media environment. Since journalists' well-being affects the quality, independence, and ethical standards of reporting, these findings have direct implications for the functioning of media and democratic processes in Bosnia and Herzegovina. Life satisfaction represents the cognitive component of subjective well-being and is most commonly defined as an individual's subjective evaluation of how good and fulfilling their life is in relation to their own standards and criteria. The primary aim of this research is to determine whether there is a relationship between life satisfaction of media workers in Bosnia and Herzegovina and certain sociodemographic variables (age, gender, and family status). To assess life satisfaction, we used the Personal Well-Being Index, which consists of 8 items to which respondents could answer on a scale from 0 (not at all satisfied) to 10 (completely satisfied). The first item measures overall life satisfaction, while the remaining seven items measure satisfaction with specific aspects of life (standard of living, health, life achievements, relationships with others, sense of security, sense of belonging to the local community, and future security). The research was conducted from April 30 to June 23, 2025, on a sample of 316 media workers. Overall, media workers report being more satisfied than dissatisfied with their life as a whole (mean = 7.19). The lowest satisfaction is observed in the areas of standard of living (6.19) and future security (5.47), while the highest satisfaction is reported in relationships with other people (7.57). Men report higher satisfaction with their standard of living compared to women, with all p-values < .05. Considering family status, a statistically significant difference was found only for the variable "overall life satisfaction," where respondents who have a marital or cohabiting partner (7.44) are more satisfied with their life than those living in a primary family (6.89) or single individuals (6.75). A borderline statistically significant result was found for the "standard of living" variable, where respondents with a marital or cohabiting partner (6.46) are more satisfied than those living in a primary family (5.90) or single (5.83). Correlations indicate that as media workers age, satisfaction with their health, life achievements, and relationships with others decreases. Similarly, with an increase in years of work experience in the media, satisfaction with health, relationships with others, and sense of security declines. All correlations are statistically significant at $p < .05$. Media workers in Bosnia and Herzegovina show moderately high life satisfaction, but clear vulnerabilities are observed in areas related to socioeconomic conditions and security. The findings point to the need for gender-sensitive policies and support programs, as well as measures aimed at maintaining health and well-being among older media workers. They also highlight the importance of social relationships and stable partnerships as protective factors for well-being in a demanding media environment.

Keywords: life satisfaction; media workers; Bosnia and Herzegovina

*corresponding author e--mail: puhalosrdjan@gmail.com

CORRELATION ANALYSIS OF ATTITUDES TOWARD LGBT INDIVIDUALS AND TRADITIONAL VALUES

Srdjan Puhalo*
Pro Educa, Bosnia and Herzegovina

Attitudes toward LGBT individuals are often linked to traditional values, including conservative views on family, sexuality, and gender roles. This study aims to examine the relationship between traditional values, gender and sexual attitudes, and attitudes toward the LGBT population in Bosnia and Herzegovina. Specifically, the research seeks to determine how conservative and traditional patterns of thought influence support for or opposition to LGBT rights and inclusion, using correlational analyses among relevant factors: traditionalism, sexual traditionalism, gender essentialism, anti-LGBT attitudes, and pro-LGBT attitudes. The study was conducted in October 2025 on a sample of 1567 residents of Bosnia and Herzegovina using an online survey method. Participants were presented with a scale measuring traditional and gender-equity attitudes, attitudes toward sexuality, as well as a scale assessing attitudes toward the LGBT population and their rights. Factor analysis identified five factors: traditionalism, sexual traditionalism, gender essentialism, anti-LGBT attitudes, and pro-LGBT attitudes. The results show that anti-LGBT attitudes are strongly and positively correlated with traditionalism (r = .636; p = .001), sexual traditionalism (r = .695; p = .001), and gender essentialism (r = .721; p = .001). At the same time, pro-LGBT attitudes are strongly and negatively correlated with traditionalism (r = -.568; p = .001), sexual traditionalism (r = -.656; p = .001), gender essentialism (r = -.657; p = .001), and anti-LGBT attitudes (r = -.883; p = .001). These results are expected, as they show that a strong attachment to traditional and conservative values is typically associated with negative attitudes toward LGBT individuals, while more liberal and less traditional attitudes are linked with greater support for LGBT rights. Multiple regression analysis showed that gender essentialism was the strongest predictor of anti-LGBT attitudes, while sexual traditionalism and general traditionalism had a moderate but statistically significant independent contribution (all $p < .001$).

Keywords: traditionalism; rights; LGBT; Bosnia and Herzegovina

*corresponding author e--mail: puhalosrdjan@gmail.com

DO AUTHORITARIANISM AND TRUST IN SCIENCE PREDICT CONSPIRACY MENTALITY AND IN WHAT WAY

Jana Božović* **& Iva Vučetić**
Department of Psychology, Faculty of Media and Communications, Singidunum University

Conspiracy mentality represents a general tendency to interpret major social and political events as the result of secret plots by powerful actors. Previous studies have linked conspiracy beliefs to various sociopsychological factors, including authoritarianism and trust in science, but findings remain inconsistent (Abalakina-Paap et al., 1999; Kerr & Wilson, 2021; Rutjens et al., 2018; Vranic et al., 2022). This study aimed to examine whether authoritarianism and trust in science significantly predict conspiracy mentality, and to determine which of the two variables is a stronger predictor. The sample consisted of 1039 adults from Serbia (51.4% men; age range = 18–89). Data were collected as part of a national survey conducted by the Institute of Political Studies in Belgrade (2017). Participants completed scales measuring Authoritarianism (α = .92) (Altemeyer, 1996), Trust in Science (α = .51) (Dagnall et al., 2019), and Conspiracy Mentality (α = .84) (Bruder et al., 2013). Pearson correlations revealed a significant positive relationship between authoritarianism and conspiracy mentality (r = .13, p < .001), a significant negative relationship between authoritarianism and trust in science (r = −.12, p < .001), and a non-significant negative correlation between trust in science and conspiracy mentality (r = −.02, p = .545). Multiple regression showed that authoritarianism was a significant positive predictor of conspiracy mentality (β = .23, p < .001), while trust in science was not (β = −.01, p = .897). The model explained 1.6% of the variance, $F(2,1036)$ = 8.66, p < .001. These results indicate that authoritarianism explains conspiratorial thinking better in comparison to trust in science. Trust in science did not emerge as a protective factor, possibly due to the fact that the scale measuring trust in science showed low reliability. Future research should further explore mediating mechanisms and cross-cultural differences, and improve measurement reliability for trust in science (Farkhari et al., 2022; Synak et al., 2024).

Keywords: Authoritarianism; Trust in Science; Conspiracy Mentality; Ideological Orientation; Serbia

*corresponding author e--mail: *jana.bozovic.20221211@fmk.edu.rs*
The research was supervised by Dr Anja Simonović.

WHOM TO TRUST: ANOMIE, RWA, AND THE CONSPIRACY MENTALITY

Dunja Mićunović* **& Anja Bošnjak**
Department of Psychology, Faculty of Media and Communications, Singidunum University

Conspiracy Mentality is a widely studied construct, increasingly relevant in today's global socio-political climate. Political Anomie, defined as the perceived breakdown of social cohesion and institutional leadership, remains underexplored, despite fostering distrust in the world and giving rise to conspiracy thinking as a way to make sense of social disorganization. Existing studies on Right-Wing Authoritarianism indicate that its association with conspiracy mentality varies across contexts, resulting in inconsistent findings (Abalakina-Paap et al., 1999; Đorđević et al., 2021; Imhoff & Bruder, 2014; Imhoff et al., 2022), as RWA is theorized to involve a perception of the social world as dangerous and a heightened sensitivity to perceived threats. This study aimed to deepen the understanding of these relationships using a secondary dataset of 448 adult participants from Serbia. Participants completed three standardized instruments: the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013), the RWA Scale (Todosijević, 2013), and the Perception of Anomie Scale (PAS; Teymoori et al., 2016). Multiple linear regression revealed that Political Anomie significantly and positively predicted Conspiracy Mentality ($\beta = .32$, $p < .001$), accounting for 11% of the variance, $F(1, 446) = 52.66$, $p < .001$. At the zero-order level — that is, reflecting the bivariate association without controlling for other variables — RWA was negatively related to conspiracy mentality and remained a significant negative predictor in the regression analysis (($\beta = -.14$, $p = .002$); $F(1,446) = 9.46$, $p = .002$). These results confirm the hypothesized role of Political Anomie in fostering Conspiracy Mentality, aligning with previous research linking anomie to alienation, mistrust, and societal breakdown (Brotherton et al., 2013; Green & Douglas, 2018; Jetten et al., 2022; Salvador Casara et al., 2022; Swami, 2012), all of which may heighten susceptibility to conspiratorial thinking. However, the negative link between RWA and Conspiracy Mentality contradicts earlier findings. One possible explanation is that, in the Serbian context, RWA may reflect support for traditional authorities and established systems, reducing belief in anti-establishment conspiracies. This study highlights the predictive utility of Political Anomie and nuances the role of RWA in the Serbian socio-political landscape.

Keywords: conspiracy mentality; perception of political anomie; right-wing authoritarianism; cultural context

*corresponding author e--mail: *dunja.micunovic.20211057@fmk.edu.rs*
The research was supervised by Dr Anja Simonović.

EDUCATIONAL PSYCHOLOGY

EVALUATING THE COLLABORATIVE REPLICATION AND EDUCATION PROJECT AS A PEDAGOGICAL TOOL

Jordan Wagge[*,1], **Ljiljana B. Lazarević**[2] **& Danka Purić**[3]
[1]Avila University
[2]Institute of Psychology, Faculty of Philosophy, University of Belgrade
[3]Department of Psychology, Faculty of Philosophy, University of Belgrade

The Collaborative Replication and Education Project (CREP) is a framework for supporting mentored student research projects that are direct replications of recent, published work in psychology. Groups of students begin by selecting a vetted replication study suitable for the undergraduate level. After outlining their study purpose, adapting materials, and creating a procedural video, their project is reviewed by an experienced psychology faculty. Once approved, teams preregister their project, gaining hands-on experience with open-science practices and the value of committing to preregistered hypotheses. After collecting and analyzing data, students submit their work for a final review—one that mirrors the peer-review process researchers encounter when submitting to scientific journals.

The data collected within CREP projects contributes to increased understanding of the replicability of recently published effects, thus serving both the students and the field of psychology. However, some instructors and departments are hesitant to adopt models of teaching research through direct replication projects because they believe that student-developed hypotheses are superior.

We conducted preliminary pre- and post-tests related to critical thinking and scientific efficacy and compared these results across students who conducted CREP (n = 31) and non-CREP (n = 89) projects over the course of a semester. Students (61% Female, 18% Male; 18-43 years old, M_{age} = 21.68, SD_{age} = 3.94) were included in samples by their instructors, who self-selected whether to include CREP or non-CREP projects. CREP or non-CREP projects each included group, individual, or whole-class projects; for these analyses, we did not compare or control for these differences. The pre- and post-test measures included selected questions from the Open Science Concept Inventory (OSCI), the Psychology Research Inventory of Concepts (PRIC), the Trust in Science Scale (TISS), and a scale related to STEM efficacy (SE).

We performed a two-way mixed ANOVA with group (CREP vs. non-CREP) as a between-subjects and time (beginning vs. end of semester) as a within-subjects effect. Pre-post comparisons indicated that for all participants, scores on the PRIC questions and SE increased (ps of .007 and .006; ηp2 of .07 and .06, respectively) over the course of the semester, while scores on the OSCI did not change (p = .31, ηp^2 = .01) and scores on the TISS decreased (p = .019, ηp^2 = .05). However, no interactions by condition were detected (largest F = 1.04, p = .31), indicating a failure to detect any difference between groups.

A one-semester research methods course appears to be associated with benefits in critical and scientific thinking. Importantly, our results suggest that CREP is at least a comparable, and not inferior, model to non-CREP projects when considering our specific outcome measures.

Keywords: replication; pedagogy; evaluation; quasi-experiment; STEM

[*]corresponding author e-mail: *jordan.wagge@avila.edu*

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THE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND MULTICULTURAL SCHOOL PRACTICES WITH THE SOCIAL IDENTIFICATION OF STUDENTS

Marijana Vitorović[*,1], Danijela S. Petrović[2] & Nataša Simić[3]

[1]University of Belgrade, Faculty of Philosophy, Department of Psychology, LIRA Lab

[2]University of Belgrade, Faculty of Philosophy, Department of Psychology

[3]University of Belgrade, Faculty of Philosophy, Institute of Psychology

A positive school climate increases students' sense of belonging and strengthens their social identification with the school, while multicultural school practices enhance students' understanding of both their own and other people's cultural backgrounds. In this way, a learning environment is created in which students can freely explore and develop their social identity. The aim of this research was to examine the extent to which students' perceptions of a school climate and various multicultural practices predict their identification with different dimensions of social identity.

The sample consisted of 1729 high school students from 20 different schools in Serbia. School climate is operationalized as a single composite score, reflecting students\\\' general perception of the school environment. Data on multicultural practices were collected using the Ethnic-Racial Socialization (ERS) domain of the School Climate for Diversity – Secondary (SCD-S) Scale, which includes 4 dimensions: (1) Promotion of Cultural Competence; (2) Cultural Socialization; (3) Cultural Consciousness Socialization; and (4) Colorblind Socialization. Students completed the Social Identification Scale (SOCID), which consists of 9 items, assessing identification across multiple social categories. The results showed that two dimensions of multicultural practices have a statistically significant contribution to the model: Promotion of Cultural Competence ($F(9, 1715) = 2.47$, $p = .009$) and Cultural Socialization ($F(9, 1715) = 4.20$, $p < .001$). The remaining dimensions of multicultural practices and the overall school climate did not demonstrate a significant effect. Both dimensions contributed most strongly to predicting students' identification with a group of friends ($t = -2.87$, $p < .01$; $t = 2.63$, $p < .01$) and Serbia ($t = -2.13$, $p < .05$; $t = 3.99$, $p < .01$).

The results indicate that different multicultural practices are associated with social identity in different ways. Practices that provide opportunities to learn about students' own culture were positively related with identification with peers and the country of residence, but practices that emphasize learning about other cultures were associated with lower levels of identification with the same social categories. These results may reflect differences in the salience of social identity dimensions, suggesting that exposure to broader cultural perspectives may contribute to a more complex and less exclusively group-based sense of belonging.

Keywords: multicultural education; school climate; social identity; secondary school students

[*]corresponding author e-mail: marijanavitorovic5@gmail.com

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THE POTENTIAL OF DESIGN-BASED RESEARCH FOR INNOVATIVE TEACHING: TEACHERS' PERSPECTIVES ON STRENGTHS AND CHALLENGES

Nataša Simić[*,1], Vladeta Milin[2] & Jelena Vranješević[2]

[1]University of Belgrade, Faculty of Philosophy, Institute of Psychology

[2]University of Belgrade, Faculty of Philosophy, Department of Pedagogy and Andragogy

As a response to the insufficient effectiveness of existing continuous professional development programs for teachers, as well as the limited use of collaborative methods in schools, the Co-CREATE project developed a program based on the Design-Based Research (DBR) approach. The program involved researchers who served as session facilitators (experts in education or psychology), teachers from secondary vocational schools, and secondary school students. Over the course of one school year, DBR participants are collaboratively creating innovative Computer-Supported Collaborative Learning (CSCL) lesson plans (first phase: 3–4 collaborative sessions), teachers are implementing them (second phase), and finally, all DBR participants are evaluating their effectiveness (third phase: 1–2 collaborative sessions). The aim of this study was to contribute to a scarce knowledge base about teachers' professional development through DBR by mapping teachers' experiences with the first phase DBR sessions while developing CSCL lesson plans for the school subject Computer Science. In total, 11 teachers (6 female) from Croatia, Portugal, Serbia, and Spain completed a questionnaire that included scales on the effects of the first phase of DBR and open-ended questions. Teachers reported modest changes (M = 3.2 on a 1–7 scale) in their communication competencies and in their beliefs about lessons, students, and teaching methods. Qualitative content analysis identified several positive aspects grouped into three main themes: (1) collaborative teamwork, (2) creative lesson design, and (3) authentic, real-life learning contexts (as teachers created lesson plans on topics genuinely present in their curriculum and relevant for their students). Identified challenges included: (1) aligning pedagogical goals with technical and time constraints (as all lesson-plan materials had to be integrated into a specific e-learning platform that teachers had not used before), (2) coordinating diverse perspectives within interdisciplinary teams, and (3) ensuring the feasibility and coherence of lesson plans across varied contexts (given the aim of creating sustainable and transferable lesson plans). Despite a limited scope, this study suggests that collaborative, interdisciplinary, and cross-cultural approaches in teacher professional development have a potential to produce positive changes in innovative outputs, such as creative lesson plans for students. However, the process requires clear communication and flexibility, careful balancing of creativity with practicality, and a greater investment of time than in typical settings.

Keywords: teachers; competences; Design-Based Research (DBR); Computer-Supported Collaborative Learning (CSCL); Computer Science

[*]corresponding author e-mail: nsimic@f.bg.ac.rs

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DIFFERENCES IN INTERCULTURAL COMPETENCE AMONG TEACHERS ACROSS LEVELS OF SCHOOL CLIMATE PERCEPTION

Milena Belić[*,1], Danijela S. Petrović[2] & Đerđi Erdeš Kavečan[3,4]
[1]Study Program in Psychology, Department of Philosophical Sciences,
State University of Novi Pazar
[2]Department of Psychology, Faculty of Philosophy, University of Belgrade
[3]Faculty of Organizational Studies "Eduka", Belgrade
[4]University Business Academy, Novi Sad

The development and application of teachers' intercultural competencies—an increasingly important domain in multicultural societies—largely depend on daily interpersonal interactions, organizational practices, and broader characteristics of school climate. The aim of this study was to examine differences in teachers' intercultural competencies based on their perceptions of school climate. The sample consisted of 346 secondary school teachers from across the Republic of Serbia. Data were collected using the Teacher Intercultural Competence Scale, a multidimensional instrument that measures self-reported competence for teaching in culturally heterogeneous classrooms. School climate was assessed using the Delaware School Climate Scale (DSCS), an instrument designed to evaluate multiple dimensions of school climate; in this study, the teacher version of the DSCS, comprising 39 items, was adapted for use in the local context.The largest differences were observed in self-efficacy in dealing with cultural diversity ($t(139) = -8.45$, $p < .001$, $MD = -0.64$, $d \approx 1.11$) and intrinsic motivation ($t(139) = -8.41$, $p < .001$, $MD = -0.74$, $d \approx 1.19$). Significant differences with large effect sizes were also found across multiple dimensions of intercultural competence, including commitment to social justice, appreciation of cultural diversity, attitudes toward minority integration, ethnorelativism, and orientation toward intercultural education goals (all $p < .001$; d range ≈ 0.94–1.19). Effect sizes indicate a robust association between positive perceptions of school climate and higher levels of intercultural competence. These findings underscore the importance of supportive and inclusive school environments as key conditions for fostering teachers' intercultural competencies and emphasize the need for systematic efforts to cultivate a positive school climate.

Keywords: school climate; intercultural competence; teachers; cultural diversity; secondary schools

[*]corresponding author e-mail: *mbelic@np.ac.rs*

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ECEC TEACHERS' PEDAGOGICAL APPROACHES TO INTEGRATION OF EDUCATIONAL ROBOTS AS LEARNING TOOLS

Ivana Vulić Šimšić* **& Milica Pupavac**
Foundation Tempus

The era of rapid digital development poses two seemingly contradictory challenges for education systems: fostering digital literacy as a key cross-curricular competency, while also tackling the issues of screen exposure and overuse of technologies from early ages which threaten the development, safety and well-being of children and youth. A OECD report showed that most countries prioritize promoting safe, responsible, and meaningful use of technology in ECEC settings, rather than adopting restrictive approaches. In Serbia in particular, ECEC curricula (Years of Ascent) emphasize early digital literacy as one of the key learning outcomes. International studies show that although teachers are highly motivated, they might lack access to age-appropriate educational digital tools or guidance on how to implement them. The aim of this study was to explore how ECEC teachers introduce and use these tools when provided with them along with technical instructions, yet given freedom in pedagogical implementation. As part of a pilot initiative, 22 preschool teachers tested one robot type in five hours of activities, reporting through post-activity survey. Responses from 19 teachers were analyzed using qualitative content analysis which indicated presence of several general approaches to introducing and using robots in pedagogical activities. "Integrative" approach sets broader thematic project organized by the teacher or at the preschool level as a starting point. It's characterized by storytelling and quest-like activities, with robots assigned roles as characters (e.g., animals, vehicles) within a larger narrative or task. The "competency-based" approach puts children's competencies in the centre, building on them through exploratory activities guided by children's curiosity, prior experiences, and creativity. Third approach places robotics and computational thinking at the center, with teacher-led activities focused on the robot itself and building and coding activity it offers. While each approach can be valuable and lead to meaningful learning, they encompass different learning processes and emphasize different outcomes. Although not generalizable, findings may offer a starting point for future research, inform ECEC teacher training, and provide initial structure for dialogue and exchange of practices within and beyond professional communities.

Keywords: ECEC teachers; educational robots; early digital literacy; learning in ECEC setting; qualitative analysis

*corresponding author e-mail: *ivana.vulic@tempus.ac.rs*

TIME ONLINE AND INTERNET ADDICTION AMONG YOUTH: THE MEDIATING ROLE OF MOTIVATED STRATEGIES FOR LEARNING

Nikola Adamov* **& Ilija Milovanović**
Department of Psychology, Faculty of Philosophy, University of Novi Sad

Internet addiction can adversely affect emotional well-being, academic success, and the quality of social interactions. Numerous studies have documented that higher levels of screen time are associated with a variety of problematic behavioral patterns among youth. However, this association may not be independent of other influences. Prior studies have highlighted that motivated learning strategies are key to academic success, yet students with high levels of internet addiction are at risk of lower motivation and diminished academic performance. This study aimed to examine the relationship between time spent online and internet addiction, and to assess whether motivated learning strategies offer additional explanatory power. The sample included 218 high school and university students (Mage = 21.07, SD = 2.50). Two instruments were used: the Internet Addiction Test (IAT) to assess internet addiction, and the Motivated Strategies for Learning Questionnaire (MSLQ), to measure Organization, Metacognitive Self-Regulation, Elaboration, and Critical Thinking. Participants reported their estimated daily screen time. A parallel multiple mediation analysis was performed using Hayes's PROCESS macro (Model 4). Results indicate that time spent online exhibits a positive direct effect on internet addiction (b = 1.17, SE = .38, $p < .01$, CI = [0.42, 1.93]). Additionally, among the motivated learning strategies included, only Elaboration partially mediates the relationship between time spent online and internet addiction (indirect effect = -.21, 95% CI = [.003, .500], $p < .01$), whereas Organization, Metacognitive Self-Regulation, and Critical Thinking did not show significant mediating effects. These results suggest that certain learning strategies, particularly elaboration, may play a protective role in the academic context by mitigating the negative impact of excessive online engagement on internet addiction. This pattern may reflect the fact that students who actively process and integrate new information tend to engage with online content in a more goal-directed and self-regulated manner, reducing the likelihood of maladaptive use. In other words, elaboration may help students maintain academic focus even when spending substantial time online, thereby buffering against the development of problematic internet behaviors. Future research should examine in more detail how various motivational and cognitive strategies develop throughout schooling and how they may help maintain academic motivation and achievement despite high levels of online activity.

Keywords: internet addiction; motivated strategies for learning; time spent online; youth

*corresponding author e-mail: nikola.adamov@ff.uns.ac.rs

KEEPING THE MATH SPARK ALIVE: HOW TEACHER PRACTICES SHAPE TRAJECTORIES OF STUDENTS' INTRINSIC MOTIVATION

Katarina Mićić[*,1], Barbara Blažanin[2], Ksenija Krstić[3] & Aleksandar Baucal[3]

[1]Center for Teacher Education & Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]Department of Pedagogical, Sociological and Psychological Studies, Faculty of Special Education and Rehabilitation, University of Belgrade

[3]Department of Psychology, Faculty of Philosophy, University of Belgrade

Declines in students' motivation for mathematics represent a concerning pattern that can meaningfully shape their long-term engagement and learning. Studies with younger students typically focus on developmental changes that accompany motivational trajectories, such as differentiation of interests, whereas far less is known about the instructional practices that influence these changes in early years. The present study addresses this gap by investigating longitudinal changes in mathematics intrinsic motivation and identifying the teaching practices that predict motivational growth or decline over a one-year period.
The study drew on a longitudinal sample of 1145 primary school students assessed at two time points (T) one year apart - in 3rd and in 4th grade. Both times students reported their math intrinsic motivation on a five-item scale grounded in Expectancy–Value Theory. Perceived teacher practices were measured at T2 using a 16-item scale that yielded three subscales: Instructional Support (e.g., being praised for effort), Controlling Instructional Demands (e.g., pressure to practice mathematics beyond one's preferences), and Autonomy-Facilitating Practices (e.g., opportunities to choose tasks). Socioeconomic status (SES; indexed by the number of books at home), math competence at T1 and gender were included as control variables to account for background differences.
A SEM demonstrated an overall strong fit, with the WLSMV estimator yielding RMSEA = .047, CFI = .948, TLI = .935, and SRMR = .062. After controlling for SES, prior achievement, and gender, Instructional Support emerged as a substantial protective factor for motivation over the one-year period (β = 0.795, p <. 001). In contrast, Controlling Instructional Demands significantly predicted motivational decline (β= –0.428, p < .001), independent of initial motivation and background characteristics. Surprisingly, Autonomy-Facilitating Practices were not a significant predictor (p = .151).
In line with Self-Determination Theory, practices that support students' sense of relatedness and competence helped sustain motivation, whereas excessive control proved detrimental. Surprisingly, autonomy-supportive practices were not a significant predictor, a finding that may reflect deeper structural and cultural characteristics of the Serbian schooling context. Overall, the findings highlight the central role of everyday teacher behavior in shaping motivational trajectories even before major educational transitions occur.

Keywords: intrinsic motivation; mathematics education; motivational trajectories; teacher instructional practices; primary school students

[*]corresponding author e-mail: katarina.micic@f.bg.ac.rs

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MUSICAL ACTIVITIES AND SOCIO-EMOTIONAL AND BEHAVIORAL SKILLS OF ROMA CHILDREN

Blanka Bogunović[*,1], Tara Veljković[2], Maša Brkanović[2] & Emilija Maksimović[2]
[1]Faculty of Music, University of Arts in Belgrade
[2]Faculty of Philosophy, Department of Psychology, University of Belgrade

The beneficial contribution of learning music to musical, cognitive, emotional, and social development is already well established. This cross-sectional study aims to explore music skills mastery and their relationships with socio-emotional skills (SEMS) and behavioral difficulties (SD) of Roma children, after participating in 6-10 months of music lessons based on the El Sistema-Music of Hope method, which includes a variety of intensive music activities (e.g., singing, body percussion, dance, performing). The sample consisted of 91 Roma children (56% female), aged 7-13 (average age 10.1), classes I-IV at a special primary school for Roma children. The SEMS scale was used (34 items; Einpaul et al., 2024), covering four domains: self-management, emotional regulation, cooperation and amity, and engagement with others; the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) and the MUS Questionnaire (15 items). Seven primary school teachers (PTs) and a music teacher (MT) assessed children after 6-10 months of teaching. Results showed the higher MUS significantly related to a higher SEMS (correlations ranged from $r = .29$ to $r = .73$, $p < .05$ or $p < .01$ across all subscales) as perceived by PTs and MT, and fewer behavioral difficulties, e.g., musically creative children had less emotional ($r = -.48$, $p < .01$), and conduct difficulties ($r = -.36$, $p < .01$), hyperactivity ($r = -.43$, p < .01) and problems with peers ($r = -.38$, p < .01) in music classes, as perceived by MT. Gender differences were perceived only in music lessons. Girls had higher scores on all SEMS domains: self-management ($F(1, 80) = 12.92$, $p < .001$), emotional regulation ($F(1, 80) = 14.78$, $p < .000$), collaboration ($F(1, 80) = 9.89$, $p < .002$) and engaging ($F(1, 80) = 6.94$, $p = .010$) while boys showed higher emotional ($F(1, 80) = 10.73$, $p = .002$) and conduct difficulties ($F(1, 80) = 19.10$, $p < .000$), and hyperactive behavior ($F(1, 80) = 27.48$, $p < .000$). In conclusion, higher MUS are associated with higher SEMS and fewer difficulties in classroom behavior of Roma children, in both teaching settings. Further, a creative aspect of MUS may be associated with fewer social-behavioral difficulties, and the results imply that girls showed greater involvement in the music lesson tasks. Further investigation is needed with larger samples and with a follow-up study to better understand the causal relation, its direction, and possible transferable effects from music to general teaching settings.

Keywords: musical skills; social-emotional skills; social-behavioral difficulties; Roma children; teacher ratings

[*]corresponding author e-mail: blanka.bogunovic@gmail.com

JOB SATISFACTION AND TEACHERS' PERSONALITY TRAITS: A TYPOLOGICAL PERSPECTIVE

Jelena Prijić* **& Ilija Milovanović**
Department of Psychology, Faculty of Philosophy, University of Novi Sad

Teachers' job satisfaction represents one of the key factors in the quality of the educational process. According to the Job Demands–Resources model, personality traits shape teachers' perceptions of job demands and social relations and we expected that teachers who perceive demands and social relations more positively would report higher job satisfaction. The aim was to examine differences in job satisfaction among teachers with distinct personality profiles. The sample consists of 152 teachers from Serbia (68.4% female) with an average age of about 45 years. The Big Five Inventory was used to assess personality traits while the TJSQ (Lester, 1984) was used to measure job satisfaction including 9 dimensions: supervision, colleagues, working conditions, salary, responsibility, nature of work, advancement, security and recognition. Cluster analysis, using the K-means method, identified 3 personality types of teachers. The first cluster includes unobtrusive teachers (15%) who score average on all personality dimensions. The second cluster comprises hyperadapted teachers (56%) characterized by high openness to experience, conscientiousness and agreeableness and low neuroticism. The third cluster was labeled vulnerable teachers (29%) due to high neuroticism and low levels of other dimensions. ANOVA results indicate that unobtrusive and hyperadapted teachers are more satisfied with colleagues ($F(2,150)= 18.49$, $p < .01$), responsibility ($F(2,150)= 12.46$, $p < .01$), and security ($F(2,150)= 10.6$, $p < .01$) compared to vulnerable teachers. The hyperadapted type is less satisfied with working conditions ($F(2,150)= 8.01$, $p < .01$) but more satisfied with advancement ($F(2,150)= 5.48$, $p < .01$) than the other types. Hyperadapted teachers are more satisfied with the nature of the work ($F(2,150)= 12.08$, $p <.01$) compared to the other types whereas this aspect is least expressed among vulnerable teachers relative to unobtrusive teachers. Vulnerable teachers are more satisfied with salary ($F(2,150)= 4.03$, $p < .05$) than other two types. In conclusion, due to their flexibility and balanced personality structure, unobtrusive teachers show moderate satisfaction. For hyperadapted teachers it is important to ensure opportunities for advancement and improve working conditions to reduce burnout caused by excessive adaptability. For vulnerable teachers, structured work and a stable environment are essential due to their pronounced rigidity and sensitivity to social challenges.

Keywords: personality traits; job satisfaction; teachers

*corresponding author e-mail: *prijicjelena01@gmail.com*

ANALYZING SENTIMENT TOWARD MATHEMATICS IN SERBIAN: EVIDENCE FROM THE SRWAC AND REDDIT DATA

Isidora Gatarić*
Department of Psychology, Faculty of Philosophy, University of Novi Sad

The aim of this research was to examine the emotional tone (i.e. sentiment) present in discourse about mathematics in the Serbian language, using the BERTopic text-modeling method to determine the nature of sentiment toward mathematics (positive, neutral, or negative). The analysis was conducted on two corpora: srWaC, which contains predominantly newspaper and informational texts, and Reddit, which consists of informal user comments from that social platform. Before modeling, the text of both corpora was thoroughly cleaned and was suitable for fine modeling. The results showed that neutral sentiment overwhelmingly dominates in both corpora (more than 80% of all sentences), while positive and negative tones appear at considerably lower frequencies. This distribution suggests that mathematics is discussed primarily as a field of knowledge, science, and rational inquiry, rather than as an emotionally charged topic. Although previous studies have reported a pronounced presence of negative emotions associated with mathematics, the findings of this study differ and indicate that such attitudes are not reflected in the language of public discourse. Taken together, these results suggest that emotions toward mathematics in Serbian are largely implicit and tend to be expressed indirectly — through cognitive structures and discursive patterns oriented toward objectivity. These findings contribute to a deeper understanding of the relationship between language, emotion, and education, and further demonstrate that contextualized topic modeling method based on transformer embeddings, such as BERTopic, can be effectively applied to detect latent affective patterns in Serbian-language texts.

Keywords: sentiment analysis; mathematics; BERTopic; srWac; Reddit

*corresponding author e-mail: isidora.gataric@uns.ac.rs

THE THREE MUSKETEERS OF HIGHER-ORDER COGNITION RIDE AGAIN: IMPLICIT UNDERSTANDINGS OF INTELLIGENCE, CREATIVITY, AND WISDOM

Tamara Stanarević*,[1] & Siniša Subotić[2]
[1]HR Generalist, RT-RK DOO Banja Luka
[2]Department of Psychology & Faculty of Natural Sciences and Mathematics, University of Banja Luka

Implicit theories of intelligence, creativity, and wisdom capture "lay beliefs" about what these constructs represent and complement explicit, scientific models. Rooted in everyday experience rather than formal instruction, they offer a bottom-up view of intuitive cultural conceptualization. This study explored which core elements people in parts of the Balkan region associate with these constructs and how they interrelate. The snowball convenience sample comprised 484 general-population adults (74% women; 60% students) from B&H, Montenegro, and Serbia. Via an online form, participants provided open-ended descriptions of how they define, recognize, and characterize intelligence, creativity, and wisdom. Four trained coders categorized responses; ratings were harmonized and averaged before analyzing category frequencies and within-construct indicator correlations using Φ (2×2 contingency) correlations. Intelligence was perceived as reflecting ability (44–61%), resourcefulness (42%), adaptation (18–34%), openness (30%), thoughtfulness (13-28%), problem-solving (9-28%), efficiency (18–20%), and knowledge application (8–15%), with Φ ≈ −.18 to .46. Problem-solving correlated with efficiency and curiosity with knowledge application, while adaptation, heredity, and several wisdom-related descriptors showed weaker or inverse Φs to core intelligence elements. Creativity was perceived as rooted in ability (39–42%), creative work (26–36%), new ideas (23–30%), imagination (16–53%), and descriptors tied to originality, nonconformity, and eccentricity (7–19%), with Φ ≈ −.21 to .18. Small and often negative Φs indicate a loose structure centered on novelty, unconventionality, and reduced alignment with socially desirable or goal-directed behavior. Wisdom was tied to experience (10–40%), ability (31–57%), thoughtfulness (25–43%), knowledge (23%), and emotional-regulation traits such as calmness, pleasantness, and self-control (31–67%), with Φ ≈ −.27 to .42. This pattern combines knowledge and experience with prudent, emotionally regulated, and socially desirable behavior, distinguishing cognitive from experiential components. Overall, people from this cultural context conceptualize intelligence through effective reasoning, creativity through originality and reduced conformity, and wisdom through experience-shaped judgment and self-regulation. These patterns largely mirror international findings, but highlight a moralized view of wisdom and an unconventional view of creativity.

Keywords: implicit theories; lay conceptions; intelligence; creativity; wisdom

*corresponding author e-mail: tamara.stanarevic@rt-rk.com

ORGANIZATIONAL PSYCHOLOGY

OCCUPATIONAL STRESS, HEALTH, AND THE SIGNIFICANCE OF ANTI-STRESS PROGRAMS IN THE MANUFACTURING AND SERVICE SECTORS

Nebojša Majstorović*, Ana Ivanov, Teodora Vujičić & Sara Mučibabić
Department of Psychology, Faculty of Philosophy, University of Belgrade

The purpose of this study was to assess the level of psychophysical health and perceived occupational stress among employees in the manufacturing and service sectors, as well as to evaluate the potential effects of attending organizational preventive and educational anti-stress programs on employees' health and stress. This study employed Holmgren\\\'s (2008) model in which the occupational stress response was assumed to depend on four factors: the degree of influence employees had over the work process (e.g., low influence on work pace), the indistinct organization and conflicts (e.g., unclear work goals), individual aspirations and commitment to work (e.g., working after ordinary working hours), and the level of balance between work and leisure time (e.g., not enough time for recreational activities). A convenience sample of 657 employees from the Republic of Serbia, diverse with respect to sector (56.6% from services), gender (62.4% females), age (M = 38.68, SD = 18.10), and occupational role (77.2% subordinates), completed the Psycho-Physical Health Questionnaire (SPFZ-1; Majstorović, 2017), the Work Stress Questionnaire (WSQ; Holmgren, 2008), and a demographic survey. Results indicated that employees in the manufacturing sector reported significantly poorer health ($t(548.6) = 4.05$, $p < .01$, d = .33) and higher overall occupational stress ($t(655) = 5.25$, $p < .01$, d = .41). Only 103 employees from both sectors reported existing anti-stress preventive programs, and 135 reported anti-stress educational programs. Employees exhibited better health ($t(204.6) = 4.17$, $p < .01$, d = .56) and lower stress levels ($t(204.9) = 5.03$, $p < .01$, d = .68) when they participated in preventive (N = 75) or educational (N = 101) anti-stress programs. Also, in both sectors the overall stress level is strongly associated with two factors: the indistinct organization of work and conflicts (r manuf. = .83; r service = .76) and individual aspirations and commitment to work (r manuf. = .83; r service = .80). It was concluded that employees from the manufacturing sector report poorer health and higher levels of occupational stress; that indistinct organization of work and conflicts and that individual aspirations and commitment represent important factors of occupational stress in both sectors; and that participation in anti-stress programs was associated with better employee health and with a lower level of stress.

Keywords: occupational stress; health, employees; anti-stress programs; manufacturing and service sectors

*corresponding author e-mail: nebojsa.majstorovic@f.bg.ac.rs

WORK STRESS AS A MEDIATOR BETWEEN WORKPLACE CHARACTERISTICS AND JOB SATISFACTION AMONG CORRECTIONAL SECURITY OFFICERS

Vicko Ćudina*
Institute of Social Sciences Ivo Pilar

Every profession has its unique characteristics, but correctional work, particularly within the security department, represents a complex and demanding environment. Officers are required to balance security responsibilities with interpersonal and supervisory expectations, while working under conditions characterized by exposure to risk, unpredictability, and emotional strain. Such contradictory role requirements inevitably generate role conflict, which can negatively affect stress and job satisfaction. In contrast, organizational resources such as environmental safety may help individuals cope more effectively with work-related challenges. Therefore, this study examined whether work stress mediates the relationships between role conflict, perceived environmental safety, and job satisfaction among correctional security officers. The research was conducted in every penal institution in the Republic of Croatia as a part of PRISCLIM project (Psychosocial Climate and Individual Characteristics of Prisoners and Prison Officers in Penal Institutions in Croatia: A Multi-Method Approach). A total of 661 correctional security officers who voluntarily and anonymously participated in this study were included (87.2% male; M_{age} = 42.75, SD_{age} = 9.93). Participants completed a comprehensive workplace climate questionnaire, from which four constructs were used in the current analysis: role conflict (3 items, Cronbach's α = .84), environmental safety (3 items, α = .81), work stress (5 items, α = .82), and job satisfaction (9 items, α = .88). A mediation analysis was conducted with 5000 bootstrap samples. The results showed that there is a direct negative association between role conflict and job satisfaction (b = -0.16, CI [-0.21, -0.10]) and an indirect one through work stress (b = -0.07, CI [-0.10, -0.05]). Environmental safety demonstrated a positive direct (b = 0.34, CI [0.29, 0.40]) and a positive indirect association with job satisfaction through work stress (b = 0.06, CI [0.04, 0.09]). Overall, the model explained 53% of the variance in job satisfaction. These findings highlight the importance of managing job demands and strengthening safety-related resources to reduce stress and improve job satisfaction among correctional security officers.

Keywords: role conflict; environmental safety; work stress; job satisfaction; prisclim project

*corresponding author e-mail: vicko.cudina@pilar.hr

ROLE AMBIGUITY AND JOB SATISFACTION: THE ROLE OF POSITIVE RELATIONSHIP MANAGEMENT

Ana Petrović* **& Ivana B. Petrović**
Department of Psychology, Faculty of Philosophy, University of Belgrade, Serbia

Role ambiguity refers to a mismatch between the required and available information for performing one's job. Job satisfaction is defined as the extent to which an individual has positive or negative feelings toward their work, as well as their overall attitude toward the organization and colleagues. The objective of this study was to examine the relationship between role ambiguity and job satisfaction, as well as the moderating role of positive relationship management, viewed as a potential that individuals can develop and as a strength that enables them to adapt productively to circumstances.
The sample consisted of 100 participants employed in executive office positions in Serbia, including 76% women and 20% men, with an average of 12 years of work experience. Participants were recruited via LinkedIn and snowball sampling. Questionnaire included the short version of Spector's Job Satisfaction Scale, the Role Ambiguity subscale from the Role Ambiguity and Role Conflict Questionnaire, and the Positive Relationship Management Scale. All analyses were conducted in IBM SPSS Statistics, moderation analysis was performed using the PROCESS macro.
Results indicated a significant negative relationship between role ambiguity and job satisfaction (r = -.54, p < .01). Positive relationship management (PRM) was significantly positively related to job satisfaction (PRM: r = .39, p < .01). No moderating effects of PRM on the relationship between role ambiguity and job satisfaction were found (PRM: t = -.98, p > .05, b = .06).
These findings shed light on the complex relationships between job resources and personal resources emphasizing the importance of role clarity. They highlight the need for organizations to develop clear job roles and carefully designed interventions to reduce the negative effects of role ambiguity on job satisfaction. The absence of moderating effects remains the focus of future research.

Keywords: job satisfaction; role ambiguity; positive relational management

*corresponding author e-mail: annapn2001@gmail.com

REDUCING EXPOSURE TO NEGATIVE ACTS AT WORK: INTERPLAY BETWEEN HUMAN CAPITAL SUSTAINABILITY LEADERSHIP AND PSYCHOSOCIAL CLIMATE

Ivana Graovac* **& Milica Vukelić**
Department of Psychology, Faculty of Philosophy, University of Belgrade

Sustainable employee well-being is a critical topic in work and organizational psychology, as it promotes organizational humanity and productivity. Human capital sustainable leadership (HCSL) combines characteristics of ethical, sustainable, mindful, and servant leadership, potentially serving as a protective shield against unethical acts at work through the creation of a positive psychosocial climate at work. The aim of this research was to examine the relationship between experiencing HCSL at work, and exposure to negative acts at work, and to explore the role of experiencing psychosocial safety at work as a mediator in this relationship. The convenience sample consisted of 166 employees with an average age of 42 years (*SD* = 12.78); 34.9% were men, 63.3% were women, and 1.8% chose not to disclose their gender. HCSL was measured by using the *Human capital sustainability leadership scale* developed by Di Fabio and Peiró, and adapted to Serbian by Đorđević and Petrović (*Cronbach's α* = .94). The psychosocial safety climate was measured with *The psychosocial safety climate questionnaire-12* (PSC-12; Hall et al; Cronbach's α = .90). Exposure to negative acts was measured by using *the Negative acts questionnaire-revised* (NAQ-R; Einarsen et al), adapted to Serbian and validated by Vukelić et al. (Cronbach's α = .96). The results showed that there was a significant positive relation between human capital sustainability leadership, and the psychosocial safety climate at work ($\beta = .57$ $p < .001$); there was also a significant negative association between human capital sustainability leadership, and exposure to negative acts at work ($\beta = -.38$ $p < .001$), as well as experiencing psychosocial safety at work and exposure to negative acts at work ($\beta = -.18$ $p < .001$). Finally, mediation analysis conducted using a bootstrapping procedure, indicated that psychosocial safety climate partially mediates the relationship between human capital sustainable leadership and exposure to negative acts, as the indirect effect was significant($\beta = -.11$, $Z = -2.1$, $p = .035$, *95%* CI = -.19, -.01), while the direct effect remained significant ($\beta = -.38$, $p < .001$). The results indicate that HCLS fosters a climate in which employees feel safe, thereby reducing their exposure to negative acts at work and serving as a protective factor against unethical workplace behavior. On the other hand, partial mediation indicates that some other mechanisms above PSC contribute to reducing negative acts, and future research could further explore these processes. The results of this research underscore the importance of cultivating ethical, sustainable, mindful, and servant leadership to support optimal employee well-being.

Keywords: human capital sustainable leadership at work; negative acts at work; psychosocial safety at work; Serbia

*corresponding author e-mail: ivanagraovac3@gmail.com

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CYBERVETTING: COGNITIVE, EMOTIONAL AND BEHAVIORAL REACTIONS OBSERVED AMONG SERBIA'S YOUTH

Maša Engler*, Jelena Pavlović & Milanko Čabarkapa
Department of Psychology, Faculty of Philosophy, University of Belgrade

Despite its growing use, "cybervetting" - i.e. reviewing online information about a job applicant - remains under-researched. The aim of this study is to expand existing scientific literature by analyzing: Serbian youths' (aged 18-30) estimates regarding the prevalence of cybervetting in their country, their opinions and feelings towards this practice, and the types of online impression management they use in response to it. A mixed-method approach consisting of a questionnaire (N = 178; 72.5% female, M_{age} = 23.89, SD = 3.53) and semi-structured interviews (N = 10; 50% female, M_{age} = 25.4, SD = 3.06) was used. Questionnaire results indicate that nearly half of surveyed youths (44.4%) consider cybervetting to be a rare or non-existent practice in Serbia. The largest number of respondents (46.6%) had neutral views on its ethics, with negative assessments being more common than positive ones (41% as opposed to 12.4%). A similar trend was noted when it came to subjects' emotional reactions to the thought of being cybervetted (58.99% neutral, 30.34% negative, 10.67% positive). Those under the age of 25 had more negative emotional reactions (Z = - 2.44, p < .05, r = - .18). Nearly three-quarters of the sample (74.2%) denied shaping their online profiles to appeal to potential employers. Data gathered from the interviews were subjected to thematic analysis which revealed that participants held positive, negative and conditionally positive opinion patterns regarding cybervetting. Positive patterns emerged from the belief that it is useful for the candidate and/or employer, while negative ones stemmed from the notion that it is useless or questionable in terms of its values and ethics. Conditional positive patterns of opinion provided a more nuanced view of cybervetting and illuminated the situations in which young people consider it to be justified. Emotional reactions observed during the interviews could also be positive or negative, whereas in some participants they were entirely absent. Four main approaches to impression management were observed, namely the 'acceptor', 'dissident', 'cleaner' and 'strategist' approaches earlier identified by Berkelaar (2017), with slight differences emerging between her subtypes and those found in this study. Future studies should aim to: determine the actual frequency of cybervetting in Serbia, involve participants from populations not sufficiently represented in this study, and explore recruiters' perspectives on the practice.

Keywords: cybervetting; selection; impression management; social media; young people

*corresponding author e-mail: masha.mejl@gmail.com

PREDICTING LEADERSHIP STYLE PREFERENCES FROM HEXACO PERSONALITY TRAITS

Danica Nikolić Vesković*
Faculty of Science and Mathematics, University of Niš, Serbia

Effective leadership depends on leader's personality traits and behaviours, with research indicating that behaviours play a more important role. The same leader's behaviours may lead to different levels of effectiveness depending on situational factors and follower characteristics. Followers may differ in their perception of a leader's attractiveness, meaning that the same leader can motivate some while demotivating others, affecting follower job satisfaction, commitment to the leader, and job performance. This study aimed to investigate whether individual differences in personality traits predict individuals' preferences for leadership styles. The sample consisted of 214 students (150 female) from the University of Niš, aged 19 to 39 years (M = 23.05; SD = 3.36). Students completed electronic questionnaires anonymously, voluntarily, and without compensation. Personality traits were assessed with HEXACO-PI-R 60 scale, while preferences for leadership style were measured with Yukl\'s taxonomy of leader behaviours, classified into: Task-oriented, Relationship-oriented, and Change-oriented behaviours. Regression analyses were conducted to examine the predictive power of HEXACO personality traits in predicting preferences for each leadership style. Predictive model of change-oriented leadership explains 12% of the variance (R^2 = .12, F(8, 205) = 3.56, p =.001). Higher levels of Emotionality (β =.17, t = 2.52, p = .012) and Openness to Experience (β = .26, t = 3.82, p < .001) contribute to a greater tendency to prefer change-oriented leadership. Predictive model of task-oriented leadership explains 10% of the variance (R2 = .097, F(8, 205) = 2.75, p = .007). Higher levels of Emotionality (β =.18, t = 2.63, p = .009), Conscientiousness (β = .15, t = 2.14, p = .034), and Openness to Experience (β = .16, t = 2.40, p =.017) contribute to a greater tendency to prefer task-oriented leadership. Predictive model of relationship-oriented leadership explains 14% of the variance (R^2 = .14, F(8, 205) = 4.14, p < .001) and includes Emotionality (β = .26, t = 3.88, p < .001), and Openness to Experience (β = .19, t = 2.89, p = .004), as significant predictors. Increases in these dimensions contribute to a greater tendency to prefer relationship-oriented leadership. Preferences for different leadership styles can be partly predicted by personality traits, with Emotionality and Openness to Experience as the most consistent predictors across all styles. These findings highlight the importance of individual differences in leadership style preferences. Leadership behaviours may be perceived differently depending on personality traits of those they lead, with implications for leadership development and leader-follower fit.

Keywords: leadership;HEXACO; task-oriented; relationship-oriented; change-oriented

*corresponding author e-mail: danica.nikolic@pmf.edu.rs

DO HELPING PROFESSIONALS RECOGNIZE EMOTIONS MORE ACCURATELY? EXAMINING THE ROLE OF EXPERIENCE

Kristina Kalaba Tošić[*,1] **& Svetlana Borojević**[2]

[1]Center for Mental Health, Prnjavor

[2]University of Banja Luka, Faculty of Philosophy, Department of Psychology, Laboratory of Experimental Psychology – LEP-BL

Emotion recognition through facial expressions represents an essential component of social interaction and effective communication, particularly in professions involving direct work with people. Importantly, emotion recognition constitutes a core dimension of emotional intelligence, referring to the ability to accurately perceive and interpret emotional signals in others. Previous research suggests that well-developed socio-emotional competencies contribute to improved interpersonal relationships and professional effectiveness. The aim of this study was to examine the role of work experience and profession type (helping vs. non-helping professions) in the accuracy and speed of recognizing basic emotions (happiness, sadness, anger, disgust, fear, and surprise), with profession type conceptualized as a contextual indicator potentially reflecting underlying emotional competencies. The sample consisted of 116 employed adult participants (balanced by gender) with a minimum of one and a maximum of twenty years of work experience. Data were collected in controlled conditions using an experimental task created in SuperLab 4.5, with 60 photographs depicting male and female models expressing basic emotions. In addition to the experimental task, participants completed a sociodemographic questionnaire, an emotional empathy scale, and a measure of current emotional state. The results show that participants from helping professions demonstrated higher overall accuracy in emotion recognition (72.27%) and responded faster compared to those from non-helping professions. Profession type was a statistically significant predictor of accuracy (moderate to large effect), while the difference in reaction time was significant but with a small effect size (d = 0.212). In contrast, years of work experience did not significantly predict either accuracy or reaction time, even after controlling for profession type (accuracy: $\chi^2(1) = 1.447$, $p = .229$; reaction time: $F(1,112) = 2.05$, $p = .155$). Furthermore, the interaction between profession type and work experience was not significant (accuracy: $\chi^2(1) = 0.159$, $p = .69$; reaction time: $F(1,112) = 0.025$, $p = .875$), indicating a stable effect of profession type regardless of experience. At the level of individual emotions, fear was the least accurately recognized, while happiness was the most accurately recognized emotion. These findings suggest that superior emotion recognition among helping professionals may be better understood within the framework of emotional intelligence, possibly reflecting pre-existing emotional competences that influence both vocational choice and interpersonal effectiveness, rather than being solely a consequence of accumulated work experience.

Keywords: emotion recognition; facial expressions; helping professions; work experience; reaction time

[*]corresponding author e-mail: *kristinak17@hotmail.com*

CLINICAL PSYCHOLOGY

HOW FREQUENCY, DURATION, AND INTENSITY OF PHYSICAL ACTIVITY RELATE TO MENTAL HEALTH: A MULTIDOMAIN ANALYSIS

Nataša Savić[*, 1], Danilo Abramović[1], Nikola Aćimović[1], Andrijana Arnaut[1], Arijana Radić[1], Lana Lugonja Prodanović[2] & Siniša Subotić[2, 3]

[1]Psychology MSc Programme, Faculty of Philosophy, University of Banja Luka

[2]Department of Psychology, Faculty of Philosophy, University of Banja Luka

[3]Faculty of Natural Sciences and Mathematics, University of Banja Luka

Physical activity (PA) correlates with mental health (MH), yet research rarely compares PA across multiple measurement modalities (e.g., Frequency, Duration, Intensity). Prior findings show benefits of higher PA frequency, perceived exertion and dose-dependent effects of moderate or vigorous PA. The present study examined how PA modalities and specific PA categories correlate with MH symptom dimensions. A general sample of 420 young adults (61% women; age: M = 23.48, SD = 4.81 years) assessed 11 PA categories/domains (e.g., walking, running, swimming, strength training, team sports) across three PA modalities: Frequency, Duration, and Intensity. They also self-reported MH symptoms (adapted DSM-5-TR scale): Internalizing – INT (depression, anxiety, OCD), Thought Disorder – TD (hallucinations), Disinhibited Externalizing – DE (aggressive outbursts), and Regulatory Control – RC (ADHD- and mania-related dysregulation). Bivariate correlations were small, but systematic. For INT and TD, Intensity, followed by Frequency, had the largest absolute values (up to |rps| = .21), and Duration had the weakest (|rps| ≈ .10–.15). Positive correlations, indicating worse MH, appeared mainly for Intensity indicators and vigorous endurance activities, while negative correlations, indicating better MH, were more common for the Duration modality, especially Strength training, Swimming and Hiking. Strength training Duration was the most consistently protective indicator, predicting lower INT (β = −.25, p < 001), TD (β = −.33, p = .003), DE (β = −.11, p = .019), and RC (β = −.16, p = .001). Duration of Swimming (β = −.29, p < 001), and Hiking (β = −.32, p = .003) also predicted lower TD. Several Intensity (TD, INT) and Frequency (TD) predictors indicated worse MH and sign reversals relative to bivariate trends. Given strong inter-modality correlations (r = .81–.86, p < 001), these shifts likely reflect suppression, as shared modality variance alters apparent unique effects. Overall, Intensity carried the most MH-relevant information bivariately, followed by Frequency, while Duration was generally weakest. Yet Strength training Duration was the most consistent protective correlate across MH domains, with additional benefits for Swimming and Hiking. Findings confirm that strength-based and controlled-exertion-based PA are especially MH relevant, and that examining PA categories by modality is informative, as high-intensity endurance activity may relate to poorer MH when its unique variance is isolated.

Keywords: types / domains of physical activity; physical activity modalities; frequency–duration–intensity; mental health outcomes; symptom dimensions

[*]corresponding author e-mail: savicnatasa111@gmail.com

SYMPTOM PERCEPTION AS A KEY PREDICTOR OF ASTHMA CONTROL: A FACTOR-ANALYTIC EXAMINATION OF THE BRIEF IPQ

Ana Komlenić[*, 1], Sanja Hromiš[2] & Anđela Keljanović[3]

[1]Institute for Pulmonary Diseases of Vojvodina

[2]Faculty of Medicine, Institute for Pulmonary Diseases of Vojvodina, University of Novi Sad

[3]Faculty of Philosophy, University of Novi Sad, University of Pristina

Illness perceptions shape how individuals interpret and manage chronic health conditions. Guided by the Common-Sense Model of Illness Representations, this study examined the psychometric properties of the Brief Illness Perception Questionnaire (Brief IPQ) among adults living with asthma and assessed the predictive value of cognitive, emotional, and symptom-related representations for asthma control. The research was conducted in December 2024 at the Institute for Pulmonary Diseases of Vojvodina, and all data were processed using the R statistical environment. Ninety-five adults participated in the study (M_{age} = 52, SD = 14). The mean ACT score was 21.44 (SD = 3.77), indicating generally well-controlled asthma. After reverse-scoring items assessing personal control, treatment control, and illness coherence, an exploratory factor analysis (maximum likelihood, oblimin rotation) and a confirmatory factor analysis were performed. Exploratory results supported a stable three-factor structure – emotional representations, symptom/identity and consequence perceptions, and perceived control/coherence – with excellent fit indices ($\chi^2(7) = 7.78$, p = .35; RMSEA = .033; TLI = .987). Confirmatory factor analyses indicated poor fit for one- and two-factor solutions (CFI < .85; RMSEA > .14), while the three-factor model showed the most adequate fit. This pattern is expected given the very small number of items per factor and the conceptual overlap inherent to the Brief IPQ; short scales frequently yield suboptimal CFA fit despite demonstrating stable structures in exploratory analyses. Across regression models, perceived symptom severity emerged as the strongest and most consistent predictor of lower ACT scores (item-level p = .038; factor-level p = .012). Cognitive representations were significant in the composite model (p = .022), whereas emotional representations showed no association with asthma control. The weak association between emotional representations and asthma control may reflect the characteristics of this sample, as participants were predominantly middle-aged adults who have lived with the condition long enough to develop stable coping patterns and reduced emotional reactivity to asthma. These findings emphasize the central role of symptom perception and cognitive evaluations in understanding asthma management. The Brief IPQ demonstrated a stable three-dimensional structure and meaningful predictive validity, supporting its use in both clinical and research contexts.

Keywords: illness perception; Brief IPQ; asthma; factor analysis; ACT; health psychology

[*]corresponding author e-mail: okianna@gmail.com

PREDICTIVE POWER OF THE FOMO EFFECT ON DEPRESSION, ANXIETY, STRESS, AND MENTAL HEALTH: THE MEDIATING ROLE OF EMOTION REGULATION STRATEGIES

Tijana Simić* **& Dragana Stanojević**

University of Priština, temporarily seated in Kosovska Mitrovica, Faculty of Philosophy, Department of Psychology

The Fear of Missing Out (FoMO) effect is a phenomenon associated with heightened emotional discomfort and reduced positive mental health. Although its negative impact on mental state is well documented, the mechanisms mediating these associations remain insufficiently explored. The aim of this study was to examine the predictive power of the FoMO effect in relation to depression, anxiety, stress, and positive mental health in adults, with a particular focus on the mediating role of emotion regulation strategies (emotional suppression and cognitive reappraisal). The study included 303 participants (246 female and 57 male), with an average age of $M = 28.4$ ($SD = 7.40$). Data were collected using the FoMO Scale (FoMOs), the Depression, Anxiety and Stress Scale (DASS-21), the Emotion Regulation Questionnaire (ERQ), and the Mental Health Continuum – Short Form (MHC-SF). The results showed that the FoMO effect explained 20.65% of the variance in depression with a significant F value ($F = 25.932$, $p < .05$); the direct effect of FoMO remained significant ($\beta = 2.44$, $t = 7.22$, $p < .001$), while emotional suppression mediated this relationship (indirect effect = .279, BootSE = .118, 95% CI .082–.542). Furthermore, the FoMO effect explained 17.80% of the variance in anxiety ($F = 21.569$, p < .05); the direct effect remained significant ($\beta = 2.50$, $t = 6.75$, $p < .001$), with emotional suppression mediating this association as well (indirect effect = .020, BootSE = .108, 95% CI .018–.436). The FoMO effect also explained 26.08% of the variance in stress ($F = 35.158$, $p < .05$); the direct effect is significant ($\beta = 2.80$, $t = 8.42$, $p < .001$), and emotional suppression mediated this relationship (indirect effect = .223, BootSE = .125, 95% CI .117–.604). Finally, the FoMO effect explained 6% of the variance in positive mental health ($F = 6.3561$, $p < .05$); the direct effect is significant ($\beta = –.668$, $t = –3.24$, $p < .001$), with emotional suppression again serving as a mediator (indirect effect = –.125, BootSE = .066, 95% CI –.273–.018). Although cognitive reappraisal was included as one of the examined strategies, the results did not support its statistical significance in the proposed model. Overall, the findings indicate that the FoMO effect positively predicts the triad of psychological distress and negatively predicts positive mental health, both directly and indirectly through emotional suppression. Adults with higher FoMO scores tend to experience elevated levels of psychological distress, lower mental well-being, and are more likely to engage in emotional suppression which further contributes to distress and diminished mental health.

Keywords: FoMO effect, emotion regulation, depression, anxiety, stress, mental health

*corresponding author e-mail: tijana.zivkovic@pr.ac.rs

THE MEDIATING ROLE OF PATHOLOGICAL PERSONALITY TRAITS AND EMOTIONAL REGULATION MOTIVES IN THE RELATION BETWEEN CHILDHOOD TRAUMA AND SUBSTANCE ABUSE

Marko Đurica*

Department of Psychology, Faculty of Media and Communication, Singidunum University

Traumatic childhood experiences represent a significant risk factor for mental health problems, including substance use disorders (Hughes et al., 2017). However, the mechanisms by which trauma leads to problematic substance use remain incompletely understood. Developmental psychopathology models suggest that early trauma may influence substance use through intermediate psychological mechanisms rather than directly (McLaughlin & Hatzenbuehler, 2009). The aim of this study was to examine whether pathological personality traits and emotional regulation motives for substance use (avoiding anxiety and depression) may have a mediating role in the relationship between adverse childhood experiences and the consequences of substance use. The study involved 224 participants from the general population (64.7% female, M = 33.8 years, SD = 12.0) who completed questionnaires measuring adverse childhood experiences (ACE-IQ), pathological personality traits (PID-5-BF), substance use motives (SUMM), and substance use consequences (AUDIT/DUDIT). 83.9% of participants reported at least one adverse childhood experience. Alcohol was the dominant substance (87.1% reported some form of use), with predominantly recreational patterns. Mediation analysis was conducted using Hayse's PROCESS Macro tool. Tested model showed complete mediation. The serial mediation model, from childhood trauma through pathological traits and motives to substance use, explained 28% of the variance in problematic use, with a significant sequential pathway (β = .04, SE = .01, p = .004, 95% CI [.01, .07]). The direct effect of trauma on substance use was not significant when mediators were included (β = .07, p = .21). These findings suggest that childhood trauma does not directly lead to problematic substance use but operates through a specific developmental sequence involving personality trait formation and subsequent motive development. The results might have important clinical implications, indicating the need for treatment approaches that address motives and pathological personality traits beyond establishing abstinence, as well as prevention through early interventions focused on developing emotional regulation skills in children who have experienced adversities.

Keywords: childhood trauma; pathological personality traits; substance use motives; mediation analysis; general population

*corresponding author e-mail: marko.djurica.20241508@fmk.edu.rs

THE ASSOCIATION BETWEEN EMOTIONAL INTELLIGENCE AND VIDEO GAME ENGAGEMENT: A META-ANALYSIS

Neda Janićijević*, Mateja Vrška, Aleksa Pavlović, Nikola Urošević, Srđan Bogojević & Danka Purić

Laboratory for Research of Individual Differences, Department of Psychology, Faculty of Philosophy, University of Belgrade, Serbia

As the number of people playing video games continues to grow, researchers have begun to investigate the association between playing video games and psychological variables such as aggression, addiction, well-being, and, more recently, emotional intelligence (EI). EI is typically conceptualised either as a trait or as an ability involving the perception, understanding, expression, and regulation of emotions. The main aim of the study was to conduct a meta-analysis to determine the direction and strength of the relationship between EI and video game engagement (gaming frequency and problematic gaming). We hypothesized a small negative correlation. We also expected that the operationalisation of gaming would moderate the association, with stronger correlations for problematic gaming (gaming addiction) than for the frequency of playing. Searches of PubMed, ScienceDirect, SAGE, PsychiatryOnline, OpenDissertations, and OSFPreprints databases, without publication year restrictions, identified 161 effects from 53 studies (dated from 2008 to 2025) that examined associations between EI and video game engagement in adolescent and adult samples. EI was predominantly assessed using trait measures (k = 145), while gaming was assessed via gaming disorder diagnosis (k = 15), gaming addiction questionnaires (k = 104), or gaming frequency indices (k = 38). A multilevel random-effects meta-analysis yielded a small negative correlation, r = -.15, 95% CI [-.19, -.11], p < .001. Heterogeneity was significant, Q(160) = 3283.41, p < .001, indicating substantial between-study variability and justifying the examination of moderators. The type of gaming measure significantly moderated this association: effects were weakest for frequency of play (β = -.05, 95% CI [-.11, .00]), moderate for gaming disorder diagnosis (β = -.15, 95% CI [-.24, -.06]) and strongest for video gaming addiction questionnaire scores (β = -.20, 95% CI [-.24, -.17]). Higher reliability of EI measures was also associated with stronger negative effects (β = -.81, 95% CI [-1.21, -.42]), whereas other moderators (age, gender, country, sample type, EI conceptualisation) were non-significant. Results highlight the need to distinguish and further research differences between addictive and high-frequency gaming. Moreover, although it is theoretically important to include more rigorous ability-based EI measures, they appear to have been absent from gaming studies.

Keywords: meta-analysis; emotional intelligence; video game engagement; gaming; correlational studies

*corresponding author e-mail: janicijevic.neda@gmail.com

DARK TRAITS GO ONLINE: MOTIVATIONAL PATHWAYS TO SOCIAL MEDIA SCREEN TIME

Jelena Spasić[*, 1], Ivana Peruničić-Mladenović[1], Nikola Petrović[1] & Dragan Bjelica[2]

[1]University of Belgrade, Faculty of Philosophy, Department of Psychology

[2]University of Belgrade, Faculty of Organizational Sciences

Growing evidence suggests that patterns of social media (SM) use have important implications for psychological well-being, particularly among youth. Although problematic SM use is often defined through screen time, most studies rely on self–reports and rarely integrate personality predictors and motivational mechanisms, particularly trolling-related motives. This study addresses these gaps by testing a motivational mediation model using objective device-recorded screen time. A community sample of SM users (N = 380, age range 16-26 years, M = 22.27, SD = 1.90; 74.4% women, 25% men, and 0.6% non-binary) completed the Short Dark Tetrad Scale (Machiavellianism, Narcissism, Psychopathy, Sadism) and scales for motivation for SM use, including author–developed subscales. Screen time was defined as average weekly SM use based on device-recorded logs. Exploratory factor analysis was conducted in SPSS, and structural equation modeling in R. Exploratory factor analysis identified three higher-order motivational factors–self presentation/popularity, connection and shared values, and trolling/antagonism–explaining 68.14% of the total variance. Structural equation modeling showed good fit, $\chi^2(7) = 12.53$, $p = .08$, CFI = .97, RMSEA = .04. Narcissism ($\beta = .23$, $p < .001$) and Machiavellianism ($\beta = .23$, $p < .001$) positively predicted the self-presentation motive. Sadism negatively predicted connection and shared values ($\beta = -.20$, $p < .001$), and both Sadism ($\beta = .33$, $p < .001$) and Machiavellianism ($\beta = .12$, $p < .05$) positively predicted trolling motives. All three motives uniquely predicted greater screen time: self-presentation ($\beta = .24$, $p < .001$), connection motives ($\beta = .14$, $p < .01$), and trolling ($\beta = .15$, $p < .05$). Indirect effects indicated that Narcissism and Machiavellianism were associated with higher screen time via self-presentation motives, whereas Sadism predicted higher screen time via trolling motives. Psychopathy did not show significant associations with motivational factors in the tested model. The findings suggest that increased objectively measured screen time may serve as a behavioral marker of intensified psychological needs expressed through personality-specific motivational pathways. Clinically, this raises the question whether needs related to validation, antagonism, or affiliation can be adequately regulated in the digital context, or whether prolonged online engagement reflects a risk for persistent unmet needs.

Keywords: screen time; dark tetrad; motivation; social media

[*]corresponding author e-mail: *jsjselenaspasic@gmail.com*

IMPROVING PSYCHOTHERAPY TRAINEES' MENTAL HEALTH ASPECTS USING FUTURE-ORIENTED INTERVENTIONS

Olga Tuchina[*, 1] **& Dmitri Shustov**[2]

[1]Psihopolis; International Institute for Developmental Transactional Analysis

[2]I.P. Pavlov Ryazan State Medical University

Impairments in Future Thinking (FT) - the capacity to simulate, predict, and plan future events, are linked to anxiety, depression, problematic decision making, and substance abuse – issues that may often affect mental-health clinicians. Few therapies target FT deficits to reduce other symptoms or integrate their remediation into mental-health training. The "Memory-of-the-Future-Focused Psychotherapy" (MFFP) continuous education training addresses this gap, integrating research data on FT with psychodynamic (Transactional Analysis, TA) therapy. MFFP includes an experiential module (24 hours / 6 days) embedding structured FT tasks (Future Fluency Task; Cultural Life Script; episodic future simulation; Self-defining memories and future projections; Lifeline; "final scene") in a group-therapy format. Mental health and FT deficits are assessed pre- and post- this module. A theoretical module (96 hours) develops competencies to analyze and further modify trainees' FT deficits across its phenomenology; affective and motivational themes; coherence; specificity, and maladaptive implicit narrative scripts. Participants acquire intervention skills (narrative elaboration, re-scripting, episodic specificity enhancement), to modify maladaptive explicit and implicit FT patterns. MFFP effectiveness for symptomatic change was evaluated in 29 MFFP trainees (mean age 43.03, *SD* = 7.2; 17.2% men) and 30 trainees of a non-FT-focused TA-training program (mean age 44.5, *SD* = 8.4; 20% men). In MFFP, significant pre-post reductions were found for alcohol use (AUDIT, Z = -2.7; p = .01, r = .5); General Symptom Index (Z = -2; p = .04; r = .37), Positive Symptom Total score (Z = -2.1; p = .03; r = .4), Interpersonal Sensitivity (Z = -3.5; p = .001; r = .65) on Symptom Checklist-90-R, and difficulties describing feelings (Toronto Alexithymia Scale-20, Z = -1.96; p = .05; r = .36). Likert-scale evaluations showed MFFP trainees' higher gains in perceived quality of life (Z = -2.2; p = .03; η^2 = .09), ability to form realistic and helpful future images (Z = -2.4; p = .02; η^2 = .1), planning (Z = -2.4; p = .02; η^2 = .1); and intention implementation (Z = -2.02; p = .02; η^2 = .07) as compared to the controls. MFFP appears to reduce psychological symptoms and improve perceived FT quality in psychotherapy trainees. It expands the educational and therapeutic toolkit for mental-health professionals and supports safer and more effective clinical practice.

Keywords: Psychotherapy Training; memory of the future; future thinking; autobiographical memory

[*]corresponding author e-mail: shtuchina@gmail.com

BEHIND WORK-RELATED STRESS: A PILOT QUALITATIVE STUDY OF COMMON THEMES IN PSYCHOLOGICAL SUPPORT SESSIONS

Draga Šapić[*, 1, 2, 3] **& Marijana Vitorović**[1, 2]

[1]Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]LIRA lab, Faculty of Philosophy, University of Belgrade

[3]Psychosocial Innovation Network

Living in a capitalist and neoliberal society, employees feel increasing pressure to be productive and dedicated beyond the scope of their work roles, which can affect their overall quality of life. Work-related stress is receiving growing research attention. Furthermore, more companies and employee-wellbeing programs are focusing on improving work-life balance while boundaries between the two become increasingly blurred. Since Serbia is still a developing country, general workplace wellbeing remains an underresearched topic. The aim of the study was to explore what experiences and topics do participants in the psychological support sessions for coping with daily work-related stress feel the need to address. Participants were individuals who voluntarily signed up to take part in support groups for people experiencing work-related stress via an online advertisement. Two support group sessions were conducted in April and May 2025. In total 9 participants attended the sessions (8 females), average age 40.3 years (*SD* = 4.89). The sessions were audio recorded and transcribed verbatim, after which the transcripts were qualitatively analyzed following the principles of phenomenological thematic analysis. Two researchers independently conducted the coding, then compared the codes and reconciled them through discussion and consensus. Based on the codes, they jointly identified initial themes and developed a final set of themes in an inductive and iterative manner. Five main themes emerged from the data: (1) Work overload at the intersection of low resources and high expectations (a. high intensity and scope of work; b. lack of human resources; c. poor work organization; d. pressure to perform), (2) Lack of collegiality and expertise (a. poor workplace relationships; b. management hypocrisy; c. lack of management expertise; d. performance over humanity), (3) Work-life imbalance (a. family-work stress transference; b. work-family stress transference), (4) Exhaustion as a consequence of burnout (a. emotional exhaustion; b. physical exhaustion; c. sick leave and quitting as final resorts), and (5) Personal characteristics that contribute to burnout (a. responsibility and solidarity; b. gender roles). The research findings deepen the knowledge of the most prominent topics when it comes to work-related stress in Serbia. The findings can be used for creating thematic support groups for work-related stress issues, tailored to the individuals' needs.

Keywords: burnout; mental health; support groups

[*]corresponding author e-mail: draga.sapic@f.bg.ac.rs

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MENTAL HEALTH OF REFUGEES IN TRANSIT: SEVEN-YEAR DATA TRENDS

Jana Dimoski[*, 1, 2], Draga Šapić[1, 2], Isidora Živić[2], Irena Stanković[2], Aleksandra Bobić[2], Irena Stojadinović Vujičić[1, 2] & Maša Vukčević Marković[1, 2]

[1]Department of Psychology and LIRA lab, Faculty of Philosophy, University of Belgrade

[2]Psychosocial Innovation Network, Belgrade, Serbia

Research on the mental health (MH) of refugees is limited, particularly in transit contexts, with little evidence tracking MH trends. This study aims to examine the MH of refugees in transit, identify predictors of symptom intensity, and document MH trends over a seven-year period. Seven annually repeated cross-sectional studies with comparable methodologies were conducted, with data collected from 2017 to 2023. Official population data were used to weight the sample for each year by gender, age, and geographical region of origin, enhancing annual representativeness for the population under study. A total of 1375 refugees participated in the study, 87.2% male, average age 25.66 years (SD = 8.33), originating from the Middle East and Africa, and residing in Serbia as a case study of a transit context along the route to Europe. They completed the Refugee Health Screener-15 (RHS-15) and a sociodemographic questionnaire. Results revealed a high percentage of participants who screened positive for MH problems (90.5% for the whole sample). To analyze trends in MH symptomatology across a seven-year period, a one-way ANOVA with polynomial contrasts was conducted. Results revealed a statistically significant fifth-order contrast for all measures analyzed – the RHS total score, $F(1, 1369) = 10.656$, $p = .001$, depression, $F(1, 1369) = 9.499$, $p = .002$, anxiety, $F(1, 1369) = 5.949$, $p = .015$, and PTSD subscale, $F(1, 1369) = 10.177$, $p = .001$. To identify predictors of symptom intensity, a linear mixed model with random intercepts for participants was applied. Results indicated a significant effect of symptom type on symptom intensity ($F(2, 716) = 20.396$, $p < .001$), with fixed-effect estimates showing that anxiety symptoms were significantly higher than both depression ($t(716) = -3.172$, $p = .002$) and PTSD ($t(716) = -3.215$, $p = .001$). Health conditions significantly predicted symptom intensity ($F(1, 349) = 17.118$, $p < .001$), whereas gender, age, education, international protection status, partner status, children, employment, and months in transit were not significant predictors. Despite its cross-sectional design, non-probability sampling, and reliance on a single instrument for MH assessment, the study reveals a substantial MH burden among refugees in transit and a complex, non-linear symptom trajectory over time, with peaks in 2017, 2020–2021, and 2023, potentially reflecting broader socio-political events such as mass border closures and the COVID-19 pandemic.

Keywords: refugees; transit context; mental health; RHS-15

[*]corresponding author e-mail: *jana.dimoski@f.bg.ac.rs*

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BUILDING THE BLUEPRINT: A QUALITATIVE SYNTHESIS OF COMMUNITY-BASED MENTAL HEALTH STANDARDS

Irena Stojadinović Vujičić[*, 1, 2, 3], Teodra Mašković Đeri[1], Biljana Stanković[1] & Maša Vukčević Marković[1, 2, 3]

[1]University of Belgrade, Faculty of Philosophy, Department of Psychology

[2] Psychosocial Innovation Network

[3]LIRA Lab

Community-based mental health care (CMHC) is internationally recognized as a key step forward for mental health systems globally (WHO, 2022). Despite universal consensus, the standards guiding CMHC remain dispersed across numerous international policy documents, leading to the lack of a coherent framework to guide national-level mental health policy and service development. This study aims to systematize CMHC standards found in international policy documents. The specific objectives include: (1) identifying international CMHC standards; (2) examining how these standards are defined and elaborated; and (3) creating a CMHC framework to support policy and services monitoring, evaluation, and development. A sample of 44 policy documents published in English after 2001 and addressing CMHC was retrieved from the official WHO, UN, EU repositories through a systematic search and two-step screening process. Inductive qualitative content analysis was used, allowing themes and categories related to CMHC standards to emerge directly from the data. Multiple researchers independently coded the documents, followed by consensus-building and iterative refinement of the coding framework. Analysis was conducted at the paragraph/chapter level. The findings highlight three core guiding principles of CMHC: person-centered, recovery-oriented, and human-rights-based approaches implemented through an integrated model of care that links mental health services with broader social and socioeconomic support. Standards for organizing and delivering these services include multidisciplinary, multisectoral, and participatory approach, alongside quality, accessibility, availability, and cultural acceptability of services. This study provides the first comprehensive synthesis of international CMHC standards. The resulting framework could be used as guidelines when assessing the alignment of national mental health systems with international expectations, as well as when identifying priority areas for reform towards policies and services that are evidence-based, rights-based, and anchored in the community.

Keywords: community-based mental health care; qualitative content analysis; mental health policy

[*]corresponding author e-mail: *irena.stojadinovic@f.bg.ac.rs*

THE ROLE OF OPTIMISM IN PREDICTING PHYSICAL HEALTH: EXPLORING THE MEDIATING EFFECTS OF HEALTH BEHAVIORS AND POSITIVE AFFECT

Katarina Protić*
Faculty of Philosophy, University of Belgrade
Tilburg School of Social and Behavioral Sciences, Tilburg University

Optimism, a personality trait related to expecting positive outcomes, is often positively associated with physical health. This connection has been especially studied through the theoretical framework of Positive Psychology, suggesting the importance of positive traits in influencing health. This study examined whether optimism predicts physical health, and whether this relationship is partially mediated by both behavioral variables (nicotine consumption, alcohol consumption, physical activity, and healthy diet) and an affective variable (positive affect) using a longitudinal study design. The data for this study were drawn from the LISS Panel, a database collected from the representative Dutch sample. The final sample included 4,007 participants aged between 16 and 99 years. Optimism was assessed using the Life Orientation Test-Revised (LOT-R), while physical health and mediators were measured through self-report items from the LISS Core Studies on Health and Personality. Regression analyses showed that optimism significantly predicted physical health ($\beta = .32$, $p < .001$). Mediation analyses demonstrated significant indirect effects through physical activity ($\beta = .11$, $p < .01$), alcohol consumption ($\beta = .07$, $p = .02$), and positive affect ($\beta = .25$, $p < .001$), whereas nicotine consumption and healthy diet did not emerge as significant mediators. The nonsignificant effects of nicotine consumption and healthy diet may be influenced by measurement limitations, including dose-insensitive assessment of smoking and normative conceptualization of diet. The mediation effect of alcohol consumption was modest and should be interpreted considering its operationalization as drinking frequency rather than quantity or problematic use. Although the mediation effects of physical activity and alcohol consumption were small and partial, they suggest that health behaviors explain only a modest proportion of the optimism-physical health relationship, indicating the presence of additional mechanisms. Positive affect emerged as the dominant pathway linking optimism to physical health. Overall, the findings suggest that optimism contributes to better physical health both directly and indirectly, primarily through affective processes and, to a lesser extent, through selected health behaviors. This indicates that enhancing optimism and positive affect may support physical health, while further research should clarify the contribution of behavioral pathways.

Keywords: optimism; health; positive affect; health behaviors

*corresponding author e-mail: katarinaprotic12@gmail.com

DEPRESSION/ANXIETY AND PROBLEMATIC SMARTPHONE USE: MEDIATING ROLES OF MINDFULNESS, DISTRESS TOLERANCE AND EXPERIENTIAL AVOIDANCE

Adrijana Harangozo[*, 1], Sanda Stanković[2] & Tatjana Vukosavljević Gvozden[1]

[1] University of Belgrade, Faculty of Philosophy, Department of Psychology

[2] University of Belgrade, Faculty of Philosophy, Department of Psychology, LIRA lab

Problematic smartphone use has become a rising public health concern, with increasing evidence linking it to mental health issues such as anxiety and depression. Previous research indicates a complex, bidirectional relationship between these constructs. This study specifically examines problematic smartphone use as a dysfunctional strategy for managing emotional experiences associated with anxiety and depression. While several studies have explored potential mediators in these associations, these effects remain insufficiently understood. The main aim of our study was to investigate the mediating roles of mindfulness, distress tolerance, and experiential avoidance in the relationships between depression and anxiety with problematic smartphone use. Based on previous empirical findings, as well as the compensatory internet use and emotion regulation theories, we hypothesized that the aforementioned variables would exert mediating effects. Data were collected online via a Google Forms survey distributed across various social media platforms. The sample consisted of 313 participants from the general population (M_{age} = 38.18 years, SD_{age} = 15.95; 73.2% women, 26.2% men). To examine the proposed mediating effects, a path analysis was conducted using the PROCESS macro for SPSS, controlling for age, gender and years of education. Experiential avoidance mediated relationships between both depression (b = .12, 95% CI [.03, .24]) and anxiety (b = .11, 95% CI [.03, .21]) with problematic smartphone use. Distress tolerance mediated the association between anxiety and problematic smartphone use (b = .11, 95% CI [.02, .22]). Mindfulness did not emerge as a significant mediator. These findings may inform the development of interventions aimed at preventing and treating problematic smartphone use. Specifically, interventions aimed at enhancing the ability to tolerate anxiety and to accept dysfunctional emotional experiences related to depression and anxiety may be particularly effective.

Keywords: problematic smartphone use; anxiety; depression; distress tolerance; experiential avoidance

[*]corresponding author e-mail: adrijanaha@gmail.com

PSYCHOLOGY OF ART

MEASURING THE EXPERIENCE OF FRESCO ART: DEVELOPMENT AND VALIDATION OF A SIX-DIMENSIONAL SCALE

Ivan Stojilović, Tijana Todić Jakšić, Aleksandra Dimitrijević, Isidora Komadina & Jugoslava Rakić
Faculty of Philosophy, University of Priština in Kosovska Mitrovica

Religious frescoes function simultaneously as aesthetic, spiritual and cultural artefacts, yet there is a lack of instruments that systematically capture this multidimensional experience. The present study aimed to develop and validate a self-report scale assessing subjective responses to fresco art, building on the model of aesthetic experience by Csikszentmihalyi and Robinson (1990) and extending it to the context of Orthodox Christian frescoes.
A pool of 68 items was generated to reflect six dimensions: Visual–Aesthetic, Emotional, Cognitive, Communicative, Spiritual–Transformative and Sociocultural. Items were rated on a 7-point Likert scale. Data were collected from N = 425 participants (M_{age} = 26.40, SD = 12.08, range 17–72; 78.1% women; 93.9% Orthodox Christian) via online questionnaires and during visits to medieval Serbian monasteries; participants also completed a religiosity measure. Exploratory factor analysis (Principal Axis Factoring, oblimin rotation) strongly supported a six-factor structure (KMO = .982; Bartlett $\chi^2(2278) = 43464.35$, $p < .001$). On the basis of loadings, redundancy and content coverage, a 36-item version (6 items per factor) was retained. Confirmatory factor analyses showed that a six-factor correlated model (CFI = .945, TLI = .942, RMSEA = .054, SRMR = .047) and a hierarchical model with six first-order factors and one higher-order factor (CFI = .943, TLI = .940, RMSEA = .055, SRMR = .049) clearly outperformed a one-factor model (CFI = .708, TLI = .695, RMSEA = .126, SRMR = .096).
Internal consistencies were excellent (α = .95–.97; AVE ≥ .76). All six dimensions correlated positively with religiosity, most strongly for Spiritual–Transformative (r = .47, $p < .01$) and Emotional (r = .46, $p < .01$), and more modestly for Cognitive (r = .36), Communicative (r = .28), Visual–Aesthetic (r = .22) and Sociocultural (r = .18), all ps < .01. The scale thus provides a psychometrically robust instrument for quantifying aesthetic, emotional, cognitive, communicative, spiritual and sociocultural aspects of fresco-art experience in both psychological and heritage-research contexts.

Keywords: religious art; frescoes; aesthetic experience; scale development; psychometrics

*corresponding author e-mail: ivan.stojilovic@pr.ac.rs

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THE EFFECT OF NARRATIVE ON THE AESTHETIC EVALUATION OF YUGOSLAV INDUSTRIAL DESIGN: ROLE OF VICARIOUS NOSTALGIA

Jelena Stanojević* **& Lara Perić**
Department of Psychology, Faculty of Philosophy, University of Belgrade

Studies have shown that contextual information can modify aesthetic judgment of objects depending on information type and individual differences. However, few studies differentiate between practical information (production methods and functionality) and affective information. In marketing research, affective information often draw on elements of brand heritage, the way brand is presented itself through its history, which can evoke nostalgic associations. In this research we examined the effects of narrative contextual information in practical narratives, which describe functional and visual features of an object, and affective narratives, which highlight historical and cultural background of manufacturers. As well as how individual differences in vicarious nostalgia shape evaluations of everyday object: liking, desire to own and buying intentions, focusing on industrial design of the former Yugoslav Republic. Based on previous studies, we predicted (H1) that either narrative would increase object ratings, and (H2) that affective narratives would enhance ratings only among individuals who reported higher levels of evoked vicarious nostalgia. Participants (N=160) aged 18-30 took part in a mixed design experiment with narrative type (practical, affective and without narrative) as a within-subject factor and a between-subject factor, vicarious nostalgia (low and high), measured by Vicarious Nostalgia Scale. Stimuli consisted of 30 photos of home furnishing items (e.g. vases, clocks, lamps) typical for Yugoslav period. Each photo was paired with all narrative types using Latin square design. Results show that practical narratives generally increased desire for ownership ($F(2, 290.865) = 4.597$, $p = .013$, $\eta^2 = .028$) and purchase intentions ($F(2, 300.722) = 4.867$, $p = .009$, $\eta^2 = .030$) compared to situation without narrative and affective narrative. While, no significant difference were found for liking ratings. Vicarious nostalgia moderated narrative effects: participants with high nostalgia levels liked ($F(2, 279.845) = 7.059$, $p = .002$, $\eta^2 = .043$), wanted to own ($F(2, 291.007) = 4.629$, $p = .013$, $\eta^2 = .028$) and wanted to buy ($F(2, 298.887) = 3.439$, $p = .036$, $\eta^2 = .021$) objects more when any contextual information was present. The effect of affective narratives emerged only among individuals with high vicarious nostalgia. Overall, evaluations of everyday objects are not solely influenced by percieved functionality, but also by evoked emotion and conveyed meaning.

Keywords: aesthetic evaluation; vicarious nostalgia; narrative effect; Yugoslav industrial design

*corresponding author e-mail: *jstanojevic30@gmail.com*

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WHO CREATED THAT PIECE? AI- AND GENDER-BIAS IN CREATIVITY JUDGMENTS REGARDING PAINTINGS AND POEMS

Mina Hagen[*,1,2], **Johannes Keller**[3] **& Milica Popović Stijačić**[1,2]

[1]Department of Psychology, Faculty of Media and Communications, University of Singidunum

[2]FMK Lab - Laboratory for Psychological Research, Faculty of Media and Communications

[3]Department of Psychology & Education, Ulm University, Germany

Earlier work found negative bias against AI-labelled art across multiple dimensions. In this study, we varied paintings and poems, labelling them as man-made, woman-made, or AI-generated, and explored how viewers/readers perceived the artwork on the three dimensions. 651 adults participated in the experiment, aged 18 to 63 (46% men; Mage = 32.82 ± 12.58), randomly assigned to one of 6 conditions, which were varied across two main factors: type of art (ToA; poem or painting) and generator of the artwork (GoA; male, female, or AI), with participants' gender as the third factor. Each participant rated the same stimulus (one poem or painting) and only the label varied - created by a man, a woman, or an AI. We ran three-factor ANCOVAs (experience with art as covariate). Participants assessed the creativity, pleasantness, and arousal of the presented artwork (PA), as well as the creativity of the artists (CoA - How creative is this person/AI algorithm?) and their entire artwork (CoEAW - How creative is the art produced by this person/AI algorithm?) on 7-point Likert scales. We pretested artworks and chose those with the fewest extreme mean values on the evaluation scales. For creativity of the PA, participants gave higher ratings for paintings than poems: $F(1, 613) = 5.23$, $p = .02$, $\eta^2 = .01$, women gave higher ratings compared to men $F(1, 613) = 6.60$, $p = .01$, $\eta^2 = .01$ and AI-generated artwork was rated as significantly less creative compared to human artists: $F(2, 613) = 12.81$, $p = .01$, $\eta^2 = .04$. Concerning the CoEAW of artists, the same pattern of results was recorded as in previous analysis. However, besides AI bias, men were rated as more creative than women: $F(2,634) = 29.86$, $p < .01$, $\eta^2 = .09$. The gender and AI bias were also recorded for CoA: $F(2,634) = 40.43$, $p = .01$, $\eta^2 = .11$. There were no significant effects on pleasantness. However, concerning the arousal, AI artwork was evaluated as less arousing than male or female artwork: $F(2,612) = 5.85$, $p = .01$, $\eta^2 = .02$. Men found poems less arousing than paintings, while women rated poems as more arousing than paintings: $F(1,612) = 5.76$, $p = .02$, $\eta^2 = .01$. Study showed a strong negative AI-bias: when labelled as AI-generated, artwork was evaluated as less creative and less arousing (but not less pleasant). Gender-bias observed for the creativity of artists and their entire artwork, but not for the specific PA, raises essential questions about the gender-stereotyped perception of artists and their work.

Keywords: AI bias; artwork; creativity; gender bias; pleasantness

[*]corresponding author e-mail: *mina.hagen@gmail.com*

SOUNDTRACK OF RESISTANCE: MUSIC LISTENING PRACTICES AND THEIR MOTIVATIONAL ROLE DURING STUDENT BLOCKADES IN SERBIA

Anđela Milošević[*,1] & Marko Vesić[2]

[1]Department of Psychology, Faculty of Philosophy, University of Belgrade

[2]Department for Composition and Orchestration, Faculty of Music, University of Arts in Belgrade

During 2024–2025, student blockades took place across universities in Serbia, representing a period of collective action and social engagement. Music has historically played an important role in Serbia, reflecting social conditions, expressing identities, and supporting emotional experiences. This exploratory study examined students' music listening practices during the blockades, changes from the pre-blockade period, participants' perceptions of music's impact, and key songs associated with the student movement, including their potential role as motivators for participation. The sample included 107 University of Belgrade students (53.3% women), aged 18–28 (M = 21.61), with data collected online near the end of the blockades. Music-related variables were assessed using single-item questions with predefined response options. Most participants reported that the frequency of music-related activities at their faculty was adequate (55.1%), though a substantial portion would have preferred more (41.1%). Private listening habits largely remained unchanged relative to the pre-blockade period (69.2%), while just over one fifth of participants (21.5%) reported increased listening. Patterns of individual versus collective listening largely remained unchanged compared to the pre-blockade period (81.3%), while 11.2% of participants reported a shift toward more collective listening during the blockades. Music was generally perceived as contributing meaningfully to the atmosphere (70.1%), and many emphasized its role in enhancing social dynamics and fostering a sense of togetherness (70%). Participants identified key songs associated with the student movement and the motivations these songs evoked through open-ended questions. Three patterns emerged: songs widely recognized by participants as significant for the student movement, fostering unity and solidarity; songs meaningful mainly at the individual level for motivation; and accounts indicating that music was not a primary motivator, but shaped the atmosphere and accompanied the experience. Overall, music played an important role for most students in creating atmosphere, sustaining group dynamics, and engagement, consistent with theoretical accounts of music's role in social, motivational, and personal functions. These findings highlight the need for further research on how musical practices influence participation and solidarity in contemporary protest movements.

Keywords: music; music listening; university students; student blockades in Serbia; exploratory study

[*]corresponding author e-mail: *milosevicka012@gmail.com*

'HEART DRUMS THE ETERNAL TAM-TAM OF RESISTANCE': MUSICAL ACTIVITIES DURING THE STUDENT BLOCKADES IN SERBIA

Marko Vesić[*,1] **& Anđela Milošević**[2]

[1]Department for Composition and Orchestration, Faculty of Music, University of Arts, Belgrade

[2]Department of Psychology, Faculty of Philosophy, University of Belgrade

Musical activities during the ongoing student protests in Serbia can be understood as an integral part of the movement, occurring in public spaces, private settings (Rosenberg, 2013), and faculty premises (Lynsky, 2011), while also serving as a vital medium for engaging with social and political conditions (Martinelli, 2013) and fulfilling multiple personal functions – enabling emotional expression, shaping identity, and supporting emotion regulation – roles particularly salient during periods of social instability (Miranda, 2013). Grounded in this theoretical framework, present descriptive study investigates the roles and meanings of musical activities for students during the 2024–2025 blockades in Serbia. Data were collected through an online survey completed by 107 University of Belgrade students (53.3% women), aged 18 to 28 (M = 21.61, SD = 2.29), primarily from undergraduate studies (78.5%), during the later stages of the blockades. Participants indicated differing degrees of engagement in the blockades, ranging from occasional attendance and support (48.6%) to full engagement through daily participation in organization and duties (14%), with 29% spending more than two hours daily at the faculty. At the faculty plenaries, music playback was largely guided by context and timing, taking into account local comments and expected periods of silence – song selection generally avoided tracks promoting hatred, works by pro-regime performers, and folk music, with only 26.2% of respondents reporting unregulated musical activities. Overall, 82.3% of students considered these musical activities appropriate within the faculty setting. The most common musical activities were spontaneous playback from phones and laptops, collective music-making, and organized events such as playback sessions and karaoke nights (73.8%), while passive listening during shared-space upkeep, parties, and dancing occurred in 43% of daily routines. Music was generally avoided in the night and morning, played moderately during the day and most frequently in the evening. A smaller proportion reported musical activities such as blockade choirs, panels, collective listening, and song production, with DJs, themed evenings, and concerts often held, for example, in the Student Cultural Center. These findings highlight that musical activities functioned not only for collective expression and identity but also as a medium for emotional engagement, solidarity, and community-building within the student movement.

Keywords: musical activities; students; collective action; sociopolitical context; protests

[*]corresponding author e-mail: vesic.marko9@gmail.com

KATARINA MARIĆ FOUNDATION

RAZUMEVANJE OPTEREĆENJA MAJKI-NEGOVATELJICA OSOBA SA RAZVOJNIM SMETNJAMA U SRBIJI

Iva Petrović
Filozofski fakultet, Univerzitet u Novom Sadu | *iivapetrovicc@gmail.com*
Mentorka:
dr JELICA PETROVIĆ

„Šta će biti sa mojim detetom kada mene ne bude?“ predstavlja intimno i univerzalno pitanje mnogih roditelja dece sa intelektualnim i razvojnim poteškoćama, ujedno osvetljavajući dugoročni, često nevidljiv teret neformalne brige. Iako se u javnom diskursu sve češće pominju problemi i potrebe roditelja koji svakodnevno neguju svoju decu, njihov pravni status, kao i sam broj neformalnih negovatelja u Srbiji, ostaju nedovoljno istraženi. Ovo kvalitativno istraživanje ima za cilj da doprinese većoj vidljivosti života majki – primarnih negovateljica dece sa mentalnim poteškoćama – kao višestruko marginalizovane društvene grupe. Kroz analizu njihovih subjektivnih iskustava i mapiranje tema u njihovim narativima, kritički se preispituje koncept „opterećenja negovatelja“ i iznova se osmišljava kao kontekstualizovano, celoživotno, kulturno i društveno iskustvo, a ne isključivo kroz negativne aspekte ili kao teret. Posebna pažnja posvećena je načinu na koji ove žene artikulišu svoju ulogu i svoj identitet u uslovima izostanka institucionalne podrške, pravnog prepoznavanja i društvenog razumevanja.

Ključne reči: opterećenje negovatelja; neformalno negovateljstvo; roditeljstvo osoba sa razvojnim smetnjama; tematska analiza, iskustvo negovanja

ISKUSTVA MAJKI U VEZI SA DONOŠENJEM ODLUKE O UPISU DETETA U ŠKOLU ZA OBRAZOVANJE UČENIKA SA SMETNJAMA U RAZVOJU

Olivera Ilić
Filozofski fakultet, Univerzitet u Beogradu | *olivera.ilic1604@gmail.com*
Mentorka:
dr OLJA JOVANOVIĆ

Cilj ovog master rada je razumevanje iskustava majki u procesu donošenja odluke o upisu deteta u školu za obrazovanje učenika sa smetnjama u razvoju. S obzirom na to da je fokus na subjektivnim doživljajima majki, odlučila sam da u radu koristim interpretativnu fenomenološku analizu. Kako bih osigurala da je iskustvo donošenja odluke o upisu još uvek sveže i relevantno za sagovornice, uzorak obuhvata pet majki čija deca pohađaju prvi razred škole za decu sa smetnjama u razvoju. Podatke sam prikupila sprovodeći polustrukturisane intervjue i vodeći se agendom razvijenom za potrebe ovog istraživanja. Analiza je sprovedena prvo na idiografskom nivou kroz identifikovanje personalnih iskustvenih tema (PET), a zatim i na grupnom nivou kroz formiranje grupnih iskustvenih tema (GET), što je omogućilo uvid i u specifične perspektive majki, ali i u zajedničke obrasce njihovih iskustava. Kroz proces analize formulisala sam četiri grupne iskustvene teme (GET): (1) Šta je najbolja opcija za moje dete? Usklađivanje potreba deteta sa sistemskim mogućnostima, (2) Da li je odluka samo moja? Usaglašavanje roditeljskih perspektiva, (3) Jesam li donela ispravnu odluku? Konačnost odluke i emocije koje je prate (4) Šta ova odluka govori o meni? (Re)definisanje identiteta kroz donetu odluku. Dobijeni nalazi pružaju dublji uvid u način na koji intervjuisane majke doživljavaju složen proces donošenja odluke o mestu obrazovanja svoje dece. Rezultati potvrđuju da se roditeljski izbor, u kontekstu Srbije, ne doživljava samo kao lična odluka, već kao odluka koja odražava sistemska ograničenja i oblikuje se kroz proces pregovaranja unutar porodice. Majke najčešće pregovaraju sa suprugom, pri čemu je taj proces često posredovan savetima i stavovima stručnjaka. Odluka je, takođe, neraskidivo povezana sa identitetima majki i vrednostima koje one pripisuju svojoj roditeljskoj ulozi. Rad doprinosi razumevanju procesa donošenja ove odluke, ali i kvaliteta inkluzivne prakse u Srbiji, čime otvara prostor za unapređenje podrške porodicama.

Ključne reči: roditeljska odluka; obrazovne politike; škola za decu sa smetnjama u razvoju; inkluzivno obrazovanje; interpretativna fenomenološka analiza

DA LI MODEL PATOLOŠKIH CRTA BEZ PSIHOTICIZMA U MEĐUNARODNOJ KLASIFIKACIJI BOLESTI MKB-11 MOŽE DA OBJASNI KLINIČKU SIMPTOMATOLOGIJU?

Katarina Stanić
Filozofski fakultet, Univerzitet u Beogradu | *kskacastanic3@gmail.com*
Mentorka:
dr IVANA PERUNIČIĆ MLADENOVIĆ

U jedanaestoj reviziji Međunarodne klasifikacije bolesti MKB-11 predstavljen je potpuno dimenzionalan model poremećaja ličnosti, koji obuhvata pet patoloških domena: Negativni afektivitet, Odvojenost, Disocijalnost, Dezinhibiciju i Anankastiju. Dijagnostički i statistički priručnik za mentalne poremećaje DSM-5 predložio je sličan dimenzionalni model, pri čemu se na mestu poslednje crte, umesto Anankastije, nalazi Psihoticizam. Brojne studije utvrdile su nisku empirijsku potkrepljenost i slabu kliničku korisnost Anankastije, zbog čega se postavlja pitanje da li je Psihoticizam ipak adekvatnija dimenzija za razmatranje patologije ličnosti. Ovo pitanje razmotreno je u okvirima ovog master rada, a Dezintegracija je korišćena kao konceptualni ekvivalent psihoticizma. Istraživanje je sprovedeno na uzorku od 155 pacijenata koji se leče na Institutu za mentalno zdravlje, i 174 ispitanika iz opšte populacije. Svi ispitanici popunili su instrument za procenu Dezintegracije (DELTA-9), dimenzija prema MKB-11 (FFiCD), i simptoma aktuelnih psihičkih tegoba (SCL-90). Rezultati potvrđuju nalaze prethodnih studija o zanemarljivom učešću Anankastije u psihopatologiji, dok se Dezintegracija izdvaja kao ključan prediktor svih patoloških stanja. Anankastija nije ostvarila značajne veze ni sa opsesivno-kompulzivnom simptomatologijom, dok je suprotan pol ovog domena, Dezinhibicija, pokazao značajno učešće u generalnoj psihopatologiji. Nalazi ove studije dodatno osvetljavaju ograničenu vrednost Anankastije za razumevanje poremećaja ličnosti i ukazuju na bitnu prednost uključivanja Dezintegracije, odnosno psihoticizma, kao validnijeg i klinički relevantnijeg domena u okviru dimenzionalnih modela ličnosti.

Ključne reči: MKB-11; poremećaj ličnosti; anankastija; psihoticizam; dezintegracija

BOLESTI ZAVISNOSTI I MRAČNA TETRADA: MEDIJATORSKI EFEKTI ODBRAMBENIH MEHANIZAMA I AFEKTIVNE VEZANOSTI

Ivana Pavlova
Fakultet za medije i komunikacije, Univerzitet Singidunum | i.p.ivanapavlova@gmail.com
Mentor:
dr JANKO MEĐEDOVIĆ

Zavisnost predstavlja složen psihološki problem sa brojnim psihološkim i socijalnim posledicama. Sve veći broj istraživanja ukazuje na povezanost osobina Tamne tetrade ličnosti (makijavelizam, narcizam, psihopatija, sadizam) sa rizičnim i autodestruktivnim ponašanjima. Pored toga, psihodinamski faktori, kao što su mehanizmi odbrane i stilovi afektivne vezanosti, mogu značajno doprineti razvoju i održavanju zavisničkih obrazaca.
Cilj istraživanja bio je da ispita medijatorsku ulogu odbrambenih mehanizama i afektivne vezanosti u odnosu između Tamne tetrade i izraženosti simptoma zavisnosti. Istraživanje je sprovedeno na uzorku od 334 pacijenta Specijalne bolnice za bolesti zavisnosti u Beogradu, većinom muškaraca srednje životne dobi, sa prevashodnim problemom alkoholizma.
Rezultati su pokazali da su osobe zavisne od droga, u poređenju sa zavisnima od alkohola, karakterisane višim nivoom disfunkcionalnosti ličnosti, izraženijim sadizmom i psihopatijom, kao i većom upotrebom nezrelih mehanizama odbrane i anksioznosti u bliskim odnosima. Sve osobine Tamne tetrade bile su pozitivno povezane sa težinom zavisnosti, pri čemu je psihopatija bila najsnažniji prediktor psihičkih, socijalnih i finansijskih disfunkcija. Nezreli mehanizmi odbrane i afektivna anksioznost u bliskim odnosima dodatno su pojačavali simptome zavisnosti. Početak konzumacije alkohola ranije u životu bio je negativno povezan sa makijavelizmom, a pozitivno sa psihopatijom, dok dužina apstinencije nije pokazala značajne korelacije.
Ograničenja studije uključuju neravnomernu strukturu uzorka, nedostatak detaljnih podataka o toku bolesti, kao i ograničenu pouzdanost nekih instrumenata. Preporučuju se dalja istraživanja sa većim uzorcima i boljim merenjima.
Zaključak ističe značaj integrisanja ličnostnih i psihodinamskih faktora u razumevanje i tretman zavisnosti. Poseban fokus treba biti na psihopatiji i nezrelim mehanizmima odbrane, što ima implikacije za razvoj ciljane psihoterapije, uključujući psihoanalitički pristup, terapiju zasnovanu na mentalizaciji i afektivnoj vezanosti, sa ciljem dugoročne psihološke promene i unapređenja funkcionalnosti pacijenata.

Ključne reči: anksiozna dimenzija afektivne vezanosti; bolesti zavisnosti; mračna tetrada; nezreli odbrambeni mehanizmi

ISPOLJAVANJE EMOCIJA I RANJIVOSTI KOD MUŠKARACA U NADOLAZEĆEM ODRASLOM DOBU U KONTEKSTU ROMANTIČNIH ODNOSA

Jana Pavlović
Filozofski fakultet, Univerzitet u Beogradu | *janapavlovic@gmail.com*
Mentorka:
dr BILJANA STANKOVIĆ

Muškarci imaju teškoće da izraze ili komuniciraju sopstvene emocije i budu ranjivi pred drugom osobom (Barrett et al. 1993; Burke et al. 1976; Simon & Nath, 2004). Razlog tome, koji se u literaturi često navodi, je usvajanje dominantnih ideala hegemone maskulinosti kroz emocionalnu socijalizaciju, što ima značajne posledice po njihovo mentalno zdravlje. Tokom nadolazećeg odraslog doba momci se suočavaju sa specifičnim razvojnim izazovima, naročito u kontekstu romantičnih odnosa. Glavno istraživačko pitanje je kako mladići u ovom uzrastu, u Srbiji, doživljavaju ispoljavanje ili izbegavanje ispoljavanja emocija i ranjivosti u romantičnim odnosima i sa kakvim izazovima u ovom domenu se suočavaju u svakoj od faza romantičnog odnosa. Istraživanje je kvalitativno i polazi od interpretativno-fenomenološke epistemološke pozicije. Sprovedeni su polu-strukturisani intervjui sa 10 cis-rodnih heteroseksualnih muškaraca koji su odrasli i trenutno žive u Srbiji, uzrasta od 21 do 26 godina, koji su prethodno imali iskustvo romantičnih odnosa. Rezultati analize pokazuju da je dinamika doživljavanja, tj. ispoljavanja emocija kod momaka u nadolazećem odraslom dobu u kontekstu romantičnih odnosa obeležena spektrom iskustava ohrabrujućih i obeshrabrujućih faktora koji se tiču njihovog doživljaja sebe, devojke i samog romantičnog odnosa, da naklonost iskazuju kombinacijom suptilnih i direktnih znakova, privilegujući ponašanje nad verbalizacijom i da se njihovi mehanizmi nošenja sa neprijatnim osećanjima kreću od vrlo zrelih i funkcionalnih do kontraproduktivnih. Emocionalna regulacija momaka u izvesnoj meri ustrojena je normom patrijarhalnog muškarca koja se usvaja socijalizacijom u porodici i muškom društvu, dok su očekivanja devojaka, bar deklarativno, drugačija. Takođe, patrijarhalne norme se ne usvajaju potpuno neproblematično, već momci teže i njihovoj problematizaciji i preispitivanju, kao i opiranju u svakodnevnom životu. Ipak, one ostavljaju trag na način na koji oni iskazuju dopadanje i naklonost i pokušavaju da prevladavaju neprijatna osećanja. Ni u romantičnim odnosima koji predstavljaju poseban kontekst u kome je ispoljavanje emocija neophodno za građenje odnosa sa devojkom, pa je stoga često i očekivano i ohrabrivano, momci nisu oslobođeni neprijatnog doživljaja ugroženosti kada treba da podele svoje emocije. U radu su prokomentarisana ograničenja ovog istraživanja i pružene smernice za buduća istraživanja i praktične preporuke.

Ključne reči: ispoljavanje emocija; ranjivost; hegemona maskulinost; emocionalna socijalizacija; muškarci; nadolazeće odraslo doba; romantični odnosi

STABILNOST EMOCIONALNOG DOŽIVLJAJA REČI: UTICAJ INDUKOVANJA KOGNITIVNE KONTROLE I LOKALNOG KONTEKSTA

Aleksandra Stanimirović
Filozofski fakultet, Univerzitet u Beogradu | *aleksandra.stanimirovic26@gmail.com*
Mentorka:
dr DUŠICA FILIPOVIĆ ĐURĐEVIĆ

Prethodna istraživanja koja su se bavila odnosom kognitivne kontrole i kontrole emocija ukazala su na preklapanje ova dva procesa, otvarajući pitanje o postojanju zajedničkog mehanizma, ali ne dajući nedvosmislen odgovor. Cilj ovog istraživanja je bio da ispita efekat kognitivne kontrole na kontrolu emocija, operacionalizovane preko stabilnosti procena emocionalnog doživljaja reči. Pored toga, cilj je bio da se ispita efekat lokalnog konteksta na procenu emocionalnog doživljaja reči, kako bi se dao teorijski i metodološki doprinos razrešenju ranijih nekonzistentnih nalaza. U istraživanju su prikupljene procene emocionalnog doživljaja reči, dok je istovremeno manipulisano stepenom kognitivne kontrole (preko procenta nekongruentnih stimulusa u zadatku koji zahteva primenu kognitivne kontrole) i valencom lokalnog konteksta u kom je reč prikazana (pomoću slika imodžija). Zabeleženi su efekti lokalnog konteksta na procene emocionalne valence i pobudljivosti reči. Pozitivan kontekst doveo je do porasta procena emocionalne valence za pozitivne i pseudoreči, dok je izloženost negativnim imodžijima dovela do viših procena pobudljivosti. Premda viši angažman kognitivne kontrole nije doveo do promena u efektu valence konteksta na procene emocionalnog doživljaja reči, zabeležen je njegov uticaj na vreme davanja procena. Skraćivanje vremena davanja procena sa protokom eksperimenta, koje je ukazalo na sveprisutnu adaptaciju na zadatak, zabeleženo je kod svih kategorija stimulusa i svih ispitanika. Ovo je bilo dodatno izraženo u slučaju procena meta u kongruentnom kontekstu, koje su davali ispitanici kojima je indukovan veći stepen kognitivne kontrole. Rezultati ove studije govore u prilog osetljivosti emocionalnog doživljaja reči na valencu lokalnog konteksta. Pored toga, uprkos tome što tradicionalni pristup ukazuje na nemogućnost transfera kognitivne kontrole na kontrolu emocionalnog doživljaja, otkrili smo da se suptilnijom analizom on može detektovati i time otvorili nove horizonte za analizu odnosa dva kontrolna procesa.

Ključne reči: kognitivna kontrola, kontrola emocija, emocionalni doživljaj, lokalni kontekst, stabilnost procena reči

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