



# XVIII INTERNATIONAL CONFERENCE

# DAYS OF APPLIED PSYCHOLOGY

CURRENT CHALLENGES IN PSYCHOLOGICAL  
SCIENCE

BOOK OF ABSTRACTS

**Niš, Serbia**  
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## DAYS OF APPLIED PSYCHOLOGY



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Faculty of Philosophy,  
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18<sup>th</sup> International Conference  
DAYS OF APPLIED PSYCHOLOGY 2022

**Current Challenges in Psychological Science**

**BOOK OF ABSTRACTS**



Niš, Serbia | September 23<sup>rd</sup> – 24<sup>th</sup> 2022.



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# ABSTRACTS



# Keynote Lectures



## CAREER CALLING ACROSS CULTURES

*Michelangelo Vianello*

Department of Philosophy, Sociology, Pedagogy and Applied Psychology,  
University of Padova, Italy

The concept of calling is deeply rooted in western culture, but research in other cultures is increasing. In the last 25 years, the concept has been applied to work, giving rise to a large and increasing corpus of studies on why and how individuals approach work as a calling. Researchers from many non-Western nations began to study the construct of career calling, which seemed to be relevant in their societies. Yet, whether calling is conceptualized equivalently across cultures is an open and pressing question. Most studies adopted an “imposed etic” approach, assuming rather testing that the construct is the same across cultures. Also, many authors would agree that the concept of calling does not exist outside Christianity. In this talk, I will firstly introduce the concept of calling and its western roots, then derive from the many western definitions a comprehensive approach to the study of calling with seven facets. I will then present a theoretical cross-cultural analysis of the most widespread religious traditions that support the notion that calling is a universal human experience of work. I will then present the results of a study that tested this hypothesis across six nations (N = 2491): India, Turkey, China, Italy, the United States, and The Netherlands. We observed that the multidimensional structure of calling and the relative importance of the different dimensions of calling in defining the construct are the same across cultures, and that the overall level of calling is surprisingly higher in non-western countries. Small cross-cultural differences in the intensity with which people from different countries approach their calling domain were observed and will be discussed. Comparisons conducted at the level of facets indicated that Italian and Dutch participants scored lower in Transcendent Summons and Pervasiveness, while Chinese participants scored the highest. Callings in India are especially high in the Purpose and Identity components. Overall, these results are compatible with the notion that calling is a universal human experience, and that culture differently influences the levels of calling’s dimensions but not their importance in defining the construct. Finally, some untested insights will be given on why calling was observed to be higher in non-Western countries.

## **UNPREDICTABLE PAST: SOCIAL IDENTITY APPROACH TO COLLECTIVE MEMORY AND CONFLICT**

***Karina V. Korostelina***

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

This presentation aims to analyze the controversial role and functions of memory sites in the dynamics of identity-based conflict and reconciliation. Memory sites are powerful instruments in the development of representations of the past, validation of power, and valorization of identity meaning. They do not only provoke immediate reactions of identity groups in society but also impact groups' agendas for the future. The embedment of memory sites into dynamics of on-going conflicts reduces their initial ability to provide and support the objective interpretation of historical data or to contribute to reconciliation. Instead, memory sites become places for political manipulation, communal disputes, and clashes over collective memory. The presentation explores the interconnections between collective memory, memory sites, and dynamics of identity-based conflict. It examines collective memory as an ideological construct, discussing how memory sites become intertwined with the transformations of social boundaries and perceptions of relative deprivation, outgroup threat, collective axiology, and power relations.

## **WORDS MATTER: THE IMPACT OF LANGUAGE ON SYMPTOMS AND ILLNESS**

*Jane Ogden*

Department of Psychology, University of Surrey, United Kingdom

Whilst symptoms may have a role for bodily data research indicates that they are also influenced by language with the choice of words impacting upon the perception of symptoms and the ways in which people make sense of their bodies. This talk will explore why words matter and the impact of language and context on a symptoms such as hunger and pain. It will also explore the role of communication between health care professional and patient and how the language used in the consultation can change patient health outcomes in the both the immediate and longer term. For example, qualitative research indicates that symptom perception involves a series of thresholds and that changes in language reflect when symptoms translate from being a sensation to being a perception. Likewise, cross sectional and longitudinal research indicates that words have different meanings to different populations and that the words used to diagnose a health condition can have a longer term impact on the experience of that condition. Further, experimental research across a number of different patient groups indicates that the use of medical, lay or patient matched words can change patient's representations of their health condition and the ways in which they experience their health problems. Therefore whilst individual words such as 'snack', 'meal', 'sore throat', 'tonsillitis', 'obesity', 'heart failure', 'depression' and even just 'health' might seem benign they can influence not only sense making and models of illness but how physical symptoms actually feel and their impact on subsequent behaviour.



# Panel Discussion



## COMMUNITY RESPONSES ACKNOWLEDGING PAINFUL HISTORY

Moderator:

***Juliette Shedd***

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

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Communities around the world are grappling with how to acknowledge and live with historical events that have impacted different sub-groups of the community in different ways. Different local governments and community groups have taken different approaches to reconciliation and remembrance of difficult histories. This panel brings participants from around the world to talk about their experiences with managing complex histories and moving communities from places of pain to reconciliation and hope.



# Symposia



## SYMPOSIUM

### **FOREST BATHING WITHOUT THE FOREST: THE URBAN NATURE EXPERIENCE**

Moderator:

***Denise Dillon***

School of Social and Health Sciences, James Cook University, Singapore

The concept of forest bathing nominally implies immersion within a forest setting, and many research studies testing effects of forest bathing use urban landscapes for comparative purposes. However, there are many forest therapy practitioners operating in highly urbanised environments without ready access to forest experiences such as extensive trails, uninterrupted vistas or time away from traffic noises that one might expect in such settings. In this session, we invited (1) papers from researchers with evidence-based experience of using forest therapy or other types of nature immersion practices in highly urbanised settings; (2) reports of studies employing mindful or spiritual walking or similar techniques in urban settings; (3) reports or conceptual proposals dealing with the matter of 'nature' and how perceptions or constructions of nature have changed over time with the consequent need for updated operationalisations for research purposes. The 4 papers we received report on the current status and/or cases of forest bathing in Japan and Thailand, and on technologically or digitally derived forest bathing practices.

### **CURRENT STATUS OF "FOREST BATHING WITHOUT FOREST" RESEARCH IN JAPAN**

***Harumi Ikei, Hyunju Jo & Yoshifumi Miyazaki***

Chiba University, Japan

Forest bathing is empirically known to have a relaxing effect on humans, and scientific findings are being accumulated. Recently, there has been an increasing interest in the relaxing effect of indoor forest-de-

rived stimuli due to the changes in lifestyle caused by COVID-19. Our research team has been conducting research on the psychological and physiological relaxing effects of forests on humans from both forest bathing itself (field experiments) and forest-derived stimuli targeting the five senses (laboratory experiments). In this presentation, representative findings from several laboratory experiments will be introduced. These were conducted on a female in her twenties in an artificial climate room with a soundproofing function, in which temperature, humidity, and illuminance were adjusted to a constant level. The impression evaluation by the semantic differential and the mood evaluation by the Profile of Mood States were used as psychological indicators. Furthermore, the oxygenated hemoglobin concentration in the brain's prefrontal cortex by near-infrared spectroscopy, and the parasympathetic and sympathetic nervous activities by heart rate variability were used as physiological indicators. The results showed that forest-derived olfactory (Japanese cypress leaf oil), visual (forest images), auditory (sound of a babbling brook), and tactile (touching wood) stimuli increased subjective comfort and relaxation, improved mood states, calmed prefrontal cortex activity, increased parasympathetic nervous activity, and suppressed sympathetic nervous activity. Thus, forest-derived olfactory, visual, auditory, and tactile stimuli bring psychological and physiological relaxing effects (forest-derived stimuli vs. control, psychological indexes: Wilcoxon signed rank-sum test, physiological indexes: paired t-test, each  $p < .05$ ). In the future, we aim to clarify the individual differences, and we are proceeding with analyses using the law of initial values and behavioral characteristics.

*Keywords:* laboratory experiment, five senses, psychological index, physiological index, relaxing effects

# FOREST BATHING DESIGN: A CASE STUDY FROM HOSPITALITY BUSINESSES BASED AROUND KHAO YAI NATIONAL PARK, THAILAND

*Sitsada Sartamorn & Hiroko Oe*

Bournemouth University Business School, United Kingdom

Forest bathing, or Shinrin-yoku, is considered a mindfulness practice and an activity that allows us to immerse and straighten our connection to nature. Therefore, the term forest bathing is starting to gain popularity in western society. However, this positive psychological curing technique began in Japan. The study has suggested positive effects such as relaxation and a healthy mind from the forest bathing; from this suggestion, it has been proven that forest bathing also boosts people's connection toward nature and drives their creative inspiration. We have seen this opportunity as a concept to promote forest bathing in Thailand. Thailand is also considered a touristic country of natural resources and cultural heritage. Several natural forests are located. one of the well-recognized forests is the Khao Yai National Park, listed on the UN World Heritage site. As a result, the area around Khao Yai National is considered a high-value area where upscale boutique hotels, resorts, and large mansions are located. This study will present the case study from hospitality businesses based around Khao Yai National Park and present the modernity and revisiting the design principles related to the ecotherapy and how several hospitality businesses around the area aim to deliver a relaxing getaway experience toward customers via promoting the concept of living with nature. This presentation also discusses the new hospitality concept in Khao Yai National Park, a hospitality business that focuses on innovative and creative design structures where customers will experience the beauty of nature and the artistic design experience. In the methodology, the qualitative research will be used. The research approach will focus using semi-structured questionnaires which will target the business owners and customers in Thailand regarding the concept of ecotherapy and innovative hospitality designs.

*Keywords:* forest bathing, innovative, designs, nature connection, psychological curing, ecotherapy

## CONNECTING WITH NATURE THROUGH TECHNOLOGY DURING COVID-19 PANDEMIC

***Marta Głowacka***

Centre for Interdisciplinary Research into Health and Illness, University of Wrocław, Poland

Since the beginning of Covid-19 pandemic in March 2020 most people have experienced changes to their lifestyle and daily routines. One of them was how and why we connect with nature. A need to leave one's home and venture into natural world was amplified by voices highlighting the health benefits of outdoor spaces. However, pandemic related mitigations limited the options of natural spaces being close enough to be allowed to visit them. Additionally, managed parks closed their gates and the remaining spaces become crowded. A large group of those classified as being at higher risk from the Covid-19 infection shielded in their homes for months. Alternative ways of connecting to nature were sought, with technology being one of them. It could be through using plants and animals identification apps, watching nature themed programmes, using web cams to visit distance places or sharing nature themed photos on social media. The literature review will show the gaps in our knowledge about technologies used to connect with nature during pandemic. An autoethnographic reflection will explore the author experience of how variety of technologies helped her to connect with nature since the start of the pandemic.

*Keywords:* technology, nature connection, autoethnography, Covid-19

# FOREST BATHING WITHOUT FOREST: EXPLORATION OF ENVIRONMENTAL-ORIENTED BEHAVIOURAL CHANGE WITH DIGITAL NATURE IN THE POST-PANDEMIC ERA

*Hiroko Oe<sup>1</sup> & Yasuyuki Yamaoka<sup>2</sup>*

<sup>1</sup>Bournemouth University, United Kingdom

<sup>2</sup>The Open University of Japan

This study focused on the mediating effects of digital forest bathing and quantified the influence of people's behavior and interactions in digital space on effective behavior change in nature. The purpose of this study is to decipher the relationship between these subjective sensations and the transformation to digital and environmentally oriented behaviors objectively and to propose a model and scale. Furthermore, this study focused on what types of people are more likely to change their behavior through the digital environment, classifying respondents into two groups according to personality, and focusing on the influence of each factor and the path that produces the influence. The data used for the analysis consisted of 300 data collected through a questionnaire survey, to which structural equation modeling (SEM) with AMOS26 was applied. The two antecedents focused on were interaction with digital environmental materials in virtual space and connection with others in cyberspace, and the effect of digital forest bathing on environmentally oriented behavior change was examined through the mediation of these two factors. The fully mediated model examined the direct effects of the two antecedents based on a 5000-bootstrap sample, and the model fit was .968 ( $> .90$ ), with a modified goodness-of-fit index, proving the validity of the model. The mediating effect of digital forest bathing was shown to arouse people's environment-oriented behavior. The direct effect of environmental digital activities is .036 ( $p < .05$ ), and the direct effect of the virtual connectivity in cyberspace is .043 ( $p > .05$ ). In contrast, when digital forest bathing was used as a mediating factor, the impact is .872 ( $p < .001$ ), indicating that the impact of the mediating effect of digital forest bathing is significant.

*Keywords:* nature; digital forest bathing; digital interaction in cyberspace; behaviour change

## FOREST BATHING IN THE GARDEN CITY

*Denise Dillon*

School of Social and Health Sciences, James Cook University, Singapore

Nature-related research typically involves three types of contact with nature: viewing nature, being in nature, and active engagement in nature-related activities (e.g., meditation in forests, gardening etc.). While there has been a loss in natural environments over the decades, cities have also begun to recognise the importance of nature and gradually incorporate elements of nature into their infrastructure design. This increasingly popular practice is known as biophilic design, which refers to the incorporation of natural elements into a built environment, with Singapore as a prime example of a biophilic city. The highly urbanized island city-state of Singapore prides and brands itself as a 'city in a garden', where roadside greenery, nature reserves, and more than 300 parks and other green spaces help to optimize urban biodiversity. We discuss the characteristics of a specific urban setting in which we conducted a comparison study between guided and unguided nature immersion sessions. We measured affiliation to nature, mood, and heart rate of 51 participants ( $M_{age} = 35$  years,  $SD = 14.17$ ) assigned to either a 2-hour guided forest therapy or unguided nature immersion session. Demographics and general health practice (GHP) information were collected. Nature connectedness (Connectedness to Nature Scale (CNS) and Environmental Identity Scale (EID) – short form) and mood (Positive and Negative Affect Scale (PANAS)) were assessed before and after the nature immersion experience. Results revealed post-immersion benefits for both groups on CNS, [ $F(1, 49) = 37.41, p < .01$  ( $M = 3.71, SD = 0.48$  vs.  $M = 3.45, SD = 0.52$ )] and EID, [ $F(1, 49) = 18.78, p < 0.01$  ( $M = 5.28, SD = 0.95$  vs.  $M = 4.9, SD = 0.52$ )], Positive Mood, [ $F(1,48) = 4.78, p = 0.034$  ( $M = 3.14, SD = 0.94$  vs.  $M = 2.9, SD = 0.99$ )] and Negative Mood, [ $F(1,48) = 8.48, p = 0.005$  ( $M = 1.26, SD = 0.41$  vs.  $M = 1.14, SD = 0.21$ )] and no additional benefit from the guided experience. Participants' comments provide nuanced perspectives on their experiences.

*Keywords:* biophilic built design, nature connectedness, emotional response to nature, urban green spaces; forest therapy

## SYMPOSIUM

### **SHARE YOUR ATTITUDE: MENTAL HEALTH SERVICES, ASYLUM SEEKERS AND NATIONALISM – UNDER THE VEIL OF PERSONAL AND SOME OTHER FACTORS**

#### Moderators:

***Darinka Ilić & Katarina Minčić***

Psychological Counseling for Students within Students' Cultural Center Niš, Serbia

The aim of this symposium is reflecting upon some of the attitudes and viewpoints of the youth in regard to meaningful topics such as social dominance, nationalism, conformity and social anomie. We asked students from different Universities in Serbia, mainly from the University of Nis, to give us the opportunity to better understand their outlook on social change, immigrant crisis, asylum seekers and the internal or external support that is necessary in such moments. Over 280 students and young adults participated in this research and shared their attitudes with the volunteers of the Psychological counseling for students. Who are the individuals who would seek help and support from a mental health professional? Are the attitudes toward seeking such help positive or negative? When do we tend to reconsider reaching out and what are the personality traits, our own viewpoints, that could support this sort of behavior? On the other hand, how do we view those who may be in need of our support? Could our own attitudes and traits be meaningful in reaching the decision to support someone in need and could they contribute to perceiving certain phenomena as threats? Some of the attitudes regarding these questions can be found in the research results below. The significance of this symposium is that in our region, mental problems are seen as “the elephant in the room”, and that is why we consider it important to research the attitudes of young people about seeking mental health services. We also consider it important to examine attitudes about asylum seekers and what is behind the curtain of nationalism among young people because it leads to a better understanding of these things.

## ATTITUDES TOWARD SEEKING MENTAL HELP SERVICES IN THE LIGHT OF CERTAIN EXPERIENCE AND PERSONALITY TRAITS

*Darinka Ilić, Gordana Anđelković, Kristina Milević & Katarina Minčić*  
Psychological Counseling for Students within Students' Cultural Center  
Niš, Serbia

The aim of this study was to examine the role of personality traits and certain experience (psychology education, knowing the person with mental health problem, having mental illness) in prediction of attitudes towards seeking mental help. The sample consisted of 284 participants, ( $N_{male} = 60$ ,  $N_{female} = 223$ ), aged 18-60 years ( $M = 25.84$ ,  $SD = 6.58$ ). Data was collected with a short version of the Big Five+2 Questionnaire, and Inventory of Attitudes Toward Seeking Mental Health Services. The scale consists of three subscales: Psychological Openness, Help-seeking Propensity, and Indifference to Stigma. The results of  $t$ -test showed that respondents with psychology education, who have or know someone with mental illness are more psychologically open than those without psychology education ( $t(278) = 2.98$ ,  $p < .01$ ), don't have ( $t(282) = 2.08$ ,  $p < .05$ ) or don't know someone with mental illness ( $t(282) = 2.27$ ,  $p < .05$ ). Also, respondents with psychology education or who have mental illness have help-seeking propensity unlike respondents without psychology education ( $t(245, 691) = 6.03$ ,  $p < .001$ ) or don't have mental illness ( $t(115, 065) = 4.44$ ,  $p < .001$ ). Respondents with psychology education are more indifferent to stigma than those without psychology education ( $t(278) = 2.01$ ,  $p < 0.5$ ). The results of multiple regression showed that Neuroticism ( $\beta = -.164$ ,  $p = .05$ ), Positive Valence ( $\beta = -.266$ ,  $p = .001$ ) and Openness ( $\beta = .260$ ,  $p = .001$ ) are statistically significant predictors, explaining 14.5% variance of Psychological Openness ( $R^2 = .145$ ,  $F(7, 276) = 6.697$ ,  $p < .001$ ). Openness ( $\beta = .135$ ,  $p = .05$ ) and Consciousness ( $\beta = .135$ ,  $p = .05$ ) are statistically significant predictors explaining 12.3% variance of Help-seeking propensity ( $R^2 = .123$ ,  $F(7, 276) = 5.550$ ,  $p < .001$ ). Neuroticism ( $\beta = -.325$ ,  $p = .001$ ) and Negative Valence ( $\beta = -.155$ ,  $p = .05$ ) are statistically significant predictors and they explain 12.7% of Indifference to stigma ( $R^2 = .127$ ,  $F(7, 276) = 5.737$ ,  $p < .001$ ).

We concluded that with certain experience and personality traits we can predict attitudes towards seeking mental help services.

*Keywords:* psychological openness, help-seeking propensity, indifference to stigma, Big Five Plus Two, attitudes

## **ATTITUDES TOWARD SEEKING MENTAL HEALTH SERVICES AND PERSONALITY TRAITS IN THE DOG EAT DOG WORLD**

***Miljana Mihajlović, Jelena Gajić, Milica Đorđević & Darinka Ilić***

Psychological Counseling Center for Students within Students' Cultural Center Niš, Serbia

The main goal of this study was to examine whether social dominance orientation could be predicted based on personality traits and attitudes toward seeking mental health. The data was collected using Social Dominance Scale, Big 5+2 Short version, and Inventory of Attitudes Toward Seeking Mental Health Services, which consists of three subscales: Psychological Openness, Help-seeking Propensity, and Indifference to Stigma. Participants were mostly from Southern Serbia ( $N = 283$ ), aged 18-60 years ( $M = 25.84$ ,  $SD = 6.58$ ), 79% of whom were females. From the research results we can conclude that Model 1 which consists of personality traits is statistically significant, and explains 10.8% of total variance ( $R^2 = .108$ ,  $F(4, 279) = 8.471$ ,  $p < .01$ ). Statistically significant predictors of social dominance orientation seen in this Model are Positive Valence ( $\beta = .230$ ,  $p < .001$ ), Negative Valence ( $\beta = .158$ ,  $p < .020$ ), and Extraversion ( $\beta = -.159$ ,  $p < .013$ ). The Second Model which consists of personality traits, and attitudes toward seeking mental health is statistically significant as well, and explains 19.4% of total variance of dependent variable ( $R^2 = .194$ ,  $F(7, 276) = 9.811$ ,  $p < .01$ ). Extraversion ( $\beta = -.141$ ,  $p < .023$ ) and Positive Valence ( $\beta = .178$ ,  $p < .007$ ) are once again statistically significant predictors of Social Dominance Orientation, as well as Psychological Openness ( $\beta = -.262$ ,  $p < .001$ ) and Help-seeking Propensity ( $\beta = -.134$ ,  $p < .028$ ). These results point

out specific characteristics which can give us deeper insight into the Social Dominance Orientation and their further relation.

*Keywords:* social dominance, Big Five, mental health services, psychological openness

## **PREDICTING THE ATTITUDES TOWARD THE ASYLUM SEEKERS – RELATIONSHIP WITH NATIONALISM, CONFORMITY, SOCIAL DOMINANCE AND OPENNESS**

***Marija Todosijević, Milan Milanović & Jovana Petrović***

Psychological Counseling for Students within Students' Cultural Center  
Niš, Serbia

The purpose of this research was to explore if conformity, nationalism, social dominance, and openness have a role in predicting attitudes towards asylum seekers. The data was collected using The Scale of Attitudes towards Asylum Seekers, Conformity Scale, NV-NO Scale (NV - national attachment and NO - national openness), Social Dominance Scale (SDO-7), and a short version of the Big Five Plus Two Questionnaire (VP+2-70). The sample consisted of 284 participants, both male ( $N = 60$ ) and female ( $N = 223$ ), aged 18-60 years ( $M = 25.84$ ,  $SD = 6.58$ ). The first model that predicted the perception of social threat explains 28.3% of the variance ( $R^2 = .28$ ,  $F(4, 279) = 13.790$ ,  $p < .001$ ), with nationalism ( $\beta = .234$ ,  $p < .001$ ), openness ( $\beta = -.211$ ,  $p < .001$ ) and social dominance ( $\beta = .305$ ,  $p < .001$ ) as significant predictors. The second model that predicted the perception of cultural threat explains 46.6% of the variance ( $R^2 = .46$ ,  $F(4, 279) = 30.253$ ,  $p < .001$ ), with conformity ( $\beta = .127$ ,  $p = .009$ ), nationalism ( $\beta = .471$ ,  $p < .001$ ) and social dominance ( $\beta = .307$ ,  $p < .001$ ) as significant predictors. The third model that predicted the perception of health and economic threat explains 16.1% of the variance ( $R^2 = .16$ ,  $F(4, 279) = 13.408$ ,  $p < .001$ ), with nationalism ( $\beta = .167$ ,  $p = .005$ ), social dominance ( $\beta = .281$ ,  $p < .001$ ), and openness ( $\beta = -.133$ ,  $p = .024$ ) as significant predictors. The obtained results indicate that different

aspects of attitudes toward asylum seekers can be predicted in a different manner by concepts such as nationalism, conformity, social dominance, and openness, so further research is advised.

*Keywords:* attitudes towards asylum seekers, nationalism, social dominance, conformity, openness

## **THE ROLE OF PERSONALITY, SOCIAL DOMINANCE AND SOCIAL ANOMIE IN THE PREDICTION OF NATIONALISM**

***Sandra Pešić, Milica Tasković & Đorđi Đeordjević***

Psychological Counseling Center for Students within Students' Cultural Center Niš, Serbia

The main goal of this study is to examine whether nationalism can be predicted based on the personality traits, social dominance and social anomie. The research sample involved mainly student participants from Niš ( $N = 283$ ), aged 18-60 years ( $M = 25.84$ ,  $SD = 6.57$ ), 79% of whom were females. The data were collected using Big 5+2 short version, Social Dominance Scale, Social anomie scale, and National Attachment Scale. Results of this research have shown that Model 1, which contains personality traits, is statistically significant and explains 11% of total variance ( $R^2 = .11$ ,  $F(6, 277) = 5.440$ ,  $p < .01$ ), and Extraversion ( $\beta = .16$ ,  $p < .05$ ) and Openness ( $\beta = -.22$ ,  $p < .01$ ) are statistically significant predictors of Nationalism. Model 2, which contains personality traits and social dominance, is statistically significant and explains 14% of total variance ( $R^2 = .14$ ,  $F(1, 276) = 9.817$ ,  $p < .01$ ), and Extraversion ( $\beta = .18$ ,  $p < .01$ ), Openness ( $\beta = -.17$ ,  $p < .01$ ) and Social dominance ( $\beta = .19$ ,  $p < .01$ ) are statistically significant predictors of Nationalism. Model 3, which contains personality traits, social dominance and social anomie, is statistically significant and explains 28% of total variance ( $R^2 = .28$ ,  $F(1, 275) = 51.690$ ,  $p < .01$ ), and Openness ( $\beta = -.14$ ,  $p < .05$ ), Social dominance ( $\beta = .19$ ,  $p < .01$ ) and Social anomie ( $\beta = .41$ ,  $p < .01$ ) are statistically significant predictors of Nationalism. The results indicate the importance of

considering both intraindividual factors and environmental factors in order to better understand the dynamics of nationalism.

*Keywords:* personality traits, social dominance, social anomie, nationalism

SYMPOSIUM  
SOCIAL DYNAMICS OF MINORITY EXCLUSION AND  
INCLUSION

Moderator:

***Michael Sweigart***

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

This interdisciplinary symposium will discuss issues related to the social exclusion and inclusion of minority communities across four diverse country contexts. Seeking to understand the roots of a high per-capita rate of refugees resettling in Lancaster County, Pennsylvania, United States in recent years, Naomi Kraenbring will present the findings content analysis of ten years' worth of media articles to identify themes describing and potentially shaping Lancaster County, Pennsylvania's attitudes and actions towards refugees. Findings of this research include foundations in the history of the county, faith and religious implications, and morality and virtuous traits. Turning to Italy, where the church fulfills many of the State's functions in supporting the integration of migrants and refugees, Beltina Gjeloši will discuss her ongoing research on how the meaning of religious and national identities impact church-led practices of migrant integration in Italy. Recognizing that non-migrant ethnic and religious minorities also face challenges to social and political inclusion, Natia Chankvetadze will discuss the importance of integrating ethnic and religious minorities into nation-state with the strong sense of civic identity. More specifically, she will discuss insights from her extensive experience as a peacebuilder in Georgia, a multi-ethnic, religious and linguistic state with two breakaway regions (Abkhazia and South Ossetia/Tskhinvali Region) that are under Russian control and have been separated from Georgia proper for last three decades. Finally, Michael Sweigart will discuss his research regarding tensions between global and domestic norms that often produce backlash to transnational movements for the rights of stigmatized minorities. Within this framework, he will present his ongoing research focused on how lesbian, gay, bisexual, transgender,

and queer (LGBTQ+) activism impacts social norm perception and personal attitudes in Serbia, where LGBTQ+ rights movements are framed by far-right political groups as a foreign-driven threat.

*Keywords:* social identity, acceptance, immigrants, religion, LGBTQ+ populations

## **“YOU ARE WELCOME HERE”: IDENTITY AND REFUGEE ACCEPTANCE IN LANCASTER COUNTY, PENNSYLVANIA**

*Naomi Kraenbring*

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

In early 2017, Lancaster, Pennsylvania, was dubbed “America’s Refugee Capital” by the BBC. This descriptor emerged from Lancaster County’s significantly high per-capita rate of refugees resettling in the area in the mid 2010s, although the region has a longstanding history of refugee resettlement. The county is decidedly Republican-voting and has a strong Anabaptist Christian religious heritage, which creates an interesting political and religious identity blend. What role does the print media have in this county’s perception of refugee resettlement and welcome? How do social identity theory and media framing potentially work together to foster a sense of place identity? Ten years’ worth of Lancaster (PA) Newspaper articles in online archives were analyzed, from 2012-2021. Qualitative content analysis techniques were utilized to identify themes describing and potentially shaping Lancaster County, Pennsylvania’s attitudes and actions towards welcoming refugees resettling in the local area. A number of themes emerged, including familiar narratives describing the foundational history and values of the county, the state of Pennsylvania, and the United States; the role of faith, both historically and today, and the religious implications and imperatives that are at play in this welcoming behavior and reputation; and more humanistic moral and ethical traits that are part of Lancaster County’s identity. Possible

implications for the future of international migration and its impact on this unique location in the coming decades will be explored.

*Keywords:* refugees, welcome, media, social identity, United States

## **THE DYNAMICS OF NATIONAL AND RELIGIOUS IDENTITY IN THE CONTEXT OF CHURCH-LED MIGRANT INTEGRATION: THE CASE OF ITALY**

*Beltina Gjeloshi*

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

In Italy, the church is an undeniable magnanimous force fulfilling many of the State's function in support of the integration of migrants and refugees alike. Yet, the role of the Church's impact remains vastly unknown. This study presents an exploration of what constitutes successful migrant integration in Italy as well as surveying the motives of church-led interventions as a humanitarian one rather than one motivated by seeing migrants as equals and future Italians. Through the lens of social identity theory, the study explores the question of how the meaning of religious and national identities impact church-led practices of migrant integration and offers the implicit values and meanings of church interventions through a literature review and methodology grounded on constructivism. To answer this question, I will collect two forms of primary data: (1) documents detailing migrant integration strategies, and (2) conduct semi-structured interviews with Italian members of the Church and migrants in Italy. A constructivist approach will allow me to tap into the malleability and unfixed nature of social identity while capturing groups' perceptions through Kelly's Grid (1955). The research also points out research ambiguities on national identity theory, the literature on race in Italy, and assessment of church interventions within the context of migrant integration strategies. Considering the fierce pro-immigration stance of the Church in Italy and its historical influence on decision-mak-

ing, possible recommendations for church actors in migrant integration practices, gaps in migrant integration needs, efficacy of applied social identity theory, and policy implications will be explored.

*Keywords:* social identity theory, migrant integration, Italy, Kelly's Grid, constructivism

## **MARKERS OF CITIZENSHIP AND INTEGRATION OF ETHNIC MINORITIES**

*Natia Chankvetadze*

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

Integration of ethnic and religious minorities into nation-state with the strong sense of civic identity represents the significant opportunity for peace building and reconciliation. Georgia (country) is a multi-ethnic, religious and linguistic state with two breakaway regions (Abkhazia and South Ossetia/Tskhinvali Region) that are under Russian control and separated from Georgia proper for last three decades. Besides working with Abkhazian and South Ossetian counterparts, observing internal dynamics with other ethnic and religious minorities is crucial for peace building. Specifically, to look at how well-integrated other minority groups are, obstacles they face and opportunities they hold to support larger scale peacebuilding process inside the country. One of the indicators to scrutinize levels of integration in the nation-state is citizenship, specifically, what are the strongest markers of citizenship and whether it includes ethnic, religious and linguistic minorities. To respond to the question what are the strongest markers (attributes) of citizenship in Georgia, I conducted bivariate analysis of variables related to ethnicity, religion, language and citizenship gathered by the survey within the project „Future of Georgia.“ Analysis showed three different findings: first, ethnic and non-ethnic Georgian citizens view differently markers (attributes) of citizenship and respond differently

to certain statements. Second, ethnic Georgian citizens differ in their opinions when it comes to granting and exercising citizenship right. Third, non-ethnic Georgian citizens showed a similar level of trust and belonging to the identity of Georgian citizen.

*Keywords:* minorities, citizenship, integration, peace building, Georgia

**IDENTITY, AUTHORITARIANISM, AND TRADITIONALISM:  
ASSESSING THE EFFECT OF LGBTQ ACTIVISM ON NORM  
PERCEPTION AND PERSONAL ATTITUDES**

*Michael M. Sweigart*

Jimmy & Rosalynn Carter School for Peace & Conflict Resolution,  
George Mason University, United States

Nascent scholarship indicates the need for empirical study of how norm perception, national identity, traditionalism, and authoritarianism may interact to influence progress and backlash on the social acceptance of gay and lesbian people. These mechanisms may be particularly relevant in contexts where sexual minority rights movements are seen as a threat being imposed by other countries. I will present research on this topic in Serbia, which is experiencing internal tensions over gay and lesbian rights, exacerbated by opposing influences of Europe and other Slavic Orthodox countries. Analysis of 2018 European Social Survey data from Serbia ( $N = 2773$ ) identified attachment to Europe as a key predictor of support for of gay lesbian acceptance. While attachment to the nation predicted opposition to one of three measures of gay and lesbian rights, traditionalism and authoritarianism emerged as more consistent predictors of negative views toward gay and lesbian acceptance. Building upon these findings, I will report preliminary results from the first wave of a panel study ( $N = 500$ ) assessing the effect of a regional sexual and gender minority rights advocacy event scheduled to take place in Serbia on norm perception and attitudinal and behavioral measures of gay and

lesbian acceptance. Interactions with national and regional identity, traditionalism, and authoritarianism will also be examined.

*Keywords:* national identity, right-wing authoritarianism, norm perception, human rights, LGBTQ+ populations

# Workshop



## **GOODBYE, AMOS! CONFIRMATORY FACTOR ANALYSIS IN A FREE AND FLEXIBLE SOFTWARE PACKAGE LAVAAN**

***Nikola Ćirović***

Department of Psychology, Faculty of Philosophy,  
University of Niš, Serbia

As opposed to the widely used software such as AMOS, lavaan is both free of charge and much more flexible in terms of different structural equation modeling (SEM) capabilities. This workshop provides a short introduction to confirmatory factor analysis (CFA) in the lavaan package. The workshop will feature demonstrations of package installation, modeling syntax, model specification, the use of modification indices (respecification), and estimation in lavaan. We will also demonstrate how to deal with missing data as well as how to deal with categorical types of data. Participants will learn about the use of different estimation techniques used in SEM (CFA) to accommodate the analysis to different types of data distributions. Prior to the hands-on exercises in lavaan, the workshop will feature a brief overview of the theory behind factor analysis and SEM in general. Finally, the demonstration will feature the most common factor structures, such as correlated factors, hierarchical, and bifactor factor models. All aspects/steps of the analyses will be demonstrated via hands-on exercises with the data provided by the lecturer. The demonstrations will be featured in R Studio, which (along with R) should be installed by the participant prior to the workshop.

Keywords: lavaan, CFA, factor analysis, SEM

*Duration: 1h 30m*



Thematic Session  
**Social Psychology**



# CAN INTERGROUP CONTACT CONTRIBUTE TO REDUCING PREJUDICE AGAINST INTERNATIONAL STUDENTS? TESTING A MEDIATION MODEL

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University of Calabria, Italy

International students offer a series of benefits for Italian university students, such as increasing intercultural exchanges, promoting new approaches to the in-class discussion, and increasing students' intellectual resources. However, prejudice against international students has existed since this cross-cultural program started. The current study, drawing on the contact hypothesis and intergroup anxiety theory, aims to investigate the expression of prejudice against international students among Italian university students. It was hypothesized that intergroup contact (quality and quantity) could be negatively related to intergroup anxiety and, in turn, should reduce prejudice (blatant and subtle) against international students. Moreover, intergroup anxiety, a type of "anxiety that people experience when anticipating or engaging in intergroup interaction", could mediate the association between contact and prejudice. Empirical data were gathered from 111 southern Italian university students (44 males, 39.6% and 67 females, 60.4%), with ages ranging from 19 to 29 ( $M = 23.80$ ,  $SD = 2.18$ ), who completed an online survey with standardized measures in the Italian language. The survey was conducted before the emergence of the COVID-19 pandemic. Path analysis was performed using bootstrapping method with 95% bias-corrected confidence intervals and 5000 bootstrapped samples. The results of the path analysis indicated that intergroup anxiety ( $\beta = -.39$ ,  $p < .001$ ; 95% CI [-.53, -.23]) was negatively related to intergroup contact (quality and quantity), and only to subtle (and not blatant) prejudice ( $\beta = -.21$ ,  $p < .05$ ; 95%CI [-.41, -.02]). Moreover, a positive and significant association was found between intergroup anxiety and subtle ( $\beta = .33$ ,  $p < .01$ ; 95%CI [.10, .51]) and blatant prejudice ( $\beta = .25$ ,  $p < .01$ ; 95%CI [.06, .41]). Finally, intergroup anxiety, fully mediated the relationship between intergroup con-

tact and blatant prejudice ( $\beta = -.10, p < .01; 95\%CI [-.18, -.03]$ ); whereas the association between intergroup contact and subtle prejudice was partially mediated by intergroup anxiety ( $\beta = -.13, p < .05; 95\%CI [-.25, -.04]$ ). Overall, students with reduced experience of intergroup contact manifested higher intergroup anxiety, which in turn increased their levels of prejudice against international students. Intergroup anxiety confirms its mediating role in the expression of discrimination. These results underline the importance and role of intergroup contact in reducing prejudice and forming positive attitudes towards minority groups.

*Keywords:* prejudice, intergroup anxiety, international students, university students

## **GRAVITY KEEPS MY HEAD DOWN, OR IS IT MAYBE SHAME? DEMONSTRATING THE EFFECTS OF BYPASSED, UNIDENTIFIED AND ACKNOWLEDGED SHAME**

*Nicolay Gausel*

University of Stavanger, Norway

The main bulk of research on self-critical emotions has focused on verbalized and acknowledged emotion words. However, little attention has been paid to the unexpressed or unacknowledged emotions. As a consequence, two experimental studies, one on intergroup level ( $N = 166$ ) and one on interpersonal level ( $N = 107$ ), and one correlational study conducted directly after the 2011 terror-bombings in Oslo, investigated acknowledged shame, unidentified shame and bypassed shame. It will be demonstrated how bypassed shame is associated with concerns about one's social-image and how it is the underlying motivation behind destructive responses. In contrast, it will be shown how acknowledged shame is associated with concerns about one's self-image, and how it is the underlying motivation behind constructive responses. In between these are unidentified shame which will be shown to be mostly experienced when both the social- and the

self-image is at stake, and how this experience is predictive of both destructive and constructive responses. In sum, I suggest a theoretical and empirical model of acknowledged shame, unidentified shame and bypassed shame that may help us identify when and why constructive and destructive responses are deployed.

*Keywords:* shame, defense, morality, rage, denial, empathy, restitution

## **SUBJECTIVE SOCIAL STATUS AND HEALTH – THE MEDIATING ROLE OF NEGATIVE EMOTIONS**

*Svetoslav Hristov*

Sofia University St. Kliment Ohridski, Bulgaria

Social status and health are closely connected. People with higher social status have better physical and mental health than people with lower social status, although, this relationship is not fully studied. Research shows that objective indicators of social status (e.g., income, education, occupation) are not able to fully explain the variance in health and more subjective factors should be taken into account. Negative emotions are considered a key component that mediates the relationship between social status and health. Although, most research focuses on generalized negative affect and not on the differentiated roles of discrete negative emotions. The current paper aims to analyze the role of sadness, anxiety, envy, and anger as mediator variables between subjective social status, self-perceived health, and life satisfaction in two studies from Bulgaria – the country with the highest economic inequalities in the European Union. For the first study, data from the European Social Survey (round 6) is used to analyze the mediating role of sadness and anxiety. The dataset consists of 2260 participants, aged 15 to 92 years ( $M = 54$ ,  $SD = 17$ ). The relevant items for subjective social status, sadness, anxiety, self-perceived health, and life satisfaction from the larger ESS questionnaire are used to measure the proposed variables. Another indepen-

dent dataset is gathered to explore the role of envy and anger. To overcome the methodological limitations of the first study, the second study uses the Bulgarian adaptations of the following psychometric instruments: Subjective Social Status Scale, The Benign and Malicious Envy Scale, subscale Anger of Buss-Perry Aggression Questionnaire, a single item for self-perceived health, and The Satisfaction with Life Scale. Preliminary results from the first study show that sadness has a stronger mediating effect than anxiety, especially in the relationship between subjective social status and life satisfaction. These results provide support for the hypothesis that discrete negative emotions have different mediating effects on the relationship between subjective social status and health.

*Keywords:* subjective social status; negative emotions; self-perceived health; life satisfaction

## **ATTITUDES TOWARDS ONLINE FEMINIST ACTIVISM IN PAKISTAN: A QUALITATIVE EXPLORATION**

***Zerafshan Khalid***

National Institute of Psychology, Quaid-i-azam University, Pakistan

Pakistan's online spaces have become critical modes of feminist self-expression, as the internet offers a more democratized, accessible and publicly visible place for ongoing debates. Digital spaces serve as an ongoing archive of community voices, and demonstrate the relevance of feminist demands in Pakistani society. Aim of the study was to conceptualize the attitudes towards the recent wave of feminism on social media through the qualitative exploration among the youth. An exploratory study was done through eight focus group discussions with social media users ( $N = 48$ ) and five in-depth interviews with feminist activists to identify the attitudes towards online feminist discourse in Pakistan. Through thematic content analysis five major themes were revealed: 1) knowledge about online feminist activism (experiences and awareness about online feminist movements), 2) online

feminist practices (liking and sharing of posts related to feminism on social media), 3) positive representations of online feminist activism (platform to speak and rise awareness about women rights, safe place to share opinions, providing justice to victims of harassment and oppression), 4) negative representations (deviation from culture and religion, promoting vulgarity and westernization, anti-men, limited to elite class, and being misused for personal benefits), and 5) the myths related to online feminist discourse in Pakistan (e.g. online movements are funded by western agencies to promote homosexuality in our society). Present study has given qualitative insight into the attitudes towards online feminist movements in Pakistan. Traditional gender roles and affiliation to culture and religion is a strong barrier when it comes to acceptance of online feminist movements. Raising awareness and ongoing women marches across the country is an evidence of a fruitful use of digital activism to change the narratives about feminism in Pakistan.

*Keywords:* online feminist activism, social media, feminist practices, feminist movement

## **THE EFFECT OF SOCIAL EXCLUSION ON THE PERCEPTION OF TRUSTWORTHINESS**

***Stefan Đorić***

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University of Niš, Serbia

Social exclusion is an unpleasant experience and represents an integral part of everyday social interaction. Its consequences are reflected in altered thoughts, emotions and behavior. Long-term negative consequences have been noted as well, such as reduced subjective well-being and poor mental health. Social exclusion is also known to have repercussions on cognitive processes, specifically on perception, although the results in this area are somewhat contradictory. It has been observed that excluded persons show preserved or even increased sensitivity to social

cues, especially those that signal the possibility of reconnection (e.g., smile). On the other hand, it has been noticed that social exclusion can have a negative effect in this context, making the perception of social cues inaccurate, distorted. The aim of this study was to examine how the experienced social exclusion affects the perception of trustworthiness, specifically, the ability to make a distinction between trustworthy and untrustworthy faces. Between subject design 2 (Social rejection: excluded vs. included) x 2 (Trustworthiness: trustworthy vs. untrustworthy) was used, with the level of attributed trustworthiness as a dependent variable. The sample consisted of 120 first- and second-year psychology students ( $M_{age} = 20.19, SD = 0.77$ ). The results showed that excluded participants attributed significantly different levels of trustworthiness to trustworthy ( $M = 3.48$ ) and untrustworthy faces ( $M = 3.10, p = .033$ ),  $F(1, 116) = 6.15, p = .014, \eta^2 = .05$ , which may indicate that they have preserved or even enhanced sensitivity in social perception. The obtained results were discussed in accordance with the existing theoretical assumptions.

*Keywords:* social exclusion, social rejection, ostracism, trustworthiness

## THE ROLE OF FACIAL EXPRESSIONS OF EMOTION IN IMPRESSION FORMATION

*Marija Pejičić*

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University of Niš, Serbia

The aim of this research was examining the readiness of people to create an impression about an individual by relying on his/her facial expressions of six primary emotions (happiness, sadness, fear, disgust, surprise and anger). The sample consisted of the students ( $N = 334$ ) of both genders, 163 males and 171 females, average age 20.2 years ( $SD = 1.33$ ). Those respondents had the assignment to rank the stimulus individuals' faces on the Revised Interpersonal Adjective Scale. Scores are presented by two dimensions – Dominance and Affiliation. Stimulus material consisted of 70 photographs – 34 photographs of male and 36 photographs of female faces from the set Pictures of Facial Affect. Linear mixed model analyses, using the GAMLj suite for Jamovi, were conducted in order to obtain the results. The results have shown that the observers are ready to draw conclusions about individual's general interpersonal tendencies based on his/her current emotional reaction –  $F(5, 2932) = 331.27$ ,  $p < .001$  for Dominance and  $F(5, 2641) = 540.36$ ,  $p < .001$  for Affiliation. The most dominant individuals were the ones on whose faces respondents recognized anger, then happiness and disgust, next was surprise, then fear, and, in the end, sadness. The highest average value on Affiliation was given to individuals on whose faces the observers recognized happiness. It was followed by sadness, fear and surprise, while disgust and anger were in the end. The obtained results were interpreted within the context of social function of emotions, whose proponents emphasize that emotion has not only an informative, but also a communicative function, even when the actor does not use it consciously for these purposes. Therefore, the expression of emotions can also carry information about a person's social motives and actions, e.g. happiness brings people closer together and encourages cooperation, while anger leads to conflict.

*Keywords:* emotion, facial expression, impression, Dominance, Affiliation



Thematic Session  
**Environmental Psychology**



# ENVIRONMENTAL BEHAVIOR AND THE ROLE OF NORMS IN A NON-WEIRD SAMPLE: THE EXAMPLE OF LITTERING IN THE GAMBIA

*Laura Farage<sup>1</sup>, Isabella Uhl-Haedicke<sup>1</sup> & Nina Hansen<sup>2</sup>*

<sup>1</sup>University of Salzburg, Austria

<sup>2</sup>University of Groningen, the Netherlands

Environmental pollution caused by human actions is a global problem that keeps getting worse despite the broad agreement on the need for change. Psychological research shows that norms strongly influence our environmental behavior. However, psychological theories are not necessarily generalizable across cultures. Most findings and conclusions are based on data from WEIRD (western, educated, industrialized, rich, democratic) samples and hence are not representative for all humanity. The present research examines whether and how we can make use of existing psychological findings in non-WEIRD contexts by investigating the role of personal and social norms regarding environmental actions in an under researched region – in West Africa. First, we will present results from a correlational field study conducted in the Gambia ( $N = 132$ ). We invited people in a public space to a candy tasting and observed their littering of the candy wrapper. This was followed by an assessment of their problem awareness, ascription of responsibility, personal norm, and behavioral intention. We found a low personal antilittering norm despite high problem awareness. Moreover, personal norm was not a significant predictor for littering behavior. Second, we will present first results of a qualitative study. We conducted semi-structured interviews ( $N = 18$ ) in the Gambia to generate a deeper understanding of normative littering perceptions and attributions. A thematic analysis showed that we can identify four main themes for littering causes: infrastructure, awareness & education, attitude & mentality, and society & norms. Our findings indicate that societal aspects are very influential. Therefore, we suggest to increase efforts of social normative interventions in future campaigning.

*Keywords:* NAM, pro-environmental behavior, culture

## THE EFFECTS OF GREENERY FEATURES ON PSYCHOLOGICAL HEALTH OUTCOMES IN TIMES OF THE COVID-19

*Lucia Monacis<sup>1</sup>, Elisabeta Osmanaj<sup>2</sup> & Maria Sinatra<sup>3</sup>*

<sup>1</sup>University of Foggia, Italy

<sup>2</sup>University of Elbasan, Albania

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In light of the theoretical and empirical evidence of the positive effects of nature exposure on mental health and well-being, this study examined the associations between emotional distress, poor mental and behavioral health outcomes, and greenery features during COVID-19. 657 urban citizens ( $M_{age} = 31.47$ ,  $SD = 11.34$ ;  $N_{female} = 360$ ) fulfilled a survey using Google Forms distributed via selected social media between June and November 2021. The questionnaire comprised socio-demographic questions such as age, gender, level of education, and workers at home and not at home, individual items rated on five-point Likert-type scale assessing the perceived increase of the negative emotional states underlying five negative emotions (anger, disgust, fear, sadness, and surprise) and of 10 adverse mental and behavioral health outcomes experienced during November 2020–April 2021. The last section included three items on nature exposure: indoor vegetation, green window views (indirect contact with nature) and green access to private and public green spaces (direct contact with nature) during the pandemic. Bivariate associations indicated positive patterns of relations between emotional distress, poor mental health outcomes and some unhealthy behaviors. Regression analyses showed that the indoor feature and indirect contact with nature lessened levels of emotional distress and poor mental health responses: (i) participants with greater amount of green view were less likely of being in higher levels of emotional distress such as sadness (OR .737), disgust (OR .711), anger (OR 0.760), and fear (OR .718), and they were less likely of being in a lower self-reported increase in sleep disturbance (OR  $-0.225$ ), recurrent dreams (OR  $-0.182$ ), recurrent thoughts (OR  $-0.236$ ) and poor concentration (OR  $-0.201$ ); (ii) the presence of plants at home was associated with a lower self-reported increase in sleep disturbance

(OR  $-.120$ ) and poor concentration (OR  $-.116$ ). The three features of greenery engagements were not associated with poor level of behavioral outcomes. This study suggested more attention should be paid to psychological and architectural factors in urban planning to yield positive effects on short and long-term health outcomes.

*Keywords:* greenery, resilience, health, pandemic period

## **RELATIONS BETWEEN WORKSPACE TYPE AND MENTAL HEALTH AMONG WORKERS FROM SERBIA<sup>1</sup>**

***Ivana Pedović & Milica Tasković***

Department of Psychology, Faculty of Philosophy,  
University of Niš, Serbia

The body of research shows that workplace spatial environment has been identified as one of the workers' mental health correlates. The goal of this study was to examine if the employees working in different types of workspace differ in their reported mental health. The study was conducted online. The sample was convenient and consisted of 1407 employed persons from Serbia (62% female), aged 18 to 66 years ( $M = 37.81$ ,  $SD = 12.16$ ). Measures of mental health used were burnout (it was assessed through the scores on the Shirom–Melamed Burnout Questionnaire measuring three dimensions of burnout - physical fatigue, emotional exhaustion, cognitive weariness and general burnout), and overall mental health (operationalized as a score on Mental Health Inventory – 5 (MHI – 5)). The respondents also reported on the workspace type that they are working in, choosing between 6 options (I work alone in an office (or some other separated indoor space); I share an office (workspace) with my

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<sup>1</sup> This work was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia [Contract No. 451-03-9/2021-14/200165] and by project *Applied psychology in the function of the quality of life of an individual in the community*, conducted at the University of Niš – Faculty of Philosophy [No. 455/1-1-6-01].

colleague/colleagues; Performing activities (I don't have an office, but I have a workspace); Open office (community working environment, no separate offices); I work from home; Combined (part-time field work, any other previous category). A one-way ANOVA demonstrated that the effect of workspace type was significant for employee's overall mental health,  $F(5, 1401) = 2.36$ ,  $p = .038$ , and dimension of burnout – physical fatigue  $F(2, 78) = 2.82$ ,  $p = .015$ . LSD Test for multiple comparisons found that the mean value of reported mental health was significantly different between some of the groups of employees working in different workspace types, with higher values contributed to workspaces where fewer employees are using the same workspace. This was also the case with reported values of physical fatigue.

*Keywords:* workspace type, mental health, burnout, employees

## **ONE LIGHT SWITCH AT A TIME: THE ROLE OF ATTITUDES AND MOTIVES BEHIND EVERYDAY PRO ENVIRONMENTAL BEHAVIOURS**

*David Kučević, Ana Anđelković, Itana Đurašković, Anastasija Mareš, Ana Milak, Marina Ršumović, Anika Tabaš & Milica Vdović*  
Faculty of Media and Communications, Singidnum University, Serbia

Serbia's environmental situation is bleak, with no signs of improvement. Previous research has shown counter-intuitive results as there has been no correlation between pro-environmental attitudes and pro-environmental behaviours in a Serbian sample. We hypothesised that the lack of relationship was due to the pro-environmental behaviour scale assessing frugal behaviour rather than strictly pro-environmental behaviour. Using the new ecological paradigm framework, we evaluated participants' attitudes. A modified version of the behavioral scale was used, while an added measure was utilised in order to control for people's motives behind their behaviour. Additionally, we predicted pro-environmental behaviour using a number of demographic predictors. This study was conducted as a part of an experimental

study that promoted green attitudes and behaviours using a warm glow intervention. On a sample of 359 participants, we explored attitudes and behaviours related to the environment, specifically assessing 3 aspects of everyday “green” behaviours (water, electricity and material conservation). Using a correlation-regression method, we analysed: 1) the relationship between pro-environmental attitudes and pro-environmental behaviours; 2) the role different motives (ecological conservation, economic conservation, comfort and habit) have in changing this relationship; 3) the predictive role of demographic variables: gender, education, SES, household size, and number of household members. Results show that the relationship between attitudes and behaviors was positive but small. However, the link only existed when talking about material conservation. Contrary to our expectations, participants behaved in an environmentally friendly manner out of habit. Only gender was a significant predictor of both “green” attitudes and behaviors. Our research sheds light on what people associate with pro-ecological behaviour and what they often overlook. Future interventions should work on highlighting the role of water and electricity preservation as a means to protect the environment, especially given that they have a bigger impact.

*Keywords:* pro-environmental behaviour, pro-environmental attitudes, ecology, warm-glow

## ECOLOGICAL PROTESTS IN SERBIA: THE ANATOMY OF THE SUPPORTERS

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Ecological civic actions are on the rise since environmental issues are a salient global concern. Ecological protests in Serbia started as disapproval of Rio Tinto's acknowledgment. In addition, cities have been declared the most air-polluted in the world while hundred mini-hydropower plants started operating recently. As a result, civic protests occurred at the end of 2021 by blocking the streets and highways in over fifteen cities. In light of these protests, we tried to describe the supporters, whether they are characterized mostly by the general political dissatisfaction, distrust in government institutions, or socio-demographic indicators. The survey was conducted by the Institute of Political Studies in March 2022. A national representative sample was achieved by interviewing the adult population in Serbia in a stratified sampling procedure ( $N = 1181$ ). The assessed variables were: social conservatism, institutional trust, media consumption, perception of the current socio-economic situation in the country, along with socio-demographic questions. The primary variable was assessed by a single item asking the degree of support for ecological protests (1 – *I do not support at all* to 5 – *I support completely*). Results revealed support for ecological protests ( $M = 3.44, SD = 1.3, t(1084) = 10.804, p < .001$ ). Younger ( $r = -.184, p < .001$ ), more educated ( $r = .089, p < .005$ ), and less religious ( $r = -.097, p < .001$ ) citizens show higher support for the protests. Financial, gender and ethnical characteristics have been of no significance, nor did media consumption. However, the higher support for protests was correlated with general dissatisfaction with the socio-economic situation in the country ( $r = -.387, p < .001$ ) and distrust in institutions ( $r = -.241, p < .001$ ). Although several variables correlate with protest support, the regression model showed that only age and general dissatisfaction with the socio-economic situation in the country ( $R^2 = .165, F = 34.442, p < .001$ ) appear as significant predictors. These findings can be used to shape the communication with the public to continue striving for a greener environment.

*Keywords:* environment, ecological protests, institutional trust, ideological worldview

Thematic Session  
**Psychometrics**



# ON MEASURING HONESTY: THE CHALLENGES OF A PSYCHOMETRIC APPROACH TO A MULTIDIMENSIONAL CONSTRUCT

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The aim of this research was to examine the psychometric characteristics of a self-reporting scale which measures honesty as a stable personality disposition. Positively, honesty can be defined as truth-orientation and realistic and authentic self-representation, while the negative definition describes it as the absence of manipulation. The multidimensionality of honesty is perceived in the subscales of the psychometric instruments, such as: beliefs about the frequency of dishonest behavior in others; punitiveness towards dishonesty; awareness of other people's dishonest behavior; self-projection; admitting dishonest conduct; temptations; rationalizations of dishonest behaviors. This study was conducted on Qualtrics, on a sample of 536 students from the biggest state university in the R. Macedonia, of which female students were more numerous (70.10%) than male students and the largest number (46.7%) of the participants were seniors. The participants were answering the pilot-version of the newly developed Scale of Honesty Beliefs [SHB], the Conscientiousness scale (which includes Orderliness, Productivity and Responsibility) out of the Big Five [BFI-2] and also a scale of Five Trick-Questions [FTQ]. Two of the FTQ were control-questions and extremely easy, and three were experimental and extremely difficult. A sentence in the answer instructions stating that the following questions were "general knowledge" questions was inserted in order to tempt participants to cheat to portray themselves in a socially desirable light, as well-informed students. The Conscientiousness Scale was conducted to examine the external validity of the SHB ( $r = .203, p < .001$ ), and the FTQ were conducted to examine the predictive validity of the SHB ( $r = .013; p = .381$ ). An EFA was also conducted, after which six factors were extracted and treated as subscales. We tested the reliability of SHB ( $\alpha = .811$ ) and its subscales. The test has good psychometric characteristics and this research

once again presented the challenges and confirmed the complexity of measuring multidimensional constructs, such as honesty.

*Keywords:* honesty, psychometrics, beliefs, validity, multidimensionality

## **“I’VE SEEN THE CLASSROOMS, THE CAMPUS, AND THE LIBRARY, BUT WHERE IS THE UNIVERSITY?” COMPARISON BETWEEN THE NETWORK AND LATENT MODEL ACROSS SEVERAL PSYCHOPATHOLOGICAL SCALES**

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Contrary to latent models, where symptoms are mere indicators of latent disorders, network models suggest that symptoms directly influence and perpetuate each other, thus yielding a disorder. Although the two models are mathematically equivalent, they are ontologically different. This study aims to compare the fits of the two models, applying state-of-the-art network suites on scales measuring dysphoria, social anxiety, generalized anxiety and paranoia. The sample included 525 participants (72.95% female,  $M_{\text{age}} = 29.12$ ,  $SD = 9.61$ ) who filled an online questionnaire including the Patient Health Questionnaire–9, Social Anxiety Scale, Brief Measure for Assessing Generalized Anxiety Disorder, and a measure of paranoia (PKIT) derived from the DSM-5 Paranoid Personality Disorder criteria. To compute network estimates and model comparisons, we used bootnet and psychonetrics R packages. Network vs. latent model fits are as follows: dysphoria scale: AIC = 14187.99, RMSEA = .024 vs. AIC = 14279.49, RMSEA = .088,  $p < .01$ ; paranoia scale: AIC = 13177.44, RMSEA = .027 vs. AIC = 13202.03, RMSEA = .054; social anxiety: AIC = 13489.36, RMSEA = .042 vs. AIC = 13607.32, RMSEA = .10; generalized anxiety: AIC = 11013.73, RMSEA = .028 vs. AIC 11061.89, RMSEA = .089. Symptom centrality, stability and accuracy were computed, and results

will be discussed. Results suggest that network models fit the data better for all four scales, albeit both models have acceptable fits. The network model seems to be at least as suitable for explaining covariance between symptoms as the latent model. Unlike latent, network models provide valuable information about symptom-symptom interactions and their individual impact. They are also suggestive of possibly important clinical targets and relapse prevention in the context of symptom activation. The conceptual and clinical implications of both models will be further elaborated.

*Keywords:* network model, latent model, comparison

## DEVELOPMENT OF THE SHORT SELF-DISGUST SCALE

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Disgust is a diverse, multifaceted emotion that evolved from a disease avoidance mechanism. Self-disgust is a core emotion, distinct from feelings such as self-hatred, that arises when the basic emotion of disgust is directed at the core feature of the self. Clinically self-disgust has been linked to depression, anxiety, trauma related difficulties, body-image difficulties, self-harm and other symptoms. We have created a short measure of self-disgust, the Short Self Disgust Scale (SSDS) containing only 4 items in order to help with clinical research on the subject. First we conducted exploratory factor analysis on a sample of 328 participants (71% female, average age 34.01, from 18 to 70,  $SD = 9.44$ ) to get to the 4 items needed from the initial pool of 8 ( $\alpha = .88$ ). Then on another sample 372 students (68.3% female) with a mean age of 20.25 ( $SD = 1.78$ ) years we performed confirmatory factor analysis ( $\chi^2(2) = 7.425$ ,  $p = .024$ , CFI = .988, TLI = .963, AIC = 23.425 and BIC = 54.777) and Cronbach's alpha was .87. In this sample we also used the Basic Psychological Needs Satisfaction and Frustration Scale based on the Self-Determination theory. The scale cor-

related positively with Autonomy, Relatedness and Competence frustration ( $r = .44$ ,  $r = .41$ ,  $r = .58$ ) and negatively with satisfaction of those needs ( $r = -.24$ ,  $r = -.28$ ,  $r = -.33$ ). In a third sample of students numbering 216 participants (84.7% female) we correlated self-disgust ( $\alpha = .87$ ) with facets of the Disgust Propensity and Sensitivity Scale ( $r = .28$  for Disgust Sensitivity, but  $r = .09$  for Disgust Propensity) with the Dark Triad Dirty Dozen scale ( $r = .26$  for Machiavellianism,  $r = .32$  for Psychopathy, and  $r = .23$  for Narcissism) and with the Depression Anxiety Stress Scale-21 ( $r = .63$  with Depression,  $r = .48$  with Stress, and  $r = .51$  for Anxiety). By looking at the relationship between our short self-disgust scale with other measured construct and its favorable psychometric properties we believe it is ready to be used by researchers in the field.

*Keywords:* self-disgust, disgust, psychological distress

## PRELIMINARY FINDINGS REGARDING THE PSYCHOMETRIC TOOLS ASSESSING YOUTH’S PANDEMIC RELATED EXPERIENCES

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Aims: Due to certain aspects of COVID-19 pandemic which interfere with their developmental tasks and needs, youth constitute a vulnerable group in terms of adverse psychosocial outcomes. Yet, the particular stressors specific to pandemic and behaviors/activities supporting youth’s psychosocial well-being have not been well documented. There is a need for an evidence base to inform pandemic-specific preventive mental health efforts to mitigate the effects of these adverse conditions. In order to facilitate research on these issues, the current study aims to develop measurement tools to assess youth’s pandemic-related psychosocial difficulties and frustrations and their engagement in behaviors supporting psychosocial well-being. Method: The sample consisted of 281 university students (83.3% female) living in Turkey whose ages ranged between 18–25 ( $M = 21.33$ ,  $SD = 1.55$ ). Two self-report scales, namely Youth’s Pandemic-Related Psychosocial Difficulties and Frustrations Scale (Y-PPDF) and Youth’s Engagement in Behaviors Supporting Psychological Well-Being Scale (Y-EBSPW) were constructed and evaluated for their psychometric properties. Along with these instruments, Perceived Stress Scale, Emotion Regulation Scale and Brief Symptom Inventory which are measuring theoretically-related constructs were used to test convergent validity. The scales were assessed for their internal consistencies, split-half and item-total reliabilities. Results: Exploratory factor analyses resulted in 14-item Y-PPDF with 3 factors (Interruption of Activities and Routines, Interruption of Relationships, Interruption of Future Plans and Goals); and 16-item Y-EBSPW with 3 factors (Physical Self-Care and Maintaining Routines, Information Seeking, Emotion Focused Coping and Social Support). The internal consistencies of the factors ranged between .76 and .86 for Y-PPDF, and .54 and .81 for YEBSPW. Significant correlations with other related scales and among sub-scales indicated robust construct validity. Both

scales had good split-half reliability. Conclusions: These preliminary results suggested that Y-PPDF and Y-EBSPW are reliable and valid instruments having the potential to contribute to the studies investigating the impact of pandemics on young populations.

*Keywords:* COVID-19 pandemic, youth, scale development, psychosocial well-being

## **PSYCHOMETRIC PROPERTIES, MODEL COMPARISON AND MEASUREMENT INVARIANCE OF WORK TASKS MOTIVATION SCALE FOR TEACHERS (WTMST)**

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Introduction. The self-determination theory, proposed that the Work Task Motivation Scale for Teachers (WTMST) comprises five core dimensions which are independent and measurable. Therefore, the WTMST offers the first instrument to measure all five motivational elements efficiently and consistently. Method. A cross-sectional design with quantitative approaches was employed. An Amharic version of the WTMST for teaching and student evaluation tasks was adopted and assessed in large-scale data ( $N = 1117$ ,  $N_{male} = 835$ ,  $N_{female} = 256$ ) of Ethiopian university teachers with a mean age of 31.1 years ( $SD = 6.1$  years). Results. Our findings demonstrate excellent reliability and construct validity (convergent, discriminant, divergent and factorial). Besides, the findings of the model comparisons provided that out except single factor model, the three competing models (correlated factor, higher-order factor and bi-factor models) are the best fitting models, of which the bi-factor model was the best fitting. The bi-factor, correlated factor, and the higher order model results of WTMST in teaching tasks found that,  $\chi^2(75) = 189.74$ ,  $p < .001$ ,  $\chi^2/df = 3.04$ , GFI = .977, TLI = .979, CFI = .985, RMSEA = .037, 95% CI [.031, .044], AIC = 279.74, BIC = 505.56;  $\chi^2(80) = 243.18$ ,  $p < .001$ ,  $\chi^2/df = 2.53$ , GFI =

.972, TLI = .971, CFI = .978, RMSEA = .043, 95%CI [.037, .049], AIC = 323.18, BIC = 523.92; and  $\chi^2(85) = 289.17$ ,  $p < .001$ ,  $\chi^2/df = 3.40$ , GFI = .965, TLI = .966, CFI = .973, RMSEA = .046, 95%CI [.041, .052], AIC = 359.17, BIC = 534.81, respectively. Besides, the WTMST of three best fitted competitive models of this study in student evaluation tasks found that,  $\chi^2(76) = 202.22$ ,  $p < .0016$ ,  $\chi^2/df = 2.67$ , GFI = .977, TLI = .985, CFI = .989, RMSEA = .039, 95%CI [.032, .045], AIC = 290.72, BIC = 511.53 for bi-factor model;  $\chi^2(80) = 286.59$ ,  $p < .001$ ,  $\chi^2/df = 3.58$ , GFI = .967, TLI = .977, CFI = .983, RMSEA = .048, 95%CI [.042, .054], AIC = 366.59, BIC = 567.24 for correlated factor model; and  $\chi^2(85) = 320.04$ ,  $p < .001$ ,  $\chi^2/df = 3.77$ , GFI = .948, TLI = .976, CFI = .980, RMSEA = .050, 95%CI [.044, .056], AIC = 390.04, BIC = 565.68 for higher order factor model. Results also suggest that the factor structure of the WTMST for both tasks demonstrate invariance across gender (men, women), university types (research, applied, and general university), age and experience in teaching. Conclusion. Therefore, the WTMST for teaching and student evaluation tasks may be valid in Ethiopian higher education.

*Keywords:* bi-factor model, confirmatory factor analysis, higher education settings, measurement invariance, work task motivation scale for teachers

## SELF-REPORT MEASURES OF PERSONALITY ORGANIZATION AND FUNCTIONING – COMPARISON OF RESULTS IN TWO LANGUAGES WITH BILINGUAL SAMPLE

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Language is both an important tool for construction of the self-concept and a core aspect of personal identity. The present study was planned to enhance a better understanding of the process of cultural and linguistic adaptation of psychometric self-report instruments by exploring differences in personality self-assessment results when using two different language versions of presumably the same instruments. Hypothesis of linguistic relativity, stating the influence of language on cognitions and hypothesis of lack of equivalence in two versions of the instruments are considered in exploration and analysis of findings. Two language versions (English and Bulgarian) of The Personality Inventory for DSM-5 – Brief Form (PID-5-BF) – Adult (APA emerging measures), and Inventory of Personality Organization – Revised (IPO-R) were filled in consecutively in one session, divided by self-controlled distraction – to listen to favorite piece of music and choose one of the six human faces that is best associated with it. A bilingual sample ( $N = 135$ ) of young adults ( $M_{age} = 30.8$ ,  $SD_{age} = 7.96$ ) participated in an anonymous online survey. The condition for inclusion in the study was to use predominantly English in at least one setting – work, home, social, informal. There were significantly higher levels on three out of five sub-scales of PID-5-BF when answering in Bulgarian: Negative Affect ( $t(134) = 4.1$ ,  $p < .001$ ), Disinhibitions ( $t(134) = 4.8$ ,  $p < .001$ ), and Psychotism ( $t(134) = 6.3$ ,  $p < .001$ ). Differences in sub-scale results might be due to psychologically non-equivalent language forms or to activation of different cultural personality frame, or to the same sequence (first Bulgarian, second English) of filling in the tests. The research contributes in methodological plan to the issue of language adaptations of instruments, and raises important questions about culturally sensitive assessment of bilingual and linguistically diverse population in clinical practice.

*Keywords:* personality organization, identity, personality functioning, bilingual

## PSYCHOMETRIC CHARACTERISTICS OF THE PARANOIA SCALE BASED ON THE CRITERIA FOR PARANOID PERSONALITY DISORDER (PKIT) IN A NON-CLINICAL SAMPLE

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The aim was to develop and validate a measure of paranoia based on the DSM-5 criteria for Paranoid Personality Disorder. The scale consists of 9 items rated on a 5-point Likert scale. Criteria-based questionnaires are useful and easily comparable between different populations, in non-clinical and clinical samples. Further, paranoia symptoms in non-clinical samples have been associated with poor physical, mental and social outcomes, alongside other psychiatric problems. We conducted a pilot study ( $N = 120$ , 101 female,  $M_{age} = 29.30$ ,  $SD = 9.77$ ), followed by a battery of scales in two online waves ( $N = 525$ , 383 female,  $M_{age} = 29.12$ ,  $SD = 9.61$ , and  $N = 224$ , 174 female,  $M_{age} = 29.02$ ,  $SD = 9.36$ ). We correlated the PKIT with the Feningstein Paranoia scale (Feningstein & Venable, 1992), The Big Five Inventory (John, Donahue & Kentle, 1991), Patient Health Questionnaire – 9 (Kroenke et al., 2001), Brief Measure for Assessing Generalized Anxiety Disorder (Spitzer et al., 2006), and a *social-evaluative anxiety* subscale from the Social Anxiety Scale (Tovilovic, 2005). Within the pilot and the first wave, scree plot and confirmatory factor analysis indicated a one factor solution (TLI = 0.96, RMSEA = .054). Reliability was  $\omega = .78$  and  $.83$ . Test-retest reliability was  $r = .82$  ( $p = .01$ ). The correlation with the Feningstein paranoia scale was  $r = .78$  ( $p < .01$ ). The scale correlated significantly with Neuroticism ( $r = .37$ ,  $p < .01$ ), Conscientiousness ( $r = -.17$ ,  $p < .01$ ), Agreeableness ( $r = -.35$ ,  $p < .01$ ), Extraversion ( $r = -.20$ ,  $p < .01$ ), and did not correlate with Openness ( $r = .024$ ,  $p > 0.54$ ), as expected. Results suggest that PKIT is a scale that can be used in research for assessing paranoia in a non-clinical population. Future studies should be focused on clinical population standardization and testing association patterns with other constructs.

*Keywords:* Paranoia scale, reliability, validity



Thematic Session  
**Psychotherapy  
& Mental Health**



# THE ORDINARY PSYCHOSIS – A NEW APPROACH OF THE FRENCH SCHOOL OF PSYCHOANALYSIS TO THE QUESTION OF MILD PSYCHOSIS

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In the DSM, the nosological approach to the psychosis is oriented around obvious psychotic phenomena such as delusions, hallucinations and disorganized cognitive and behavioural states. However, Bleuler's idea of latent schizophrenia is testimony to the fact that acute psychotic symptoms are either transitory or altogether absent in many instances of psychosis. This paper examines the pragmatic consequences of the term ordinary psychosis, introduced in 1998. Firstly, we will discuss the possibilities of discerning the latent psychotic structure, characterized by the feelings of externality in the domain of social functioning, body experience and subjective feeling. Secondly, we will argue on different possibilities of stabilization. Finally, we will specify the treatment principles in ordinary psychosis. While working with ordinary psychosis, the clinician should aim to create an atmosphere the patient can experience as safe. This implies that the clinician is actively present in the sessions, but at the same time respectful of the habits the individual has spontaneously invented for living his life. This dialogue aims at grasping the issues the patient has difficulties with, helping him find ways to cope. Indeed, the focus of the clinician in the treatment of ordinary psychosis is directed toward finding out how subjective consistency and reconnection might be created. The subjective consistency and reconnection always appear to be specific for every subject in its particularity. What is singular to the patient's functioning thereby stands to the fore.

*Keywords:* latent schizophrenia, ordinary psychosis, latent psychotic structure, stabilization

## EFFECTIVENESS OF COGNITIVE BEHAVIOURAL THERAPY ON STRESS OF INFERTILE WOMEN: A META-ANALYSIS

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**Background:** Infertility is regarded as a highly stressful life experience and the available treatment strategies also add extra distress to the clients, especially women. Cognitive behavioural therapy is one of the psychosocial interventions that have been considered a strategy to alleviate the psychological distress related to infertility. The objective of the present meta-analytic study is to evaluate the research articles published on the effectiveness of cognitive behavioural therapy in managing stress among women facing infertility. **Method:** A comprehensive data search was done using EBSCO, SCOPUS, PubMed, Google Scholar, and ProQuest. Seven articles analyzing the effectiveness of psychological interventions in infertility stress, published in the past 20 years (between 2002 and 2022) were included in the meta-analysis. **Result:** Combined effect size of CBT is found to be high in reducing stress (Hedges'  $g = 1.279$ ) among women facing infertility. Subgroup analysis indicated that face-to-face cognitive behavioural therapy (Hedges'  $g = 1.788$ ) is found to be more effective in reducing the psychological stress associated with infertility compared to internet-based CBT (Hedges'  $g = 0.644$ ). Subgroup analysis also showed that interventions with long duration (more than 10 weeks, Hedges'  $g = 1.897$ ) are found to be more effective than moderate duration interventions (between 5 and 10 weeks, Hedges'  $g = 1.053$ ) and short duration interventions (less than 5 weeks, Hedges'  $g = .139$ ). **Conclusion:** Cognitive Behavioural Therapy is found to be effective in reducing stress among women facing infertility.

**Keywords:** Cognitive Behavioural Therapy, stress, infertile women

## EMPATHY, MACHIAVELLIANISM, GRANDIOSE, AND VULNERABLE NARCISSISM AS PREDICTORS OF RESILIENCE

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Resilience is not limited to capacity to overcome distress but also includes the power to ‘bounce back’ and gain from the experience. Adaptive outcomes of resilience are closely related to empathy, the main cognitive-affective resource of prosocial behavior. Nevertheless, there are reports in the literature indicating that ability to recover may be more specific for individuals with antagonistic personality traits. Here, we investigated the ability of empathy, Machiavellianism and grandiose and vulnerable narcissism to predict resilience. For this purpose, 811 participants from Serbia (678 females and 138 males;  $M_{age} = 31.11$ ,  $SD_{age} = 10.44$ ) responded online to Brief Resilience Scale ( $\alpha = .85$ ), Five Factor Machiavellianism Inventory ( $\alpha = .82$ ), Narcissistic Admiration and Rivalry Questionnaire ( $\alpha = .76$ ), Narcissistic Vulnerability Scale ( $\alpha = .80$ ), and Affective and Cognitive Measure of Empathy ( $\alpha = .88$ ). Multiple regression analysis ( $R = .55$ ; corrected  $R^2 = .30$ ;  $F(11, 799) = 32.112$ ;  $p < 0.01$ ) confirmed statistically significant contributions of Machiavellian activation ( $\beta = .49$ ;  $p = .001$ ), cognitive empathy ( $\beta = .102$ ;  $p = .002$ ), and Machiavellian antagonism ( $\beta = -.115$ ;  $p = .006$ ) when predicting resilience to stress. This suggests protective role of Machiavellianism in stress, primarily due to its activity dimension encompassing assertiveness, low self-consciousness and proactivity. Simultaneously, antagonistic Machiavellianism is, although much weaker, a risk factor of resilience to stress. Contradictory effects of two Machiavellian dimensions on resilience may clarify conflicting reports regarding the role of Machiavellianism in stress. Empathy may be protective under ability to recover from stress, but only via its cognitive resources, devoid of any affective components. In the present setting, both grandiose and vulnerable narcissism had no observable effects on resilience. In conclusion, our findings point at the protective role of personality resourc-

es committed to activation and control. Pronounced affectivity and antagonism impair the ability 'to bounce back' from stress.

*Keywords:* resilience, empathy, Machiavellianism, grandiose narcissism, vulnerable narcissism

## **THE USE OF DIGITAL TECHNOLOGIES FOR MENTAL HEALTH PROMOTION IN ADOLESCENCE: A NARRATIVE REVIEW**

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Children and adolescents' mental health is one of the World Health Organization's (WHO) main priorities. There is a growing concern about the findings from various studies which provided evidence of the high prevalence of child maltreatment (physical, sexual, and psychological/emotional violence and neglect) and traumatic experiences across countries. Moreover, child maltreatment and abuse have long-term negative consequences on mental health throughout life. There is a high demand to provide mental health services for children and adolescents affected by adverse life experiences and suffering from mental health problems. Demand for care during the global COVID-19 pandemic has increased even more. Novel and innovative solutions are needed to reduce the treatment gap and foster psychosocial services for children and adolescents. Evidence-based psychosocial interventions delivered via the internet for adolescents can provide a feasible solution for reaching out to those in need, and this field of research is emerging rapidly. The main goal of this study was to provide a narrative review of empirical studies using internet-based interventions for mental health promotion in adolescence. We searched for published papers in the last five years using the keywords 'internet intervention', 'adolescence', and 'mental health' in abstracts and titles of articles indexed in PubMed in August 2022. The search in the database revealed 100 papers. Empirical findings in adolescent samples from the recent internet intervention trials provided evi-

dence for the efficacy of these interventions for various problems, such as loneliness, low self-esteem, depression, anxiety, eating disorders, substance abuse, and others. The presentation will address the growing field of internet interventions for adolescents mental health and will outline future perspectives for research in this field.

*Keywords:* evidence-based, internet intervention, adolescents, mental health

## **REDUCING SELF-CRITICISM USING A TWO-CHAIR DIALOGUE IN VIRTUAL REALITY: A PILOT STUDY WITH NON-CLINICAL ADULT POPULATION**

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Severe self-criticism is largely linked to a variety of psychopathologies, such as anxiety and depression. Positive impact of two-chair dialogue technique for the reduction of severe self-criticism has been previously documented in research. Based on the emotion transformation model of Emotion-focused therapy, we developed a prototypical virtual environment that enables two-chair work with the help of virtual reality technology. Instead of talking to an imagined aspect of their self, a person can talk to and listen to their avatar. The experiment had a  $2 \times 2$  mixed design, with group (experimental vs. control) and time (pre vs. post) as between and within factors, respectively. The study employed  $N = 27$  non-clinical adult participants;  $N = 21$  in the experimental and  $N = 6$  in the control group. The intervention consisted of two sessions within the space of approximately two weeks: participants responded to their inner critic either with two self-compassionate responses ( $N = 7$ ), two self-protective responses ( $N = 7$ ), or one of each ( $N = 7$ ), in a counterbalanced order. To mea-

sure changes in self-criticism, we used the standardised Slovak version of Forms of Self-Criticising/Attacking & Self-Reassuring Scale, specifically Inadequate and Hated Self subscales combined. Linear mixed model analysis returned a significant interaction in self-criticism scores between experimental and control groups in pre and post measures,  $b = -5.405$ ,  $t(25) = -2.205$ ,  $p = .04$ . However, this seems to be caused by an unexpected increase in self-criticism in the control group. Although the pre-to-post self-criticism scores decreased from  $M = 18.43$  ( $SD = 8.72$ ) to  $M = 16.71$  ( $SD = 6.6$ ) in the experimental group, they surprisingly increased from  $M = 20.5$  ( $SD = 11.04$ ) to  $M = 24.67$  ( $SD = 13.85$ ) in the control group. Potential reasons for this outcome are discussed.

*Keywords:* self-criticism, virtual reality, two-chair dialogue, experiment

## **ADVANTAGES OF USING VIRTUAL REALITY IN PSYCHOTHERAPY TREATMENTS: A SYSTEMATIC REVIEW OF THE LITERATURE**

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Digital technologies are now an essential component of everyday life, and innovation, especially in the digital domain, is happening very fast. The main objective of this paper is to examine the body of research specific to the application of VR in improving mental wellness and psychological effects on well-being, with a focus on interventions for emotional disorders. A comprehensive systematic literature search was conducted following PRISMA guidelines. Databases searched included Research gate, Psychosocial Intervention, PubMed Central, Semantic Scholar and Academia with inclusion of peer reviewed articles published in English and Spanish, between 2015 and 2022 (inclusive to August 2022), in which the research design includes VR-based therapy.

Using keywords “virtual reality”, “VR-based therapy”, “mental wellness”, “mental health”, “emotional disorder”, “psychology” and “health care”, a search of the literature was conducted and 19 articles were identified for inclusion in this review. Within these papers, most employed quantitative research methodologies within an experimental design. In regard to psychological well-being, some evidence suggests that in many cases VR has been effective in improving various attributes of mental wellness in a variety of samples, and that the quality of the VR technology itself may play a role in these results. Other articles found that virtual reality is effective in working with a wide range of mental health conditions. Generally, virtual reality interventions have the potential to overcome barriers to care and better meet the needs of consumers. Possible limitations for this kind of study may include rapid advancements in technology and the fact it cannot conclude which VR program is most optimal for clinical use nor clarify which technological features of VR are most successful. Future research is required to advance understanding and knowledge of the long-term and large-scale effects of VR, as well as clarifying which technological features of VR are most successful.

*Keywords:* virtual reality, psychotherapy, psychology, digital technologies, mental health



Thematic Session  
Protective Behaviours  
during the COVID-19  
Pandemic



## SHARING IS (NOT) CARING! PREDICTING INTENT TO VACCINATE AGAINST COVID-19 BY EMOTIONAL AND COGNITIVE FACTORS

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In an attempt to battle the Corona virus, and understand hesitancy towards vaccination in general, it is important to examine risk and protective factors that are connected to vaccination intent. Two different groups of factors have been found relevant in past research – emotional and cognitive. We tested both of them: Empathetic concern, Perspective taking, Germ Aversion, and belief in conspiracy theories as predictors of Covid-19 vaccination intent in Study 1, while belief in superstitions, conspiracy theories, and pseudo-profound bullshit (PPB), as predictors of Covid-19 vaccination intent in Study 2. In Study 1 a total of 1201 adults in Serbia were interviewed in person in a representative stratified three-stage probability sampling procedure (October 2021), while sample size in Study 2 was 1150 adults (November 2021) using the same sampling procedure. In Study 1, all correlations with vaccination intent were significant, Germ aversion  $r = .223, p < 0.01$ , Empathetic concern  $r = .224, p < 0.01$ , Perspective taking  $r = .174, p < 0.01$ , Conspiracy belief  $r = -.335, p < 0.01$ , and the regression model was significant,  $F = 39.03, p < 0.01, R^2 = .16$ . Regression in Study 2 showed that the model was a significant predictor of vaccine intentions,  $F = 101.476, p < 0.01, R^2 = .215$ . However, only conspiracy belief had a significant correlation with vaccination intent  $r = -.461, p < 0.01$ . Our findings suggest that we should focus on promoting citizens Empathetic concern for others, Germ aversion tendency, and most importantly lowering people's beliefs in conspiracy theories to increase vaccine uptake in the future. With this in mind, neither emotional nor cognitive factors as a whole have prevailed in predicting anti-vax sentiments, it might be most beneficial to combine elements of the two instead.

*Keywords:* vaccinal intentions, coronavirus, conspiracy theories, empathy, superstition

## IMPACT OF SOCIAL CONSERVATISM IN SHAPING COVID-19 VACCINATION INTENTION

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Different cognitive (ideological worldview), emotional and socio-demographic factors have been marked as important for vaccine refusal. Studies from the USA found that people from the right of the ideological spectrum tend to reject or at least are more skeptical of vaccination issues. On the other hand, research from Europe indicates that ideological extremism from both sides seems to lower people's vaccination intentions. Belief in conspiracy theories is undoubtedly associated with health behavior. The aim of this study is to investigate different cognitive factors of vaccine refusal in Serbia, a country that is characterized by medium to low vaccine uptake. We analyzed data from two representative surveys ( $N_1 = 1201$ ,  $N_2 = 1150$ ) conducted face to face by the Institute of Political Studies in September (Study 1: 52.4% male;  $M_{age} = 44.25$ ,  $SD_{age} = 16.31$ ) and November (Study 2: 50.3% male;  $M_{age} = 46.09$ ,  $SD_{age} = 16.72$ ) 2021 among the Serbian adults. In both studies, we analyzed the associations between social conservatism, conspiracy belief, and willingness to vaccinate, with the addition of trust in institutions only in Study 1 (due to the restrictions imposed by the project of Institute of Political Studies). Descriptive statistics, correlation, and regression modeling were used in our statistical analysis. Results show that the higher people score on social conservatism, the more likely they are going to support vaccination ( $r_1 = .216$ ,  $p < .01$ ;  $r_2 = .16$ ,  $p < .01$ ), and are less likely to believe in conspiracy theories ( $r_1 = -.168$ ,  $p < .01$ ;  $r_2 = -.077$ ,  $p < .01$ ). In Study 1, the model predicting willingness to vaccinate consisted of social conservatism, conspiracy beliefs, and trust in government. All variables proved to be significant predictors ( $F = 154.45$ ,  $R^2 = .287$ ,  $p < .01$ ). In Study 2 model consisted of social conservatism and conspiracy beliefs alone. Both variables proved to be significant ( $F = 164.32$ ,  $R^2 = .227$ ,  $p < .01$ ). Our findings disagree

with the results from other studies explaining political ideology and vaccine intention, indicating surprisingly that social conservatism in Serbia is not being an obstacle to vaccination willingness.

*Keywords:* social conservatism, conspiracy theories, trust in government, vaccine intention, coronavirus

## **FEAR OF COVID-19 AND PERSONALITY TRAITS AS PREDICTORS OF MOTIVATION FOR VACCINATION**

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Our research was conducted with the aim of verifying whether fear of COVID-19 and personality traits are statistically significant predictors of motivation for vaccination. Previous results has shown that increased fear of COVID-19 predicts vaccination willingness 14 months later and self-estimated knowledge of conventional vaccines and COVID-19 vaccines, confidence in efficiency and safety of conventional vaccination were associated with a lower risk of vaccine hesitancy or resistancy. The survey was conducted in April 2021, on a convenient sample of 119 participants, aged 18 to 70 ( $M = 27.66$ ,  $SD = 11.97$ ) in Serbia. In this research, a questionnaire that examines the psychological aspects of the COVID-19 pandemic (S-PACQ-19) was used for operationalization of fear of COVID-19 and Motivation for vaccination, to which was added a questionnaire of personality traits (Big Five Inventory-10). The research is in the form of structured, non-experimental research – survey research. The data were processed using the method of linear regression analysis. The results indicate that the Level of willingness to be vaccinated ( $R^2 = 0.205$ ,  $F(4, 114) = 7.37$ ,  $p < .001$ ) can be predicted based on the fear of COVID-19 (Fear of infection  $\beta = .096$ ; Fear of lack of food  $\beta = .078$ ; Fear for the future  $\beta = .072$ ; Frequency of thinking about COVID-19  $\beta =$

.325), while the Level of willingness to be vaccinated can also be predicted based on the main personality traits ( $R^2 = .107$ ,  $F(5, 113) = 2.705$ ,  $p = .024$ ), (Extraversion  $\beta = .090$ ; Agreeableness  $\beta = .108$ ; Conscientiousness  $\beta = .077$ ; Neuroticism  $\beta = .307$ ; Openness  $\beta = .170$ ). This research could be applied in psychotherapy, clinical psychology and counseling psychology, because it could help individuals with high levels of COVID-19 related fear.

*Keywords:* fear of COVID-19, personality traits, motivation for vaccination

## **THE ROLE OF FEAR OF ADVERSE EFFECTS IN THE YOUTHS' INTENTION TO BE VACCINATED AGAINST COVID-19: THE REASONED ACTION APPROACH**

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The aim of this study is to test the moderating effect that fear of adverse effects has in the relationship between three predictors of Reasoned Action Approach and youths' intention to be vaccinated against COVID-19. The online-based research was conducted in July 2022 on a sample consisting of 311 (70.7% female) participants with an age range from 15 to 25 ( $M = 21.19$ ,  $SD = 2.545$ ). Referring to the predictors: attitudes toward vaccination were measured on a five-items scale ( $\alpha = .963$ ), subjective norms on a four-item scale ( $\alpha = .879$ ), and perceived behavioral control on a two-item scale ( $\alpha = .877$ ), while intention to be vaccinated against COVID-19 was measured on a three-item scale ( $\alpha = .992$ ). All of the items had values from 1 to 7. Fear of adverse effects was measured on a single-item scale had values from 1 to 10. Hierarchical regression analysis indicated that the model was statistically significant in the second block, when interaction of fear of adverse effects and attitudes ( $R^2 = .875$ ,  $F(3, 307) = 333.997$ ,  $p < .01$ ); subjective norms ( $R^2 = .784$ ,  $F(3, 307) = 163.286$ ,  $p < .01$ );

and perceived behavioral control were introduced ( $R^2 = .631$ ,  $F(3, 307) = 67.637$ ,  $p < .01$ ). Interaction was registered only in terms of attitudes and fear of adverse effects ( $\beta = -.060$ ,  $p < .05$ ) and subjective norms and fear of adverse effects ( $\beta = -.081$ ,  $p < .05$ ). Youth with positive attitudes towards vaccination have significantly higher intention to get vaccinated if they fear adverse effects less than youths who fear them more. Also, youth with low fear of adverse effects have higher intention in conditions of both lower and higher social pressure, than youth with higher fear.

*Keywords:* reasoned action approach, fear of adverse effects, COVID-19, youth

## **THE ROLE OF TRUST IN THE HEALTH-CARE SYSTEM IN THE RELATIONSHIP BETWEEN TRUST IN OFFICIAL MODERN MEDICINE AND YOUTHS' ATTITUDES TOWARDS VACCINATION AGAINST COVID-19**

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The aim of this study was to test the moderating effect that trust in the health-care system has in the relationship between trust in official modern medicine and youths' attitudes towards vaccination against COVID-19. The online research was conducted on Serbian sample consisting of 311 (70.7% female) participants with an age range from 15 to 25 ( $M = 21.19$ ,  $SD = 2.546$ ). Both the predicting and the moderating variable were measured on a single-item scale, with a ten-point answer scale, in which participants answered how much they trust the official medicine and the health-care system, respectively. Five-item scale ( $\alpha = .963$ ) was used to measure youths' attitudes towards COVID-19 vaccination. Therefore, the participants evaluated vaccination against COVID-19 on the semantic differential scale from 1 to 7 (harmful-useful; unnecessary-necessary; bad-good; unpleasant-pleasant; stressful-relaxing). Hierarchical regression analysis

shows that the model is statistically significant ( $R^2 = .350$ ,  $F(3, 307) = 55.010$ ,  $p < .01$ ) in the second block when interactive effect of trust in official medicine and trust in the health-care system was introduced ( $\beta = .121$ ,  $p < .05$ ). The results suggest that with the increase of trust in official medicine the more positive are youths' attitudes toward vaccination ( $\beta = .493$ ,  $p < .01$ ), yet in people with higher levels of trust in the health-care system this relationship was stronger. In other words, in the conditions of low trust in official medicine the youths' attitudes are steadily negative, no matter the level of trust in the health-care system. Meanwhile, in the conditions of high levels of trust in official medicine the ones who have also higher levels of trust in the health-care system have significantly more positive attitudes than those with lower levels of trust in the health-care system. The theoretical and practical implications of these results will be discussed.

*Keywords:* institutional trust, trust in health system, trust in official modern medicine, attitudes towards COVID-19 vaccination, youth

## **INSTITUTIONAL TRUST AS A MODERATOR OF RELATION BETWEEN FEAR OF GETTING INFECTED AND ADHERENCE TO PRECAUTIONARY MEASURES DURING COVID-19 PANDEMIC**

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The aim of this research is to test the moderating effect that institutional trust (in government and healthcare system) has in the relationship between fear of getting infected and adherence to precautionary measures during COVID-19 pandemic. In April 2020, 1387 (82.6% female) participants took part in this online-research, with an age ranging from 18 to 85 ( $M = 37.00$ ,  $SD = 12.62$ ). All variables were measured on one-item scale. Hierarchical regression analysis indicated that the model was statistically significant in the second block, when interaction between the trust in healthcare system and fear of getting infected was introduced ( $R^2$

= .067,  $F(1, 1383) = 5.533$ ,  $p = .019$ ), while this statistical significance was not registered when the interaction between the trust in government and fear of getting infected was introduced ( $R^2 = .057$ ,  $F(1, 1383) = 2.287$ ,  $p = .131$ ). Significant main effects of fear of getting infected ( $\beta = .221$ ,  $p < .01$ ) and trust in government were registered ( $\beta = .071$ ,  $p < .01$ ), while their interactive effect was not ( $\beta = -.040$ ,  $p = .131$ ). So, the greater the fear of getting infected and the greater the trust in the government, the respondents report greater adherence to precautionary measures. In terms of trust in healthcare system, a significant main effects of trust in the healthcare system ( $\beta = .107$ ,  $p < .01$ ) and fear of getting infected ( $\beta = .219$ ,  $p < .01$ ) were registered, as well as their interactive effect ( $\beta = -.062$ ,  $p < .05$ ). People with low trust in healthcare system in conditions of low fear of getting infected adhere less to measures than persons who have greater trust in the healthcare system. When people fear more, they are increasingly adhering to precautionary measures, regardless of the level of trust in the healthcare system.

*Keywords:* institutional trust, fear of getting infected, precautionary measures, COVID-19

## LONG TERMED CONSEQUENCES OF COVID-19: A QUALITATIVE ANALYSIS OF CROATIAN SEVERE COVID-19 ADULT SURVIVORS

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Post-COVID-19 syndrome is a condition characterized by long-term symptoms and complications that continue or develop after acute COVID-19. It has been found the majority (up to 80%) of patients admitted to hospital with severe COVID-19 disease experience long-term physical and psychological symptoms. The aim of this study was to qualitatively explore the experiences of severe or critical COVID-19 adult survivors throughout the post-acute period (within 1 year post hospital discharge). We examined both negative (physical and mental health symptoms, cognitive symptoms, post-traumatic stress, difficulties in social functioning, diminished functional ability, etc.) and positive (post-traumatic growth) long-term post-COVID effects. This study is a part of a larger project which include four Eastern and Central European countries: Bulgaria, Slovakia, Croatia, and Romania. A biopsychosocial public health perspective was adopted. Participants include 12 adults severe or critical COVID-19 survivors of all ages, with 3-6 months length of the post-acute period. Data were collected through in-depth semi-structured interviews and analysed through thematic analysis. The results show a number of negative long-term post-COVID consequences, and the most commonly reported symptoms are fatigue, and number of neurological symptoms or mental health conditions – difficulty thinking or concentrating, headache, sleep problems, dizziness when standing, and depression or anxiety symptoms. Participants report that symptoms get worse after physical or mental effort. Knowing patients' experiences enables better understanding of their needs for support and will allow for the development of socio-culturally appropriate tailored approaches to the treatment of post-COVID-19 syndrome and psychosocial support in the recovery process.

*Keywords:* severe or critical COVID-19 survivors, post-COVID-19 long-term psychosocial effects, qualitative research

Thematic Session  
**Motor Behaviour & Sports  
Psychology**



## **THE TRANSCRANIAL DIRECT CURRENT STIMULATION (tDCS) IN OLDER PERSONS: ARE THERE ANY POTENTIAL POSITIVE EFFECTS ON THE BALANCE PERFORMANCE?**

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Transcranial direct current stimulation (tDCS) has recently drawn attention as an inexpensive, painless, safe, and effective technique in improving cognitive and motor performance in older persons. However, it remains unclear whether tDCS can improve balance performance in older person. The present study examined the effects of selected balance exercise combined with tDCS on balance performance in older persons. Twenty-four older persons participated in this randomized sham-controlled trial. The participants were randomly assigned into balance exercise with tDCS (real tDCS group) or balance exercise with sham tDCS (sham tDCS group) groups. The participants in the real tDCS group received anodal tDCS (1mA, 20min) over the left primary motor cortex (M1). For the sham condition, the current was applied for only 30s in order to mimic the sensation. The participants performed a selected balance exercise program for 50min following tDCS. Training was conducted 2 sessions per week for 8 weeks (16 sessions). Berg balance scale (BBS) and timed up and go test (TUG) were measured before (baseline), after 8 weeks of the training, and 4 weeks of follow-up. Compared to sham tDCS group, BBS and TUG were significantly improved in real tDCS group after the training and 4 weeks of follow-up. These results indicate that the selected balance exercise program combined with tDCS can improve balance performance in older persons. Our findings suggest that tDCS may be a useful technique for enhancing balance, helping the older person in improving their quality of walking, and reducing the number of falls.

*Keywords:* balance, older, motor performance, tDCS

## ACTIVE AGING PROGRAMS AGAINST SEDENTARY LIFESTYLE IN THE ELDERLY. INFLUENCE ON METABOLIC PARAMETERS AND LIFE SATISFACTION

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In elderly, physical activity programmes brings improvements in quality and satisfaction with life. The aim of this study was to analyse the importance of physical activity programs and their influence on BMI, Cholesterol, Triglycerides and perception of satisfaction with life. The participants were 142 individuals (87 females and 55 males), aged between 64 and 78 years. All of them practised swimming and/or water gymnastics (3 hours per week). The elderly group was evaluated on two occasions: beginning of sports season (mid-September) and at the end of the sports season (end of July). They were evaluated regarding cholesterol and triglycerides analysis and satisfaction with life. We found within the BMI strata that the highest percentages point to cholesterol values below 60, considered beneficial, also the highest percentages of individuals had triglycerides values below 150, which are presented as favourable values. This values were lower in the second evaluation, after the physical activity programme. To evaluate life satisfaction as a cognitive construct the (to some extent modified) Life Satisfaction Scale was used. In this context, it was found that satisfaction with life also increased from a value of  $M = 4.00$ ,  $SD = .90$  to  $M = 5.26$ ,  $SD = 1.04$  ( $t(81) = 0.32$ ,  $p \leq 0.04$ ) between the two evaluation moments. It was observable that physical activity programs that include 3 or more hours per week, properly systematized and organized, constitute a positive factor against sedentary lifestyle and, in turn, in a more active and happier elderly person, as well as presenting an important factor in the regularization and/or decrease in cholesterol, triglycerides and BMI levels.

*Keywords:* active aging, lifestyles, cholesterol, triglycerides, life satisfaction

## MOTOR COMPETENCE, ACADEMIC ACHIEVEMENT AND LATERALITY IN PRE-SCHOOL AGE CHILDREN

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Introduction. The need to move well has been evidenced in the literature as essential for the correct development of the child, not only from the physical point of view, but also mentally, psychologically and socially. On the other hand, numerous investigations have shown how high levels of physical activity are associated with better academic performance. There are also studies that have related laterality and academic performance showing how laterality can influence the ability to read or write. Aim. Therefore, the main aim of this study was to analyze the relationship between laterality, motor skill and academic performance. It was intended to observe how better motor coordination could help to define laterality earlier and, therefore, to obtain better academic performance. Method. 74 pre-school children were involved in this study (34 boys and 40 girls) with a mean age of  $4.6 \pm .48$  years old. For the evaluation of motor competence, the MABC-2 battery observation sheet was used, divided into sections A and B. For the evaluation of laterality, the Harris Test was used. Finally, the evaluation of academic performance was carried out by the teachers of each child. Results. A one-way ANOVA was performed to compare the effect of laterality on the academic performance  $F = 11600, p < .001$ . The analysis revealed significant differences between both variables, with those with right-handed laterality obtaining better evaluations. In the same way, a one-way ANOVA revealed that there was a statistically significant difference in motor competence and academic performance  $F = 7.809, p < .007$ . Those with better motor competence scored significantly higher (in academic performance ( $3.06 \pm .24$ ) compared to the normal motor competence group ( $2.29 \pm .12$ ). Conclusion. The results point that the three variables are connected and it can be concluded how working in the three directions could help to increase the motor skills, improve academic performance or accelerate the definition of laterality.

*Keywords:* motor competence, MABC battery, preschoolers, academic performance

## PERFECTIONISM IN SPORTS AS A PREDICTOR OF SPORTS ANXIETY

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Perfectionism in sports is often seen as a risk factor for sports performance, but also mental health. However, in recent years, perfectionism has been viewed as a multidimensional construct that consists of adaptive (striving for perfectionism) or maladaptive perfectionism (perfectionistic concerns), which affects cognitive, emotional, motivational, and athletic outcomes in sports. The aim of this research is to examine the relationship between adaptive and maladaptive perfectionism and sports anxiety in a sample of Serbian respondents ( $N = 70$ , 51.4% male), who train collective sports at professional ( $N = 21$ ), semi-professional ( $N = 17$ ) and recreational ( $N = 32$ ) level. The respondents were from 16 to 37 years old ( $M = 21.34$ ;  $SD = 3.33$ ), who train group sports from 2 to 20 years ( $M = 10.05$ ;  $SD = 3.99$ ). To measure perfectionism in sport, two subscales of the Multidimensional Inventory of Perfectionism in Sport were used: Striving for perfection (SP) and Negative reactions to imperfection (NRI), while sports anxiety as a personality trait was measured using three subscales of the questionnaire The Sport Anxiety Scale-2: Somatic anxiety (SA), Worry (W), and Cognitive disruption (CD). The results of ANOVA analysis show there are no statistically significant differences in SP ( $F(2, 69) = 1.429, p = .244$ ), NRI ( $F(2, 69) = .283, p = .755$ ), SA ( $F(2, 69) = .250, p = .779$ ), W ( $F(2, 69) = 1.270, p = .287$ ), and CD ( $F(2, 69) = .602, p = .551$ ) between athletes of different level of participation. Continued analysis included creating a predictive model consisting of SP, NRI, and age, and training duration. This model was statistically significant for Worry ( $F(4, 69) = 6.535, p = .001$ ;  $R^2 = .287$ ) with SP ( $\beta = -.350, p = .028$ ) and NRI ( $\beta = .673, p = .001$ ) as significant predictors; and Cognitive disruption ( $F(4, 69) = 5.040, p$

= .001,  $R^2 = .237$ ) with SP ( $\beta = -.334$ ,  $p = .042$ ) and NRI ( $\beta = .659$ ,  $p = .001$ ) as significant predictors; but not for Somatic anxiety ( $F(4, 69) = 1.100$ ,  $p = .364$ ). Obtained results are in line with pervious research showing that adaptive perfectionism can be preventive factor, and that maladaptive perfectionism is a risk factor in developing sport anxiety. Knowing that not all perfectionism has negative consequences on individual's development, sports experts can help athletes develop adaptive form of perfectionism.

*Keywords:* maladaptive perfectionism, adaptive perfectionism, somatic anxiety, sport anxiety, cognitive disruption

## COMPETITIVE ANXIETY IN RELATION TO GENDER, TYPE OF SPORT AND SPORT PARTICIPATION

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Competitive anxiety is defined as a feeling of worry when an upcoming situation is perceived as threatening by the individual when competing. It is assumed that anxiety has negative effects on athletes which results in decrease of overall performance, as well as decline in mental health. This study aimed to investigate if there are differences in athlete's level of competitive trait anxiety regarding gender, type of sport and the level of participation, in a sample of Serbian respondents ( $N = 92$ ; 46.7% male), who train collective ( $N = 70$ ) and individual sports ( $N = 22$ ) at professional ( $N = 24$ ), semi-professional ( $N = 23$ ) and recreational ( $N = 45$ ) level. Participants' age ranged from 16 to 37 years ( $M = 22.15$ ,  $SD = 3.75$ ). During the beginning of 2022, participants completed an online questionnaire containing The Sport Anxiety Scale-2 which consists of three subscales: somatic anxiety (SA), worry (W) and concentration disruption (CD). The results of independent samples  $t$ -test

demonstrate that there are significant differences between male and female athletes regarding the somatic anxiety ( $t(90) = -3.155$ ,  $p = .002$ ), worry ( $t(77.01) = -3.969$ ,  $p = .001$ ) and cognitive disruption ( $t(90) = -2.336$ ,  $p = .022$ ). The results also shows that there is significant difference in regards to a type of sport in somatic anxiety ( $t(27.09) = -2.667$ ,  $p = .012$ ), but that there is no significant differences in worry ( $t(90) = -.419$ ,  $p = .679$ ) and cognitive disruption ( $t(90) = -.915$ ,  $p = .363$ ). The results of ANOVA analysis show there were no statistically significant differences in somatic anxiety ( $F(91, 2) = .239$ ,  $p = .788$ ), worry ( $F(91, 2) = 2.014$ ,  $p = .140$ ) and cognitive disruption ( $F(91, 2) = .356$ ,  $p = .702$ ) between athletes of different levels of participation. Obtained results show that female athletes have higher levels of competitive anxiety, and that athletes from individual sports achieve higher scores on somatic anxiety.

*Keywords:* somatic anxiety, sports, worry, concentration disruption, competitive anxiety

Thematic Session  
**Work, Organization &  
Mental Health**



## WORK-FAMILY CONFLICT AND TURNOVER INTENTION: THE MEDIATING ROLE OF OPTIMISM

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The current Job Demands-Resources model (JD-R model) version proposes that high job demands lead to adverse health-related and organisational outcomes, and that high resources lead to increased motivation and higher productivity. Personal resources (e.g., optimism) directly impact outcomes, but they also could act as a mediator between job demands and outcomes. Even though the JD-R model has received a lot of empirical support in previous research, it does have one limitation – it focuses on job demands as the primary source of outcomes while ignoring non-work-related factors. Given prior studies highlights that work-related and home-related factors influence health-related and other outcomes, it is important to consider both home and work demands within this model. Therefore, this study aimed to examine the relationships between work-family conflict (WFC) and family-work conflict (FCW) and employee turnover intention (TI) and to test the mediating role of optimism in these relationships. The sample consisted of 168 (54.8% female) employees with a mean age of 35.86 ( $SD = 9.94$ ), a mean length of service of 10.44 years ( $SD = 8.46$ ), and 47.6% are married. We used the Work-Family Conflict Scale, Turnover Intention Scale and Optimism Scale. The results indicate that the TI correlates positively with WFC ( $r = .24, p < .01$ ) and FCW ( $r = .23, p < .01$ ), optimism correlates negatively with TI ( $r = -.47, p < .001$ ), and optimism correlates negatively with WFC ( $r = -.21, p < .01$ ) and FCW ( $r = -.38, p < .001$ ). In addition, the results showed that the relationship between WFC and TI is completely mediated by optimism (c:  $\beta_{WFC \rightarrow TI} = .16, p = .04, 95\% CI [0.02, 1.18]$ ; c':  $\beta_{WFC \rightarrow TI} = .02, p = .08, 95\% CI [-0.50, 0.62]$ ; a\*b:  $\beta_{WFC \rightarrow O \rightarrow TI} = .15, p < .001, 95\% CI [0.23, 0.84]$ ). Higher values of WFC contribute to lower optimism, which then leads to higher TI. The mediatory role of optimism is not determined in the relation between FCW and TI. The obtained findings have been considered in the light of theoretical and practical importance.

*Keywords:* work-family conflict, family-work conflict, turnover intention, optimism, mediating effect

## **JOB DEMANDS, JOB RESOURCES AND PERSONAL RESOURCES AS DETERMINANTS OF BURNOUT OF HEALTHCARE WORKERS DURING COVID-19 PANDEMIC**

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According to the JD-R model, excessive job demands from which employees do not adequately recover may lead to burnout. During the COVID-19 pandemic, healthcare workers faced high job demands. The JD-R model also predicts that the job resources and personal resources mitigate the negative effect of job demands on burnout. Studies observed that the effect of job demands on burnout was especially strong if employees possessed few resources and, in a similar vein, that the effect of resources on burnout was particularly strong if employees encountered many job demands. This study aimed to investigate the role of job demands, job resources and personal resources in burnout among healthcare workers during the COVID-19 pandemic and to identify the most influential determinant in burnout. The sample consisted of 224 healthcare workers (74.6% female) from three hospitals, mean age of 42.57 ( $SD = 10.95$ ) and a mean service of 16.87 years ( $SD = 10.93$ ). The data were collected from March till the end of May 2020. We used Copenhagen Burnout Inventory Scale, Job Demands-Resources Questionnaire, Organizational-Based Self-Esteem Scale and Resilience Scale. The hierarchical regression analysis was used to identify the most influential determinant of burnout. Results show that the basic demographic variables (gender, age) introduced in the first step explained 2.1% of the variance of burnout. Job demands, introduced in the second step, explained an additional 28.7% of the variance of burnout. Job resources, introduced in the third step, explained an extra 11.6% of the variance of burnout. Personal resources, introduced in the four-step, explained an additional 6.4% of the variance of burnout, and the model explained 48.8% of the total variance of personal burnout ( $F(14,196) = 15.273, p < .001$ ). Significant positive predictors are

work overload, emotional demands and role conflict, while negative predictors are age, supervisor support, opportunities for professional development and resilience. Results imply that, during the COVID-19 pandemic, job demands were the most influential determinant of healthcare workers' burnout. The findings were evaluated in terms of their theoretical and practical significance.

*Keywords:* job demands, job resource, personal resource, burnout, healthcare workers

## **THE ROLE OF SOCIAL TIES IN A PROFESSIONAL CAREER OF A PHYSICIAN**

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The significance of medical career research is explained by high social value of the profession. A total of 123 medical doctors, aged 28-65 years ( $M = 40.38$ ,  $SD = 11.058$ ) from city hospitals of Saint-Petersburg participated in our research. The sample was balanced by gender and specialization (surgeons and general practitioners). The purpose of the research was to examine the relationship between the objective and subjective success of physicians and their social ties with functional roles. The original scales developed on the basis of a survey of experts were used to measure career success of the physicians. Social career resources were identified during a semi-structured interview. The respondents named a "mentor" the most important person for their career development. A "gatekeeper", who assists recognition and promotion, was regarded the most deficient person. Subjective success of a physician's career was associated with presence of a spouse who acted as an "ally" ( $\chi^2(1) = 4.724$ ,  $p = .03$ ). Physicians with a higher level of subjective success discuss with their spouses the experienced difficulties in career development and receive support from them. The predictive power of functional roles over the rates of objective success was analyzed by means of regression analysis

( $R^2 = .275$ ,  $F(4, 118) = 11.169$ ,  $p < .001$ ). Higher rates of objective career success correlated with higher numbers of “role models” among the friends from the non-professional circle ( $\beta = .344$ ,  $p < .001$ ), and with lower numbers of such models among co-workers ( $\beta = -.203$ ,  $p < .001$ ). Subjective success is related to accessible emotional support from a spouse and objective success depend on the focus on role models outside one’s close professional circle.

*Keywords:* career, social resources, physician, subjective success, objective success

## **PSYCHOSOCIAL EFFECT OF WORKPLACE SAFE DISTANCING MEASURES ON ALLIED MENTAL HEALTH PROFESSIONALS AT TWO TIME POINTS**

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The COVID-19 pandemic saw an increase in demand for mental health services. Allied mental health professionals (AMHP) were tasked to meet the heightened demands while adjusting to various changes in infection control measures including safe distancing measures. Yet, studies exploring the psychosocial effect of workplace safe distancing measures on AMHPs are sparse. This study aims to give insight into this topic and provide helpful considerations to better support AMHPs in future pandemics. Fifty-two AMHPs in a tertiary mental health institution volunteered to participate in the study. However, four participants resigned during the period of the study and, thus, their data have been excluded from this study. The remaining forty-eight participants completed the DASS-21, Oldenburg Burnout Inventory (OBI), and the UCLA Loneliness Scale (ULS) at two time points: (t1) June to August 2020 – when strict workplace measures include leave freeze, having lunch alone, and making adjustments such as calling suitable patients to arrange for teleconsultations and providing teleconsultations were implemented; and (t2) Jan-

uary to March 2021 – when measures eased allowing for lunch with one other colleague from the same team, taking of leaves with restrictions, and resumption of face-to-face services. Paired samples *t*-tests were used to compare participants' scores on the DASS-21, OBI, and ULS at these two time points. Participants reported to be significantly less lonely during t2,  $t(47) = 4.86, p < .001, d = .57$ . An increase in stress scores and reduction in depression, anxiety, and exhaustion scores were also observed. However, these differences were not significant. The lack of significant changes in DASS-21 and OBI scores could be due to low sample size or other work factors unique to pandemics (e.g., increased workload and leave restrictions) which may obliterated the positive effect of relaxation of measures. Future research can examine these hypotheses, which may offer helpful perspectives to enhance workplace mental health for AMHPs in extended crisis.

*Keywords:* workplace mental health, pandemic, safe distancing, Allied Health Professionals

## CAPACITY FOR MENTALIZING AND RESILIENCE AS A PREDICTORS OF BURNOUT SYNDROME AMONG FRONTLINE AND NON-FRONTLINE HEALTHCARE WORKERS DURING THE GLOBAL COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY IN SERBIA<sup>2</sup>

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One of the phenomena that occur in situations of increased mental and emotional exhaustion at work is burnout syndrome, so it is expected to be more frequent among healthcare workers in a situation of increased stress due to COVID-19. The aim of this study was to examine whether the capacity for mentalizing and resilience among healthcare workers explains the degree of burnout syndrome during the COVID-19 pandemic in Serbia. The research was conducted on a sample of 406 healthcare workers (141 doctors and 265 nurses) employed at the University Clinical Center of Kragujevac in Serbia; 203 worked on the COVID-19 frontline, and 203 in regular clinical conditions. The average age of the sample was 40.11±9.41 years. The Maslach Burnout Inventory was used to measure the burnout syndrome. Capacity for mentalizing was examined using the Reflective Functioning Questionnaire. The Brief Resilience Scale was used to measure resilience. The analyses of hierarchical linear regression showed that hypomentalizing was a significant positive predictor of emotional

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2 Declaration: This paper was the result of a larger self-financing project led by the first author during PhD studies, and is part of her doctoral dissertation.

exhaustion ( $\beta = .12$ ;  $p < .05$ ) and depersonalization ( $\beta = .15$ ;  $p < .05$ ), resilience was a significant negative predictor of emotional exhaustion ( $\beta = -.28$ ,  $p < .01$ ) and positive predictor of personal accomplishment ( $\beta = .20$ ;  $p < .01$ ). The findings suggest that being a woman and working on the COVID-19 frontline implies a higher burnout, while the level of burnout decreases with better socioeconomic status and more children. Profession, marital status, and age of respondents were not significant predictors of burnout dimensions. Resilience, capacity for mentalizing, and burnout syndrome among healthcare workers are interrelated phenomena, which have important professional implications.

*Keywords:* burnout syndrome, COVID-19 frontline, mentalizing, resilience, doctors, nurses



Thematic Session  
**Educational Psychology**



## **BARRIERS TO EFFECTIVE STUDYING IN HIGHER EDUCATION: CONTENT ANALYSIS OF STUDENTS' REPORTS<sup>3</sup>**

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The transition from secondary school to higher education is often a challenging experience for young people. Studying at the university in the uncertain times of the global pandemic of COVID-19 might be even more demanding than in the past. Distance or hybrid teaching and social isolation together with permanent health concerns brought unprecedented well-being threats among the general student population. And their impact is probably larger on vulnerable groups of students. This study explores the perceived barriers to effective studying among higher education students in Slovakia. The authors analyzed short written reports from 175 university students. The participants submitted their reports as a voluntary open question in the larger survey (40% of survey participants reported perceived barriers in their studying). Three independent coders identified two main content categories: internal barriers and external barriers. Within the internal barriers category, special educational needs, mental health issues and psychological distress were highly prevalent in this sample. The participants reported mainly distance teaching, social distancing and educators' approach as external barriers. Based on the results, we discuss implications for integrating well-being into higher education learning and teaching and also offering support for vulnerable groups of students including diverse needs when it comes to well-being, mental health and educational process.

*Keywords:* higher education students, barriers, special educational needs, mental health, well-being

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## TEACHERS' PROFESSIONAL DEVELOPMENT DURING THE COVID-19 PANDEMIC: EXTENT AND CORRELATIONS OF COMPETENCES GROWTH<sup>4</sup>

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At the beginning of the COVID-19 pandemic, some authors pointed out that even though the crisis will inevitably negatively impact educational outcomes short term, it could also be a catalyst for educational change long term. The goal of our study was to investigate to what extent teachers' competences have grown during the remote teaching during the pandemic and what factors contributed to the growth. The investigated domains were chosen based on the findings from our previous studies which suggested that teachers have improved their general digital competences (GDC), digital-pedagogical competences (DPC), competences for student assessment (SAC), and competences for conducting inclusive practices (IPC) as a consequence of teaching in the altered conditions. During Spring 2022, a total of 324 teachers (67% subject teachers; 91% female; 71% urban areas; 74% elementary school; average teaching experience 19.8 years) filled out an online questionnaire constructed for the study. Teachers rated their initial (pre-pandemic) and current levels of competences on a 7-point scale on 18 items comprising the four domains. The instrument also included scales for measuring school-related variables (collaboration, leadership, use of ICT, promoting achievement, valuing initiative) and teacher-related variables (mindset, reflective practice, self-efficacy, job satisfaction, and networking). Results of paired sample *t*-test showed that teachers have improved their competences in all four domains significantly (GDC:  $t(312) = 14.269$ ,  $p < .001$ ; DPC:  $t(312) = 25.422$ ,  $p < .001$ ; SAC:  $t(312) = 16.645$ ,  $p < .001$ ; IPC:  $t(312) = 12.214$ ,  $p < .001$ ) although the progress was the greatest in the domain of DPC. Classroom teachers have improved more than subject teachers in GDC ( $t(312) =$

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<sup>4</sup> The study is a part of the project *Čovek i društvo u vreme krize* funded by the Faculty of Philosophy, University of Belgrade.

4.093,  $p < .001$ ) and DPC ( $t(312) = 2.513, p = .012$ ). Results of partial correlation analysis showed that after controlling for the initial level of a competence, all teacher-related factors had significant correlations with the growth of each competence ( $r$  ranging from .151 to .302,  $p < .05$ ) while among the school-related factors only collaboration correlated with IPC ( $r = .178, p = .013$ ). Implications for teachers' continuous professional development are discussed.

*Keywords:* COVID-19, professional development, digital-pedagogical competences, remote teaching

## THE QUALITY OF FAMILY RELATIONSHIPS OF EDUCATORS

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The aim of the research was to examine how the length of service, the level of education at which they teach (primary school, secondary school, faculty), the field of education they teach (social sciences, natural sciences, technical sciences) and the length of the relationships contribute to the quality of family relationships of educators. The sample consisted of 128 respondents (79.7% female), average age 45.42 ( $SD = 8.82$ ) years and average length of service 19.05 ( $SD = 8.24$ ) years. To examine the quality of family relationships, the FACES-IV scale was used, which consists of the following subscales: Balanced Cohesion, Balanced Flexibility, Disengagement, Entanglement, Rigidity, Chaoticness, which create Cohesion and Flexibility, and Family Communication and Family Satisfaction. The results show that the age of the respondents is a statistically significant predictor of Balanced Cohesion ( $\beta = -.21, p < .05$ ) and Family Communication ( $\beta = -.20, p < .05$ ). The length of the respondent's working experience is a significant predictor of Balanced cohesion ( $\beta = -.33, p < .01$ ), Disengagement ( $\beta = .29, p < .01$ ), Family Communication ( $\beta = -.31, p < .01$ ), Family Satisfaction ( $r = -.20, p < .05$ ) and Cohesion ( $\beta = -.30, p < .01$ ). The

length of the relationship with the partner proved to be a significant predictor of Disengagement ( $\beta = .21, p < .05$ ) and Cohesion ( $\beta = -.24, p < .01$ ). The level of education at which the respondents teach, as well as the educational field, do not contribute to family relations. Statistically significant models are those concerning the prediction of Balanced Cohesion ( $R^2 = .14, F(3, 94) = 4.98, p < .01$ ), Disengagement ( $R^2 = .12, F(3, 94) = 4.35, p < .01$ ), Family Communications ( $R^2 = .11, F(3, 94) = 3.86, p < .01$ ) and Cohesion ( $R^2 = .12, F(3, 94) = 4.12, p < .01$ ). The models are made up of the following variables: age, length of service and length of the relationship with the partner. It can be concluded that with age there is a decrease in satisfaction with communication in the family, as well as that family members are less involved in the lives of other members. These results are also in accord with the finding that an increase in work experience contributes to a lower connection with other family members, decreased satisfaction with communication in the family and the family as a whole. Also, the results show that the length of the partner relationship contributes to a lower assessment of cooperation and harmony in the family.

*Keywords:* educators, family relations, cohesion, flexibility

## STUDENTS' CONSTRUCTIONS OF THE MEANING OF CORONAVIRUS<sup>5</sup>

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The Covid-19 pandemic caused numerous changes, both on a global and individual level thus having not only universal but also personal meaning. One of the sensitive groups affected by the pandemic are students because of the numerous changes that online studying has brought to their lives. The main research question was: what meanings do students attribute to the coronavirus when they report on the changes that the pandemic has caused in their lives? The research was conducted on the student population of the Faculty of Philosophy in Niš, in April and May 2020, immediately after the first wave of coronavirus in Serbia. Fifty-seven students filled out an online questionnaire with the instruction to describe the changes that the coronavirus caused in their lives. The collected data were approached inductively. Using discursive analysis, several categories of the meaning of the coronavirus were distinguished: Coronavirus as an awakening, Coronavirus as a slowdown, Coronavirus as an excuse for inactivity, Coronavirus as a killer of freedom and Coronavirus as conspiracy. The distinguished constructions not only reflect the different meanings that the students relate to the coronavirus, but also indicate attributing the coronavirus a great power in our lives. Coronavirus has the power to wake us up and shake us up and make us slow down with our lives, to take away our freedom, but also to give us a valid excuse for laziness and inactivity. The construction of the corona as a conspiracy means that the corona does not actually exist, but as such it has great power over our lives. The conducted research supports the constructionist approach and the under-

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standing that the same phenomenon can have completely different meanings for different people. The analysis showed that the coronavirus has both negative and positive meanings for students.

*Keywords:* coronavirus, students, meaning, discursive analysis

## **TEACHERS' COPING STRATEGIES REGARDING THE PANDEMIC: CONNECTIONS WITH FEAR OF COVID-19 AND TEACHERS' MENTAL WELLBEING**

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Responses to the COVID-19 pandemic have put the schools and their staff in the frontlines, creating a long list of new stressors for teachers to deal with. Respecting the challenges of pandemic education, a group of researchers conducted a survey on a sample of 817 elementary school teachers with the aim of assessing teachers' coping strategies regarding the pandemic and their connections to fear of COVID-19 and their mental wellbeing. Data were collected during April and May 2021, through an online questionnaire. Coping strategies were measured with Brief-COPE, consisting of 14 scales, covering a wide range of coping strategies that can be grouped into approach strategies – those that actively work to change the stressor or accept its presence in one's life and avoidant coping strategies – that tend toward more dysfunctional responses such as denial, distraction, or substance use. Fear of COVID-19 Scale and Warwick-Edinburg Mental Well-being Scale were also used. Research results show that teachers use more actively approach strategies ( $M = 37.52$ ,  $SD = 6.01$ ), than avoidant strategies ( $M = 23.41$ ,  $SD = 4.75$ ) ( $t(757) = 64.73$ ,  $p < .001$ ). Fear of COVID-19 correlates positively with both clusters, but more significantly with avoidance strategies ( $r = .46$ ,  $p$

< .001) than approach strategies ( $r = .25, p < .001$ ). Teachers' mental wellbeing correlates mildly positively ( $r = .14, p < .001$ ) with approach strategies, but correlates moderately negatively with avoidant strategies ( $r = -.31, p < .001$ ). These results confirm the negative correlations between avoidant strategies and teachers' mental wellbeing, as well as its stronger connection with the fear of COVID-19, suggesting that teachers' tend to choose avoidant strategies if they are more negatively influenced by the pandemic.

*Keywords:* coping strategies, teachers, fear of COVID-19, mental wellbeing, pandemic education

## **CULTURAL PLURALISM IN SCHOOLS – PARENTS' PERSPECTIVE<sup>6</sup>**

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Although the importance of involving parents in the work of the school is recognized as significant, researches place little focus on the parental perspective. The aim of this study was to examine parents' opinions on the extent to which cultural diversity is supported in schools in Serbia and to determine whether there are differences in parents' opinions with regard to intercultural and demographic variables. The sample consisted of 128 parents (88% female), age 27–54 ( $M = 40.75, SD = 6.02$ ). Instruments include Cultural Pluralism in School scale and questions for measuring intercultural experience and demographics. The study was conducted online. Statistical analyses include descriptive statistics and in-

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dependent-samples *t*-tests. The results obtained in this research show that parents generally believe that cultural diversity is supported in Serbian schools. The average score on the Cultural Pluralism in School scale is  $M = 30.12$  ( $SD = 4.96$ ,  $Min = 14$ ,  $Max = 35$ ). Variables of intercultural experience did not prove significant for parents' opinions. Regarding demographic variables, the only significant ones are belonging to an ethnic group. Parents of Bosniak ethnicity ( $M = 32.50$ ,  $SD = 3.30$ ) are more likely to believe that the school supports cultural diversity than parents of Serb ethnicity ( $M = 29.33$ ,  $SD = 5.44$ ) ( $F(2.105) = 5.25$ ,  $p = .005$ ). It seems that in schools where different nationalities are included, there is a greater tolerance for cultural differences. Accordingly, in schools where children are predominantly from the same cultures, targeted programs should be implemented in order to enhance sensitivity.

*Keywords:* cultural pluralism, cultural diversity, schools, parental perspective, intercultural experience

Thematic Session  
**Personality & Individual  
Differences**



## PERSONALITY TRAITS AND SOCIAL SUPPORT AS PREDICTORS OF DEPRESSION, ANXIETY AND STRESS IN YOUNG PEOPLE

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The aim of the study was to examine the predictive power of personality traits and social support in predicting the occurrence of symptoms of depression, anxiety and stress in young people. The sample consisted of young people ( $N=113$ ), average age  $M=21.88$ ,  $SD=3.33$ . The results of regression analysis show that similarity traits and social support explain 36% of the variance of depression ( $F(112) = 4.28$ ,  $p < 0.01$ ) and from the group of predictor variables neuroticism was singled out as a personality trait ( $\beta = .330$ ;  $p < 0.01$ ). Also, the results of regression analysis show that personality traits and social support explain 54% of variance in anxiety ( $F(112) = 9.03$ ,  $p < 0.05$ ), and from the group of predictor variables, neuroticism ( $\beta = .467$ ;  $p < 0.01$ ) and activity ( $\beta = .180$ ;  $p < 0.05$ ) were singled out, where the activity itself was manifested through symptoms such as impatience, anxiety, propensity for difficult and challenging tasks. Finally, the results of regression analysis show that personality traits and social support explain 57% of stress variance ( $F(112) = 10.2$ ,  $p < 0.05$ ), while neuroticism was singled out from the group of predictor variables ( $\beta = .569$ ;  $p < 0.01$ ) which is manifested through symptoms such as emotional distress, tension, anxiety, obsessive indecision. Based on the results, it can be concluded that respondents with a pronounced personality trait neuroticism will exhibit depressive, anxiety symptoms, as well as stress symptoms that are reflected in hopelessness, lack of interest, apathy and devaluation. Also, subjects who are active will show symptoms of anxiety such as tension, agitation, fearfulness and worry. Although personality traits and social support are together important in predicting depression, anxiety, and stress, only personality traits as significant predictors have been singled out from the group of predictor variables.

*Keywords:* personality traits, social support, depression, anxiety, stress

## EPISTEMIC TRUST AND PERSONALITY FUNCTIONING IN EMERGING ADULTHOOD

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Developmental stages are a universal way to describe the socio-psychological development of the individual. Erikson's theory of identity and the life cycle distinguishes eight stages of psychosocial development but rapid changes in society and technology give argument to theoreticians of life-span to formulate a ninth stage – emerging adulthood. Emerging adulthood encompasses the period between adolescence and adulthood (age 18 to 28), and is characterized with instability, along with other aspects such as: identity exploration, feeling in-between, self-focus and a sense of possibilities and optimism. Epistemic trust is a new concept closely related to theory of mentalization referring to the capacity of the individual to consider knowledge in communication and to trust others, laying a solid foundation for resilience. Recent findings suggest that failure to establish epistemic trust or decreased levels may underpin psychopathology, increasing the risk of mental health problems. The present study aims to reveal effects of epistemic trust and demographic characteristics on personality functioning (measured by self-report scale of DSM-5 Levels of personality functioning, Bulgarian adaptation). A sample of university students ( $N = 627$ , 70.4% female, 1.6% other) participated in an anonymous online survey. Two separate stepwise multiple regression analyses were conducted to evaluate whether different components of epistemic trust (trust, mistrust, and credulity) predict impairment in levels of personal functioning – self and interpersonal. Two components of epistemic trust appeared as significant predictors ( $Adj. R^2 = .27$ ,  $F(2, 625) = 117.92$ ,  $p < .01$ ) of the level of personality functioning-self: predictors mistrust ( $\beta = .35$ ,  $p < .001$ ), and credulity ( $\beta = .31$ ,  $p < .001$ );). The second overall regression was also statistically significant ( $Adj. R^2 = .27$ ,  $F(3, 624) = 80.32$ ,  $p < 0.01$ ) and interpersonal level of personality functioning was predicted by all three components of epistemic trust – mistrust ( $\beta = .28$ ,  $p < .001$ ), credulity ( $\beta = .36$ ,

$p < .001$ ), and trust ( $\beta = -.14, p < .001$ ). The study reveals some newly defined factors contributing to developmental processes in emerging adulthood that either support or hinder identity consolidation and interpersonal competence. Application of these findings in psychological counselling and support are discussed.

*Keywords:* emerging adulthood, epistemic trust, personality functioning, university students

**NEED FOR AFFECT, SOCIAL STRATEGIES, AMBIGUITY  
INTOLERANCE AND SOCIAL ANOMIE AS PREDICTORS OF  
VIOLENT BEHAVIOR IN CLOSE RELATIONSHIPS AMONG ADULTS:  
A PRELIMINARY STUDY**

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This research was conceptualized to include multiple factors (cognitive-emotional, interpersonal and environmental factors) that could influence on the commission of violent behavior. The aim of this research was to examine the predictive power of the dimensions of need for affect, social strategies, intolerance of ambiguity and social anomie in predicting violent behavior among adults. Sample was convenient and consisted of 100 adults from Serbia (87% female), aged 18 to 66 years ( $M = 32.39, SD = 15.32$ ). Need for affect was assessed through the scores on the Need for Affect Scale. Social strategies were assessed through the scores on Social Strategy Scale. Ambiguity intolerance was assessed through the scores on the Short Ambiguity Intolerance Scale (SAIS-7). Social anomie was assessed through the scores on the Social Anomie Scale. Violent behavior was assessed through the scores on the The Violent Behavior Questionnaire among adults (VBQ). Four multiple linear regressions were conducted in which the dimensions of violent behavior were used as criterion variables (Mocking and making a rough jocks, Machinations and plotting, Insulting

and threatening, Easier hitting, pushing, Beating with or without tools). The predictive model containing dimensions of need for affect (Approach and Avoidance), social strategies (Success expectations, Task-irrelevant behavior, Avoidance, Master-orientation in an achievement situation, Seeking social support), intolerance of ambiguity and social anomie. The predictive model was statistically significant in predicting Insulting and threatening ( $R^2 = .175$ ,  $F(9,90) = 2.124$ ,  $p < .005$ ), with Approach (emotion-inducing situations and activities) ( $\beta = -.230$ ,  $p < .05$ ) and Ambiguity intolerance ( $\beta = .325$ ,  $p < .05$ ) as significant predictors and Beating with or without tools ( $R^2 = .175$ ,  $F(9,90) = 2.122$ ,  $p < .005$ ) with Approach (emotion-inducing situations and activities) ( $\beta = -.248$ ,  $p < .05$ ) and Success expectations ( $\beta = -.296$ ,  $p < .05$ ) as significant predictors.

*Keywords:* violent behavior, need for affect, social strategies, ambiguity intolerance, social anomie

## **THE EFFECTS OF PERSONALITY TRAITS, SUBJECTIVE WELL-BEING AND POSITIVE ORIENTATION ON POSTTRAUMATIC GROWTH IN THE CONTEXT OF COVID-19 PANDEMIC**

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The main goal of this research was to explore whether the posttraumatic growth in the context of COVID-19 pandemic can be predicted based on personality traits, subjective well-being, and positive orientation, and what role the positive orientation has in a relationship between personality traits and posttraumatic growth. The sample consisted of 230 participants (58.3% female, age  $M = 34.54$ ,  $SD = 9.56$ ). Instruments used in this research were Brief HEXACO Inventory (De Vries, 2013), Positivity Scale (Caprara et al., 2012), Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), and Posttraumatic Growth Inventory (Tedeschi & Calhoun, 2004). The results of regression

analysis showed that the model is statistically significant ( $R^2 = .084$ ,  $F(9, 220) = 5.231$ ,  $p < .001$ ), with statistically significant predictors being neuroticism ( $\beta = -.136$ ,  $p = .049$ ), extraversion ( $\beta = .277$ ,  $p < .001$ ), positive orientation ( $\beta = .174$ ,  $p = .007$ ) and positive affectivity ( $\beta = .177$ ,  $p = .034$ ). The results of mediation analysis confirmed the assumption that the positive orientation is a statistically significant mediator in the relationship between extraversion and posttraumatic growth ( $b = .182$ , 95% CI [.068, .297]), but this mediation is partial, because the direct effect between extraversion and posttraumatic growth remains significant ( $b = .212$ , 95% CI [.110, .314]). These results point to a conclusion that people with lower scores on neuroticism, and higher scores on extraversion, positive orientation, and positive affectivity, have experienced significant posttraumatic growth in the context of the COVID-19 pandemic, as well as emphasize the important role of positive orientation. Further research into which variables have an effect on the posttraumatic growth in the light of the COVID-19 pandemic, could aid the development of practices and interventions for the current pandemic as well as future traumatic events.

*Keywords:* posttraumatic growth, subjective well-being, positive orientation, personality, COVID-19 pandemic

## THE ROLE OF BASIC BELIEFS AND TEMPORAL FOCUS IN LIFE SATISFACTION OF THE RETIREES

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Many countries today are concerned about the problem of population aging, which has significant implications for employment, savings, consumption, economic growth, social well-being, and quality of life. A promising approach to this problem is to study it through the prism of late socialization, although the cognitive mechanisms are not well understood. The aim of this study is to determine the influence of basic beliefs and temporal focus on life satisfaction among retirees. The study involved 132 individuals who have had official retired status for at least one year (29% men, mean age 65.9 years). The survey methods used were: Temporal Focus Scale by Shipp, Edwards and Lambert, Basic Beliefs Survey by Yanoff-Bulman, Scale of Life Satisfaction by Diener. The results of the regression analysis showed that the greatest contribution to shaping life satisfaction in retirement is made by basic belief in one's own happiness ( $\beta = .383$ ) and self-worth ( $\beta = .347$ ), i.e., a positive perception of oneself, one's own age, and belief in one's own worth as a person. To a lesser extent, focus on the present ( $\beta = .216$ ) and belief in the justice of the world ( $\beta = .177$ ) influence the increase in retirees' satisfaction. In the group of less satisfied retirees, negative correlations were also found between basic beliefs and focus on past events. Among those who are more satisfied with their retired life, positive correlations were found between basic beliefs and focus on the present. The findings highlight the need for psychotherapeutic work with people in retirement to improve their subjective well-being by changing beliefs and focusing on time.

*Keywords:* basic beliefs, temporal focus, life satisfaction, retirees, elderly

## PSYCHOLOGICAL FACTORS INVOLVED IN CRIMINAL RECIDIVISM

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The intervention of psychological specialists for the reintegration process of criminals and the prevention of recidivism must be based on evidence, taking into account different personality factors. The objective of the study was to analyze the impact of concealed behavior in the context of the risk of criminal recidivism. Three psychological instruments were applied: the 5-Factor Personality Questionnaire, the Machiavellianism Scale, the Self-Efficacy Scale, and an omnibus questionnaire, on a sample of 460 men definitively sentenced and in custody in seven Romanian penitentiaries. The age range was 21-65 years ( $M = 39.2$ ,  $SD = 10.3$ ), with 38% of participants being repeat offenders, of which 21% had more than two previous convictions. According to the simple linear regression, the only model used, 14% of the variation in social desirability was explained by Machiavellianism ( $\beta = .12$ ,  $p < .01$ ), and 27% of the variation in the Machiavellian trait was explained by the feeling of self-efficacy, a feeling that correlates with age ( $r = .43$ ,  $p < .05$ ). Recidivists scored significantly lower on the social desirability scale  $t(458) = -3.56$ ,  $p < .01$ , and the mean score for Machiavellianism was significantly higher in comparison to non-recidivists  $t(458) = 2.01$ ,  $p < .05$ . In conclusion, the variation of covert behavior is explained both by the Machiavellian trait and by the feeling of self-efficacy, which ensures the convicted person the belief that he can behave covertly as long as it takes to achieve his goal. At the same time, these skills are refined with age. However, it is necessary to monitor social desirability equally for both recidivists and non-recidivists. These results have practical relevance because the appeal to the concealed behavior of the person in custody in the penitentiary system in order to build a favorable image in front of the staff diminishes the identification of his genuine needs and risks for recovery.

*Keywords:* criminal recidivism, social desirability, Machiavellianism, self-efficacy



Thematic Session  
**Clinical Psychology & Mental  
Health**



## PREFERRED SOLITUDE, LONELINESS AND SELF-ESTEEM AS PREDICTORS OF SELF-REPORTED MENTAL HEALTH

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The aim of the research was to examine the influence of different experiences of loneliness and solitude, as aspects of social functioning, as well as the experience of self, as an aspect of cognitive assessment, on the self-reported mental health. The convenience sample consisted of 352 respondents of both genders (female 79,8%). The age of the respondents ranges from 18 to 46 years ( $M = 24.71$ ,  $SD = 4.49$ ). For the purposes of this research, the short version of the UCLA Loneliness Scale, the adapted Scale of Preferred Solitude, the Rosenberg Self-esteem Scale and the Mental Health Inventory – MHI-5 were used. The general hypothesis, that loneliness, preferred solitude and self-esteem are statistically significant predictors of self-reported mental health was confirmed. Loneliness, preferred solitude and self-esteem, taken together, significantly predict a certain percentage of the variance of mental health ( $R^2 = .148$ ,  $F(3, 348) = 20.097$ ,  $p < .001$ ). Regarding the individual variables, self-esteem ( $\beta = .333$ ;  $p < .001$ ) is the strongest predictor of self-reported mental health and the only statistically significant one. (Loneliness:  $\beta = -.098$ ,  $p = .076$ ; Preferred solitude:  $\beta = .009$ ,  $p = .859$ ). The results are discussed in line with developmental perspective and with previous findings.

*Keywords:* loneliness, preferred solitude, self-esteem, mental health

## THE ROLE OF NARCISSISTIC ADMIRATION IN THE RELATIONSHIP BETWEEN PERCEIVED STRESS AND MENTAL HEALTH OUTCOMES

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Research findings on the mental health benefits of narcissism have been inconsistent. The present study examined the protective role of narcissistic admiration (NARC - *The Narcissistic Admiration and Rivalry Concept*) at the beginning of COVID-19 pandemic lockdown. Using hierarchical regression analysis, two hypotheses were tested: Hypothesis 1 – predicting the protective role of narcissism (*Narcissistic Admiration and Rivalry Questionnaire Short Scale*) between perceived stress (*Perceived Stress Scale 4*) and general well-being (*Mental Health Continuum - Short Form*), and Hypothesis 2 – predicting the protective role of narcissism between perceived stress and anxiety (*Six-item State-Trait Anxiety Inventory*). The sample consisted of 744 participants from Serbia (age range 18-67;  $M = 25.00$ ;  $SD = 9.57$ ), with 439 males and 335 females. Narcissistic admiration was positively correlated with general well-being ( $r = .21, p < .01$ ), and negatively correlated with anxiety ( $r = -.09, p < .01$ ). The results did not support the moderating role of narcissistic admiration in the perceived stress and general well-being relationship ( $\beta = .053, p > .05$ ). Contrary to our expectations, individuals reporting higher levels of stress, while scoring high on narcissistic admiration showed more symptoms of anxiety than those scoring lower ( $\beta = .073, p < .01$ ). In other words, narcissistic admiration proved to be a vulnerability factor. Despite both hypotheses being rejected, results are in line with previous findings that emphasize the role of sense of agency in reducing distress among individuals high on narcissistic admiration. Practical and theoretical implications of the findings will be discussed.

*Keywords:* narcissism, narcissistic admiration, resilience, coronavirus pandemic

## RELATIONSHIP BETWEEN SATISFACTION OF BASIC PSYCHOLOGICAL NEEDS, FEELINGS OF LONELINESS AND ANXIETY IN ADOLESCENTS WITHOUT PARENTAL CARE: A PILOT STUDY

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Adolescents without parental care are particularly vulnerable to experiencing feelings of loneliness and anxiety and also have difficulty meeting basic psychological needs. These problems occur frequently and are interrelated. Considering this, the interest in this paper is to investigate whether there is a correlation between the satisfaction of basic psychological needs, the feeling of loneliness and anxiety among adolescents in SOS Children's Village. The sample consists of 31 adolescents aged 14 to 19 years of which 13 (41.9%) are male and 18 (58.1%) are female. The subjects are aged 14 to 19 years ( $M = 15.90$ ,  $SD = 4.25$ ). For the purposes of this research, a purposive sample was used and therefore there is a risk of poor assessment of the suitability of the respondents and the results cannot be generalized to the entire population, which means that the findings obtained in this research will only be valid for the sample for which are obtained. The Basic Psychological Need Scale was used to measure the satisfaction of basic psychological needs. The UCLA Loneliness Scale was used to measure the feeling of loneliness and State-Trait Anxiety Inventory Form Y-STAI was used to measure anxiety. The results of the analysis showed that there is a statistically significant negative relationship between the satisfaction of basic psychological needs and the feeling of loneliness ( $r = -.58$ ,  $p < .01$ ); that there is a statistically significant negative relationship between the satisfaction of basic psychological needs and anxiety ( $r = -.36$ ,  $p < .05$ ); and that there is a statistically significant positive correlation between the feeling of loneliness and anxiety ( $r = .64$ ,  $p < .01$ ). The findings confirmed all three hypotheses: by increasing the satisfaction of basic psychological needs, the feeling of loneliness decreases, by increasing the satisfaction of basic psychological needs, anxiety decreases, by increasing the feeling of loneliness, the anxiety of adolescents without parental care also increases.

*Keywords:* psychological needs, loneliness, anxiety, adolescents without parental care

## MENTAL HEALTH AND THE PANDEMIC: A QUALITATIVE ANALYSIS OF THE PREVALENT PROBLEMS IN PEOPLE SEEKING PSYCHOLOGICAL SUPPORT

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A great number of studies internationally emphasized numerous negative effects of the pandemic on mental health and wellbeing among the general population and medical workers. This induced the development and implementation of mental health and psychosocial support interventions, which are often insufficiently tailored to the specific needs of people suffering from COVID-19 and the broader pandemic context. Since there are no previous studies providing insight into the prevalent psychological problems of persons suffering from COVID-19 and seeking psychological support due to mental health issues, the aim of this study was to fill in this gap. The study involved 32 persons (28 females), average age 38.53 years ( $SD = 13.24$ ), that were infected with COVID-19 (or whose family members were infected), receiving telephone or online psychological support from December 2020 to June 2021. Immediately after the end of each session, trained psychologists providing support drafted a detailed protocol of the session (sessions were not recorded due to ethical reasons). Protocols of the support sessions were analyzed qualitatively by relying on the principles of thematic analysis, and the themes were developed and elaborated in an inductive and iterative manner. Two groups of themes emerged from the analysis – first covering the most common psychological difficulties people seeking support face (a. anxiety, fear and panic attacks; b. somatization and increased focus on one's own body; c. grief over the loss of a loved one; d. feeling of guilt), and the other referring to the aggravating circumstances and risk factors that make the coping process more challenging (a. unfavorable COVID-unrelated life circumstances; b. uncertainty and loss of control during the pandemic; c. the lack of social support). The study offered relevant insights into

common difficulties related to the COVID-19 pandemic among persons seeking support, thus allowing for the development of more evidence-based psychological support interventions.

*Keywords:* mental health, COVID-19 pandemic, psychological support, qualitative research

## **COMORBIDITY BETWEEN GENERALIZED AND SOCIAL ANXIETY, DYSPHORIA, AND PARANOIA FROM A NETWORK PERSPECTIVE**

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From the network perspective, disorders are systems of direct symptom interactions and feedback loops. Symptoms connecting different clusters of symptoms (i.e., different disorders) are called bridge symptoms and are considered responsible for the emergence of comorbidity. These symptoms can thus be both etiologically and clinically relevant. This study explores the network structure and bridge-symptoms between generalized and social anxiety, dysphoria, and paranoia. Participants ( $N = 525$ , 72.95% female,  $M_{age} = 29.12$ ,  $SD = 9.61$ ) filled an online questionnaire including the Brief Measure for Assessing Generalized Anxiety Disorder, Patient Health Questionnaire–9, Social Anxiety Scale, and a new measure of paranoia based on the DSM-5 paranoid personality disorder criteria. For network estimation, we have used bootnet and networktools packages from R. The analysis yielded a sparse network, with 97/561 significant connections. The items were clustered in four groups, corresponding to four scales. Generalized anxiety was positioned “between” dysphoria and social anxiety. The most connected items were dysphoric affect ( $z = 1.30$ ), worry ( $z = 1.28$ ), feeling irritated ( $z = 1.20$ ), hidden intentions ( $z = 1.15$ ), and avoidance ( $z = 1.12$ ). The strongest bridges between clusters were feeling anxious ( $z = 1.29$ ), feeling irritated ( $z = 1.28$ ), and feeling restless ( $z = 1.04$ ). Other indices will

be discussed. Results suggest that generalized anxiety symptoms are most associated with other nodes, alongside items from the interpersonal domain. It seems that symptoms of generalized anxiety disorder also form bridges between disorders, possibly due to the universal nature, where from these reactions, activation can spread to different problems depending, possibly, on individual characteristics. Future studies should include personality traits and risk factors to check their influence on activation trajectories.

*Keywords:* comorbidity, network analysis, bridge symptoms

## **CHILDREN'S REACTIONS TO THE COVID-19 LOCKDOWN IN SERBIA: PARENTS' REPORTS<sup>7</sup>**

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Aim of our study was to explore the experiences of children during COVID-19 lockdown, from a parental point of view. In order to slow down the spreading of coronavirus, preschools and schools were closed, with frequent curfews and other measures being introduced in Serbia. Therefore, children spent days mainly at home with their families, with less opportunities to play and socialize. Previous findings show that COVID-19 quarantine might have had a significant impact on children's emotions and behavior. Risk factors were generally associated with duration of quarantine measures, fear of being infected, frustration, and boredom. In our study, 89 parents of children 3 to 11 years old ( $M = 6.8$ ;  $SD = 2.5$ ; 58% girls), answered two open-ended questions about changes in children's behavior related to the fear of COVID-19, and disease containment measures such as stay at home orders and social distancing. The survey was conducted

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online during the national state of emergency in Serbia in 2020. Thematic analysis was applied by two independent coders. Analysis of the answers to the first question showed that around 45% of parents confirmed they have noticed some changes in their children's behavior that they perceived to be related to the fear of COVID-19. Three overarching themes emerged: fear of going outside and possibly getting infected, frequently asking questions about the virus and measures, and expressing new behavioral patterns such as tics. Furthermore, when it comes to the answers about children's reactions to prescribed measures, 68% of parents have noticed behavioral changes that group around the following themes: increased irritability (e.g., crying, intense night fears); verbally expressing missing physical contact; deepening contact with their significant others and neighbors (those who they are physically close with). The findings of the study show that the COVID-19 lockdown has affected children's emotions and behavior in many ways. We consider implications for what caregivers may do to protect their children's mental health during similar crises.

*Keywords:* fear, COVID-19, pandemic distress, children, parents

## COPING STRATEGIES AND DISTRESS IN PARENTS OF CHILDREN WITH AUTISM

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Stress, anxiety, and depression are frequently found to be higher in the group of parents of autistic children compared to other parent groups. Adaptive coping strategies are linked to positive mental health outcomes. The aim of this research was to examine the differences in coping strategies and distress between parents of autistic children and parents of typically developing children. We examined whether coping strategies are significant predictors of distress in both groups. The sample consisted of 192 parents – 137 were parents of typically developing children and 55 were parents of children with autism. The instruments are The Brief-COPE and The Depression Anxiety Stress Scale – DASS–21. The results show that the groups differ in the following variables: Acceptance ( $t(190) = -3.34, p = .001, d = .54$ ) and Religion ( $t(190) = -3.14, p = .002, d = .45$ ), and Distress ( $t(190) = -5.32, p < .001, d = .79$ ), which are more pronounced in autistic child parents. The results of the regression analysis show that the Self-blame strategy is a significant predictor of distress in parents of typically developing children ( $\beta = .41, p < .001$ ), and that this model explains 25% of the criterion variance ( $R^2 = .25, F_{(14, 122)} = 4.19, p < .001$ ). In the sample of parents of children with autism, Denial ( $\beta = .38, p < .001$ ) proved to be a significant predictor of distress. This model explains 44% of the criterion variance ( $R^2 = .44, F_{(14, 40)} = 4.01, p = .007$ ). The results confirm the findings of numerous studies and indicate that raising a child with autism is a specific challenge for mental health and adaptive strategies. Knowing the risk factors for mental health is an important guideline in counseling and psychotherapy work with this group of clients.

*Keywords:* autism, parents, coping strategies, distress

## EXPLAINING THE GAP IN THE TRANSGENERATIONAL TRANSMISSION OF ATTACHMENT: THE ROLE OF PARENTING PRACTICES, CONTEXT AND DIFFERENTIAL SUSCEPTIBILITY<sup>8</sup>

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The transmission of attachment across generations is well-documented, but there is still a gap in explaining the mechanisms of this transmission. Based on the findings that parental sensitivity, even indirectly through mentalization, only partially mediates the relation between adult and child attachment, we followed and tested the recently proposed model of intergenerational transmission of attachment that includes parenting practices (parenting styles) as additional mediators and context (variations in environmental stressors) and differential susceptibility (child's difficult temperament) as moderators as well. The sample consisted of 145 dyads of the primary caregivers (all females) and their adult children. Mean age of children was 20.39 years ( $SD = 2.29$ ), while mean age of primary caregiver was 47.94 years ( $SD = 5.55$ ). For the operationalization of variables we used A Serbian Version of the Modified and Revised Experiences in Close Relationships Scale – SM-ECR-R; The Reflective Functioning Questionnaire – RFQ; Parental Bonding Instrument – PBI; Risk scale, and Temperament Evaluation of Memphis, Pisa, Paris and San Diego – auto-questionnaire – short version. The results show an adequate fit of the data in the model ( $CMIN/df = 1.106$ ,  $p = .272$ ;  $GFI = .942$ ;  $CFI = .975$ ;  $RMSEA = .027$ ,  $PCLOSE = .854$ ;  $SRMR = .063$ ) in which parental anxiety predicts sensitivity indirectly through security in mental states (Standardized Regression Estimate =  $.029$ ,  $95\%CI [-.04, .02]$ ), while sensitivity further predicts anxiety in children. The authoritarian, authoritative, and permissive parenting styles didn't mediate the examined relationship, but stressful experiences and the irritable temperament of the child significantly predicted and

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moderated the relationship between the mother's and child's attachment pattern. The paper discusses the role of the context and innate characteristics of the child as quite important in explaining the gap in the transgenerational transmission of attachment.

*Keywords:* transgenerational transmission and gap of attachment, parenting styles, stressful experiences, difficult temperament of a child

Thematic Session  
Perception, Cognitive  
Psychology &  
Cyberpsychology



## CONTRAST SENSITIVITY AND IDENTIFICATION OF EVERYDAY OBJECTS

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Contrast sensitivity (CS) has been identified as an equally good or even better predictor than visual acuity (VA) of functional vision in clinical and/or aged populations. A few small-scale studies done on soldiers found it to be a better predictor (than VA) of performance in various visual tasks. All of these studies but one used a detection, discrimination or reading task. Our study aimed to explore the possibility of using CS to predict performance in a more demanding identification task in a young population. Two tests for measuring CS were used on a convenience sample of 126 first-year students of psychology. The FrACT (The Freiburg Visual Acuity and Contrast Test) was administered to measure the absolute threshold (AT). In addition, unlike any other study before, we also used the method of constant stimuli to assess the difference threshold (DT). We reasoned that this measure of CS might be more ecologically valid than AT given that, in our daily life, we more often perceive objects of different shades in a cluttered environment than extremely light objects against a homogenous background. These two measures were used to predict the performance in an identification task wherein the subjects were asked to identify everyday objects in 50 degraded line drawings. Regression analysis showed that only DT ( $R^2 = .10$ ,  $F(2, 118) = 6.32$ ,  $p = .002$ ;  $b = -.02$ ,  $t = -2.89$ ,  $p = .005$ ) and not AT was a significant predictor of the accuracy while neither significantly predicted the speed of identification. Thus, our study showed that CS can be used to predict performance even on more complex visual tasks, such as identification, and that the ability to perceive brightness differences in the middle range of the grey spectrum (i.e. DT) might be more relevant to this task than the ability to perceive extremely bright grey stimuli against a white background (i.e. AT).

*Keywords:* contrast sensitivity, identification, absolute threshold, difference threshold

## IS THERE AN EFFECT OF CURRENT EMOTIONAL STATE ON INATTENTIONAL BLINDNESS?

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The main goal of this research is to examine the relationship between the current emotional state of the participants and the phenomenon of inattentional blindness. That is a perceptual phenomenon of not seeing clearly visible events due to performing another task when attention is focused on it. Previous research has shown that emotions can affect perception. Negative emotions narrow the focus of attention, while positive emotions have the opposite effect. It was also found that the emotions can change the perception, leading to overestimation or reduction of the value of the observed object. This study examines how emotional state affects the occurrence of a specific phenomenon of inattention blindness. The sample consisted of 200 students from the University of Banja Luka (equal by gender). Students are from different study programs and have participated voluntarily. To assess inattentional blindness, a classic experimental task of Mack and Rock was used with estimating the length of the cross lines and exposing a new unexpected stimulus. The task is to assess which line on the screen is longer, horizontal or vertical, and in the fourth presentation a critical stimulus unexpectedly appears, and its observation is key to the results. The Current Emotional State Scale was used to estimate the two opposite states, anxiety and relaxation. Inattentional blindness was measured by the accuracy of detection of a new unexpected stimulus. Since it is a binary variable a logistic regression was performed to exam the effect of current emotional states on the likelihood of detection of new stimulus. Results show that the logistic regression model was statistically significant ( $\chi^2(1,200) = 5.059, p = .025$ ) and explained 3.6% (Nagelkerke  $R^2$ ) of variance. But, only relaxation is significantly associated with an increase in the probability of noticing an un-

expected stimulus (OR = 1.13, 95%CI [1.0, 1.3]), while anxiety has no effect. The obtained results can be explained by the findings of Gasper and Clore about emotional state effect on processing style. Subjects who are more relaxed and have pleasant emotions also have a wider range of attention and they are focused on the global characteristics of the stimulus. This can then lead to a higher probability of noticing the new stimulus. The obtained results provide additional empirical knowledge about the extent to which internal factors can reduce this specific perceptual phenomenon.

*Keywords:* inattention blindness, emotional state, anxiety, relaxation

## **CAN PARENTS' PERSONALITY TRAITS PREDICT THE CHILD'S EXECUTIVE FUNCTION DIFFICULTIES?**

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A considerable amount of research has determined the connection between certain personality traits and cognitive abilities, while research focused on the connection between parents' personality and their children's cognitive abilities is lacking. This study aimed to explore possible predictors of children's executive function (EF), assessed by mothers on the Behavior Rating Inventory of Executive Function (BRIEF) questionnaire. More precisely, it was tested whether mothers' and fathers' personality traits can predict a child's assessed EF difficulties. The research sample consists of 1101 triads (child-mother-father) who participated in the "CHILD-WELL" project. Children's average age was 10.48 years ( $SD = 1.16$ , 48% male). Relevant socio-demographic variables were controlled for in the first step of the hierarchical regression analysis: child's gender, age, family structure (intact family vs. other), parent's education level, family income, and parent's perceived socio-economic status (SES). The personality traits were assessed in the shortened version of the Big Five Inventory, derived from International

Personality Item Pool, measuring conscientiousness, neuroticism, extroversion, agreeableness, and openness. Mother's perceived SES ( $\beta = -.17, p < .01$ ), child's gender ( $\beta = -.15, p < .01$ ), and family structure ( $\beta = .11, p < .01$ ) were significant predictors of the EF ( $R^2 = .09, F_{(8, 823)} = 10.30, p < .01$ ). Adding the mother's personality traits significantly increased the amount of the variance explained ( $\Delta R^2 = .11, F_{(5, 818)} = 15.57, p < .01$ ), with neuroticism ( $\beta = .25, p < .01$ ), extroversion ( $\beta = -.14, p < .01$ ), and conscientiousness ( $\beta = -.08, p < .05$ ), being significant predictors of EF. Moreover, adding the father's personality traits significantly increased ( $\Delta R^2 = .01, F_{(5, 813)} = 12.20, p < .05$ ) the variance explained, with neuroticism ( $\beta = .08, p < .05$ ), and openness ( $\beta = -.08, p < .05$ ) showing significance. Altogether, the model explains 21% of the criteria variance. The contribution of this study is connecting the parent's personality with the child's EF. The results show that both mother's and father's personality traits possibly play a role in explaining executive functioning. Adding mother's personality traits explained more variance in the criteria ( $\Delta R^2 = .11$ ) than adding father's traits ( $\Delta R^2 = .01$ ), which is expected considering the mothers assessed the child's EF.

*Keywords:* executive functions, personality, childhood, Big Five

## INSECURE ATTACHMENT FACILITATES INHIBITING POSITIVE MEMORIES: EVIDENCE FROM A DIRECTED FORGETTING TASK

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Recent research suggests that remembering memories can be used to regulate emotions antecedently. The present study, for the first time, investigated the relationship between attachment and emotion regulation by looking at how imagining an attachment figure would help to inhibit negative memories. One hundred forty-four participants ( $M_{age} = 20.02$ ,  $SD_{age} = 1.06$ ) participated in the experiment. First, the participants were grouped as secure and insecure based on their attachment scores they received from Experiences in Close Relationships Scale Short Form (ECRS-SF). Next, participants were asked to imagine their attachment figures, friends or acquaintances according to the experimental condition that they were randomly assigned to. Immediately after the mental activation task, participants were provided with two lists which consisted of equal number of positive and negative words. Participants had to remember a specific autobiographical memory for each word. Forget group in each mental activation condition were instructed to forget list 1 memories and remember list 2 memories. Remember group were asked to recall all memories. All participants were asked to remember all memories in the final recall. The results of Haye's moderated moderation model (model 3) demonstrated that mental activation did not have any significant effect on inhibiting positive and negative memories. But, the attachment style significantly moderated the relationship between directed forgetting and memory recall ( $\beta = -0.21$ ,  $SE = 0.10$ ,  $p < .05$ , 95% CI = [-0.41, -0.10]). Particularly, insecurely attached participants were able to inhibit their positive memories, while securely attached ones were not. Furthermore, negative memories were not inhibited regardless of attachment style. These results suggest that insecure attachment down-regulates one's mood by facilitating the inhibition of positive memories.

*Keywords:* directed forgetting, emotion, attachment, emotion regulation, motivated forgetting

## HOW SITTING TIME ASSOCIATED WITH EXCESSIVE GAMING: MEDIATED ROLES OF WEIGHT STATUS AND PERCEIVED WEIGHT STIGMA AMONG YOUNG ADULTS

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Previous studies found that university students were likely to engage in sedentary behaviors, particularly, long sitting time and excessive gaming during the COVID-19 pandemic. This study thus aims to investigate the relationship between long sitting time, weight status, perceived weight stigma (PWS), and excessive gaming. Moreover, the mediated effects of weight status and PWS in the relationship between long sitting time and excessive gaming were evaluated. This is a cross-sectional study that involved 600 participants (65% of females and 35% of males) who were recruited through convenient sampling in the university students in Taiwan (age more than 20 years). The average age of the participants was  $22.81 \pm 3.75$  years. All participants completed a demographic questionnaire (including weight and height), International Physical Activity Questionnaire with short form (IPAQ-SF), Perceived weight Stigma Scale (PWSS), and Internet Gaming Disorder Scale (IGDS9-SF). Descriptive statistics, independent *t*-tests, and Pearson correlations were used to summarize the demographics, compare the differences in variables, and analyze the association between long sitting time, weight status, PWSS, and excessive gaming, respectively. Additionally, Hayes' PROCESS model (Model 4) was performed to test mediation roles of weight status and PWSS. Moreover, we categorized the participants into two groups according to the sitting time item in the IPAQ-SF: sitting time less than 8 hours, and more than 8 hours groups. Two independent *t*-tests found that sitting time less than 8 hours group had significantly higher PWSS and IGDS9-SF scores than the other group. Pearson correlations found that sitting time (using the continuous hours) was negatively associated with weight status ( $r = -.15, p < .001$ ), PWSS ( $r = -.13, p = .002$ ), and IGDS9-SF ( $r = -.18, p < .001$ ). Additionally, we found a significantly direct effect between sitting time and excessive gaming (coefficient = -2.43, 95% bootstrapping

confidence interval [-3.91, -0.96]. The weight status and PWSS were significantly subsequential mediators in the association between sitting time and excessive gaming (coefficient = -.12, 95% bootstrapping confidence interval [-.25, -.04]). Therefore, there were relationships among long sitting time, excessive gaming, and other factors (i.e., weight status, PWS). This study highlighted that both types of sedentary behaviors could be associated and weight status and PWS might mediate the relationship between them.

*Keywords:* gaming, stigma, sedentary behavior, sitting, weight status, youth

## **THE EFFECTS OF PLAYING VIDEO GAMES ON ANXIETY AND DEPRESSION AMONG ADOLESCENTS: A SYSTEMATIC LITERATURE REVIEW**

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Playing video games is one of the most popular leisure activities among adolescents. It is estimated that nearly 90% of adolescents play some kind of video games. In the last decade, scientists have been focused on examining possible side effects of video-game playing on mental health (i.e., anxiety and depression) as the most common internalizing problems among adolescents. In order to estimate the effects of playing video games on anxiety and depression among adolescents, the systematic scientific literature review has been conducted. A systematic search of the literature was made following the Preferred Reporting Items for Systematic review and Meta-Analysis Protocols. The results of seventeen studies that have been published in academic journals in Serbian or English language within the last ten years (2013–2022) have been analyzed. The search databases were EBSCO, Medline and Directory of Open Access Journals. By summing the results of studies, it has been determined that playing video games has an

impact on the level of anxiety and depression symptoms through some specific factors. Adolescents who play video games during long periods of time, many hours each day, and those who exhibit symptoms of gaming addiction, show high level of anxiety and depression symptoms. Furthermore, playing violent video games has the impact of showing increased level of depression symptoms. If we are looking for gender differences, we can notice that the girls who excessively play video games more often show symptoms of anxiety, whereas the boys more often show symptoms of depression. These findings indicate the necessity of parental control and supervision over the time that adolescents spend on gaming and also over the content of video games in order to prevent negative effects of this popular activity on mental health.

*Keywords:* gaming, mental health, internalizing problems, adolescents

## **ASSOCIATION BETWEEN EXPOSURE TO SOCIAL NETWORKS, DISSATISFACTION WITH OWN APPEARANCE AND DIETING IN ADOLESCENTS**

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The purpose of this research was to investigate the relationship between exposure to modern social networks, dissatisfaction with one's own appearance and dieting among adolescents. The research was conducted on 117 respondents aged 12-20 from which 26 males and 91 females ( $M_{age} = 16.72$ ,  $SD_{age} = 4.37$ ). This research was conducted online by using SuvreyMonkey, whereby a questionnaire was sent to groups of adolescents such as larger high school groups and to their peers and friends. As measuring instruments for the research, the Scale of Sociocultural Attitudes on Appearance (SATAQ-3) was used, to assess dissatisfaction with one's own appearance, a questionnaire for general dissatisfaction with body appearance (Body Shape Questinnaire – BSQ) was

used, and as a measure of dieting, Adolescent Dieting Scale was used. The conducted research has shown that the total measure of media exposure is statistically significantly and positively related to dissatisfaction with body appearance among adolescents ( $r = .67, p < .01$ ) especially among the female population ( $r = .72, p < .01$ ). The general conclusion of this paper is the following: the use of social networks and exposure to the influence of them is related to dissatisfaction with one's own appearance and dieting among adolescents. The research findings indicated a particularly high correlation between the use of social networks, dissatisfaction with one's own appearance and dieting, among adolescent girls as the most vulnerable group to social and media pressures.

*Keywords:* social networks, appearance, adolescents

## **PROBLEMATIC SOCIAL MEDIA USE IN THE COVID-19 ERA: THE ROLE OF PERSONALITY AND TRAIT EMOTIONAL INTELLIGENCE**

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According to previous research, social media use among students has increased during the COVID-19 pandemic due to lockdown and transition to distance learning. Many studies have demonstrated a link between personality traits and problematic social media use (PSMU). In addition to basic personality traits, trait emotional intelligence (EI) has shown to be a protective factor against various behavioral problems: higher trait EI is likely to be related to decreased PSMU. The present study explored the role of basic personality traits and trait EI in predicting PSMU during the pandemic. Subjects in this online research were female students ( $N = 259$ ) from the University of Belgrade who completed:

(1) Bergen Social Media Scale (BSMAS), measuring problematic social media use according to the core components of addiction (salience, mood modification, tolerance, withdraw symptoms, conflict, and relapse), (2) HEXACO Personality Inventory Revised comprising traits Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to experience, and (3) the TEIQue, examining trait EI factors - Well-Being, Self-control, Emotionality, and Sociability. Hierarchical regression model comprised of the HEXACO personality traits (entered 1st) and trait EI factors (entered 2nd) as predictors, and PSMU as a criterion variable was tested. HEXACO personality traits explained almost 23% of variance ( $F(6, 252) = 13.682, Adj. R^2 = .228, p < .001$ ) with Honesty-Humility ( $\beta = -.289, p < .001$ ), Emotionality ( $\beta = .190, p < .001$ ), Extraversion ( $\beta = -.116, p < .05$ ), Conscientiousness ( $\beta = -.275, p < .001$ ) and Openness to experience ( $\beta = -.116, p < .05$ ) as significant predictors. In the second step, PSMU was predicted ( $F(10, 248) = 8.990, Adj. R^2 = .236, p < .001$ ) negatively by HEXACO Honesty-Humility ( $\beta = -.287, p < .001$ ), Conscientiousness ( $\beta = -.171, p < .05$ ) and by trait EI factor Self-control ( $\beta = -.202, p < .05$ ). Trait EI factors offered no incremental increase in predicting PSMU. The current data confirmed relations between PSMU and most of HEXACO personality traits. The results also indicate significant role of Self-control as a trait EI factor in predicting PSMU in the COVID era.

*Keywords:* problematic social media use, HEXACO model, trait emotional intelligence, COVID-19, university students

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