



# BOOK OF ABSTRACTS

## Psychology in transition: Adapting to a rapidly changing world

International Scientific and Professional Psychology Conference

September 19, 2025, Split, Croatia



Department of Psychology  
Faculty of Humanities and Social Sciences in Split

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## WELCOME NOTE

Dear Colleagues and Esteemed Guests,

It is our great pleasure to welcome you to the Psychology Conference 2025, organized by the Department of Psychology, Faculty of Humanities and Social Sciences, University of Split, and to present the Book of Abstracts for this year's theme: "Psychology in Transition: Adapting to a Rapidly Changing World."

We are honoured that you have chosen to be part of this conference and to contribute your research, ideas, and perspectives. Your presence lays the foundation for meaningful scientific dialogue, exchange, and collaboration. This conference brings together a diverse community of researchers, practitioners, and students, united by a shared commitment to advancing psychological knowledge. Through the exchange of insights, the questioning of assumptions, and the exploration of innovative approaches, we aim to better understand—and respond to—the complex challenges facing individuals and communities in times of rapid change.

We thank you for your presence and we hope this Book of abstracts will serve as a valuable resource for dialogue and collaboration throughout the conference and beyond.

Together, we can advance psychology's role in fostering understanding, empathy, and positive change in an ever-changing world!

With warm regards,

Assistant Professor Katija Kalebić Jakupčević, PhD

Head of the Department of Psychology

Faculty of Humanities and Social Sciences

## KEYNOTE LECTURES

# BRIDGING METASCIENCE, PEDAGOGY, AND POLICY: FORRT'S VISION FOR OPEN, REPRODUCIBLE, AND ETHICAL RESEARCH AND TRAINING

**Flavio Azevedo**

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The Framework for Open and Reproducible Research Training (FORRT; <https://forrt.org>) is a global, community-driven initiative dedicated to integrating open scholarship and research credibility into higher education. FORRT fosters a culture of responsible and transparent scientific inquiry by developing educational resources, structured training materials, and pedagogical strategies that support researchers, educators, and students in adopting open and reproducible research practices. FORRT provides comprehensive lesson plans, interactive teaching tools, curated repositories of open science literature, and guidelines for integrating reproducibility into academic curricula. Its initiatives include systematic reviews of open scholarship pedagogy, the Replication Hub, open-access educational frameworks, and collaborative training programs that equip scholars with the skills to navigate methodological transparency, ethical authorship, and responsible data stewardship. Through mentorship programs and interdisciplinary workshops, FORRT helps build research literacy and critical engagement with open science across different career stages and disciplines. Additionally, FORRT is co-developing R2, a journal dedicated to reproducible research, embedding open peer review, transparent authorship, and structured guidance for replication studies. By linking educational reform with open science advocacy, FORRT ensures that reproducibility and credibility are not just ideals but accessible practices within academic training. By bridging pedagogy, metascience, and policy, FORRT is shaping the future of open, reproducible, and ethically responsible research training—empowering educators, researchers, and students to engage with science in a way that is rigorous, transparent, and globally accessible.

# THE HUMAN MIND IN DIALOGUE WITH ITS REPLICA AI – A HISTORICAL PERSPECTIVE

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Psychology has been in transition since the first appearance of this word sometime at the end of the fifteenth century. One may say that all the transitions psychology has gone through for the last 500 years have been provided by a need for changed understandings of the human nature and the human mind in dialogue with current cultural streams in the actual society. This is exactly what we are facing in 2025, in which the digitally based communication has invaded the complete society from micro to macro levels all over the world. Even the human mind is so infused with computer-based communication that it is natural to think about the mind as if it is a computer itself. Although the development of artificial intelligence has exploded for the last couple of years, the idea about the human mind as something comparable with a computer is not a new idea. In psychology, all historians agree upon the fact that this idea got off to a flying start through the symposium arranged by the “Special Interest Group in Information Theory” at Massachusetts Institute of Technology Sept. 10-11, 1956. This symposium was sponsored by IBM, and it was here Noam Chomsky presented for the first time his ideas about a transformational generative grammar. There were several contributors to the cognitive revolution, but Chomsky’s presentation of a linguistic system with a precision with mathematics was symptomatic for how a cognitive model for the human mind aimed to be conceptualized. This brings the question about artificial intelligence to the core of psychology, namely how it actually understands the human mind. However, psychology’s understanding of the human mind has changed along the history. This is what will be focused on in my presentation. After a short presentation of some of the premises for the available artificial intelligence of today and some aspects of the idea behind the computational mind, I will follow a link back to the 18th century when psychology was explicitly included in philosophy by Christian Wolff in 1732. He was also a mathematician, and he understood the human as if it is governed by logical thinking. His student, Alexander Baumgarten, on the other hand, is the founder of modern aesthetics. He also contributed to psychology but argued instead for the human aesthetic mind. Those two perspectives on the human mind paved the way for experimental psychology in the 19th century, and both Fechner and Wundt followed up the two perspectives. The fundamental question that will be pursued in this presentation is therefore how the human aesthetic mind will act in dialogue with its apparent replica – AI.



## **ORAL PRESENTATIONS**

## **MENTORING IN ACADEMIA: EXPERIENCES FROM CROATIA'S HIGHER EDUCATION AND RESEARCH SECTOR**

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Mentoring plays a vital role in shaping the personal and professional development of early career researchers (ECRs). As ECRs navigate the uncertainties and precarity of academic life, mentors can serve not only as scientific guides but also as providers of emotional and career-related support. Hence, effective mentorship can be essential for ECRs' research productivity, career satisfaction, and well-being. However, despite its recognized importance, mentorship often remains an undervalued and under-supported component of academic work. Moreover, existing research has predominantly focused on the perspectives and needs of mentees, while comparatively little is known about how mentors themselves understand and experience their roles—particularly in contexts with limited institutional investment in mentoring. To address this gap, this study presents findings from a qualitative study conducted within a four-year research project Well-Being and Mental Health of Early Career Researchers in Croatia: A Longitudinal Study (ECR-WELL), funded by the Croatian Science Foundation. Specifically, the study included 24 semi-structured, one-on-one interviews with mentors (18 women and 6 men, aged 41 to 66;  $M = 51.18$ ) from Croatian scientific institutions across scientific fields and geographical regions. Results revealed that mentors recognize the need to balance professional guidance with emotional support. They also report often being overburdened, lacking institutional support, and having limited access to mentor training. These findings suggest there is a need for structural improvements and better resources, particularly in terms of mentor trainings and systemic support for mentors. However, although mentoring is time consuming and demanding, most mentors report personal and professional fulfilment in supporting ECRs. Their insights are crucial for developing healthier academic environments where young researchers can thrive and contribute meaningfully to science.

**Keywords:** mentors, academia, mentoring process, early career researchers, ECR's

# DEVELOPMENT AND VALIDATION OF AN ULTRA-BRIEF VERSION OF THE BIG THREE PERFECTIONISM SCALE – SHORT FORM (BTPS-SF)

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Perfectionism is a multidimensional construct with several conceptual models and measurement tools. The Big Three Perfectionism Scale (BTPS; Smith et al., 2016) introduced a comprehensive framework by integrating subscales from various perfectionism measures into a single 45-item scale, comprising three factors: rigid, self-critical, and narcissistic perfectionism. To reduce participant burden, Feher et al. (2020) developed a 16-item short form (BTPS-SF), replicating and maintaining the original three-factor structure. In line with growing trends toward ultra-brief psychological measures, the present study aimed to develop and validate a Croatian ultra-brief version of the BTPS-SF to be used in research settings with time constraints. A total of 1337 young women (ages 18–21,  $M = 19.8$ ) from all counties in Croatia completed the BTPS-SF along with measures of obsessive-compulsive symptoms (OCI-R), disordered eating behaviours (EAT-26, DEAS-s), and orthorexia (Düsseldorf Orthorexia Scale). An exploratory factor analysis (EFA) was used to identify a smaller set of items for each dimension, ensuring strong factor loadings and minimal cross-loadings. A confirmatory factor analysis (CFA) supported the three-factor model with acceptable fit indices. Despite item reduction, subscales demonstrated adequate internal consistency (McDonald's  $\omega$ ). Construct validity was established through significant correlations with related constructs, supporting convergent validity. The final ultra-brief scale provides a reliable and valid tool for assessing perfectionism efficiently, making it especially suitable for large-scale surveys or studies involving multiple psychological measures with limited time for assessment.

**Keywords:** perfectionism, BTPS, psychometric validation, short-form scale, ultra-brief measures

# PERCEPTION OF SCIENTIFIC EVIDENCE IN PSYCHOTHERAPY AMONG PSYCHOTHERAPISTS IN CROATIA: A QUALITATIVE STUDY

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Psychotherapy, as a form of intervention for various range mental health problems, is practiced worldwide. At the same time, there is a lack of information on how psychotherapists assess the effectiveness of their work, and how they implement scientific discoveries in everyday practices. This preregistered qualitative study aimed to collect information on the perception of scientific evidence in psychotherapy and its usage in a sample of Croatian psychotherapists. Secondary aim was to develop educational interventions in order to facilitate the use of scientific evidence in everyday psychotherapeutic work. Purposive sampling was utilized by including only accredited psychotherapists from different psychotherapy approaches, currently working in Croatia. The participants were approached through personal contacts and professional societies. All interviews were conducted remotely using the Zoom platform, since it offers more flexibility in planning and meeting with participants. Interviews were conducted individually, with only the researcher and the participant present. The researcher was not previously familiar with the participant. In total, 14 interviews were conducted and transcribed using a transcription tool. Qualitative analysis of the collected data was analyzed using the thematic analysis approach. The manifested themes were organized in a map and will be used as a guide for the development of interventions for the uptake of evidence-based practices.

**Keywords:** psychotherapy, evidence-based practice, qualitative research, interviews, educational intervention

## WHAT MAKES THEM TICK? EXPLORING POSITIVE JOB MOTIVATION AMONG CORRECTIONAL OFFICERS - PRELIMINARY RESULTS

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Correctional institutions are specific work environments that can be highly demanding for employees. In such settings, positive work motivation is important in enabling employees to meet complex job requirements and facilitating long-term job satisfaction. Therefore, this study aimed to examine differences in nonmaterial job aspects considered to improve work motivation among officers employed in different departments within Croatian correctional institutions. Preliminary data collected within the ongoing PRISCLIM project on a convenience sample of correctional officers (N = 1307) were analysed. The majority of the participants were males (65%). Their average age was 44 years (SD=10) and the majority had a secondary school diploma (64%). For the purposes of this study, a 19-item questionnaire was developed, and respondents assessed how much each of the listed job aspects would increase their work motivation using a 5-point Likert-type scale. A three-factor structure was obtained: Organizational support and employee involvement, Feedback and interpersonal relationships, Work autonomy and development. Generally, data revealed that correctional officers assessed Organizational support and employee involvement as the strongest potential work motivator. However, officers employed within the treatment and health department, compared to officers from all other departments, assessed Work autonomy and development as more important for their work motivation.

**Keywords:** job motivation, nonmaterial job aspects, correctional officers, prisons, PRISCLIM project

# MANAGERIAL ACTIVITY IN CONFLICT MANAGEMENT: LESSONS FROM A SMALL ISLAND STATE USING AI

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Conflict is very often perceived as a negative issue to contend with in organizations especially in the Maltese context. Malta is also a European Union Member State with a great influx of foreign workers as unemployment is only at 3%. For this reason, which came about in the last decade, examining conflict has become a relevant issue also because of the cultural issues and possible misunderstandings that foreign workers might bring about in our organisations. Although conflict, at times, can be constructive, more often than not it may be also destructive. Resolving or managing conflict effectively requires implementing strategies that promote cooperation, inclusion and understanding. Using the concepts of Thematic Analysis, Chat GPT Version 4.0 was used to elicit themes from 41 individual semi-structured interviews carried out with subordinates working in the Maltese Industry. With regards to the management's role, two prominent themes were elicited; namely 'Proactivity versus Reactivity in Conflict Resolution' and 'Perceived bias and Favouritism'. This paper aims to outline the innovative methodology used to elicit these themes and to discuss them within the context of a small island state which is increasingly becoming more diverse and cosmopolitan. It also aims to critically analyse these themes using existing literature and to propose ways in which conflict can be dealt with in a more effective manner.

Keywords: conflict, management, small island state, artificial intelligence

## **DO YOU BELIEVE ME? HOW SUBJECTIVE WRITING STYLE AND FRAMING AFFECT TEXT CREDIBILITY JUDGMENTS AND RETENTION**

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In modern times, the lack of source or background information, paired with the easier diffusion and access, made the discrimination between false and true news much harder. In these conditions, the specific ways in which a text is written can play a significant role in its credibility and memorability. The objective of this study is to determine whether formal elements of text, such as Writing Style (subjective/objective) and Framing (presence/absence of semantic negation), can alter individuals' perceived truthfulness of the news they read. Beyond credibility, we examined whether these factors impact the short-term retention capacity of information contained in the texts. Participants perform a task divided into three phases: reading a complete news article of a specific topic (Medicine, History, Astronomy, or Technology), evaluating the credibility of the article and a memory test. The responses provided by participants indicate that while Writing Style can influence the perceived truthfulness of a text, Framing (the presence/absence of semantic negations) was shown to significantly alter the retention of information contained within the news. The results highlight the importance of carefully considering the formal elements of text in the dissemination and interpretation of information. Further research is needed to delve into the interaction between the Framing, Writing Style (subjective/objective) and their impact on reasoning and individuals' perceptions regarding the truthfulness of news.

Keywords: misinformation, truthfulness of text, writing style, semantic negations

# MUSIC-INDUCED ETHNOCULTURAL EMPATHY: PROMOTING THE POWER OF ETHNOCULTURAL EMPATHY THROUGH JAZZ AND FILM MUSIC

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"I believe that all people are in possession of what might be called a universal musical mind". These words from the musician Bill Evans presents an idea analogously to Noam Chomsky's "universal grammar theory" in linguistics. At least we could recognize the existence of a human "universal aesthetic mind". As Western societies today are experiencing widespread changes due to globalization, migration, modernization, and rapid digitalization, it is crucial to strengthen interethnic bonds. Moreover, the quest for peaceful coexistence and strong intercultural relations in modern multicultural societies is a prominent political priority in the West today. Ethnocultural empathy recognizes the heterogeneous nature of empathy across various culturally based understandings of the concept. Music provides communicational possibilities between listeners and gives a reference for common attention and experiences of deep emotional involvement and intimacy. This could terminologically be related to both empathic affordances, and social bonding and cohesion. Could artistic creations in the form of organized sound (music) in various forms contribute to the facilitation of ethnocultural empathy? Jazz already represents a cosmopolitical reality though its origins and synthesis, while film music probably is one of the most common forms of musical consumption today. Furthermore, film music could be considered as a contemporary classical and universal artistic tradition appearing in multimedia contexts. The speaker argues that ethnocultural empathy already is aestheticized and institutionalized in the great worldwide "databases" of film music and jazz. The presentation further investigates and demonstrates how selected types of jazz and film music could contribute to ethnocultural empathy.

Keywords: ethnocultural empathy, jazz, film music, universal aesthetic mind, cosmopolitanism



# MENTAL HEALTH IN TIMES OF GLOBAL CRISES: THE PSYCHOLOGICAL IMPACT OF THE KOČANI FIRE TRAGEDY ON YOUTH AND COMMUNITIES IN NORTH MACEDONIA

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The frequency and intensity of global crises—ranging from pandemics and climate change to economic disruptions and social unrest—have brought mental health into sharp focus as a key public health priority. These large-scale events often intersect with localized tragedies, compounding the psychological toll on affected populations. One such local tragedy occurred in North Macedonia, where a devastating fire in the city of Kočani resulted in the deaths of 59 young people. This incident had a profound emotional and psychological impact on the community and exposed critical weaknesses in the country's mental health infrastructure, particularly in responding to traumatic events affecting youth. This study explores the psychological aftermath of the Kočani fire, situating it within the broader context of mental health challenges during times of global crisis. The research aims to understand the short-term and long-term mental health effects on survivors, families of the victims, peers, and frontline responders. Drawing on a qualitative approach, including semi-structured interviews and focus groups with affected individuals and professionals, the study identifies dominant emotional responses (e.g., shock, grief, anxiety, guilt), coping mechanisms (both adaptive and maladaptive), and the availability and accessibility of psychosocial support services. Preliminary findings suggest that the tragedy amplified pre-existing mental health vulnerabilities, particularly among youth, and highlighted a significant gap in crisis preparedness and trauma-informed care. The analysis further reveals the role of community solidarity, rituals of mourning, and the media in shaping collective grief and resilience. The study advocates for the integration of mental health into emergency response protocols, the training of school personnel and community workers in psychological first aid, and the development of long-term recovery strategies focusing on mental wellbeing.

**Keywords:** mental health, global crises, trauma, Kočani fire, youth, psychological impact, collective grief, psychosocial support, resilience, North Macedonia, emergency response, trauma-informed care

# THE MODERATING EFFECT OF TRANSFORMATIONAL LEADERSHIP ON THE RELATIONSHIP BETWEEN HAPPINESS AT WORK AND INTERNAL CORPORATE SOCIAL RESPONSIBILITY IN THE HOTEL INDUSTRY

**Ivana Jadrić**

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Happiness at work (HAW) is an important subject of analysis for many scholars and practitioners as it is related to productivity, profitability, and positive business practises. The correlation with different leadership styles has been confirmed in numerous previous studies. An analysis of recent literature points to an additional variable whose relationship with HAW is being increasingly investigated - internal corporate social responsibility (CSR). Internal CSR is associated with ethical behaviour, employee well-being and sustainable practises. On the other hand, different leadership styles and their correlation with HAW have been the subject of numerous studies for some time, with transformational leadership often highlighted as leading an organisation in a way that inspires and motivates employees to go beyond personal interests and focus on the development of the organisation. Considering that there is previous research showing the relationship between transformative leadership and organisational climate, quality of life and happiness at work, and that there is also research showing the relationship between internal CSR and HAW as well as CSR and leadership, this research is questioning whether transformative leadership can act as a moderator variable on the relationship between internal CSR and HAW. For this purpose, research was conducted from February to April 2025 with 109 respondents - employees in the hotel industry - using an online questionnaire. The data analysis confirmed the correlation of all variables and the role of transformative leadership as a moderator between internal CSR and HAW. Based on this research, it can be concluded that organizations in service industries such as the hotel industry can increase employee satisfaction by strengthening internal CSR policies, whereby transformational leaders being those who can maximise the positive effects of CSR.

**Keywords:** happiness at work, internal corporate social responsibility, transformational leadership, hotel industry.

# PHYSICAL ACTIVITY AND NOT DIGITAL TECHNOLOGY USE PREDICTS PRIMITIVE REFLEXES IN FIRST-GRADE PUPILS IN CROATIA

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Primitive reflexes are automatic movements present at birth, aiding early development. These reflexes usually fade as the nervous system matures. If they persist beyond infancy, they can affect coordination, balance, focus, and motor skills, leading to learning difficulties. Environmental factors like physical activity or use of digital technology (DT), as a sedentary behavior, impact reflex integration. This study aims to investigate the persistence of primitive reflexes in first-grade pupils in Croatia and its relation to time spent in physical activities or using digital technology. The research was conducted as part of the DigiLitA project, "The Impact of Environment on Child Development". The participants were 221 children (117 girls) aged 6 to 8 years ( $M = 6.66$ ,  $SD = 0.477$ ), first-grade students, along with one of their parents. Children were tested individually for persistence of three types of primitive reflexes. Their parents provided estimates of the time the child spends in different physical activities and activities using DT. Results show different significant relations between individual primitive reflexes and different physical activities and types of DT use. The hierarchical regression model shows that male gender (entered at the first step) and frequency of child engaging in activities such as riding a bike or skateboarding (entered at the second step) are significant predictors of the persistence of primitive reflexes. The model explained 6.2% of the variance. Using DT to play games for fun or time spent using DT in general did not show to be a significant predictor of primitive reflexes.

**Keywords:** primitive reflexes, digital technology use, environment influence, physical activity

# NEUROTECHNOLOGY AND THE MODERN WORKPLACE: BALANCING EFFICIENCY WITH ETHICAL RESPONSIBILITY

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As the boundaries between technology and the human brain blur, neurotechnology promises to reshape the modern workplace, offering unprecedented opportunities for boosting productivity and well-being. Yet, with these possibilities comes a crucial question: at what cost? Alongside its undeniable benefits come important ethical concerns that must be carefully considered before widespread implementation of neurotechnology. This conceptual paper explores key ethical and psychological challenges related to the use of neurotechnology in professional environments, including issues of privacy, mental health, informed consent, and potential bias. It also examines broader implications for employee autonomy, workplace culture, and individual rights within the context of current legal and social frameworks. Grounded in organizational psychology and a review of relevant ethical literature, the discussion is framed by the Sustainable Development Goals (SDGs) — particularly Goal 3 (Good Health and Well-being), Goal 8 (Decent Work and Economic Growth), and Goal 10 (Reduced Inequality). The paper offers an ethical perspective intended to support organizations in navigating these complexities and making responsible, rights-oriented decisions regarding neurotechnology in the workplace, while contributing to the development of context-sensitive approaches to leadership, governance, and workplace culture. Ultimately, it argues that while neurotechnology holds transformative potential, its implementation must be guided by a balanced approach that protects human dignity and fosters sustainable, inclusive work environments.

**Keywords:** neurotechnology, workplace productivity, employee well-being, ethical concerns, sustainable development goals

# THE IMPACT OF CLASSMATE SUPPORT ON GAMING DISORDER: A STUDY OF MACEDONIAN ADOLESCENTS

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Problematic gaming is a prevalent risk behavior among adolescents, with excessive use of online and video games potentially disrupting their psychological, physiological, and behavioral well-being. Literature suggests that adolescents may develop gaming addictions similar to substance addictions. The American Psychiatric Association defines Internet Gaming Disorder (IGD) in the DSM-5, and the World Health Organization includes Gaming Disorder (GD) in the ICD-11. This study aimed to examine how classmates' support acts as either a protective or risk factor for developing tendency for gaming disorder. A survey was conducted in 2022 across 10 high schools in Macedonia using the Qualtrics platform, with 301 adolescents (49.8% male, 50.2% female) aged 15 to 18 participating. The sample was convenient, selected based on parental and student consent. The study used well-established psychometric instruments: the Internet Gaming Disorder Scale -IGDS9-SF, the Gaming Disorder Test- GDT, and the Child and Adolescent Classmate's Support Scale -CASS. The results revealed a significant correlation ( $r = 0.78$ ,  $p < 0.01$ ) between IGD and GD, supporting the use of the term disordered gaming (DG). In this survey the IGD was used as a tool for measuring the tendency for gaming disorder. Findings indicated that positive peer support is a protective factor, as it was associated with a decrease in problematic gaming ( $r = -0.21$ ,  $p < 0.01$ ). All aspects of CASS (emotional, informational, instrumental, and appraisal support) showed negative correlations with gaming disorder, further supporting the role of classmates' support in reducing gaming-related issues.

**Keywords:** gaming disorder, classmate support, adolescents, protective and risk factors

## **SOFTENING THE STRUGGLE: SELF-COMPASSION AS A PROTECTIVE FACTOR AGAINST STRESS AND MENTAL HEALTH PROBLEMS IN EARLY CAREER RESEARCHERS**

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Mental health challenges in academia, often referred to as a "mental health crisis in academia", have reached alarming levels. The demanding nature of academic environments is well-documented, with research showing high rates of stress, burnout, and mental health issues—particularly among early career researchers (ECRs). Addressing this crisis requires systemic solutions, including institutional policies and cultural shifts that promote well-being. However, in the face of institutional inertia, it is valuable to explore individual protective factors. One such protective factor is the self-compassion trait, which entails treating oneself with kindness in times of difficulty, recognizing that difficulties are a shared part of being human, and being non-judgmentally aware of thoughts and emotions without suppressing or exaggerating them. This study set out to address the dearth of longitudinal research in this field by examining whether self-compassion reduces stress and mental health issues in ECRs and whether this relationship is mediated by coping strategies. We hypothesize that ECRs with higher self-compassion are more likely to use adaptive coping strategies (both problem-focused and emotion-focused), resulting in better mental health outcomes. A total of 467 ECRs in the Netherlands participated in an online three-wave study over a two month period. Participants completed the Self-Compassion Scale Short Form, Brief COPE, Perceived Stress Scale, and General Health Questionnaire. Path analysis will be used to examine the proposed hypotheses. Understanding the role of self-compassion in mental health is expected to help inform both individual and institutional interventions, contributing to a healthier academic culture.

**Keywords:** self-compassion, mental-health, stress, academia, coping

## CHALLENGES TO ETHICS REVIEW OF EMERGING TECHNOLOGIES

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The aim of the study was to provide a broad overview of the challenges faced by research ethics review bodies concerning new technologies, stakeholders, collaborations, and frameworks, in response to evolving research environment. The study was conducted as part of the Horizon Europe project Challenges and innovative changes in research reviews (CHANGER). We used scoping review methodology. A literature search was performed using major bibliographic databases – Scopus, Web of Science, and PubMed – as well as grey literature sources. The SyRF (Systematic Review Facility) platform was used for screening, and a Large Language Model (LLM) was employed for data extraction. The collected data was used to create Evidence and Gap Map (EGM) for visual presentation of the identified challenges to ethics review. In total, 756 academic articles, 65 deliverables from 46 Horizon 2020 projects and 13 deliverables from 8 Horizon Europe were included in this scoping review. The EGM indicated areas where ethical concerns were most prevalent. For example, AI faces risks related to bias and privacy, while biomedical engineering and genomics highlight the need for legal and regulatory frameworks, and for ensuring informed consent. Similarly, robotics and automation show concerns around safety, security, and regulatory gaps. Big data analytics presents challenges in data privacy and security, while digital health involves risks on privacy, transparency, and public trust. Our findings highlight the need for interdisciplinary and adaptable ethics review mechanisms that can address emerging ethical challenges. The EGM provides a visual guide for ethics review improvements and regulatory development in evolving research environments.

**Keywords:** ethics review, legal and ethical challenges, emerging technologies

## HOW GOOD ARE MEDICAL STUDENTS AND RESEARCHERS IN DETECTING DUPLICATIONS IN DIGITAL IMAGES FROM RESEARCH ARTICLES: A CROSS-SECTIONAL SURVEY

**Antonija Mijatović, Nensi Bralić, Luka Ursić, Miro Vuković, Marija Franka Žuljević, Marija Roguljić, Ana Marušić**

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Improper manipulation of digital images threatens the integrity of scientific research. This study evaluated how well humans can detect one specific type of manipulation: image duplication within biomedical research figures. We conducted a pen-and-paper survey among medical students and experienced researchers - who regularly view images in academic papers. Participants were asked to identify image duplications in Western blots, cell cultures, and histological sections. We measured both their accuracy in detecting duplications and the number of errors they made. A total of 831 students and 26 researchers participated. Students correctly identified a median of 10 duplications (29% of total; IQR 8.0–13.0), while researchers identified 11 (31%; IQR 8.3–14.0), with no statistically significant difference ( $p = .271$ ). Both groups performed better at detecting duplications in Western blots compared to cell or tissue images ( $p < .005$  and  $p = .007$ , respectively). Among students, gender had a small effect: females identified slightly more duplications ( $p < .005$ ,  $R^2 = 1.6\%$ ) but also made more errors ( $p < .005$ ,  $R^2 = 2.2\%$ ). Academic year did not influence performance. Detection of image duplication was generally poor across both students and researchers, regardless of experience. These findings suggest a need for automated image screening tools and clearer guidelines for researchers on digital image preparation in scientific publications.

**Keywords:** image manipulation, image duplication, research integrity, pen-and-paper survey



## QUALITY OF LIFE IN WAR VETERANS: THE ROLE OF PTSD AND COMORBIDITIES

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Exposure to war and combat is a well-established risk factor for the development of mental health disorders, most notably posttraumatic stress disorder (PTSD). The enduring psychological and social consequences of such experiences can substantially affect the quality of life (QoL) of veterans. In Croatia, previous research has demonstrated that PTSD is strongly associated with reduced QoL among war veterans, while veterans without PTSD generally report better outcomes. This study further contributes to the understanding of these relationships by examining differences in QoL between war veterans with PTSD, war veterans without PTSD, and healthy individuals without war experience, as well as QoL in relation to psychiatric and physical comorbidities, in a sample of Croatian veterans hospitalized at the Department of Psychiatry, University Hospital Dubrava. The sample included 164 veterans with PTSD and comorbid psychiatric and physical disorders and 213 participants without psychiatric disorders (159 with war experience and 54 without). PTSD was assessed using the Clinician-Administered PTSD Scale (CAPS), while QoL was measured with WHOQOL-BREF across four domains. Additionally, psychiatric symptoms were assessed with Hamilton Anxiety Scale (HAMA), Hamilton Depression Scale (HAMD), and Positive and Negative Syndrome Scale (PANSS), while ICD-10 was used for physical diseases. The results showed that veterans with PTSD had significantly lower QoL in all domains compared to both veterans without PTSD and healthy individuals. No significant differences were found between healthy participants with or without war experience. Findings highlight that PTSD symptoms, intensified by physical comorbidity, diminish veterans' QoL—not just war experience itself.

**Keywords:** combat PTSD, war veterans, quality of life, wellbeing, mental health

# PATTERNS OF DOMESTIC VIOLENCE: SOCIO-DEMOGRAPHIC AND CRIMINOLOGICAL INSIGHTS INTO PERPETRATORS

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Domestic violence is a serious public health issue with severe consequences. Despite its high prevalence and recidivism rate, perpetrators' socio-demographic, criminological, and victimological characteristics remain insufficiently explored, leaving gaps in understanding contributing factors. The study aims to examine characteristics of the perpetrators by retrospectively analyzing data from the Information System of the Ministry of the Interior of the Republic of Croatia for Split-Dalmatia County, covering the period from January 1, 2022, to December 31, 2022. The study included 256 perpetrators of both genders who had committed domestic violence offenses. A 25-item structured questionnaire was used to assess socio-demographic and criminological traits of perpetrators, as well as characteristics of the offenses. The results show that most perpetrators were middle-aged men, often fathers, living in marital or cohabitating partnerships and typically having completed secondary education. Alcohol misuse was a prevalent factor in most offenses. Many had a prior history of misdemeanor or criminal offenses and a significant proportion had previously experienced victimization related to such offenses. Perpetrators were frequently acquitted due to the victim's choice not to testify or insufficient evidence to support charges. The data indicate that offenders are predominantly middle-aged men with a history of prior criminal acts, frequently committing offenses under the influence of alcohol. These findings highlight the need for evidence-based interventions addressing alcohol abuse and violent offender rehabilitation to reduce recidivism. Targeted strategies focusing on these risk factors are crucial for reducing repeat offenses, enhancing long-term rehabilitation success, and contributing to the reduction of domestic violence.

**Keywords:** perpetrators, domestic violence, socio-demographic characteristics, criminological characteristics

# **NARCISSISTIC PERSONALITY DISORDER: HISTORY, TYPES, MANIFESTATION AND TREATMENT**

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Narcissistic Personality Disorder (NPD) is a complex psychiatric condition marked by grandiosity, a need for admiration, and a lack of empathy, significantly impairing interpersonal relationships and social functioning. This paper examines NPD through a multidisciplinary lens, exploring its psychological constructs, causes, symptoms, and treatment approaches. NPD is often linked to early childhood experiences, such as emotional abuse or overindulgence, leading to the development of defensive mechanisms aimed at protecting fragile self-esteem. The disorder manifests in both overt and covert forms, with individuals exhibiting a grandiose self-concept that masks underlying feelings of inferiority and insecurity. While NPD is frequently resistant to treatment, approaches like Schema Therapy show promise in addressing the core vulnerabilities of individuals with the disorder. The paper also distinguishes between narcissism and self-esteem, highlighting that NPD is not simply the result of inflated self-worth but rather a deeper struggle with internalized shame and a need for external validation. Despite challenges in diagnosis and treatment, ongoing research emphasizes the need for a multidimensional approach to NPD, integrating both psychodynamic and cognitive-behavioral therapies.

Keywords: narcissism, self-esteem, egotism, treatment, disorder

## **GENDER AND PARENTAL EDUCATION AS DETERMINANTS OF VOCATIONAL INTERESTS IN VOCATIONAL SCHOOL STUDENTS**

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In Croatia around 70% of students enroll in vocational high school programs after completing elementary education. As the choice of vocational program should be in line with students' preferences and abilities, researchers and practitioners focus on factors underlying their career decisions. This study aims to investigate vocational interests of VET school students, and focus on gender and parental education as potential determinants. The study was a part of the project VETFIT, which aims to explore the development of students' vocational interests throughout the first three years of high school education. A total of 981 students completed a questionnaire in the first measurement wave. We assessed their vocational interests using the Personal Globe Inventory (PGI), which conceptualizes interests as comprising two components: preferences for various working activities (i.e., preferences) and personal beliefs in competence in these working activities (i.e., competence beliefs), measured across three dimensions: People–Things, Data–Ideas, and Prestige. Results suggest that girls hold higher preferences and competence beliefs for activities involving working with people and those of higher prestige, while boys hold higher preferences and competence beliefs for activities involving things and those of lower prestige. Furthermore, students whose parents completed university degree reported greater preferences, but not competence beliefs, for activities of higher prestige than students whose parents completed lower levels of education. These findings contribute to the extensive literature on gender differences in vocational interests, while also highlighting the role of parental education in determining students' preferences for activities demanding higher levels of effort and skill.

**Keywords:** vocational education, vocational interests, parental education, gender differences

# GENDER ASPECTS OF ATTITUDES TOWARDS CORPORAL PUNISHMENT OF CHILDREN

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Research on attitudes towards corporal punishment is crucial in understanding the prevalence and justification of physical punishment of children. Previous studies indicate gender differences in these attitudes, but the extent and nature of these differences remain unclear. This study aims to examine the role of gender in the justification of corporal punishment of children, using a vignette to measure attitudes among Croatian university students. The study involved 582 university students aged 18 to 40. Participants were from various fields of study and were surveyed online. The Short Situational Scale of Attitudes towards Corporal Punishment (SSS-CP) was developed for this study depicting hypothetical conflicts between parents and children, culminating in corporal punishment. A quasi-experimental design was used with the variation of participant, parent and child's gender. Data were analyzed using ANCOVA, controlling for previous experience of corporal punishment. Physical punishment was more justified when the participant is male (6% of criterion variance), the perpetrator was a female parent (1.3% of criterion variance) and the child was male (1.8% of criterion variance), however, no significant interaction effects were found. Previous experience of corporal punishment also predicted more positive attitudes towards its use (1.7% of criterion variance). The study highlights the importance of gender in shaping attitudes towards corporal punishment. Interventions aimed at reducing corporal punishment should consider gender norms and socialization patterns. Further research is needed to explore cultural and temporal variations in these attitudes.

**Keywords:** corporal punishment, gender differences, attitudes, physical punishment, vignette-based scale, childhood violence

# HPV VACCINATION ATTITUDES AND BEHAVIOUR AMONG STUDENTS: THE ROLE OF EMOTIONAL AND COGNITIVE PREDICTORS

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The aim of this study was to examine key determinants of attitudes towards HPV vaccination among university students. Despite ongoing media campaigns and educational initiatives highlighting the benefits of HPV vaccination in preventing various types of cancer, vaccination coverage in most EU countries remains below 50%. In the Republic of Croatia, by 2024, only 51% of girls and 34% of boys up to 15 years of age had been vaccinated, which is significantly below the target level. Numerous factors influence the decision to vaccinate or not, and this study focused on predictors previously identified in research on health behaviour and attitudes towards vaccination against various diseases. Specifically, the study explored the predictive roles of personal characteristics from both emotional and cognitive domains-namely, emotional stability, intellectual humility, critical thinking, knowledge about HPV, and attitudes towards sexuality-in a sample of students from the University of Split. Self-assessment questionnaires were used, including: the General Data Questionnaire, the Emotional Stability Subscale (Mlačić & Goldberg, 2007), the General Intellectual Humility Scale (Leary et al., 2017), the Critical Thinking Questionnaire (Kobylarek et al., 2022), and two instruments developed for this research-the HPV Knowledge Scale and the HPV Vaccination Attitudes Scale. The results indicated that various predictors play a significant role in shaping vaccination attitudes and behaviours, underscoring the complexity of these concepts. These findings suggest there is considerable potential to improve targeted interventions among young people to promote healthier behaviours. The study highlights the importance of addressing subjective norms (such as peer and societal influences), levels of knowledge about HPV, and personal beliefs and attitudes, in line with findings from other research on student populations. Overall, these results emphasize the need for further research and the development of tailored educational programs to increase HPV vaccination uptake among young people.

**Keywords:** HPV, vaccination, attitudes, behaviour, students

## **FOR A BETTER (OR A WORSE) FUTURE: A PRELIMINARY INVESTIGATION ON THE EFFECT OF PRESENT-TO-FUTURE CONTINUITY ON LIFE SATISFACTION IN EMIGRATION**

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Migration challenges an individual's sense of continuity, impacting perceptions of self, family ties, and collective belonging. A strong present-to-future continuity—the feeling that one's present and future seamlessly connect—is vital for life satisfaction during such transitions. We investigated how perceived continuity across three distinct levels—self, family, and the collective ingroup—predicts life satisfaction among individuals experiencing migration. Forty-one participants who emigrated from Bosnia and Herzegovina within three years reported their state levels of future self-, family, and collective continuity and assessed their life satisfaction in migration five times a day for seven days. A hierarchical mixed effect modeling approach that differentiated within- and between-person predictor effects revealed that within-person family continuity significantly predicted higher life satisfaction. Specifically, individuals reported increased life satisfaction on days when experiencing greater connection between their present and future family circumstances. Between-person collective continuity was also a significant positive predictor of life satisfaction, indicating that individuals who held firmer beliefs about the future stability of their ingroup experienced greater life satisfaction. While other forms of continuity, including self-continuity and trait-level family and collective continuity, did not reach statistical significance, the results underscore the dynamic interplay of perceived temporal continuity, particularly concerning family and collective identity, in shaping emigrants' life satisfaction. Therefore, fostering a sense of continuity can foster well-being even in those individuals experiencing significant life changes.

**Keywords:** future self-continuity, future family continuity, future collective continuity, life

# STRATEGIC MOBILITY: PERCEPTIONS OF WORK MIGRATION AMONG YOUNG CROATIAN PROFESSIONALS

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This study aimed to explore how young Croatian professionals perceive and strategically use work migration in today's labour market. Data were collected through four in-person focus groups with 21 participants aged 21-35, representing a diverse range of employment contexts, including low- and high-value jobs, as well as onsite, remote, and self-employed workers. The analysis was conducted using Braun and Clark's (2006) thematic analysis approach. The findings revealed that migration is rarely seen as a simple choice between leaving or staying. Instead, young professionals see it as a selective, temporary strategy to access opportunities not available in Croatia, such as advanced education, specialized training, or higher-paying jobs. Participants often framed migration as part of a broader career plan with the goal of returning to Croatia to contribute with new skills. Many also utilize remote work to access international markets and opportunities without actually moving abroad, helping them stay connected to their local lifestyle and social circles. Participants emphasized strong emotional and cultural ties to Croatia, including family, community, and a sense of belonging, which influenced their decisions to return or stay. Migration was generally viewed as a means of enrichment rather than escape, allowing participants to balance personal values with professional growth. Overall, young professionals in Croatia use migration and remote work strategically to maximize flexibility, maintain their identities and core values, and shape careers on their own terms within a globalized world.

**Keywords:** work migration, career mobility, young professionals, qualitative research



## **VIRTUAL NIGHTLIFE EXPERIENCE: DEVELOPMENT OF IMMERSIVE 360-DEGREE VIDEOS FOR THE ASSESSMENT OF ALCOHOL CRAVINGS**

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Nightclubs, bars, private gatherings, and other nightlife social settings are common environments where alcohol (ab)use frequently occurs, placing its patrons at risk of various harmful outcomes. Cue reactivity with exposure to alcohol-related cues and its effect on alcohol craving have been a common approach in the study of harm reduction from alcohol use. Project Nightlife: A study in real and virtual context – REAL NIGHTS, funded by NextGenerationEU, had two main objectives: 1) to explore the degree and patterns of substance use among night-club attendees, and 2) to test the potential use of virtual reality (VR) technology in harm-reduction from alcohol use. We developed three immersive 360-degree VR videos, depicting nightlife experiences, which are based on cue exposure, incorporating visual and auditory alcohol-related stimuli, with the assumption that the immersive environment would allow alcohol-craving induction. VR environments were filmed for three nighttime settings: a nightclub, a bar, and a house party. The environments included personalized scenes, in which the musical style and beverage type were varied, allowing personalization of the experience based on participants' preferences. Thus, participants in the experimental part of the study, that will be exposed to VR intervention, will be able to select their preferred musical style (pop, rock, EDM, and trap/folk dance music) and alcoholic beverage type (beer, wine, and hard liquor). In three sessions, during which they will experience VR environments, participant's alcohol craving will be assessed among other outcome variables. In total, 18 amateur actors and 70 extras participated in filming of the VR environments.

**Keywords:** virtual reality, cue reactivity, alcohol craving, risky behaviors, alcohol use

## FROM CROATIA TO EUROPE: EXPLORING THE DRIVERS OF YOUTH LABOR MIGRATION AND CAREER DEVELOPMENT

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In today's globalized labor market, there is an increasing demand for worker mobility. European regulations have eased the process of international movement, allowing individuals to seamlessly transition between working in their home countries and abroad as they navigate through their careers. This stands in contrast to the traditional career models, in which organizations directed career progress and rewarded employees with stability, promotions, and salary increases. In the modern career landscape, individuals are expected to take ownership of their own development, often by changing jobs, employers, or even professions to achieve career success and personal fulfillment. This self-directed approach is particularly evident among younger generations, who are increasingly open to pursuing employment opportunities beyond national borders. This study aims to explore intra-European youth labor migration by examining the career development intentions of young employees in Croatia, with a focus on potential career moves to EU-31 countries. Specifically, we seek to understand the scope of this phenomenon and the reasons behind it. First, we analyzed available demographic data to highlight current trends in youth migration. Second, using a nationally representative sample of 1,500 employed adults aged 19 to 35 in Croatia, we examined their intentions to seek employment in other European countries, the motivations behind these decisions, and the broader career-related factors that may influence it. The focus is placed on the quality of working life in both Croatia and other European countries, as well as on the personal resources that facilitate mobility and support career development. The findings contribute to a deeper understanding of youth labor mobility within Europe and inform strategies for enhancing career opportunities and well-being among young workers.

Keywords: careers, migration, youth, EU, Croatia

## POSTER SESSION

## PROTOCOL FOR AN EDUCATIONAL INTERVENTION ON EVIDENCE-BASED PSYCHOTHERAPY PRACTICE

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Psychotherapy, as a form of intervention for a wide range of mental health problems, is practiced worldwide. At the same time, there is a lack of information on how psychotherapists assess the effectiveness of their work and implement scientific discoveries in everyday practices. As a part of a research project, we conducted 14 in-depth interviews with accredited psychotherapists in Croatia, related to their use of scientific evidence in everyday practice. Based on the information collected in the qualitative part, as part of an earlier study within a research project, we will develop an educational intervention that will be presented at the conference regarding the duration and content. The aim of the intervention is the increase of evidence-based practices in everyday work. The intervention will be conducted online and will last approximately 90 minutes, and we plan to invite at least 500 participants. We will collect information about psychotherapy practices before and after the educational intervention. We plan to collect contact data from the participants and follow up after six months to assess the changes in psychotherapy practices related to evidence use and assessment of the quality of the intervention.

**Keywords:** evidence-based psychotherapy, educational intervention, outcome assessment, research methodology

## THE ROLE OF CHILD AND PARENTAL PHYSICAL ACTIVITY IN PREDICTING THE PERSISTENCE OF PRIMITIVE REFLEXES IN FIRST-GRADE CHILDREN

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Physical activity plays a vital role in children's healthy growth and neurodevelopment. Regular movement supports motor skill development, coordination, and neurological integration, including the natural inhibition of primitive reflexes during early childhood. If retained beyond this period, these reflexes may be linked to difficulties in attention, coordination, and learning. Parental physical activity can indirectly shape children's habits, as parental lifestyle often influences the home environment and children's opportunities for spontaneous movement and play. This study aimed to examine the presence of primitive reflexes in first-grade children and explore their relationship with different types of physical activity, as well as the potential mediating role of parental physical activity. The research was conducted within the DigiLitA project, "The Impact of Environment on Child Development." A total of 221 children (117 girls), aged 6 to 8 years ( $M = 6.66$ ,  $SD = 0.477$ ), and one of their parents participated. Children were individually tested for the persistence of three primitive reflexes, while parents reported the time their child spent in activities such as cycling, walking, or outdoor play. Results showed a direct effect between time spent in activities like cycling or skating and the persistence of primitive reflexes. No significant effect was found for walking or general outdoor play. The assumed mediating effect of parental physical activity was not confirmed. These findings suggest that the presence of primitive reflexes in school-aged children is a complex issue that requires an expanded model to identify key factors for better understanding and adapting intervention strategies that support motor skill development.

**Keywords:** primitive reflexes, physical activity, children, parents, motor development

## CLINICAL DISABILITY, FATIGUE AND LIFE SATISFACTION IN PRIMARY PROGRESSIVE MULTIPLE SCLEROSIS PATIENTS: PRELIMINARY STUDY

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Recently, there has been increasing interest in the subjective psychological well-being of people with neurodegenerative disorders, such as multiple sclerosis. Although it is well known that fatigue and life satisfaction have an impact on disease outcomes, their relationships with clinical disability are not sufficiently explored. This study aimed to investigate the relationship between clinical disability, fatigue, and life satisfaction in subjects with primary progressive multiple sclerosis (PPMS). PPMS participants were recruited at the Neurology Department of the University Hospital of Split and are actively involved as participants in the research project funded by the Croatian Science Foundation [Investigation of subclinical markers of multiple sclerosis, HRZZ-2022-10-6203]. All participants were treated with neuromodulatory ocrelizumab drug for at least one year or more and had no clinical or neuroradiological disease activity in the last three months before assessment. The participants completed the Single-Item Life Satisfaction Measurement and Fatigue Severity Scale, while an expert neurologist evaluated the Expanded Disability Status Scale (EDSS) score in each PPMS subject. Preliminary findings will be presented and discussed in relation to previously published findings on multiple sclerosis well-being. The clinical implications will be discussed considering the psychological, cognitive, and neurophysiological status and well-being of the multiple sclerosis subjects.

**Keywords:** expanded disability status scale, fatigue, life satisfaction, primary progressive multiple sclerosis

## **DETERMINANTS OF ROMANTIC RELATIONSHIP SATISFACTION: PARENTING STYLES, PARTNER ATTACHMENT, AND EMOTIONAL INTELLIGENCE**

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The aim of this study was to examine the relationship between emotional intelligence, attachment styles, parenting styles, and romantic relationship satisfaction, as well as to attempt to predict relationship satisfaction based on these variables. The study included 188 university students (18% male, 82% female) aged between 18 and 26 years. Data were collected online using the following instruments: the Emotional Competence Questionnaire (Takšić, 2002), the partner attachment version of a modification of Brennan's Experiences in Close Relationships Inventory (Kamenov & Jelić, 2003), the Parenting Behavior Questionnaire (Keresteš et al., 2012), and the Marital Satisfaction Scale (Čubela Adorić & Jurević, 2006), modified by replacing the word "marriage" with "relationship" in the items. The results showed that emotional regulation and management, maternal warmth, and maternal support for autonomy were significantly, moderately, and positively related to relationship satisfaction. A weak but significant positive correlation was found with emotion expression and labeling, overall emotional intelligence, and maternal knowledge. On the other hand, paternal intrusiveness, maternal and paternal punishment, paternal support, and the anxiety dimension of attachment showed a weak negative correlation with relationship satisfaction. Additionally, the avoidance dimension showed a significant, moderate, and negative correlation with relationship satisfaction. No significant correlations were found with the remaining variables. Significant predictors of relationship satisfaction included paternal punishment, paternal permissiveness, emotional regulation and management, and attachment-related avoidance. Together, these predictors explained 24% of the variance in romantic relationship satisfaction. The findings were largely consistent with previous research and contribute to the understanding of these constructs within the Croatian context.

**Keywords:** romantic relationship satisfaction, emotional intelligence, attachment, parenting styles

# PSYCHOTHERAPY ONLINE: A STRUCTURED ONLINE PROTOCOL FOR EMOTIONAL REGULATION AND SELF-COMPASSION

**Ivana Jambrović Čugura**

III. Gymnasium, Split, Croatia

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This presentation outlines a structured protocol for an online psychotherapy session focused on addressing the inner critic and enhancing emotional regulation. The aim is to demonstrate how digital tools can be integrated into therapeutic work to support clients in developing self-compassion and emotional resilience. The session, conducted via Zoom, begins with grounding through guided breathing and body scanning to establish emotional presence. The core intervention involves identifying critical inner dialogue using a shared digital document, where self-critical thoughts are listed and responded to with realistic, compassionate alternatives. This exercise helps externalize the inner critic and initiate cognitive restructuring. The session then incorporates a creative element: the client constructs a symbolic visual representation of a supportive inner voice using simple tools such as Canva or Jamboard. This allows for deeper integration through imagery and personalization. The final phase includes reflective discussion and setting a self-regulation task for the week ahead. The online format enables effective use of visual and interactive elements that enhance emotional engagement and insight. This protocol demonstrates that online therapy, when structured thoughtfully, can foster emotional awareness and reduce the impact of self-critical thought patterns. It is especially relevant for clients experiencing anxiety, low self-esteem, and difficulties with emotional regulation.

**Keywords:** inner critic, emotional regulation, online psychotherapy, self-compassion, cognitive restructuring



## THE INTERPLAY OF CYBERCHONDRIA, HEALTH LITERACY, AND PERSONALITY TRAITS

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Increased access to the internet worldwide, along with the growing popularity of social networks, has led to a significant rise in the amount of available information about mental health, as well as improvements in mental health literacy. While the growing availability of information offers numerous benefits, it also carries risks such as information overload, exposure to misinformation, and the potential for negative impacts on mental health. Cyberchondria is defined as anxiety resulting from excessive searching for health information on the internet, which can lead individuals to draw inaccurate conclusions about their own health (Bodrožić Selak et al., 2022). According to current studies, Cyberchondria can be related to personality dimensions and health literacy, so our aim was to incorporate selected variables into a correlation design. In an online survey, we collected anonymous data from 284 students at the University of Zagreb, aged 18 to 29 (Mean=20.97, SD=1.60), of whom 242 (85.2%) were female and 42 (14.8%) were male. A questionnaire constructed from the socio-demographic data, IPIP-20, MHLS and CSS-12 scale was used. Majority of data was asymmetrically distributed, therefore we opted for Spearman correlation analysis. Compulsion (COMP) showed weak correlations with Emotional Stability and Agreeableness, Distress (DIST) was slightly related to Emotional Stability and Reassurance (REAS) to Intellect. Health literacy, on the other hand, was unrelated to Cyberchondria, but was slightly related to Intellect and Agreeableness. Based on our evidence, we discuss potential direction for future research in general and clinical populations.

Keywords: cyberchondria, health literacy, personality

## RECEIVING A DIAGNOSIS OF IDIOPATHIC SCOLIOSIS AND THE SELF-ESTEEM OF PAEDIATRIC PATIENTS: A COHORT STUDY

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Adolescent idiopathic scoliosis (AIS) affects 1-4% of adolescents worldwide. There has been no published research on how receiving a scoliosis diagnosis influences an individual's self-esteem. In this cohort study our aim was to find out if receiving a scoliosis diagnosis influences self-esteem of paediatric patients. Adolescents aged 10-18 will fill out the Rosenberg self-esteem scale (RSES) and the Depression, anxiety and stress scale both before and after an initial exam where they receive a diagnosis of AIS using the Cobb angle on X-ray as gold standard diagnostic tool. Additionally, patients treated with Cheneau bracing will complete a follow-up survey 2 months after the first exam, when they will receive their brace, to assess its association with their self-esteem. The study is being performed at Polyclinic for the Rehabilitation of Persons with Developmental Disabilities in Split, Croatia from January 2025 to July 2025. We will exclude those already diagnosed with AIS, other structural diseases of spine like kyphosis or congenital defects, mental illness, or outside of target age range. The findings will aim to answer the question if receiving a scoliosis diagnosis results in immediate drop in self-esteem and other measured mental health parameters like depression, anxiety and stress. Also, patients treated with Cheneau bracing will be assessed on the first follow-up exam. The importance of our research is to understand how receiving AIS diagnosis affects adolescents so that health professionals can provide them with timely support and, if necessary, professional psychological assistance.

**Keywords:** scoliosis, self-esteem, mental health, adolescent, depression

## **INTEGRATIVE APPROACHES TO PSYCHOLOGICAL RESILIENCE IN CRISES**

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Global crises such as pandemics, climate change and social injustices bring numerous psychological challenges contributing to increased anxiety, stress and feelings of insecurity. The goal is to present the integration of three modern therapeutic approaches - Cognitive-Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and Compassion-Focused Therapy (CFT) - in strengthening psychological resilience during crisis periods. Using comparative analysis, the ways in which each approach addresses emotional difficulties caused by uncertainty and change will be highlighted: CBT focuses on restructuring negative thoughts and behavioral interventions, ACT promotes psychological flexibility and action aligned with personal values, while CFT emphasizes the development of compassion and reduction of self-criticism to maintain emotional stability. Special emphasis is placed on the practical implications of these approaches for therapists and the broader community aiming to empower individuals in facing global challenges.

Keywords: psychological resilience, CBT, ACT, CFT, global crises

# POSTTRAUMATIC STRESS AND POSTTRAUMATIC GROWTH IN THE TIME AND PARENTING PERSPECTIVES IN MOTHERS OF CHILDREN WITH GENETICALLY DETERMINED DISEASES IN EARLY CHILDHOOD: A PROTOCOL OF A LONGITUDINAL STUDY

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The diagnosis of a child's genetic disorder is a profoundly traumatic event that has far-reaching effects on the psychological well-being of parents, particularly mothers, significantly increasing their emotional burden and psychological distress. This study protocol offers a novel contribution to the field by presenting a robust, longitudinal research framework designed to investigate both the posttraumatic stress and potential for posttraumatic growth in mothers of children diagnosed with genetic diseases. The study uniquely tracks the dynamic course of posttraumatic stress over time and explores the key predictors that contribute to the resilience and personal growth of these mothers, offering valuable insights into their coping mechanisms. Utilizing a sequential design that combines both cross-sectional and longitudinal methodologies, this study will involve 120 mothers of children aged 0 to 3 years, each diagnosed with a genetically determined disease before their first birthday. Two assessments will be conducted, six months apart, allowing for the analysis of change and development over time. A comprehensive, questionnaire-based approach will be employed for data collection, utilizing well-established, culturally adapted instruments, including the Impact of Event Scale-Revised (IES-R), the Posttraumatic Growth Inventory (PTGI), the Zimbardo Time Perspective Inventory (ZTPI), the Parental Burnout Assessment (PBA), the Kansas Inventory of Parental Perceptions (KIPP), and the Family Resilience Assessment Scale (FRAS). This study's protocol provides an innovative approach to understanding the long-term psychological and emotional impacts of having a child with a genetic disorder, contributing to the broader understanding of parental resilience and the factors that facilitate posttraumatic growth. The findings from this research could have profound implications for developing targeted interventions to support mothers in managing their emotional well-being and improving family dynamics in the face of genetic disease diagnoses.

**Keywords:** posttraumatic stress, posttraumatic growth, early childhood, genetic disease, parenting

# **PATIENT PERSPECTIVES ON MUSIC THERAPY AND LONG-TERM OUTCOMES IN THE TREATMENT OF SUBSTANCE USE DISORDERS: FINDINGS FROM QUALITATIVE INTERVIEWS WITH THE POLISH COHORT OF THE FALCO PROJECT**

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Substance use disorders (SUD) represent one of the most serious public health challenges in Europe. In response to the growing need for effective and sustainable treatment options, the FALCO Project explores the potential of music therapy as an adjunctive intervention in the treatment of SUD. Existing research suggests that music, by activating the brain's reward system, can support the therapeutic process by reducing substance cravings and enhancing motivation. The aim of this study is to explore the perspectives of individuals affected by addiction, with the goal of identifying the most meaningful therapy outcomes from the patient's point of view. It also seeks to understand their views on the role of music in their lives and their expectations regarding music therapy. Additionally, the study examines whether these perspectives align with the most commonly used research instruments for assessing therapy outcomes (e.g., measures of abstinence, quality of life, and social integration). In Poland, qualitative interviews are being conducted with three participants at the Addiction Treatment Center in Gdańsk. Topics addressed during the interviews include quality of life, social relationships, occupational functioning, treatment retention, music therapy, the role of music in life, and substance cravings. The qualitative data will inform recommendations for the selection of measurement tools that are both clinically relevant and meaningful to patients. The findings will be integrated into subsequent stages of the project, including the development of fact sheets for long-term evaluation instruments. Interviews are ongoing, and preliminary results will be presented at the conference.

**Keywords:** substance use disorders (SUD), music therapy (MT), long-term outcomes, patient perspectives, qualitative interviews

## THE INTERPLAY OF SELF-CRITICISM, MINDFULNESS, AND SOCIAL MEDIA USE IN EXPLAINING YOUTH DEPRESSION

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This study addresses the increasing prevalence of depressive symptoms among young people, a group particularly susceptible to the influence of social media. The primary aim was to examine how specific aspects of social media use—emotional connection, self-presentation, and maintaining social ties—relate to depressive symptoms, while also exploring the role of self-criticism (inadequate self, hated self, and self-reassurance) and mindfulness in explaining levels of depression. The research involved 394 participants ( $M = 23.15$ ,  $SD = 2.65$ ), who completed an online survey using a snowball sampling method. Measures included Facebook use intensity and behaviors, self-criticism, self-reassurance, mindfulness, and depression (DASS). The results revealed significant gender differences in social media use dimensions and depression scores, but not in self-criticism or mindfulness. Emotional connection to social media showed a small positive correlation with depression ( $r=0.11$ ,  $p<0.05$ ), while self-presentation and maintaining social ties were not significantly associated with depressive symptoms. Strong positive correlations were found between depression and both the inadequate self ( $r=0.67$ ,  $p<0.001$ ) and the hated self ( $r=0.76$ ,  $p<0.001$ ), whereas self-reassurance ( $r=-0.60$ ,  $p<0.001$ ) and mindfulness ( $r=-0.25$ ,  $p<0.001$ ) were negatively correlated. Regression analysis identified the hated self as the strongest positive predictor of depression, followed by the inadequate self, while self-reassurance emerged as a significant negative predictor. Emotional connection to social media and mindfulness did not contribute significantly to the explained variance. The findings emphasize the central role of internal psychological factors over behavioral aspects of social media use in understanding youth depression.

**Keywords:** depression, self-criticism, mindfulness, social media use, young adults

# EMOTIONAL ENGAGEMENT WITH SOCIAL MEDIA, COMPARISON, AND DEPRESSION: A STUDY ON GENERATION Z

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Social media has become an integral part of everyday life, reshaping how individuals communicate, share information, and construct their self-image. With rapid changes in algorithms and the emergence of new platforms, there is a growing need to understand their psychological impact, particularly on Generation Z. This study explored the relationship between social media use (emotional connection, self-presentation, maintaining social ties), tendency to compare oneself to others, mindfulness, and depression among Generation Z youth, with special attention to gender differences. The findings revealed that women, compared to men, showed greater emotional engagement with social media, were more active in self-presentation, and more likely to maintain social contacts through these platforms. They also reported higher levels of depressive symptoms. No gender differences were observed in the tendency to compare with others or in mindfulness levels. Among women, emotional connection and comparison with others were positively associated with depression, while mindfulness was negatively associated. Other aspects of social media use did not show a significant link to depression. In contrast, among men, no significant associations were found between these variables and depressive symptoms. Regression analyses indicated that, for women, both social comparison and mindfulness significantly predicted depression levels. These results highlight the necessity of developing gender-sensitive mental health interventions and emphasize the importance of continuous education about the psychological effects of social media use among young people.

**Keywords:** social comparison, social media, depression, Gen Z

# **PRIORITIZING INTERVENTIONS AND REPRODUCIBILITY MEASURES TO IMPROVE RESEARCH REPRODUCIBILITY: A DELPHI CONSULTATION METHOD**

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The Horizon Europe iRISE project aims to enhance research through expert consensus on key measures and interventions. Reproducibility is when a study's results can be consistently obtained using the same methods and data. It is essential for validating findings, building trust in science, and advancing knowledge efficiently. A Delphi study brought together experts from 34 countries, including policymakers, funders, editors, publishers, and researchers. In Round 1, 73 experts participated, and 67 participated in Round 2. They rated 14 reproducibility measures and 27 interventions on a 10-point scale. To reach consensus, at least 70% of experts had to give a score of 8 or higher for each reproducibility measure and intervention in order for them to make it onto the priority list. Participants provided comments in Round 1, which were summarised and shared in Round 2. Eight reproducibility measures and six interventions reached the priority list, meaning scored 8 or higher on Likert scale, with top measures including "Methodological quality", "Reporting quality", and "Code and data availability and re-use". The leading interventions were "Data management training", "Data quality checks/feedback", and "Statistical training". No additional items met the threshold in Round 2. This study identifies critical areas for improving research transparency and reproducibility by integrating expert perspectives across disciplines. The final panel will establish a definitive priority list, guiding actionable strategies to enhance research practices.

**Keywords:** reproducibility, interventions, reproducibility measures, consensus, experts



# ASSOCIATION BETWEEN RESILIENCE, PERFECTIONISM AND JOB SATISFACTION AMONG MEDICAL RESIDENTS IN CROATIA: A CROSS-SECTIONAL STUDY

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Medical residents are among the most vulnerable healthcare workers to developing psychological symptoms, making their job satisfaction a critical factor influencing mental health, quality of care, and retention. This study explores the association between resilience, perfectionism, and job satisfaction among medical residents in Croatia, focusing on the mediating role of perfectionism. Using a cross-sectional design, data were collected online from 148 participants (79.1% female, median age 30 years) between April and May 2024. Key measures included the Brief Resilience Scale, Multidimensional Perfectionism Scale, and the Index of Job Satisfaction. Results revealed that the concern about mistakes, a subscale of perfectionism, negatively correlated with both resilience ( $P=-0.476$ ,  $p<0.001$ ) and job satisfaction ( $P=-0.375$ ,  $p<0.001$ ). Regression analysis identified concern about mistakes as the sole predictor of job satisfaction. Mediation analysis confirmed that concern about mistakes mediated the relationship between resilience and job satisfaction. Specifically, lower resilience was linked to higher concern about mistakes, which, in turn, was associated with lower job satisfaction. In conclusion, this study highlights the mediating role of perfectionism in the relationship between resilience and job satisfaction among medical residents. Addressing self-criticism may be a crucial intervention strategy to enhance well-being and job satisfaction. Future longitudinal studies are needed to establish causal relationships and guide targeted interventions.

**Keywords:** resilience, perfectionism, self-criticism, job satisfaction, medical residents

## MENTAL HEALTH AND SLEEP HABITS: IS IT MORE IMPORTANT HOW WE SLEEP OR HOW MUCH WE SLEEP?

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Healthy sleep is essential for maintaining good mental health. Students are particularly vulnerable to sleep disturbances. The prevalence of poor sleep habits, combined with a rising trend in anxiety, depression, and stress, makes students vulnerable to mental health challenges. The main goals of this research were to describe the sleep habits of undergraduate students and to identify which sleep-related factors contribute most significantly to their mental health. PSQI and the DASS-21 were applied in paper-and-pencil format during the academic year 2021/2022. The sample consisted of 302 students (79.8% female) aged between 18 and 33 years ( $M = 20.27$ ,  $sd = 1.68$ ), from various studies at the University of Zagreb. More than half of the students reported poor sleep quality, with prolonged sleep latency and nighttime awakenings as the most frequently reported sleep problems. Three hierarchical regression analyses were conducted to predict symptoms of depression, anxiety, and stress based on sleep disturbances, sleep quality, insomnia medication use, and sleep duration. The set of predictors explained 24.2% of the variance in stress symptoms, 29.5% in anxiety symptoms, and 15.5% in depressive symptoms. The use of insomnia medication emerged as the strongest predictor of impaired mental health in all three analyses, while sleep duration was a significant predictor only for depressive symptoms. The results indicate that qualitative aspects of sleep are more important than sleep duration. Practical non-pharmacological interventions aimed at improving sleep habits may contribute to enhanced mental health. Further research into the underlying mechanisms of the sleep-health relationship is essential.

**Keywords:** sleep quality, depression, anxiety, stress, students

## **ADOPTIVE PARENTING SUPPORT PROGRAMS – THE NEED FOR PARENTS AND CHILDREN**

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In today's world where crisis situations such as natural disasters, political instability, pandemics and personal trauma occur almost daily, emotional and social support is becoming a key element of recovery and stability of individuals and communities. A very important segment is supporting families and parenting. Numerous social changes mark the context in which modern parenting takes place and pose new challenges to parents in fulfilling parental responsibilities. What is common to EU member states, including Croatia, is that they follow the general trend of organizing parenting support through universal and targeted services for parents at additional risk who raise children in difficult circumstances. Such a group of parents includes adoptive parents and adopted children. Adoptive parents face a number of problems specific to this population before and after adoption, and many have a need for help cope with the challenges they face. Adoptive parenting support programs are a powerful tool in developing quality parenting practices, recognizing and responding to the child's needs as well as preventing a number of social, emotional and behavioral problems of children. Support programs for adoptive parents are implemented through the non-governmental sector and institutionally. As part of the Family Center, during 2024, 132 parents were included in support programs for adoptive parents for whom a pre and post evaluation through self-assessment was performed. The results of the comparison of self-assessments show that participation in programs is accompanied by an increased result in parental self-efficacy, positive interaction with the child, openness to communication about adoption and a reduced result in parental stress.

**Keywords:** support, parenting, adoption, parental self-efficacy, children's needs

## **FROM PARENTAL INTERFERENCE TO CAREER ASPIRATIONS: THE ROLE OF CAREER DECISION-MAKING AUTONOMY IN THE CONTEXT OF STUDENTS' GENDER AND SUBJECTIVE SOCIOECONOMIC STATUS**

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Parental involvement and support are crucial in the process of career exploration in adolescents, but when this involvement is perceived as excessive, it may have an adverse effect. The aim of this study was to examine the relationship between parental interference and career aspirations through career decision-making autonomy, moderated by students' gender and subjective socioeconomic status. The study was conducted among 1,131 first-year vocational secondary school students in Croatia, who completed questions regarding parental behavior, career decision-making, career aspirations and subjective assessment of socioeconomic status. The model explained up to 7% of the variance in career aspirations, indicating a significant, although partial, contribution of family and contextual factors in shaping aspirations. In addition to the direct negative effect of parental interference on career aspirations, the results suggest that parental interference also indirectly affects adolescents' aspirations through reduced autonomy. However, parental interference showed a significant negative effect on career decision-making autonomy only in female students, while this effect was not significant among male students. Moreover, the negative effect of reduced autonomy in career decision-making on career aspirations was stronger for students with below-average subjective SES. It could be concluded that among female students, parental interference is associated with reduced autonomy in career decision-making, and reduced autonomy, in turn, was linked to lower career aspirations, particularly among those female students with lower subjective SES. The study further discusses the role of parental behavior and personal characteristics among more vulnerable groups in the educational and vocational context.

**Keywords:** parental interference, career aspirations, career decision-making, socioeconomic status, gender differences

## HOW IS TECHNOSTRESS RELATED TO ACCEPTANCE OF CHANGE AND WORK-RELATED WELL-BEING?

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When adapting to the rapidly changing workplace, it is inevitable to talk about technostress, as a state of psychological and physiological arousal among employees who are dependent on information and communication technologies when performing their work. The results of previous research have identified five conditions that promote the occurrence of technostress: techno-overload, techno-invasion, techno-complexity, techno-insecurity and techno-uncertainty. The aim of this research was to explore the relationship between the experience of technostress with the trait of acceptance of change and the work-related well-being. An online questionnaire containing the Technostress Creators scale (Ragu-Nathan et al., 2008), Acceptance of Change Scale (Di Fabio and Gori, 2016) and Job Affective Well-Being Scale (Van Katwyk et al., 2000) was applied to a heterogeneous sample of employees (N=259). Correlation analysis showed significant, but generally low, negative correlations between specific facets of technostress and specific facets of acceptance of change, and all facets of affective work-related well-being. A notable finding is the high positive correlation between the technostress facets and low-pleasure and low-arousal emotions. Although the research design does not allow for causal inference, the findings suggest the importance of dealing with technostress, to experience unpleasant emotions such as boredom, depression, discouragement, gloom, and fatigue, less frequently. These emotions can easily go unnoticed in the work context, but their ineffective management can have serious negative consequences for the mental health of workers and the functioning of the organization. The findings additionally suggest that acceptance of change may act as a protective factor.

**Keywords:** technostress, digital transformation, acceptance of change, job affective well-being, Croatian workforce

## COGNITIVE INTERACTION WITH EVIDENCE SYNTHESIS: A QUASI-EXPERIMENTAL STUDY OF SUMMARY OF FINDINGS TABLE IN SYSTEMATIC REVIEWS

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This study investigates how expert researchers, clinicians, and health care consumers interact with Summary of Findings (SoF) tables from systematic reviews of evidence. A quasi-experimental study will be conducted using the Read&Learn platform, an online tool designed to track user interactions with tables and text. Participants will include members of the GRADE Group and Cochrane, who create SoF tables; clinicians who use these tables in practice; and health care consumers who may also engage with them. The study intervention involves blurring specific SoF table cells, requiring participants to navigate and reveal content to answer structured questions. Participants will alternate between viewing the question screen and the SoF table, ensuring that all required data are accessed through interaction with the table itself, without additional calculations. The primary outcome measures will include response accuracy, time spent interacting with different table components, and navigation patterns. With at least 25 participants per group, we will compare comprehension scores (0–16) to assess whether the intervention disproportionately affects non-experts, thereby evaluating how cognitive load impacts understanding across expertise levels in line with the study's objective. Findings will provide insights into how different user groups engage with SoF tables and inform strategies to improve their design and usability for diverse audiences. This study aims to contribute to evidence-based strategies for optimizing SoF tables, enhancing accessibility and comprehension for key stakeholders in health care decision-making.

**Keywords:** summary of findings tables, evidence-based practice, health care consumers

## COGNITIVE INTERACTIONS OF HEALTH AND PSYCHOLOGY STUDENTS WITH STATISTICAL CALCULATIONS: A QUASI-EXPERIMENTAL STUDY

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This study will examine the how first, third- and fifth-year students in medicine, dental medicine, pharmacy, and psychology interact with statistical calculations and interpreting data from standard health outcome measures. Assuming a 30% difference in completion time, a power analysis (80% power, 5% alpha) indicated a sample size of 19 participants per group. Using the Read&Learn platform (R&L), participants will complete a series of tasks designed to evaluate their statistical competence (event rate (ER), absolute risk (AR), measures of difference (absolute risk reduction (ARR), relative risk reduction (RRR)), ratio measures (odds ratio (OR), risk ratio (RR)), number needed to treat (NNT), sensitivity and specificity). To stimulate real-time cognitive engagement with the statistical information, participants will be required to click on blurred table cells to reveal the data necessary for completing health-related tasks. This act of clicking represents their cognitive interaction with the material, serving as both a behavioral and cognitive measure of information processing under varying levels of cognitive load. R&L tracks participants' interacting with the table and text. The study will analyze response accuracy, time taken to complete tasks, and common errors in statistical reasoning. Findings will highlight differences in statistical proficiency across disciplines and identify potential gaps in education that may hinder evidence-based decision-making. This study will evaluate the statistical competence of medical students in comparison to psychology students. This study aims to identify key areas where students may need additional statistical education, ultimately contributing to improvements in curriculum design and better integration of statistical literacy in clinical training.

**Keywords:** cognitive interaction, health research, medical education, evidence-based practice, Read&Learn tool