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July 7–9, 2025
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PLENARY LECTURES

PL-1

Changing gambling behaviors among sports gamblers: Should we be concerned?

JEFFREY DEREVENSKY

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Dr. Derevensky will present the results of three studies assessing sports gambling behaviors in light of changes in legislation, availability and accessibility of sports gambling in the U.S. He will discuss the results of a large-scale study of gambling behaviors among adolescents, a large national study of college student athletes and research with adult gamblers contacting a gambling problem helpline. The implications for future research, clinical practice and policy development will be addressed.

Keywords: sports gambling, gambling disorders, legislation

PL–2

Examining biopsychosocial risk factors and treatment outcome in gambling disorder

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Gambling disorder (GD) is a complex condition with a multifactorial aetiology, resulting from the interaction of biological and environmental factors. Understanding the underlying factors involved reveals multiple levels of interaction (neuropsychological, biological, and personality traits). At the neuropsychological level, alterations in decision-making, cognitive flexibility, and cognitive distortions have been described. At the biological level, the implication of neuroendocrine systems such as those involving leptin, orexin and ghrelin, as well as their metabolites such as LEAP2, and the endocannabinoid system, and their interactions with clinical features, have also been reported. At a personality level, traits such as impulsivity, sensation seeking and emotional dysregulation, as well as low self-direction, are also factors linked to the onset and maintenance of GD. Additionally, social factors such as age and gender have been described as important risk factors in the development of a gambling problem. Regarding GD management, cognitive behavioral therapy (CBT) is a well-supported

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option for therapeutic intervention, in both individual and group settings. This presentation will also discuss the study of clinical trajectories of response to treatment, the identification of subgroups, and the analysis of networks and predictors of therapeutic success and failure. Studying the phenotypic characteristics of GD can improve our understanding of its classification and help us develop diagnostic, preventive and treatment tools based on potential therapeutic targets. The ultimate goal is to design personalized interventions.

Keywords: gambling disorder, risk factors and treatment outcome

PL–3

Two sides of the same coin? A transdiagnostic conceptualization of substance and behavioural addictions

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Transdiagnostic theories suggest that all addictions, including both substance and behavioral can be viewed as representing a common disorder with shared underlying vulnerabilities rather than conceptualizing each addiction as a distinct disorder. A transdiagnostic conceptualization of addictions may have important treatment implications. Specifically, if all addictions represent a common underlying disorder, then it may be possible to develop a treatment that may have utility for both substance and behavioral addictions. This presentation will present results from a multi-method program of research that aims to identify the common mechanisms of substance and behavioural addictions through a transdiagnostic lens. Furthermore, the presentation will present a developing transdiagnostic model of treatment called the Component Model of Addiction Treatment (Kim & Hodgins, 2018). The presentation will conclude with future research directions and next steps for the Component Model of Addiction Treatment.

Keywords: transdiagnostic treatment; component model of addiction treatment; psychological mechanisms

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PL–4

Problematic Use of the Internet (PUI) – Advances in diagnosis, treatment and networked research

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In response to growing global concern about problematic usage of the internet (PUI) and its public mental health and societal costs, including harmful effects on young people, this narrative review provides an update on progress made in the field of PUI, in terms of nosology, biopsychosocial mechanisms, interventions and services, and describes a large European multinational cohort study of schoolchildren, co-designed with public stakeholders (BOOTSTRAP – Boosting Societal Adaptation and Mental Health in a Rapidly Digitalizing, Post-Pandemic Europe). A key advance has been achieving consensus on the clinical definition of various forms of PUI. Based on the public health principle of protecting individuals and the public from harm, the World Health Organisation has introduced several new diagnoses into the ICD-11, including gambling disorder, gaming disorder, compulsive sexual behaviour disorder, and other unspecified or specified disorders due to addictive behaviours, and has named online activity as a diagnostic specifier. These definitions provide a platform for developing systematic networked research into various forms of PUI at global scale. Progress has also been made in areas such as assessment, identification of underpinning brain-based, cognitive and social determinants, establishment of empirically based etiological models, as a basis for therapeutic intervention, and public engagement. Emerging evidence suggest PUI derives from an interaction between the person, their cognitive (including impulsive and compulsive executive functioning) and affective status and the environment. This explains in part why young people, whose cognitive-affective functioning is still maturing, are so susceptible and provides a rational basis for the development of tailored interventions. Evidence from randomised controlled trials and meta-analyses show promise of efficacy for pharmacological and non-pharmacological approaches in PUI. Surveys of clinical services across different countries reveal psychotherapeutic approaches are currently the most widely available forms of treatment, but education and training for practitioners is often insufficient. Addressable knowledge gaps to advance the field include a better understanding of the course and evolution of PUI-related problems across different age groups, genders and other specific vulnerable groups, reliable methods for early identification of individuals at risk (before PUI becomes disordered), efficacious preventative and therapeutic interventions and services, and ethical health and social policy changes that adequately safeguard young people and protect individuals' digital human rights.

Keywords: problematic usage of the internet, children and adolescents, prevention

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PL–5

Problematic usage of the internet: Clinical and public health considerations

MARC N. POTENZA

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The availability and usage of digital technologies have changed rapidly, generating new psychiatric concerns that may relate to specific groups differently. In this presentation, current advances in understanding specific types and patterns of internet use in the context of psychiatric concerns will be presented, considering individual differences. He will present data from multiple sources including from work of an international Lancet Psychiatry Commission on Problematic Usage of the Internet (PUI), a World Health Organization workgroup developing screening and assessment instruments applicable across jurisdictions and large-scale studies including the Adolescent Brain Cognitive Development (ABCD), a longitudinal study of over 11,000 developing youth. In his presentation, Dr. Potenza will present on these international activities and how gender/sex relate to engagement in types and patterns of internet use. He will present on the rise of online sports gambling and how youth and young adults, especially males, may be impacted. He will present on individual differences relating to youth engagement in social media, including new data on how online social activities relate to subsequent ADHD symptomatology and not vice versa, especially for girls. How to identify and treat different types of PUI will be considered, as will novel digital interventions.

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PL–6

Problematic use of the Internet: Treatment and prevention approaches

HANS-JÜRGEN RUMPF

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Background: In the last decade, the methodology of studies addressing prevention and treatment of Internet Use Disorders (IUDs) has significantly improved. While the body of evidence is increasing there is still a paucity of high-quality studies in several areas. Some recent developments are summarized here. *Methods:* The presentation is based on a narrative review of the existing evidence on studies on treatment and prevention of IUDs. Moreover, major trends in ongoing studies, recent advantages and unpublished findings are shown. *Results:* In addition to the publication of systematic reviews, meta-analyses and umbrella reviews, the first clinical guidelines focusing on the treatment of specific IUDs are now available. These guidelines cover IUDs in general, as well as gaming disorder, social network use disorder, shopping disorder and pornography use disorder. The Stepped Care Approach for Problematic Internet Use Treatment (SCAPIT) study adopted a broad focus on the entire target group, ranging from minor problematic Internet use to severe IUDs. This stepped care intervention was effective in reducing IUD criteria and functional impairment after six months. Finally, the ongoing BootStRraP (Boosting Societal Adaptation and Mental Health in a Rapidly Digitalising, Post-Pandemic Europe) trial is addressing universal and indicated prevention in schools as part of a large, EU-funded, multicentre study. In three cohorts, an app-based intervention will be developed and tested. *Discussion:* Although evidence of treatment approaches for IUDs has increased, it is still limited in specific areas and for specific disorders. In addition to effective treatments, it is important to reach a larger population, and prevention efforts need to be strengthened using state-of-the-art methods. Stepped care approaches are promising.

Keywords: treatment, prevention, Internet Use Disorders

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PL–7

10-in-3: My ICBA journey from Budapest to Nantes

SOPHIA ACHAB[1], GIOVANNI ALBANI[2], JOEL BILLIEUX[3], GAËLLE CHALLET-BOUJU[4], MATTHIAS BRAND[5], NAOMI FINEBERG[6,7,8], JON GRANT[9], SUSANA JIMÉNEZ-MURCIA[10,11], DANIEL KING[12,13], HAE KOOK LEE[14], ASTRID MÜLLER[15], ORSOLYA KIRÁLY[16,17], MARC POTENZA[18], STEVE SUSSMAN[19], ATTILA SZABO[20], ZSOLT DEMETROVICS[13,16,17]

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SYMPOSIA AND PARALLEL SESSIONS

1A–1

A qualitative analysis of gender-related differences in recovery from gambling problems among middle-aged and older adults

JENNIFER J PARK, LI YAN MCCURDY, JENNIFER M LOYA, MELISSA GORDON, KRYSTEN BOLD, BRIAN KILUK, MARC NICHOLAS POTENZA

Yale School of Medicine

Background: Although gender-related differences have been observed concerning gambling behaviors and motivations for gambling, studies on problem gambling treatment and recovery have mostly been focused on men. It is unclear whether factors associated with successful treatment and recovery identified in men are generalizable to women. The present study examined gender-related differences in data from qualitative interviews. *Methods:* As part of a larger study to develop a mobile health app to provide cognitive-behavioral therapy among people with gambling problems, we conducted semi-structured interviews to obtain qualitative data about treatment and recovery from problem gambling. For the purpose of this study, data from six middle-aged and older adult women (mean age 59.5±6.5 years) and six such men (mean age 65.2±11.7 years) with lived experience of problem gambling were used in analyses. Content analysis was used to analyze interview transcripts in NVivo, guided by the Connectedness, Hope, Identity, Meaning, Empowerment (CHIME) framework of recovery. *Results:* Connectedness, hope and optimism, a positive sense of identity, meaning in life, and empowerment were constructs associated with recovery that were similarly important across genders. Gender-related differences were identified regarding connectedness, where women more often mentioned the importance of friends in their recovery whereas men more often mentioned the importance of romantic partners. This finding with men was consistent with our demographic data, which indicated that men in our sample were all in relationships whereas most women were not. Women were also more likely to make comments on rebuilding a positive sense of self and self-improvement than men. *Conclusions:* These data provide insight into treatment factors that may be helpful for older adults with gambling problems to achieve recovery and can guide gender-specific personalization of gambling treatment.

Keywords*:* gambling, gender, sports, older adults, social media

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1A–2

Young adults with online sports gambling problems: A qualitative study exploring experiences of problem gambling and behavior change

JENNIFER J PARK, LI YAN MCCURDY, JENNIFER M LOYA, MELISSA GORDON, KRYSTEN BOLD, BRIAN KILUK, MARC NICHOLAS POTENZA

Yale School of Medicine

Background: Young adults, especially males, appear at elevated risk for problematic online sports gambling, with the recent legalization of online sports gambling across most US states and targeted marketing. In Connecticut, calls to gambling helplines have increased by 90%, largely attributable to young men engaged in online sports betting, with similar increases seen in other US jurisdictions. The present study aimed to explore the experiences of online sports gambling, problematic behaviors, and behavior change among young adults with sports gambling problems. *Methods:* In early efforts to develop a smartphone app to deliver cognitive-behavioral for problem gambling, semi-structured interviews were conducted online with adults with lived experience of problem gambling in the US. In this presentation, data from nine young adults (8 male, 1 genderqueer; mean age = 31.9 years, SD = 4.3; 88.9% previously or currently in professional treatment) were analyzed. The interview focused on exploring (i) preferences and motivations for online gambling, (ii) experiences of problematic online gambling, and (iii) reasons, strategies, barriers, and facilitators for behavior change (i.e., quitting or reducing gambling). Transcripts were analyzed in NVivo using content analysis. *Results:* Motivations for online gambling included positive and negative reinforcement, such as excitement and avoidance of difficult feelings, respectively. Multiple behavior-change strategies were identified, from restricting access to money to learning emotion-regulation skills. *Conclusions:* The study identified in young adults with online sports gambling problems key motivations for gambling and experiences of problem gambling and behavior change. Findings could inform the development of tailored treatment and public health interventions to address the specific needs of this population.

Keywords: gambling, gender, sports, older adults, social media

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1A–3

Public perceptions of gambling-related harms on social media

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Background: Gambling Disorder (GD) is as a significant public health concern due to its profound economic, legal, and health impacts. Despite its growing recognition, the social perceptions of gambling-related harms on digital platforms, such as X (formerly Twitter), remain underexplored. Therefore, this study aims to address these gaps by analyzing public discussions on X to uncover variations in the perception of gambling harms across different game types, geographic regions, and sociodemographic factors. *Methods:* This study employs an observational and analytical design based on the analysis of user-generated data from X (formerly Twitter) regarding gambling-related harms. Public posts (xeets) containing keywords such as "gambling disorder," "problem gambling," "sports betting," and "casino" will be collected over a one-year period. Data extraction will utilize the Tweet Binder platform, capturing attributes such as text, publication date, number of likes and rexeets, geolocation, and user profile information. Collected xeets will undergo preprocessing to ensure relevance and eliminate duplicates. Machine learning techniques, including supervised and unsupervised learning, will be applied to identify patterns and classify xeets into predefined categories, such as perceived harms, promotional content, and user sentiment. Advanced natural language processing tools, such as BERT-based models, will be employed to analyze linguistic and emotional content. *Results and Conclusions:* The project aims to provide insights for tailored prevention strategies and public policy recommendations that address specific societal needs. By analyzing social media extensively, this research uncovers key patterns in public discussions on gambling-related harms and explores their implications for shaping effective public health interventions.

Keywords: gambling, gender, sports, older adults, social media

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1A–4

Perspectives on gambling and problem gambling: Clinical and policy conisderations in the United Kingdom

HENRIETTA BOWDEN-JONES

University of Cambridge

Background: In November 2024, major changes occurred in the UK gambling landscape, with tighter regulations and a significant increase in the provision of independent funds to address treatment, research, prevention and education related to gambling problems. *Methods/ Approach:* In this presentation, Professor Bowden-Jones, the UK's National Clinical Advisor on Gambling Harms, will outline the current perception of gambling, gambling-related harms and stigma at a population level, referring to recent gambling and stigma studies conducted by researchers in the UK. *Results and Conclusion:* The presentation will summarize large-scale research efforts and interventions to reduce gambling-related harms and stigma across the general population.

Keywords: gambling, gender, sports, older adults, social media

1A–5

Setting priorities for gambling research: Results of a large-scale expert study

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Background: Gambling is being increasingly recognised as a public health concern, requiring evidence-based strategies to address harms. Given the limited resources for research in terms of funding and capacities, it is imperative to focus on the most pressing questions. We aimed to identify research priorities using a systematic, transparent, and democratic methodology to inform researchers and stakeholders. *Methods:* Leading gambling researchers were invited to list problem-gambling-related research questions. Suggestions were coded and compiled into a list of research options. In the second phase, these options were scored against six evaluation criteria (Answerability, Feasibility, Effectiveness and Impact on equity for all and an additional two criteria based on their category: Novelty and Relevance for description-type options, Potential for burden reduction and Deliverability of the intervention for intervention-related options). Stakeholders assigned relative weights to each criterion, and research options were ranked according to their weighted research priority scores. *Results:* 307 experts (46.9% of eligible researchers) from 35 countries, with an average of 12.2 years of experience in gambling research, listed 1361 questions, that were consolidated into 102 options. A list of the top 25 research priorities was created. The results highlight that generating further fundamental knowledge about the epidemiology, background factors and consequences of problem gambling is needed. Top-priority topics indicate the importance of focusing on vulnerable and minority groups, youth and adolescents, significant others, technological innovations, the intersection of gaming and gambling, gambling advertising and co-occurring conditions. Evaluating and tailoring existing measures were prioritized more highly than new interventions, and identifying factors underlying treatment seeking, drop-out and relapse was also considered a priority. *Conclusion:* This initiative successfully involved the global research community in identifying gambling research priorities. The results will provide relevant information for the researchers and other stakeholders for future projects.

Keywords: gambling; research priorities; expert study, gender, sports, older adults, social media

Reference:

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1B–1

The first legislation in the world to ban social media for children under 16 by the Australian Government: Its basis, implications and influences in the world

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Background: On 29th November 2024, the Australian Parliament approved the Online Safety Amendment (Social Media Minimum Age) Bill 2024 as a landmark legislation aiming to protect young Australians during their childhood and critical stages of their development. The parliamentary announcement stated that "The laws place the onus on social media platforms – not young people or their parents – to take reasonable steps to prevent Australians under 16 years of age from having accounts, and ensures systemic breaches will see platforms face fines of up to $49.5 million". This legislation is the strictest in the world. US, France, Norway, China and UK have conducted government reviews on safety of screen use and social media by children, and issued parental guidance. Germany and EU have made similar initiatives. Protection of children online has been announced as a key priority for the upcoming Danish EU presidency. This symposium also provides perspectives from the above countries as well as Ireland, Singapore and Japan in addition to the Australian perspective. *Methods:* Narrative review of responses from interested parties to the Australian legislation, and their clinical and research implications. *Results:* There are a range of reactions to the Australian Online Safety Amendment (Social Media Minimum Age) Bill 2024. Four regulatory paradigms were identified amongst different countries: (i) age-gate restriction; (ii) content control system; (iii) time-window curfew; (iv) industry self-regulation. The age verification systems piloted by Australia are described. There are also comments on means to circumvent the laws, and the difficulties in "policing" the legislation. *Conclusion:* The influences and implications of the Australian ban, emerging as a potential 'focusing event', are relevant to research and clinical practices, given the likelihood of similar bans enacted by other countries.

Keywords: legislation, social media use, age limit, social media harms

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1B–2

Australian parliamentary select review of social media harms: The enquiry for social media ban legislation

DANIELA VECCHIO

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Background: In 2024 the Australian Parliament appointed the "Joint Select Committee on Social Media and Australian Society" with the task to review "Social media: the good, the bad and the ugly". The terms of reference for the committee include: (i) the age verification to protect Australian children from social media; (ii) the decision of Meta to abandon deals under the News Media Bargaining Code; (iii) the important role of Australian journalisms, news and public interest media in countering mis an disinformation on digital platforms; (iv) the algorithms, recommender systems and corporate decision making of digital platforms in influencing what Australians see, and the impacts of this on mental health; and (v) other issues in relation to harmful or illegal content disseminated over social media, including scams, age-restricted content, child sexual abuse and violent extremist material; and (iv) any related matters. The review informed the parliamentary debate which led to the first legislation in the world to ban access of Social Media by children under the age of 16. *Methods:* Narrative review of the final report submitted by the Australian Joint Select Committee, published in November 2024, within the context of our clinical experiences of Social Media Addiction seen within the Gaming Disorder Clinic at Fiona Stanley Hospital in Western Australia. *Results:* Addictive risks and harms of Social Media are summarized as highlighted in the report. Twelve specific recommendations made by the Joint Parliamentary Select Committee are detailed and discussed with their implications for clinical services and research. *Conclusion:* Australia is the first country in the world to pass the legislation to ban Social Media for children under the age 16. Beyond this ban, the twelve specific recommendations have clinical and research implications, and the potentials for harm prevention, as well as promoting wellbeing in youths.

Keywords: legislation, social media use, age limit, social media harms

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1B–3

Societal impact of online platforms with a focus on addiction risks: Implementing measures for safe use in Germany

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Background: In 2022 the European Parliament agreed a comprehensive regulatory package for digital services (DS), i.e., social media and other online platforms. Due to their reach, DS with >45m monthly active users pose considerable risks to fundamental rights, democratic processes, and public health by dissemination of illegal content and manipulation to increase usage times. They are therefore obliged to take appropriate, proportionate, and effective risk mitigation measures under Art. 35 Digital Services Act (DSA).The implementation of the German DSA (05/2024) will be coordinated by the federal network agency (BNetzA) that is largely responsible for enforcing the new rules for providers based or legally represented in Germany. It has commissioned a study to describe the addictive potential of DS and their social and health-related effects. Moreover, measures for risk reduction should be investigated. *Methods:* The professional services network Deloitte conducted a bibliographic study supported by the German Center for Addiction Research in Childhood and Adolescence. In addition to intensive literature research and expert evaluations, comparative law techniques were used. *Results:* Addictive risks of DS are promoted via methods to maximize user engagement. Hence, data-driven commercial interests contradict safe online use to a significant extend. Regulatory measures of platforms and international politics are described to protect (especially young) users. *Conclusion:* A combination of legal frameworks, technological solutions, and educational measures is required to effectively minimize the dangers of online addiction. By implementing these measures, the BNetzA can help to create a safe and healthy digital environment on the German national level.

Keywords: legislation, social media use, age limit, social media harms

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1C–1

The latest national survey on gaming disorder in Japan

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Gaming disorder is defined in the 11th Revision of the International Classification of Diseases (ICD-11) as a pattern of gaming behavior ("digital-gaming" or "video-gaming") characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences. The global prevalence of gaming disorder has been widely studied, with estimates varying depending on the research. A meta-analysis of 53 studies conducted between 2009 and 2019 estimated the global prevalence at 3.05% (95% CI: [2.38, 3.91]), with notable gender differences reported (Kim et al., 2022). In Japan, a previous survey estimated the prevalence of gaming disorder among the general young population at 7.6% (95% CI: [6.6, 8.7]) for men and 2.5% (95% CI: [1.9, 3.2]) for women, with an overall prevalence of 5.1% (95% CI: [4.5, 5.8]) (Higuchi et al., 2021). This presentation introduces findings from a new epidemiological survey conducted in 2024, during the COVID-19 pandemic, involving 9,000 Japanese individuals aged 10 to 79.

Keywords: gaming disorder, prevalence, national survey, Japan

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1C–2

Examining the psychological and mental health correlates of co-occurring PTSD and problematic gaming

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Background: Post-Traumatic Stress Disorder (PTSD) often co-occurs with substance use and behavioural addictions. Yet, a paucity of research has examined the correlates of problematic gaming and co-occurring PTSD. The aim of the present study was to address this gap. Methods: Adults from a community and university sample (N = 1,618) residing in Canada who met criteria for problematic gaming in the past 12 months completed self-report measures of gaming (e.g., frequency, time spent), psychological (e.g., emotion dysregulation, impulsivity), mental health (e.g., ADHD), and addictions (e.g., cannabis use) correlates. *Results:* A total of 621 (38.4%) individuals met the cut-off score for PTSD. Individuals with problematic gaming who met criteria for PTSD reported significantly increased levels of adverse childhood experiences (ACEs), emotion dysregulation, and impulsivity (specifically, lack of premeditation, negative urgency, and positive urgency). Additionally, they reported significantly lower perceived social support and self-efficacy, greater depression, anxiety, and stress symptoms, and were more likely to meet ADHD criteria. In terms of addictive behaviours, participants were also more likely to meet cutoff scores for problematic alcohol use, cannabis use, compulsive sexual behaviour, compulsive buying, and food addiction. A multivariate binary logistic regression was conducted to examine associations between various psychological, mental health, and addictions factors and the likelihood of participants not meeting criteria for PTSD (coded 0; reference group) or meeting criteria for PTSD (coded 1). There were several significant predictors in the model. Higher levels of stress and anxiety showed the strongest effects, with odds ratios (OR) of 6.10 and 3.58. Food addiction (OR = 2.03), ACEs (OR = 1.87), and emotion dysregulation ((OR = 1.03) were modest predictors. *Conclusions:* We found that ACEs, emotion dysregulation, anxiety, depression, stress, and food addiction were associated with co-occurring PTSD and problematic gaming. Future research is needed to examine the causal mechanisms underlying these associations.

Keywords: gaming, Gaming Disorder, PTSD

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1C–3

Exploring Gaming Disorder and substance use: Patterns and associations in adult gamers

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Background: Gaming Disorder (GD) frequently co-occurs with other conditions, including addictive behaviours. Yet research on substance use among adult gamers remains scarce. In particular, only a handful of studies examined the relationship between GD, as defined by the 11th revision of the International Classification of Diseases (ICD-11), and the use of both licit and illicit substances. *Methods:* An online survey conducted in June 2023 gathered data from a large sample of adult gamers (N = 6,307; Mage = 26.2, SD = 6.48; 80.3% men; Mgaming hours = 24.0 per week, SD = 15.6). The survey incorporated the Gaming Disorder Test and assessed the frequency of substance use, as well as whether substances had been used in the past 12 months. Substances included alcohol, tobacco/nicotine, caffeine-rich products, kratom, stimulating supplements, cannabis, prescribed stimulants, prescribed sedatives, (meth)amphetamines, MDMA/ecstasy, hallucinogens, cocaine, ketamine, opiates, and a dummy drug Relevin. *Results:* The prevalence of GD within the sample was 2.5%. GD scores were significantly higher among users of all substance categories except alcohol – the most substantial GD difference was observed in users (as compared to non-users) of prescribed stimulants (d = 0.55) but also meth/amphetamines (d = 0.29), prescribed sedatives (d = 0.27), kratom (d = 0.22), and cannabis (d = 0.20). On the other hand, gaming frequency was mostly unrelated to substance use. Only alcohol users played, on average, 5 hours less per week, while nicotine and prescribed sedative users 3 hours more per week. *Conclusion:* The findings highlight that while Gaming Disorder is relatively uncommon, it is closely linked to substance use, with stimulants—particularly prescribed substances (typically used for ADHD treatment)—playing a prominent role. In contrast, gaming frequency showed limited associations with substance use.

Keywords: Gaming Disorder, substance use, comorbidity

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1C–4

Who seeks treatment for gaming? Characteristics of treatment-seeking patients with gaming disorder

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Background: Gaming Disorder is a recently recognized psychiatric condition, yet little is known about the characteristics of individuals who seek treatment. Most studies have focus on non-clinical samples, leaving a gap in understanding the needs and profiles of treatment-seeking patients. *Method:* We conducted a comprehensive assessment of 107 adolescents and adults seeking treatment for Gaming Disorder at a newly established specialized outpatient clinic in Southern Sweden. Participants underwent a comprehensive evaluation that included a battery of selected questionnaires along with structured and semi-structured clinical and psychosocial interviews. *Results:* The sample included 94% males, with 43% adolescents (aged 13–19) and 57% adults (aged 20 and older). The analysis is yet to be completed, with the results expected to be finalized by January 2025. The planned analyses will examine symptoms of Gaming Disorder, time spent gaming, which games are played, gaming motives, psychiatric comorbidities, psychological distress, daily functioning, academic performance, employment status, social relationships, substance use, gambling in and outside games, as well as harm severity of gaming. We will explore relationships among these variables and identify factors associated with more severe gaming problems. *Conclusion:* With the number of patients seeking treatment for Gaming Disorder expected to grow, it is important for clinicians to better understand this new group of patients and their needs. Our findings aim to contribute to this understanding and inform the development of effective treatments.

Keywords: Gaming Disorder, treatment-seeking, characteristics

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1C–5

A model to explain the relationships between problematic smartphone use and risky loot box use through problem videogaming in preadolescents

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Loot boxes are virtual items embedded within video games that contain randomly generated in-game prizes. Loot box use can become risky leading to negative consequences if their use becomes excessive. Despite numerous studies indicating a high use of loot boxes among young people, due to their involvement in videogaming and smartphone use, the relationship between these behaviors has not been deeply analyzed to date, especially among preadolescents. The aim of the present study was to verify a possible mechanism through which problematic use of smartphones, videogaming frequency, problem videogaming, and risky loot box use, are related. Participants were 664 middle school students (49% males; mean age = 12.76, SD = 6.13) in Italy. A path analysis found that problematic use of smartphones had significant and positive direct effects on the frequency of videogaming, problem videogaming, and risky loot boxes use. Moreover, problematic use of smartphones had significant and positive indirect effects on loot boxes engagement and risky loot box use through problem videogaming. This study expands knowledge about the relationships between smartphone use, videogaming, and the use of loot boxes in preadolescents. Implications for prevention can be derived.

Keywords: lootboxes, problematic smartphone use, problem video gaming, preadolescents

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1D–1

Craving responses in laboratory settings vs. real life as predictors of problematic pornography use and gaming: An ecological momentary assessment

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University of Duisburg-Essen, Duisburg, Germany

Background: Current theories and models of behavioral addictions, for instance the I-PACE model, postulate a complex interaction of mechanisms involved in the development and maintenance of addictive behaviors, such as problematic pornography use. Key mechanisms are cue-reactivity and craving which are linked to symptom severity and behavior enactment across different behavioral addictions. Our study aimed to investigate cue-reactivity and craving in a laboratory setting via an auditive cue-reactivity paradigm in problematic pornography use and gaming as well as in the natural environment. *Method:* 116 participants were assigned to the risky/pathological pornography use (n=44) or gaming (n=72) group via a structural interview based on DSM-5 criteria. Participants were presented with an auditive cue-reactivity paradigm while skin conductance level and heart rate were captured. Craving ratings were obtained before and after each script (one neutral and one addiction-related script). Symptom severity was assessed with a standardized questionnaire. The laboratory assessment was followed by a 1-week ecological momentary assessment (EMA) where participants were instructed to report 4 times per day on their current craving and their engagement in pornography use/ gaming. *Results:* Craving ratings increased significantly after the cue-reactivity paradigm, however, the change was not predictive of overall craving and behavior engagement in the natural environment. Craving intensity across the EMA-period was the strongest predictor of frequency of behavior enactment in both gamers and pornography users. In gamers, post-paradigm craving predicted overall EMA craving intensity, while craving ratings were lower in the pornography group during both laboratory assessment and EMA. *Conclusions:* The auditive cue-reactivity paradigm shows a significant effect which is linked to craving in the natural environment. Craving in daily life had a strong impact on actual behavior enactment. Our results highlight the key role of cue-reactivity and craving in daily lives in the context of problematic pornography use and gaming.

Keywords: cue-reactivity paradigm, addictive pornography use and gaming, ecological momentary assessment

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1D–2

Neural correlates of neural reactivity to distal and proximal cues in individuals with pornography use disorder

FLORIAN STORZ, DZHEYLYAN KYUCHUKOVA, SINA WEHRUM-OSINSKY, RUDOLF STARK

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Background: Cue-reactivity and craving are assumed to drive the development and maintance of pornography use disorder (PUD; Starcke et al., 2018). In accordance, past research has shown that sexual stimuli activate reward related brain areas more strongly in individuals with problematic pornography use. However, the differential role between more distal (e.g.geometric shapes) and proximal cues (e.g. sexually explicit videos) in the prediction of PUD symptoms is less understood. Furthermore, most research comprises subclinical samples. We hypthosize that activation by distal cues (vs. proximal ones) is more predictive of PUD symptoms, since they have become conditioned rewards for these individuals. *Method:* Our sample was recruited from the PornLoS treatment trial (Stark et al., 2024), in which PUD was assessed by a clinical interview and PUD symptoms were assessed via the PPCS-6 and CSBD-19. Before beginning their psychotherapy, patients performed the sexual incentive delay task (SIDT; Markert et al., 2021) in the scanner. This task allows disentangling the processing of distal and proximal rewards. Neural activation, skin-conductance and response time were measured. *Results:* Pre-liminary data suggest that the neural activation in several reward related areas (nucleus accumbens, ACC, OFC) elicited by distal cues is associated with PUD symptoms. *Conclusions:* Our results contribute to the ongoing discussion about the classification of PUD as a behavioral addictions or as an impulse control disoreder. Increased responses to distal cues as a function of PUD symptoms suggest increased cue-reactivity and craving, and is in line with an addiction model of PUD

Keywords: problematic pornography use, cue-reactivity, fMRI

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1D–3

Striatal processing of sexual cues in problematic pornography use and healthy controls: A systematic review

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Background: According to neurobiological theories of addiction, the striatum plays a crucial role in the functional processing of addiction-related cues. Some theories postulate a shift from reward-related to habitual and compulsive cue-processing over the course of an addiction, accompanied by a shift in activation from the ventral to the dorsal striatum. The processing of pornography-related cues may play a specific role in this context, as sexual explicit stimuli are perceived as natural rewards by the majority of adolescents and adults. This preregistered systematic review summarizes findings from neuroimaging studies on striatal processing of sexual cues, focusing on ventral and dorsal striatal subregions in subjects with problematic pornography use (PPU) and healthy controls. *Method:* PubMed, Scopus, and Web of Science were searched using pre-defined search terms to identify relevant studies in peer-reviewed journals. Whole-brain and region-of-interest analyses in striatal regions of individuals with different severities of PPU and healthy controls were included. N = 20 empirical studies reported task-related neural activations to pornography-related cues and sufficient information about the symptom severity of PPU or related disorders of their samples. The procedure followed the PRISMA guidelines and incorporated a quality assessment based on guidelines for neural cue-reactivity studies. *Results:* In both healthy subjects and individuals with PPU, ventral and dorsal subregions of the striatum, such as the nucleus accumbens, caudate and putamen are frequently reported to respond to sexual stimuli and anticipatory cues of sexual stimuli. Some studies show increased activation in the striatum in people with PPU in dorsal or ventral subregions. *Conclusions:* The review underlines the decisive role of the striatum in the processing of sexual cues. The results are further discussed in relation to the processing of anticipatory cues vs. explicit sexual stimuli in the context of the hypothesized role of the striatum in the development of addictive behavior.

Keywords: cue reactivity, problematic pornography use, striatum

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1D–4

Executive function and personality factors in problematic pornography use

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Background: Problematic pornography use (PPU), i.e. the addiction-like consumption of pornography, is characterized by a reduced control over one's use of pornography. This diminished control might also be reflected in a reduction of general executive functions. Furthermore, certain Big-5 personality factors, such as neuroticism or conscientiousness, have been found to relate to both, executive functions and addictive behaviors. Self-directedness is another personality trait that has been suggested as a predictor for addictive behaviors. As it is associated with feelings of having control over one's own life and active problem solving, it might also relate to executive functions. *Method:* Data from 111 male participants from a large multicenter study (FOR2974) was analyzed. Participants were assigned to one of three groups, non-problematic (n=54), risky (n=30) or pathological (n=27) pornography use, based on a diagnostic interview. Executive functions were measured using the modified card sorting test (MCST) and the Stroop-task, while Big-5 personality factors and self-directedness were assessed with standardized questionnaires. *Results:* Pathological pornography users performed worse in the Stroop-task, but not the MCST, when compared to non-problematic users. None of the assessed personality traits differed between groups, however self-directedness, extraversion, conscientiousness and neuroticism all showed correlative associations with PPU-symptom severity (small to medium effect sizes), with self-directedness being the strongest predictor. *Conclusions:* Results indicate an association between PPU symptom severity and interference susceptibility, but not necessarily other executive functions. Self-reported self-directedness may be considered a general predisposing variable in the context of PPU. The results confirm, at least partially, the theoretical hypotheses on diminished cognitive control in PPU.

Keywords: pornography use; executive functions; personality traits

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1D–5

Measures of cue reactivity/attentional bias as indicators of the severity of pornography use disorder

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Background: Individuals with pornography use disorder experience a loss of inhibitory control over their pornography consume, an attentional bias towards the addiction-related cues and an approach bias for sexual material, leading to maladaptive usage behavior. To date, only a few studies have focused on this topic, indicating a positive association between cue reactivity and severity of pornography use disorder. *Method:* In an ongoing study, we use a stop-signal task, a line-orientation task, a picture perception paradigm, and an approach-avoidance task to measure stimuli unspecific response inhibition and different aspects of cue reactivity/attentional bias towards sexual explicit material. Participants are recruited from a treatment study on pornography use disorder (PornLoS study, Stark et al., 2024). The severity of pornography use disorder is assessed by means of questonnaires (CSBD-19; PPCS-6) and a structural clinical interview. Correlation analyses will show which indices of cue reactivity/attentional bias are significantly positively related with the severity of pornography use disorder. *Results:* From preliminary studies, we expect a positive association between symptoms of pornography use disorder and response reactivity to sexually explicit material. During the conference we will present first results on this hypothesis. *Conclusions:* This study will help to identify relevant predictors of the severity of pornography use disorder based on behavioral tests of cue reactivity/attentional bias

Keywords: pornography use disorder, attention, approach bias

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Stark, R., Markert, C., Golder, S., Psarros, R., Discher, J. P., Khatib, S., Metzger, J., Palmer, S., Rechmann, J., Storz, F., Walter, B., Allard, S., Antons, S., Bledzka, M., Brand, M., Dörrenbächer, S., Englisch, J., Friehs, T., Da Cunha Gonçalves, K., . . . Heinz, C. (2024). The PornLoS Treatment Program: Study protocol of a new psychotherapeutic approach for treating pornography use disorder. *Journal of Behavioral Addictions, 13*(3), 854–870. https://doi.org/10.1556/2006.2024.00046

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1E–1

Understanding and treating behavioral addictions

BEATRICE BENATTI

University of Milan

Background: Behavioral addictions, encompassing activities such as gambling, internet use, shopping, and gaming, have increasingly been recognized as significant mental health issues that parallel substance addictions in terms of their psychological and social impact. *Methods:* This presentation will focus on the complexities of behavioral addictions, exploring their neurobiological underpinnings, diagnostic criteria, and the unique challenges they present in clinical settings. *Results and conclusion:* By examining current research and clinical practices, we aim to shed light on effective therapeutic strategies, including cognitive-behavioral approaches, pharmacotherapy, and emerging digital interventions. The goal is to provide a comprehensive understanding that empowers healthcare professionals to identify, manage, and treat behavioral addictions

Keywords: neuromodulation, behavioral addictions, OCD, ADHD, treatment

1E–2

Behavioral addictions in adult patients with ADHD: Prevalence, phenotypes and long-term treatment outcomes

GIACOMO GRASSI

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Background: attention deficit hyperactivity disorder (ADHD) and substance-related and addictive disorders share several common neurobiological dimensions (e.g. from impulsivity to reward dysfunction). Indeed, a large amount of literature showed a high comorbidity between substance-related disorders, behavioral addictions (BAs) and ADHD. However, on a few data exist on the natural trajectories of BAs in ADHD patients. Thus, the aim of this study is to investigated the prevalence of BAs in a sample of adult patients with ADHD treated and to investigated the clinical and cognitive profile of these patients and the long-term outcomes of behavioral addictions after treatment with methylphenidate *Methods:* 248 consecutive adults newly diagnosed as ADHD patients were assessed through a series of validated scales for gambling disorder, internet, sex, shopping and food addictions. ADHD patients with at least one comorbid behavioral addiction were compared to non-comorbid patients on several clinical, cognitive and neurophysiological measures (P300 evoked potential). A subset of patients was re-assessed after at least one year of treatment with methylphenidate and the patients' clinical outcomes on behavioral addictions were analyzed. *Results:* Behavioral addictions are highly frequent in adults with ADHD (more than half of patients show at least one BA). These patients tend to have more complex clinical phenotypes. Patients receiving a long-term treatment with methylphenidate seems to show improvement of several behavioral addiction

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symptoms Conclusion: Behavioral addictions should be routinely assessed in adults with ADHD. Treating ADHD seem to improve also BAs comorbidities. However, future larger studies should better investigate the exact impact of ADHD pharmacotherapies on BAs.

Keywords: neuromodulation, behavioral addictions, OCD, ADHD, treatment

1E–3

Is there a role for dopaminergic agonists in treating OCD and related disorders? Insights from preclinical and clinical data

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Background: Obsessive-compulsive disorder (OCD) affects 2%–3% of the population and is often associated with significant functional impairment and reduced quality of life. A substantial subgroup of patients does not respond adequately to first-line treatments, such as cognitive-behavioral therapy and selective serotonin reuptake inhibitors (SSRIs). Considering the limited response to serotonergic modulation and the use of low doses of second-generation antipsychotics in treatment-resistant cases, the role of dopamine has been increasingly explored as a potential avenue for developing new therapeutic options. Indeed, dopamine plays a key role in OCD neuropathology, particularly in processes related to goal-directed behavior and maladaptive habits. *Methods*: In this work, we aim to review the evidence from studies using animal models as well as completed and ongoing clinical trials involving agents with dopaminergic agonist actions. *Results and conclusion*: The accumulated evidence from basic and preclinical research, alongside emerging data from clinical trials, offers promising perspectives on the use of dopaminergic agonists for controlling obsessive-compulsive symptoms in certain patients.

Keywords: neuromodulation, behavioral addictions, OCD, ADHD, treatment

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1F–1

Gaming disorder and impulsivity: A systematic review and meta-analysis

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Background: Impulsivity, the tendency to act quickly and without careful consideration of potential consequences, is a recognised risk factor for behavioural addictions. Numerous studies have highlighted the role of impulsivity in gaming disorder. However, no meta-analysis has yet been undertaken to assess the magnitude and direction of the relationship between impulsivity, including its subdimensions, and gaming disorder. *Methods:* This talk will summarise a meta-analytic review of recent research on impulsivity and gaming disorder. A literature search was conducted across multiple databases, including PsycINFO, MEDLINE, Emcare, CINAHL, and Scopus. Studies were included if they were published in the last five years and assessed the association between gaming disorder and impulsivity using validated measures. Potential sources of heterogeneity were investigated through subgroup analyses based on sample type, age, gender, region, and assessment type. *Results:* The analysis confirmed the overall association of impulsivity and gaming disorder. This talk will summarise the relationship between subdimensions of impulsivity on problematic behaviour, and patterns of impulsivity that were found within various groups. *Conclusions:* Impulsivity significantly contributes to the development and maintenance of gaming disorder. Interventions aimed at enhancing self-regulation and reducing impulsive behaviours may enhance treatment and prevention approaches. Future research should explore the underlying mechanisms linking impulsivity to disordered gaming and examine the potential for targeted interventions and therapies.

Keywords: impulsivity, gaming disorder, meta-analysis

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1F–2

The role of impulsivity and self-regulation in predicting Gaming Disorder

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As the popularity of playing video games increases, so does the prevalence of gaming addiction. In our search for the causes of Gaming Disorder, we focused on the role of impulsivity and self-regulation. I would like to briefly introduce the theoretical basis showing the links between impulsivity and self-regulation and Gaming Disorder, followed by the results of my team's study. The study involved both self-report and cognitive measures of self-regulation including: Stop Signal Task, Go/No-Go, NAS-50, BIS-Brief, BDEFS, ERQ, BIS-BAS, SCS-SF, Adult ADHD Self-Report Scale, PHQ-4, as well as Direct Gaming Involvement (DGI; gaming time), and Gaming Disorder (GD). Our sample included 82 participants aged 18 to 36 (M = 22.71; SD = 3.23). We hypothesized that DGI and impulsiveness-related variables would be correlated with GD and predict GD in linear regression analysis. We also hypothesized that impulsiveness would act as a moderator of the relationship between DGI and GD. Results showed that hypotheses concerning the relationship between impulsivity and GD risk were confirmed, while the hypothesis concerning impulsivity's moderating role was rejected. In summary, DGI and impulsivity can be considered complementary yet independent predictors of GD risk.

Keywords: impulsivity, self-regulation, gaming disorder

1F–3

Schizotypy and Problematic Gaming: Examining the effect of escape and fantasy motives

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Video game use has come under increasing scrutiny as the popularity of gaming has increased, leading to concern about the impacts of problematic gaming on individuals. There is a need to further elucidate the pathways to problematic gaming empirically. One personality-related construct that may enhance the field's understanding of problematic gaming is schizotypy – a set of characteristics that incorporate cognitive-perceptual disturbances, eccentricities, interpersonal difficulties. The present student tested a parallel mediation model (N = 357, 74% male, Mage = 31.7 years; SDage = 8.9 years), whereby schizotypal traits were

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hypothesized to influence problematic gaming, via gaming motives – namely, escape, and fantasy. The Schizotypial Personality Questionnaire – Brief (Revised), Motives for Online Gaming Questionnaire (MOGQ), and Internet Gaming Disorder Scale – Short Form, were used to measure the constructs. The results supported the hypothesized parallel mediation effect, which demonstrate how people with different personality characteristics may be drawn to gaming for different reasons, and how these reasons are related to problematic gaming.

Keywords: problem gaming, gaming disorder, gaming motives, schizotypy, personality

1F–4

Is IGD the results of self-medication or impulsivity in a community population? The results of cross-sectional study

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Purpose: The psychopathology of Internet Gaming Disorder (IGD) is widely examined and inconclusive in the literature, including self-medicating for negative emotions or the results of impulsivity. Therefore, the present study investigated the goodness-of-fit of these two models in a cross-sectional study. *Methods:* 466 participants were recruited from an online investigation (n of male=176, 37.77%), and all of them were assessed by impulsivity, depressive mood, emotional regulation, and the severity of IGD. Descriptive and mediation analyses were conducted in the present study. *Results:* our results showed impulsivity and depression could impact IGD ($z=4.07$, $p<0.001$; $z=2.47$, $p=0.013$). The mediated role of emotional regulation between impulsivity and IGD was found. However, depression could not have an indirect impact on IGD through emotional regulation. *Discussion:* Our finding supported that IGD could result from poor impulsivity regulation. However, the present study did not enroll enough participants with severe depression. *Suggestions:* experimentation or case-control study could examine the relationship between impulsivity, depression, emotional regulation, and IGD in further research.

Keywords: IGD, emotional regulation, impulsivity, depression

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1F–5

"Spending money cannot change fate": Fate control beliefs and risky loot box behaviors among Chinese physical/virtual loot box purchasers – A network analysis approach

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Background: The increasing popularity of loot boxes, which exist in both physical and virtual forms, has attracted research attention regarding its potential addictive use. Despite the research effort, how risky loot box behaviors are associated with one's perceptions of fate and luck, which has been consistently shown to relate to gambling, remains unknown. The present study hence aims to use network analysis approach to examine the symptomatic associations between risky loot box behaviors and fate control beliefs among loot box purchasers. *Method:* A sample of Chinese adults who had experience of physical/virtual loot box purchase ($N > 1000$) was recruited via convenient sampling for an online survey. *Results:* Significant and positive correlations were found, at the factor-level, between fate control beliefs and risky loot box behaviors ($p < 0.001$). Network analyses further revealed "Fate determines one's successes and failures" as the most prominent node within the networks, followed by "I have bought more loot boxes after failing to receive valuable items". Bridge centrality indices also determined "Individual characteristics can reveal one's fate" as the bridge symptom, connecting the two network communities. *Conclusion:* The present study revealed significant associations between fate control beliefs and risky loot box behaviors, and how one's beliefs about fate can potentially explain the development of risky loot box behaviors. Theoretical and practical implications regarding the findings, particularly in understanding and preventing risky loot box purchase, deserve further discussion.

Keywords: fate control beliefs, risky loot box behaviors, network analysis

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1G–1

How to conceptualise (mal)adaptive involvements into sports and physical exercise?

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In this talk, we will first challenge the idea that maladaptive exercising could be conceptualized as an "addictive disorder", that is, in its usefulness to determine the psychological processes underlying distress and functional impairment in excessive physical exercise. We will then present the results of a new study that aims at examining whether (mal)adaptive involvements into sport and physical exercise can be better conceptualized by burn-out, addiction, and/or compulsivity-based constructs.

Keywords: addiction, physical exercise, compulsivity, burn-out, debate

1G–2

Prevalence of the risk of exercise addiction based on a new classification: A cross-sectional study in 15 countries

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Exercise addiction is widely studied, but an official clinical diagnosis does not exist for this behavioral addiction. Earlier research using various screening instruments examined the absolute scale values while investigating the disorder. The Exercise Addiction Inventory-3 (EAI-3) was recently developed with two subscales, one denoting health-relevant exercise and the other addictive tendencies. The latter has different cutoff values for leisure exercisers and elite athletes. Therefore, the present 15-country study (n=3,760) used the EAI-3 to classify the risk of exercise addiction (REA), but only if the participant reported having had a negative exercise-related experience. Based on this classification, the prevalence of REA was 9.5% in the sample. No sex differences, and few cross-national differences were found. However, collectivist countries reported greater REA in various exercise contexts than individualist countries. Moreover, the REA among athletes was (i) twice as high as leisure exercisers, (ii) higher in organized than self-planned exercises, irrespective of athletic status, and (iii) higher among those who exercised for skill/mastery reasons than for health and social reasons, again irrespective of athletic status. Eating disorders were more frequent among REA-affected individuals than in the rest of the sample. These results do not align with recent theoretical arguments claiming that exercise addiction is unlikely to be fostered in organized

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sports. The present study questions the current research framework for understanding exercise addiction and offers a new alternative to segregate self-harming exercise from passionate overindulgence in athletic life.

Keywords: athletes, collectivist nation, exercise addiction, exercise addiction inventory, individualist nation

1G–3

Passion and exercise addiction across cultures: Insights from Hungarian and Indian exercisers

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The risk of exercise addiction (REA) and its potential overlap with passion has rarely been investigated in collectivist societies. However, recent research indicated that exercisers in these societies may exhibit higher levels of REA than those in individualist cultures. This study employed an online cross-sectional survey to compare REA, obsessive passion (OP), and harmonious passion (HP) between Hungary, a Central European individualist country, and India, the world's largest collectivist society. Almost 1,000 (n = 987) participants (50.9% from Hungary), predominantly female (59.8%), met the inclusion criteria of 18 years or older, exercising at least four times per week. The findings revealed that the prevalence of REA was higher among Indian exercisers (21.86%) than among Hungarian exercisers (5.38%). A nation-by-gender interaction showed that Indian men exercised more frequently and reported higher levels of REA, OP, and HP than Indian women. Hungarian participants scored higher on HP and lower on REA than their Indian counterparts. Obsessive passion emerged as a significant predictor of REA in both nations, while HP accounted for 11.2% of the variance in REA only among Indian exercisers. These findings highlight the influence of cultural and gender factors on REA, OP, and HP, suggesting that cross-cultural generalizations in this domain may be unreliable. Consequently, the relationship between passion and exercise addiction should be studied within specific cultural contexts.

Keywords: behavioural addiction, culture, physical activity, sport; training

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1G–4

Beyond the numbers: A qualitative inquiry into exercise addiction using the revised Exercise Addiction Inventory

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Exercise addiction (EA) is a multifaceted behavioral phenomenon with profound psychological, physical, and social implications. Drawing on the framework of Weinstein and Szabo (2023), this study adopts a qualitative lens to delve into the lived experiences of individuals at high risk for EA. Utilizing the Exercise Addiction Inventory-3 (EAI-3) with a validated cut-off score of ≥34, nineteen participants were strategically recruited. Through semi-structured interviews, this research examines the subjective dimensions of EA, emphasizing the emotional, social, and behavioral contexts that shape exercise-related habits and dependencies. The ongoing thematic analysis seeks to identify recurring patterns and key themes, offering nuanced insights into the complexities of EA that often elude purely quantitative approaches. By complementing the EAI-3's robust screening capabilities with qualitative exploration, this study bridges critical gaps in understanding the subjective realities of those affected by EA. The findings are anticipated to inform the development of targeted, evidence-based interventions and enhance theoretical models of EA by integrating rich personal narratives with established frameworks. This work underscores the value of combining structured assessment tools with qualitative inquiry to advance research and practice in behavioral addiction.

Keywords: exercise addiction, qualitative study, Exercise Addiction Inventory-3 (EAI-3), semi-structured interviews

1G–5

Use of muscle building supplements is associated with maladaptive eating and exercise behaviors in adult men and women

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Use of muscle building supplements (MBS; e.g., protein powder or shakes, creatine) is increasingly common, especially in young men, despite evidence for negative physical and psychological health effects, including elevated risk of future anabolic androgenic steroid abuse. MBS use has been linked to maladaptive eating and exercise behaviors in student athletes, but these associations have not yet been explored in more demographically diverse samples. This study examined prevalence and correlates of MBS use in adults engaged in regular exercise (i.e., >150min/week). Respondents (n = 800, 47.2% female, M age = 41.55

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years) completed the Brief Assessment of Stress and Eating (BASE-10), including one item quantifying frequency of MBS use, the Exercise Addiction Inventory (EAI), Compulsive Exercise Test (CET), and Exercise Motivations Inventory (EMI-2). A third of respondents (32.3%, n = 256) endorsed any MBS use, with overall more frequent use in men than women ($p < .001$, $\varphi = .32$). Frequency of MBS use was inversely correlated with age ($r = -.18$, $p < .001$), though 23.1% of respondents aged 40+ endorsed continued MBS use. MBS users scored significantly higher on the EAI, compared to non-users ($p < .001$, Cohen's $d = .71$). There were significant multivariate main effects of MBS use on combined CET ($p < .001$, $\eta p2 = .06$) and EMI-2 scores ($p < .001$, $\eta p2 = .23$). Those using MBS endorsed both maladaptive and adaptive motives for exercise, including weight control, challenge, social recognition, and affiliation. MBS users also indicated significantly greater eating disorder pathology on the BASE-10 than non-users ($p < .001$, Cohen's $d = .97$). MBS use appears more common in adult men and women than previously assumed and is associated with disordered exercise and eating behaviors. Findings highlight the importance of screening for MBS use and of education about its potential negative health effects.

Keywords: muscle building supplements, exercise addiction, eating disorders

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1H–1

The role of parents and peersin shaping adolescents' digital behaviors: Is there vicarious learning?

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Background: Bandura's (1977) vicarious learning theory can provide a lens through which to understand the use of technology, by suggesting that adolescents develop patterns of behaviour by observing role models such as parents, peers, siblings or teachers in their social environment. This research can make a significant theoretical contribution by demonstrating how vicarious learning is effectively applied to the acquisition of digital behaviours and how these behaviours are maintained through the influence of the observed role model. The current study aims to examine how family habits and peer interactions influence adolescents' use of digital devices, focusing on which group exerts greater influence. *Method:* Participants were 300 adolescents and their parents and 882 schoolmates across three Belgian high schools. They completed self-report questionnaires assessing digital device usage like availability, online vigilance, disconnection strategies and communication app. These variables reflect observable behaviours that adolescents may adopt by modelling the actions of their role models. Moreover, they capture how adolescents observe, internalize, and replicate digital habits from their social environment. A linear regression design was employed whit data collected from both groups (adolescents and their parents and schoolmate). *Results:* The results highlight significant correlations between adolescents' gender and availability, communication app, and online vigilance in both groups. In the parent-adolescent dynamics, communication ($\beta = 0.136$, $p = 0.047$) and availability ($\beta = 0.279$, $p < 0.001$) are strongly associated with adolescents. Findings support that adolescents learn vicariously from their peers when it comes to the use of disconnection strategies ($\beta = 0.164$,$p = 0.004$).The online vigilance of peers correlated negatively with adolescents' online vigilance ($\beta = -0.144$, $p = 0.013$) an effect that was also moderated by the presence of school policies.Conclusions: The findings show a mixed result. Further research is needed to explore whether there is vicarious learning.

Keywords: adolescents, vicarious learning, digital behaviours

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1H–2

The influence of parental phubbing on adolescents' problematic social media use: The roles of family and school factors

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Background: Although previous cross-sectional studies have indicated the association between parental phubbing and problematic social media use in youth, there is still limited empirical evidence examining the direct causality between these two factors and the possible mechanisms underlying that association. Additionally, the impact of parental phubbing may vary depending on social environment factors including parenting styles and social support perceived by school teachers. In this two-wave longitudinal study (W1 = baseline; W2 = 4 months later), we aimed to test a theoretical model where parental phubbing (W1) directly predicts problematic social media use (W2). Moreover, parental rejection and frustration of relatedness needs at W2 were included as subsequent mediators in the association between parental phubbing and problematic social media use. Ultimately, we tested for potential differences in the hypothesized associations across two groups: adolescents perceiving low vs. high social support from teachers (W1). *Method:* Online questionnaires were administered at middle and high Italian schools. The final sample consisted of N= 919 adolescents (M age = 14 ± 1.50; 56% females). The model was tested using path analysis; differences between low and high teacher support were explored through multigroup analysis. *Results:* Parental phubbing (W1) positively predicts only parental rejection (W2), while parental rejection and frustration of relatedness needs increase problematic social media use. The multigroup analysis shows that low and high teacher support significantly influence how parental rejection increases the frustration of relatedness needs. *Conclusions:* These preliminary results seem to indicate that there is no direct longitudinal effect of perceived parental phubbing on problematic social media use and that thwarting parenting practices (e.g., perceived rejection) and need frustration (e.g., relatedness) may be possible risk factors for adolescent's problematic social media use.

Keywords: problematic social media use, parental phubbing, social needs

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1H–3

Partner phubbing and psychological distress among adults in intimate relationships: The mediating role of relationship dissatisfaction

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Background: As one of the manifestations of problematic smartphone use (Billieux, 2012; Lapierre & Zhao, 2022), phubbing (i.e., snubbing others during face-to-face interactions by using their smartphones) has drawn increased attention in recent years. There is evidence that the pervasive use of smartphones in the presence of one's romantic partner (i.e., partner phubbing) is associated with personal (e.g., psychological distress, loneliness; Maftei & Măirean, 2023) and negative interpersonal outcomes (e.g., low communication quality, relationship dissatisfaction; Wang & Zhao, 2023). The present study aims to explore the relationship between partner phubbing, relationship satisfaction, and psychological distress (i.e., depression and stress). More specifically, the mediating role of relationship satisfaction in the relationship between partner phubbing and psychological distress has been explored. *Method:* Data were cross-sectionally collected via an online survey from 109 Italian adults (age: M=29.95, SD=6.28; 57.8% females) in romantic relationships. Participants filled out questionnaires about perceived partner phubbing, marital satisfaction, and depressive and stress symptoms. The study was part of a larger investigation into the phenomenon of digital ostracism; i.e., the DIGOST Project, funded by the European Union – NextGenerationEU). *Results:* Mediation analysis revealed that partner phubbing increases individual psychological distress (both depressive and stress symptoms) by heightening relationship dissatisfaction. More specifically, the results showed that more partner phubbing is associated with lower relationship satisfaction ($p < .001$), which is, in turn, associated with higher psychological distress (both depressive and stress symptoms; $p < .001$ and $p < .05$, respectively). *Conclusions:* Given the ever-increasing use of smartphones to communicate between intimate partners, the present study offers insight into the pathway by which overreliance on smartphone use may relate to relationship dissatisfaction and individual psychological distress. Future research should investigate the effectiveness of interventions targeting phubbing in order to reduce its negative individual and interpersonal outcomes.

Keywords: partner phubbing, psychological distress, relationship satisfaction

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1H–4

The role of metacognitions in problematic social networking sites use: A longitudinal study

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Background: The metacognitive model of addictive behaviors (Spada et al., 2015) asserts that both positive (i.e. beliefs about the usefulness of the addictive behavior in regulating unpleasant cognitive and emotional experiences) and negative metacognitions (i.e. beliefs about the uncontrollability of thoughts related to the addictive behavior and over the behavior itself) play a crucial role in the development and maintenance of both substance-based addictive behaviors and behavioral addictions. A positive association between metacognitions and Problematic Social Networking Sites Use (PSNSU) emerged recently. However, the absence of longitudinal studies limits our understanding of how metacognitions and PSNSU influence each other over time. This six-month longitudinal study aimed to address this research gap. *Method:* A sample of 215 Italian adolescents (41% Females; mean age =15.40 ± .62) was recruited. Self-report measures of metacognitions about social networking sites use and PSNSU were completed at baseline and after six months. A cross-lagged panel analysis was employed to explore the direction of the relationship between positive and negative metacognitions about social networks use and PSNSU over time. *Results:* The model produced good fit indices ($\chi 2 = 2.650$, df = 2, p =.266; RMSEA = 0.039 (90% C.I. = 0.000 - 0.120), CFI = 0.998, SRMR = 0.026). The results of the cross-lagged analysis highlighted that positive (β=.13, p<.001) and negative (β=.17, p<.001) metacognitions about social networking sites use at T0 predict PSNSU at T1, and that PSNSU at T0 predicts positive (β=.24, p<.001) and negative (β=.15, p<.05) metacognitions about social networking sites use six months later. *Conclusions:* The findings of this study showed that the relationship between metacognitions and PSNSU was bidirectional, endorsing the role of both positive and negative metacognitions in the initiation and maintenance of PSNSU. It is plausible to hypothesize a reciprocal effect between metacognitions and PSNSU, which mutually reinforces over time.

Keywords: longitudinal study; metacognitions; problematic social network sites use

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1H–5

Dark personality traits as predictors of problematic social networking site behaviors

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Background: Dark personality traits, particularly narcissism, have been associated with problematic social networking sites (SNs) use, especially of an addictive nature, yet the role of other dark traits in social comparison contexts remains underexplored (Jabeen et al., 2023). To address this, more specific personality models are needed to distinguish dark traits, account for the multidimensionality of constructs like narcissism, and incorporate traits such as greed and irresponsibility, aiming to identify predictors of problematic SNs use. *Method:*To explore these relationships, two multiple linear regression models were performed. The nine subscales of the BERO scale, a tool designed to assess dark personality traits (García-Fernández et al., 2024), were included as independent variables. The dependent variables consisted of the two subscales from the Problematic Use of SNs Questionnaire (PUS; González-Nuevo et al., 2023): addictive consequences and negative social comparison. *Results:*The regression equation was significant for both models. In the model predicting negative social comparison with non-compliance and greed emerging as significant predictors with positive regression weights. In the model predicting addictive consequences with the same predictors showing positive regression weights. In both models, non-compliance had the highest beta coefficient, followed by greed. *Conclusions:*These findings emphasize the role of specific dark traits, such as non-compliance and greed, in problematic SNs behaviors, highlighting their predictive power over both addictive consequences and negative social comparisons.

Keywords: dark personality traits, problematic use of social networking sites, pus questionnaire, bero scale

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1H–6

Silence in the age of noise: From FoMO to JoMO in a hyperconnected world – Addressing internet addiction

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The concept of well-being, encompassing physical, mental, and social dimensions, is central to our understanding of individuals' subjective experiences. In the age of pervasive and sometimes intrusive social media, its impact on well-being is profound, exhibiting both positive and negative outcomes based on individual usage patterns. This study explores the complex dynamics between personality traits, social media engagement, internet addiction, the Fear of Missing Out (FoMO), and well-being, primarily focusing on the Joy of Missing Out (JoMO). Drawing on a diverse sample of 707 subjects, the research employs a robust methodology, including online surveys and statistical analyses. The findings challenge conventional wisdom by revealing that FoMO does not significantly impact well-being, while JoMO emerges as a positive contributor. Factors such as social media engagement, social comparison, having children and possessing higher levels of extroversion, agreeableness, conscientiousness, and emotional stability play a crucial role in enhancing well-being. The study highlights the nuanced dynamics of social media engagement, suggesting that engagement's impact on well-being becomes more pronounced when considered within the broader context of personality traits, social comparison, and demographic characteristics. The results open up avenues for future research, urging a deeper exploration of the temporal evolution of these factors and their interaction with cultural contexts. Additionally, understanding the underlying psychological processes could inform interventions promoting healthy digital experiences. In conclusion, this research advances our understanding of the multifaceted relationships between social media addiction, personality traits, and well-being. By considering both positive and negative dimensions, it contributes to the development of strategies fostering healthy digital experiences in an interconnected world.

Keywords: well-being, online engagement, internet addiction, FoMO, JoMO, personality

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2A–1

Relationships between an individual's and perceived romantic partner's attachment anxiety and avoidance with CSBD and PPU severity: The role of bond quality, emotion regulation, and couple coregulation

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Background: Dynamics within romantic relationships play a significant role in the development and maintenance of compulsive sexual behavior disorder (CSBD) and problematic pornography use (PPU). Couple coregulation is linked to attachment style (Butner et al., 2007), which influences emotion regulation (ER) – a key factor in shaping the quality of a relationship (Temel & Dawd, 2023). Moreover, marital satisfaction is influenced not only by an individual's attachment style but also by their partner's attachment style and the interaction between the two (Banse, 2004). Research indicates that ER mediates the relationship between attachment and symptoms of CSBD/PPU (Wizła & Lewczuk, 2024). *Method:* The study employed a cross-sectional design. Participants (n≈800) who were in a romantic relationship and completed the following measures were included in the analyses: Experiences in Close Relationships Scale and its modified version assessing perceived attachment insecurity of the romantic partner, Relationship Assessment Scale, Dyadic Coping Inventory, Difficulties in Emotion Regulation Scale, Compulsive Sexual Behavior Disorder Scale, and Brief Pornography Screen. Path analysis was used to model the relationships between the variables. *Results:* The path analysis revealed several significant pathways, highlighting potential mechanisms underlying the contribution of the studied variables to the development of CSBD/PPU. The study assessed the role of individuals' and perceived partners' attachment anxiety and avoidance (as well as their interaction), couple coregulation, ER difficulties, and bond quality in CSBD/PPU. *Conclusions:* The findings expand our understanding of the mechanisms linking romantic relationship-related factors to the development and maintenance of CSBD/PPU. Future research should incorporate dyadic studies, including both partners' self-reports, and be conducted also in clinical contexts. Additionally, it is crucial to examine the differences between perceived and actual attachment styles to determine what aspects of attachment have the greatest significance in these processes. This would facilitate integrating social factors into preventive and therapeutic strategies for CSBD/PPU.

Keywords: compulsive sexual behavior, pornography, romantic relationship, sexuality

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2A–2

Prospective associations between couples' problematic and non-problematic pornography use and sexual well-being: Results from a preregistered dyadic study

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Background: Pornography use is a salient component of couples' sexuality, with conflicting evidence concerning whether pornography use is associated with better or worse sexual wellbeing (Bőthe, Vaillancourt-Morel, et al., 2021; Vaillancourt-Morel et al., 2019). These inconsistencies might be attributed to methodological and conceptual shortcomings, such as the simplified assessment of constructs (e.g., cross-sectional pornography use frequency) or the use of male samples, regardless of their relationship status. Yet, half of the men who seek treatment for problematic pornography use (PPU) are in a romantic relationship (Bőthe, Baumgartner, et al., 2021). The present dyadic study examined the prospective associations between different aspects of pornography use (i.e., frequency of use, eight pornography use motivations [PUMs], and PPU) and sexual well-being (i.e., sexual satisfaction, function, distress, and frequency), considering gender differences. *Method:* We collected self-report data from 309 couples (317 women, 13 gender-diverse individuals) at baseline and one year later, and conducted autoregressive cross-lagged analyses within an actor-partner interdependence framework. *Results:* Results suggested that individuals' specific PUMs at baseline were associated with better sexual wellbeing over time (e.g., baseline sexual curiosity PUM was positively associated with sexual function one year later). However, individuals' higher baseline PPU was associated with more sexual distress over time. We also observed gender differences (e.g., the PPU-sexual distress association was stronger among women than other

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genders) and partner effects (e.g., individuals' baseline self-exploration PUM was associated with their partners' better sexual satisfaction one year later). *Conclusions*: Results highlight that associations between different aspects of pornography use and couples' sexual wellbeing are complex and may differ across genders. Findings suggest that PPU may result in worse, while pornography use frequency and specific motivations may be unrelated or result in better, sexual wellbeing, providing a more nuanced understanding of pornography's potential effects on couples' sexual wellbeing (Vaillancourt-Morel et al., 2019).

Keywords: compulsive sexual behavior, pornography, romantic relationship, sexuality

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2A–3

Relative contribution of frequency of pornography use and PPU to the desire to engage in coercive sexual behaviors

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Background: There is growing concern about whether pornography consumption increases the risk of committing sexual violence. Mainstream pornography often depicts significant levels of violence and dominance over women, which may lead users to replicate these patterns in their interpersonal relationships. Previous research has yielded inconsistent results, largely due to methodological limitations and variability in how this relationship is measured (Mestre-Bach et al., 2024). Moreover, such studies often overlook the role of individual dispositions in amplifying or mitigating the link between pornography consumption and the desire to commit sexual aggression. This study aimed to analyze whether sexism moderates the relationship between the frequency of pornography consumption and the desire to commit sexual aggression. *Method:* 388 men (Mage=27.60; SD=8.35) completed an online survey assessing their frequency of pornography consumption (ad hoc question, 8-point Likert scale), PPU (s-IAT-Sex), sexism, and desire to force someone sexually (ad hoc question, 6-point Likert scale). *Results:* Sexism significantly moderated the relationship between pornography consumption and the desire to force someone sexually ($p<.001$; $R^2=11.89\%$). At low levels of sexism, the relationship was barely significant ($\beta=0.06$; $p=.032$), becoming increasingly significant at moderate levels of sexism ($\beta=0.102$; $p<.001$) and, particularly,

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at high levels (β=0.142; p<.001). The moderation of sexism between PPU and the desire to force someone sexually was even stronger (p<.001; R^2=24.04%). At low levels of sexism, the association was non-significant (β=-0.001; p=.888), becoming significant at moderate levels of sexism (β=0.024; p<.001) and at high levels (β=0.049; p<.001). *Conclusions:* These findings suggest that increased levels of sexism boost the association between the frequency of pornography use/PPU and the risk of desiring to commit sexual aggression. On the contrary, at low levels of sexism, the association between the frequency of pornography use, PPU, and risk of sexual aggression becomes less relevant (or irrelevant). This interaction highlights the importance of addressing personal dispositions, such as sexist attitudes, in understanding the potential risks derived from pornography consumption.

Keywords: compulsive sexual behavior, pornography, romantic relationship, sexuality

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Mestre-Bach, G., Villena-Moya, A., & Chiclana-Actis, C. (2024). Pornography Use and Violence: A Systematic Review of the Last 20 Years. *Trauma, Violence, and Abuse, 25*(2), 1088–1112. https://doi.org/10.1177/15248380231173619

2A–4

Who finds pornography stressful? Profiles of pornography use, sexual distress, and mental health

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Background: This empirical investigation departs from traditional approaches that often examine the effects of pornography on sexual function and distress in isolation. By demonstrating that problematic pornography use (PPU), rather than frequency of use alone, is more strongly associated with increased sexual problems and distress, this research highlights the critical need to identify and address problematic usage patterns. The aim of this study was to identify profiles among pornography users, specifically distinguishing those with sexual distress and sexual function problems, characterize these profiles, and assess variations in mental health, including anxiety, depression, and emotion regulation using latent profile analysis (LPA). *Method:* Data were collected from 463 participants in Israel through an anonymous online survey. LPA was employed to analyze patterns of pornography use, focusing on frequency of pornography use, PPU, sexual distress, and sexual dysfunction. Emotion regulation, anxiety, and depression were examined across user profiles. *Results:* Three distinct profiles emerged: The first profile consisted of high-frequency PPU users with significant sexual problems and distress. The second group represented high-frequency non-PPU users with low or no sexual problems, and the third group included no/low-frequency non-PPU users with minimal sexual issues. Differences across profiles were observed in

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emotion regulation, anxiety, and depressive symptoms. High-frequency PPU users showed the lowest emotion regulation capabilities and the highest levels of anxiety and depression. In contrast, the no/low-frequency non-PPU group reported better mental health outcomes and minimal sexual distress. *Conclusions:* The findings reveal the complexities of pornography use, emphasizing that there may be consumption patterns that are more problematic. This research underscores the importance of recognizing distinct profiles of pornography use and their contextual nuances in understanding the sexual and mental well-being of users (Bothe et al., 2020; Vaillancourt-Morel at al., 2017).

Keywords: compulsive sexual behavior, pornography, romantic relationship, sexuality

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2B–1

Updated and gender inclusive prevalence of compulsive buying-shopping disorder: A meta-analysis

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Background: Compulsive Buying-Shopping Disorder (CBSD) is an increasing public health concern with significant impacts on both mental health and societal challenges. However, prevalence estimates for CBSD in the general population exhibit considerable variability, and the most recent meta-analysis addressing this topic dates back nearly a decade. Most studies lack a comprehensive gender-sensitive analysis, particularly for LGBTQI+ populations, and prevalence estimates specifically for online CBSD are currently unavailable. *Aim:* This meta-analysis aims to address these gaps by providing an updated, gender-inclusive overview of CBSD prevalence, including estimates for men, women, and LGBTQI+ individuals. Additional subgroup analyses examine prevalence across age groups, specific demographic characteristics, and, where data allow, prevalence rates for online CBSD. *Methods:* This meta-analysis was preregistered with PROSPERO (CRD42024591568). A systematic search was conducted in Scopus, Web of Science, PubMed MEDLINE, and PsycINFO for peer-reviewed studies in English and German that report CBSD prevalence in the general population. Studies identified through manual searches are also included. The analysis covers individuals of all ages and genders (men, women, and LGBTQI+), without restrictions on geographic location or other demographic factors. Eligible studies are cross-sectional or longitudinal with a minimum sample size of 72 participants (based on a conventional formula: 5% precision, 95% confidence interval, and an expected prevalence of 4.9%). Clinical samples, individuals with Parkinson's disease, those using dopaminergic medication, individuals who shoplift, those who stockpile, and studies with duplicate prevalence data are excluded. Two reviewers independently screen titles, abstracts, and full texts using Covidence software. Publication bias is assessed through funnel plots, risk of bias with the ROBINS-I tool, and quality of evidence with the GRADE approach. Data synthesis employs a random-effects model to account for heterogeneity, with sensitivity analyses performed as needed. *Anticipated Results:* This meta-analysis provides a robust, gender inclusive prevalence estimate for CBSD, identify demographic variations, and offer insights into age- and gender-specific factors associated with CBSD, including online contexts. While results are not available in their entirety at the time of submission, they are expected to be finalized in time for presentation at the congress. The findings aim to deepen understanding of CBSD epidemiology and support future targeted interventions.

Keywords: compulsive buying, social network use disorder, social media

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2B–2

A critical view on online shopping as perceived by young mothers who shop excessively

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Background and Aims: Involvement in online shopping is a growing trend, with potential negative consequences when it becomes excessive. Shopping is often socially attributed to women, especially mothers, as purchasing children's products is viewed as part of caregiving. This presentation will share key insights from a study on young mothers' perceptions of their involvement in online shopping. *Method:* Fifteen young Israeli mothers of children aged six months to six years, who self-identified as heavily engaged in online shopping, participated in semi-structured interviews. *Results:* A content analysis revealed that the mothers displayed a critical awareness of their shopping behavior, often describing a sense of loss of control. They also expressed criticism of contemporary consumer norms and the manipulative marketing strategies that encourage their shopping practices. *Conclusion:* Therapists and policymakers should encourage critical awareness among individuals and help them recognize the manipulative mechanisms that can drive excessive shopping behaviors.

Keywords: compulsive buying, social network use disorder, social media

2B–3

Association between compulsive buying-shopping disorder and social networks: A systematic review

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Background and Aims: This presentation will focus on a systematic review that investigates the association between social network use and compulsive buying/shopping disorder, an increasingly pressing issue due to the rapid rise of digital platforms and their potential impact on consumer behavior. This talk will highlight empirical studies that examine both compulsive buying-shopping disorder and social media use, applying specific diagnostic criteria and psychometric measures. *Method:* Relevant studies in English and Spanish were identified through extensive searches in major databases, including PubMed, PsycInfo, Web of

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Science, and Scopus. Data selection and extraction followed PRISMA guidelines, with a rigorous assessment of study quality and potential biases using the EPHPP tool. *Results and Conclusions:* This presentation offers a comprehensive analysis of how social networks may influence compulsive buying patterns and identifies vulnerable population profiles, thereby informing the development of targeted prevention and intervention strategies suited to the digital landscape.

Keywords: compulsive buying, social network use disorder, social media

2B–4

Piloting the modified flicker change blindness task for online buying-shopping disorder and social network use disorder

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Background and Aim: Individuals suffering from an addiction disorder tend to perceive stimuli related to their addiction more quickly than people without this disorder. Flicker tasks have previously been used to investigate visual attention, attentional biases, and change blindness in individuals with substance use disorders and gambling disorder. The results indicate attentional biases and reduced change blindness in individuals with addiction disorders. However, the task has not yet been applied to online buying-shopping disorder and social network use disorder. The aim of this pilot study is to test the feasibility of a modified flicker task using visual online shopping and social network stimuli. The project is being developed within the context of the DFG research group FOR2974 (Grant No.: 411232260). *Method:* An online survey was conducted to measure the valence and representativeness of different online shopping and social network stimuli (app icons). Based on the results, eight online shopping and eight social network icons were selected. The app icons were matched for physical properties and were embedded in a smartphone background display. Thirty individuals with regular internet use, measured using the German version of the Assessment of Criteria for Specific Internet-use Disorders (ACSID-11), will be tasked with identifying the changed flickering icon as quickly as possible in a total of 32 trials. The arrangement of the icons will be semi-randomized across four different lateralization conditions. Outcome variables will include the proportion of correctly detected changes and the latency to detect a change. *Results:* The results of the pilot study will be presented. Data collection has not yet been completed at the time of submission. *Conclusions:* The feasibility and possible further adaptations of the flicker task will be discussed.

Keywords: compulsive buying, social network use disorder, social media

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2B–5

A mindfulness-based program for social network use disorder: A pilot randomized controlled clinical trial

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Background and Aims: Social networks use disorder (SNUD) refers to the addictive use of social networking sites (SNS) and online-communication platforms, resulting in negative consequences and functional impairment in daily life. SNUD is highly prevalent, yet treatment options remain limited (Wegmann et al., 2023). This abstract outlines research from a pilot randomized controlled clinical trial (RCT) evaluating the feasibility and preliminary efficacy of a novel mindfulness-based program (MBP) specifically tailored for SNUD. *Method:* The primary outcome is a reduction in SNUD symptom severity. Secondary outcomes include depression, anxiety, and functional impairment. The study employs a series of feasibility measures including attendance rates, individual home practice intensity, and participant satisfaction. Additionally, Ecological Momentary Assessment (EMA) is used to capture real time fluctuations and contextual-factors in outcome measures and mediators, as well as passive sensing (PS) to track behavioral patterns such as SNS usage frequency and duration. *Results:* This research is ongoing. Data from pre- and post-assessments will be available for presentation at the ICBA in July 2025.

Keywords: compulsive buying, social network use disorder, social media

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2C–1

The cost of being a woman at work: The role of gender and country's gender inequality in work addiction

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Background: The evidence on the role of gender in work addiction is inconclusive, with some studies showing higher levels of work addiction in women than men and others reporting no gender differences. Moreover, data on cultural factors and their interactions with individual factors in predicting work addiction is still scarce. To fill this gap, this study explores the role of gender, country-level gender inequality, and their interaction in work addiction. *Methods:* The sample consisted of 31,748 full-time employees (63.5% of females) from 91 countries and territories. The level of work addiction was assessed using the International Work Addiction Scale (IWAS-5), which previously demonstrated partial scalar invariance across cultures worldwide, allowing for meaningful cross-cultural comparisons. Gender inequality was measured using the Gender Inequality Index (GII). First, the measurement invariance for the IWAS-5 was calculated between genders. Second, multilevel modeling (MLM) was used to test gender (level 1), gender inequality (level 2), and their cross-level interaction as predictors of work addiction. Effects were controlled for the managerial position, average weekly hours actually worked (as estimated by participants), and average weekly working hours by country. *Results:* The IWAS-5 showed scalar measurement invariance between genders. The MLM results demonstrated that (a) being female and working in countries with higher levels of gender inequality was positively related to work addiction, and (b) the strength of the positive relationship between being female and work addiction was higher in countries with higher levels of gender equality. *Conclusions:* Globally, women tend to be more prone to work addiction than men, with gender differences being especially pronounced in gender-equal countries. The results of this study can be helpful in adequately addressing the problem of work addiction worldwide, with consideration for gender and cultural differences.

Keywords: work addiction, gender differences, gender inequality, multilevel modeling

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2C–2

Longitudinal evidence linking obsessive passion and relationship dissatisfaction to work addiction

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Background and Objectives: Research has examined the relationship between passion for work, work addiction, and romantic relationships. However, longitudinal studies that integrate these factors remain scarce. Prior findings indicate that work addiction, much like obsessive work passion, can negatively affect relationship quality. Nevertheless, little is known about whether dissatisfaction in romantic relationships contributes to the development of work addiction over time or how passion for work affects this process. This longitudinal study aimed to investigate the associations between passion for work, relationship satisfaction, and both current and future work addiction. *Methods:* We conducted an online survey with 586 participants (51.4% women) who completed questionnaires across two time points: 2018 (T1) and 2022 (T2). Work addiction was measured at T1 and T2 using the Bergen Work Addiction Scale. Obsessive and harmonious work passion at T1 was assessed using the Passion Scale, and relationship satisfaction at T1 was measured using the Relationship Satisfaction Scale. We hypothesized that T1 work addiction mediates the relationship between T1 relationship satisfaction and T2 work addiction, as well as between T1 harmonious/obsessive work passion and T2 work addiction. *Results:* Pathways between variables were tested using structural equation modeling. Obsessive work passion at T1 weakly but significantly predicted T2 work addiction ($\beta = 0.09$). T1 work addiction strongly predicted T2 work addiction ($\beta = 0.507$). Relationship satisfaction at T1 did not significantly predict T1 work addiction but was a weak negative predictor of T2 work addiction ($\beta = -0.090$). T1 work addiction mediated the effects of T1 obsessive passion and relationship satisfaction on T2 work addiction. *Conclusions:* Our findings indicate that relationship dissatisfaction and obsessive work passion are risk factors for future work addiction, with current work addiction playing a central mediating role. Prevention efforts should prioritize promoting healthier work motivations and protecting personal relationships.

Keywords: work addiction, passion to work, obsessive passion, relationship dissatisfaction

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2C–3

Love addiction, early maladaptive schemas and modes: An empirical research

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Background: Love addiction is a behavioral addiction characterized by a dysfunctional and compulsive way of seeking closeness with one's romantic partner, even when this leads to negative consequences and impairment in one's functioning. Various authors (Salani et al., 2023) have suggested that this condition originates from experiences during development that shaped the way of relating to others in adulthood. To test this idea, our study aims to investigate the relationship between love addiction and early maladaptive schemas (EMS) and the modes described in Schema Therapy. *Method:* We recruited a sample of 192 participants to whom we administered an online questionnaire consisting of the following tools: the Love Addiction Inventory (LAI; Costa et al., 2019) to measure love addiction, the short version of the Young Schema Questionnaire (YSQ-S3; Saggino et al., 2018) to measure EMS, and the Short Schema Mode Inventory (Panzeri et al., 2016) for the modes. *Results:* Numerous significant relationships emerged between EMS and love addiction, in particular regarding the "Abandonment" and "Admiration seeking" schemas. Love addiction was also correlated with various modes. Specifically, multiple regression analysis showed that the "Compliant surrender," "Impulsive child," "Healthy adult," and "Demanding Parent" modes significantly predicted levels of love addiction, explaining a moderate portion of its variance. *Conclusions:* Our study appears to support the idea that love addiction is linked to schemas developed during one's development and the way these influence functioning in adulthood. From this perspective, Schema Therapy seems to be an effective framework for interpreting love addiction and, potentially, for treating it.

Keywords: love addiction, schema therapy, modes

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2C–4

Love addiction and interpersonal dependency: An empirical research on general population

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Background: "Love Addiction" is a condition that several authors have suggested to consider as a behavioral addiction toward an object of romantic love (Borrello et al., 2023; Orsolini et al., 2022), whose absence is the source of negative emotions that which are soothed through the presence of the partner. In various ways, it can also be considered a form of interpersonal dependency focused on one's romantic partner, although the scientific literature does not yet clarify to what extent these two constructs overlap and in which ways, a gap that our study aims to fill. *Method:* 209 participants were recruited through an online questionnaire. The tools used were: the Love Addiction Inventory (LAI) to assess love addiction and the Relationship Profile Test (RPT) to assess interpersonal dependency, as well as the Experience in Close Relationship Scale 12 (ECR-12), the Inventory of Interpersonal Problems (IIP-32), the Subjective Emptiness Scale (SES-I), the Marlowe-Crowne Social Desirability Scale (MC-SDS), the Rosenberg Self-Esteem Scale (RSES), the General Self-Efficacy Scale (GSES) and the Meaning in Life Questionnaire (MLQ). *Results:* Love addiction and interpersonal dependency were found to be significantly but weakly correlated. Only the 'Withdrawal' scale of the former showed a moderate positive correlation with 'Destructive Overdependence' and a negative correlation with 'Healthy Dependency' of the latter. Love addiction, but not interpersonal dependency, was found to be associated with a 'Domineering/Controlling' interpersonal style. Regression analyses further showed that interpersonal dependency does not mediate the relationship between adult attachment and love addiction. *Conclusions:* Overall, love addiction and interpersonal dependency appear to be two constructs that are partially associated but, to a much greater extent, distinct from each other. This seems to suggest that displaying higher levels of affective dependency does not necessarily reflect a greater predisposition towards interpersonal dependency—that is, seeking others (including people other than one's partner) to manage unpleasant emotions.

Keywords: love addiction, interpersonal dependency, interpersonal problems

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2C–5

Love addiction among patients with eating disorders: A pilot study

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Background: Eating disorders are associated with a variety of difficulties in relational and romantic contexts. Moreover, several studies have shown that these disorders are linked to adverse experiences during childhood (Maher et al., 2022). Various authors have suggested that this also applies to love addiction (Salani et al., 2022). For this reason, we aimed to investigate the relationship between eating disorders and love addiction, also taking early maladaptive schemas (EMS) into account. *Methods:* The sample consists of a clinical group of 60 individuals with eating disorders and a control group of 130 participants. The participants were administered a sociodemographic questionnaire and a battery of tests, including the following instruments: the Love Addiction Inventory (LAI), the Eating Disorder Inventory (EDI-3), the Young Schema Questionnaire Short Form 3 (YSQ-S3). Results: Several positive correlations were found between love addiction and the scales of the EDI-3, particularly (but not exclusively) with "Body Dissatisfaction" and "Interpersonal Problems Composite." Numerous correlations also emerged between EMS and both love addiction and the EDI-3 scales. No significant differences were observed between the two groups regarding love addiction levels. The experimental group showed higher levels of the EMS "Failure," "Unrelenting Standards," and "Negativity/Pessimism." *Conclusions:* Our hypotheses were partially confirmed. Specifically, our study showed that eating disorders and love addiction are associated with each other, as well as with EMS, highlighting both overlapping elements and differences between these two conditions.

Keywords: eating disorders, love addiction, early maladaptive schemas

References:

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2D–1

Comparison of ICD-11 and DSM-5 criteria in screening for specific internet-use disorders

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Background: With the inclusion of gaming disorder in the ICD-11, diagnostic criteria were introduced. These criteria can be applied to other potential internet use disorders (IUDs). Significant differences exist between DSM-5 and ICD-11 criteria for (Internet) gaming disorder. The present study examines these differences by comparing DSM-5 and ICD-11-based screening instruments in the context of (potential) specific IUDs, including gaming disorder, buying-shopping disorder, pornography use disorder, and social network use disorder. *Method:* Data were collected in the context of the DFG-funded research unit FOR2974 across multiple sites in Germany (N=1118). Participants were classified using structural clinical interviews for specific IUDs based on DSM-5 criteria for gaming disorder plus questions on functional impairment. The ACSID-11 and modified IGDT-10 were used to screen for symptoms of specific IUDs based on ICD-11 and DSM-5 criteria respectively. Contingency tables compared the two screening instruments across various metrics (e.g., accuracy, precision, recall). The construct validity of the screening instruments for specific IUDs was further examined using the multitrait-multimethod approach. *Results:* The multitrait-multimethod results showed strong correlations (r's ranging 0.756 to 0.818) between specific IUDs measured by the ACSID-11 and the IGDT-10. Contingency tables revealed moderate to substantial differences between the ACSID-11 and the IGDT-10 in classifying problematic specific internet use behaviors based on the defined thresholds (e.g., for gaming disorder, the difference in classification for the criteria impaired control was 15%). *Conclusions:* The findings indicate that screenings based on ICD-11 versus DSM-5 criteria for specific IUDs show similarities but emphasize different diagnostic aspects. The observed differences in the classification of problematic internet use highlight the importance of deliberate criterion selection to adequately reflect the various facets of these disorders. Alternatively, the parallel application of both criteria models may offer additional diagnostic insights and facilitate a more nuanced understanding of these disorders.

Keywords: specific internet use disorders, affective and cognitive mechanisms, daily usage patterns, behavioral addiction, ICD-11, DSM-5

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2D–2

The mediating role of coping-strategies in the relation between personality traits and symptoms of gaming disorder

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Background: During the development of a gaming disorder (GD), affected individuals experience reduced control over their gaming use and the behavior exceedingly gains greater priority in the individuals' lives. This implies continuation of their gaming behavior even when experiencing negative consequences. A common motivation for gaming is the relief of everyday stress, while a decrease of other coping strategies over time can lead to maladaptive behaviors. Based on theoretical assumptions, we hypothesized, that employed coping strategies mediate the relationship between specific personality traits, such as conscientiousness, neuroticism and self-directedness, and the symptom severity of GD. *Method:* In this study, participants (N=351) underwent a structured diagnostic interview to examine symptom severity according to the proposed DSM-5 criteria for (Internet) GD. Through self-report questionnaires personality traits of the five-factor model (extraversion, agreeableness, conscientiousness, neuroticism, openness) as well as self-directedness and coping strategies (problem-focused coping, emotion-focused coping, avoidant coping) were assessed. All data was acquired through a multi-center study (FOR2974). *Results:* We found a negative direct association between self-directedness and symptoms of GD. Additionally, the relationship between extraversion, conscientiousness, neuroticism and symptoms of GD is mediated by problem-focused coping. Emotion-focused coping mediates the relationship between extraversion and GD, while avoidant coping mediated the relationship between neuroticism and self-directedness with GD. *Conclusion:* Our results show the importance of different coping strategies for the development of GD, depending on the personality traits of an individual, which might be a starting point for future prevention and early interventions.

Keywords: specific internet use disorders, affective and cognitive mechanisms, daily usage patterns, gaming disorder, personality, coping

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2D–3

Affective and cognitive functions, impulsivity and compulsivity in compulsive buying-shopping disorder and social-network-use disorder: A comparison

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Background: Online shopping and the use of social networks have become increasingly intertwined through social commerce. Consequently, it can be assumed that compulsive buying-shopping disorder (CBSD) and social-network-use disorder (SNUD) are also related, as questionnaire-based studies have already shown. However, these studies mainly focus on symptom severity, without considering underlying mechanisms or without comparing affective and cognitive functions. According to the I-PACE model, similar functions could be assumed for both disorders. Additionally, impulsivity and compulsivity may be common transdiagnostic features in addictive behaviors. This systematic review assesses common and differential affective and cognitive processes, including impulsivity and compulsivity, in CBSD and SNUD. *Method:* A preregistered systematic review was conducted using PubMed, Scopus, and Web of Science. The search included original articles with experimental paradigms systematically comparing affective and cognitive functions in CBSD and SNUD, as well as (systematic) reviews/meta-analyses on these functions in either or both disorders. After applying inclusion/exclusion criteria, no original articles were included which compare both potential disorders, but 22 reviews/meta-analyses (9 CBSD, 13 SNUD) were selected to address affective and cognitive functions and the transdiagnostic factors impulsivity/compulsivity. *Results:* Preliminary findings of indirect comparison of reviews/meta-analyses, based on classification of reported results into the I-PACE model, indicate similar affective and cognitive functions in CBSD and SNUD, such as cue-induced craving but no convincing evidence for attentional biases. While research on compulsivity in both disorders is limited, they both show high impulsivity. However, CBSD research indicates more and clearer findings across multiple impulsivity areas (e.g., disadvantageous decision-making). *Conclusions:* There are no studies that directly compare CBSD and SNUD. However, the findings from experimental studies suggest similar affective and cognitive functions as well as the involvement of impulsivity and compulsivity in CBSD and SNUD. Potential differential mechanisms should be investigated more systematically and by directly comparing CBSD and SNUD.

Keywords: specific internet use disorders, affective and cognitive mechanisms, daily usage patterns, compulsive buying-shopping disorder; social-network-use disorder; neurocognitive mechanisms

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2D–4

Effects of mood modification on the use of specific Internet applications and interference with everyday life functioning: A multi-level analyses of a 14-day ambulatory assessment study

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Background: Multiple theoretical models of addictive behaviors link the variables problematic use with mood modification, gratification/compensation or coping which may lead to impairments in everyday life. It is assumed that individuals with problematic use of specific Internet applications have a higher stress level and are more often exposed to negative mood, which is compensated for by engaging in specific addictive behaviors. The increased use may then lead to interferences with other obligations. With this study we investigate longitudinally how stress, mood, reward/relief craving and the use of specific Internet applications affect impairments in everyday life. *Method:* We analyzed N=996 data sets of adult Internet users from a multicenter study (FOR2974). The survey comprised a clinical interview, an extensive test battery and a 14-day end-of-day ambulatory assessment, in which the use of specific Internet applications (gaming, buying-shopping, social networks use or pornography use), stress, mood, craving, relief, pleasure and impairment in everyday life were assessed. Based on the clinical interview, the individuals were classified into groups with non-problematic, risky or pathological internet use. We used a multi-level analysis with the state variables as level 1 predictors and the group classification as level 2 predictors for the problematic internet use. *Results:* Individuals with higher symptom severity (pathological use>risky>non-problematic group) reported more stress and a more negative mood in everyday life. They also reported higher daily craving for the activity. The multilevel models showed that pleasure while using an internet application had a significant effect on the time of usage. In addition, mood and stress levels were significant predictors of problematic internet use. *Conclusions:* Dealing with stress and negative mood could be an important factor in problematic Internet use (interference with other activities). Reducing dysfunctional behaviors through functional and pleasurable coping strategies could be helpful in overcoming problematic Internet use.

Keywords: specific internet use disorders, affective and cognitive mechanisms, daily usage patterns, longitudinal, mood modification, specific internet use disorder

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2D–5

Daily patterns and predictors of pathological use of social networks and buying-shopping

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Background: Empirical studies show that people with pathological use of social networks (p-SNU) or pathological buying-shopping (p-BSh) share similar personality traits and comparable usage patterns. Insights into everyday use and possible influencing factors could, therefore, facilitate understanding functional impairments and promote intervention and prevention strategies. This study aims to compare daily use patterns, interference, and temptation within a natural environment, and to predict them based on specific personality traits. *Method:* 72 participants with p-SNU and 64 with p-BSh were recruited in a multi-center study (FOR2974) based on a modified diagnostic interview using the DSM-5 criteria for gaming disorder. The main study examined usage time, symptom severity of p-SNU and p-BSh, generalized problematic internet use, impulsivity, and chronic stress. In a 14-day ambulatory assessment, participants reported interference and temptation to use the application. *Results:* Individuals with p-SNU reported significantly higher usage times than the p-BSh group, while the latter reported higher interference. When usage time, symptom severity, generalized problematic internet use, impulsivity, and chronic stress were used as predictors, the results showed that only generalized problematic internet use significantly contributed to explaining the variance of interference in p-SNU. The same was valid for the variance of temptation. For p-BSh, generalized problematic internet use and usage time predicted most of the variance for interference as well as of temptation. *Discussion:* Attributed priority and tendencies towards generalized problematic internet use seem to play the largest role in predicting daily neglect of other activities and perception of the behavior as a temptation in p-SNU and p-BSh. If individuals tend to develop tendencies towards generalized problematic internet use, this already seems to be the main indicator of distress in everyday life in individuals with p-SNU and p-BSh. How situation-specific triggers influence behavior enactment in everyday life should be investigated in the future.

Keywords: specific internet use disorders, affective and cognitive mechanisms, daily usage patterns, internet use disorders, key characteristics, everyday temptation

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2E–1

Behavioral addictions, substance use and impulsivity as predictors of disordered and binge eating

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Disordered eating refers to a spectrum of problematic eating behaviors and distorted attitudes, encompassing factors such as restrictive food intake, a preoccupation around food, among others. Sexual dysfunction has been found to be associated with disordered eating symptom severity (e.g., body image concerns), and are hypothesized to occur due to impulsivity underlying disordered eating habits. As sexual dysfunction is frequently found in individuals with problematic pornography use and compulsive sexual behaviors, we examined if compulsive sexual behaviors, pornography use, substance use, and impulsive tendencies predicted broad disordered eating behaviors or binge eating symptoms, in non-clinical US college (n=2,161, 69.7% male, 30.3% female, M=19.95 years, SD=4) and community (n=1,898, 47.9% male, 52.1% female, M=33.73 years, SD=14.98) samples. For both samples, we used multiple regressions to examine predictors of disordered eating/binge eating symptoms. In the college sample, the regression model was statistically significant ($F(6, 1810) = 33.71$, $p < .001$, $R2= .10$), with weekly substance use frequency ($p< .001$), compulsive sexual behaviors ($p= .001$), negative urgency ($p< .001$), and positive urgency ($p= .002$) as significant predictors of broad disordered eating. In the community sample, the regression model was statistically significant ($F(6, 1528)=19.99$, $p < .001$, $R22= .07$), with compulsive sexual behaviors ($p=.002$), negative urgency ($p< .001$), and positive urgency ($p=.004$) as significant predictors of binge eating symptoms. Future research could consider further exploration of behavioral addictions and disordered eating habits, and longitudinal research is needed to examine the directionality and predisposing factors in this relationship.

Keywords: compulsive sexual behavior, pornography use, substance use, disordered eating, impulsivity

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2E–2

Food addiction and personality traits: A meta-analysis

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Background: Epidemiological and clinical evidence has identified food addiction as a clinically significant phenomenon. Numerous studies have examined its relationship with personality traits, but a systematic review and meta-analysis of these findings has yet to be conducted. *Methods:* A systematic search was performed across multiple academic databases to identify studies exploring the relationship between food addiction and personality traits. A three-level meta-analysis was conducted to estimate the strength of these associations for each trait. Meta-regression analyses were used to assess the role of potential moderators. *Results:* The search yielded 42 studies, with the majority focusing on impulsivity and Cloninger's personality dimensions. However, insufficient data were available to evaluate the relationship between food addiction and traits assessed by the five-factor model. The strongest associations were found between food addiction severity and low self-directedness, as well as high levels of urgency and attentional impulsiveness. Age and gender were identified as significant moderators for some effect sizes. *Conclusions:* Additional research is needed to clarify the relationship between food addiction severity and certain personality traits. The findings suggest that food addiction shares personality characteristics commonly associated with other addictions and eating disorders, while also highlighting its unique features as a condition at the intersection of both.

Keywords: food addiction, personality, impulsivity, meta-analysis

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2E–3

Alexithymia, a risk factor for food addiction behaviors

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Background: The importance of emotions in addiction, particularly in the context of food addiction and its correlation with alexithymia, cannot be understated. Emotions play a significant role in driving addictive behaviors, including binge eating. Individuals may use food as a coping mechanism to deal with difficult or overwhelming emotions. Alexithymia, characterized by a difficulty in identifying and expressing emotions, can exacerbate this process leading to a heightened vulnerability to addictive behaviors like binge eating. *Methods:* Our research method consisted of analyzing the database of 278 patients suffering from obesity and therefore candidates to bariatric surgery at the Regional University Hospital of Tours, France. We did a correlation study to compare the data of two variables, the TAS-20 for alexithymia and the BES for binge eating disorder. *Results:* The correlation cofficient between the two variables was 0.3234 (Pearson) and 0.3106 (Spearman) with a p-value < 0.0001 indicating a moderately positive correlation with statistically significant relationship. Since it is a positive correlation, though moderate, it suggests that as alexithymia increases, binge eating tends to increase as well. *Conclusions:* understanding how emotions and alexithymia contribute to addiction and binge eating disorder, can guide more effective intervention and support for individuals struggling with addictive behaviors.

Keywords: alexithymia, food addiction, obesity, BED, bariatric surgery

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2E–4

Experience of a telemedicine unit for eating disorders treatment

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Since 2019, based on the common observation with the health agency and care partners that behavioural addictions were insufficiently known and taken care of in the region, the addiction service of the University Hospital of Nantes provides a telemedicine offer around all behavioural addictions. This action was experimented for 3 years as part of the PRPA "Regional Addiction Prevention Project" and then was refocused on TCAs and perpetuated in 2023. With a view to evolving and structuring care pathways, these telehealth actions have developed around exchanges with requesting practitioners on the method of tele-expertise, joint teleconsultations and video training for all actors in the region. We propose around this oral communication to describe the different facets of our telehealth actions (direct, indirect care, training), their evolution according to experience and our partnership exchanges and their inclusion in our service operation and in our care network. Based on the different steps taken and the evolution of needs and contexts, we are convinced that telehealth practices can contribute to a complementary and structuring response to current health issues. We will discuss the advantages and disadvantages encountered in this practice. We will look at the development prospects that emerge through exchanges with partners, patients and their entourage and what adaptations are necessary to best meet the diversity of needs. We are convinced that telehealth practices are capable of providing a complementary, structuring response to current health problems by adapting the offer to the difficulties encountered and approaching the needs of patients.

Keywords: eating disorder, care network, telemedicine, multidiciplinary, visioconsultaiton

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2E–5

Validation of the Food Craving Acceptance and Action Questionnaire (FAAQ) in pregnancy

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Background: Food cravings are common during pregnancy and can trigger disordered eating behaviors, including binge and loss of control eating, which pose risks to maternal and fetal health. Food cravings are now widely conceptualized as cognitive-affective states and there is growing support for the efficacy of interventions targeting psychological flexibility in reducing the adverse impact of cravings on behaviors across diverse domains. Assessing food cravings with theoretically informed and empirically validated measures is crucial for advancing research and clinical interventions. *Method:* Pregnant individuals (n=264) recruited via Prolific completed the 10-item Food Craving Acceptance and Action Questionnaire (FAAQ), a measure of psychological flexibility and acceptance of (factor 1) and willingness to experience cravings (factor 2), along with the Food Craving Questionnaire – Trait – reduced (FCQ-T-r; Cronbach's $\alpha = .93$), and the Prenatal Eating Behaviors Screening Tool (PEBS; $\alpha = .89$). Psychometric performance of the FAAQ was examined via confirmatory factor analysis (CFA), internal consistency reliability, construct validity, and indicators of clinical utility. *Results:* CFA showed poor fit for the original 10-item, 2-factor structure of the FAAQ but excellent fit for the previously established 7-item, 2-factor FAAQ-II (CFI = .97, RMSEA = .07, TLI = .95, with items 1, 3, and 6 removed). Internal consistency reliability was adequate for total ($\alpha = .69$) and subscale scores ($\alpha = .76, .79$). FAAQ-II scores correlated significantly with FCQ-T-r scores ($r = -.57$ to .77, $p < .001$), supporting construct validity. FAAQ-II scores differentiated participants with or without clinically significant disordered eating (PEBS ≥ 34, $p = .003$) and were positively associated with pre-pregnancy BMI ($p = .02$). *Conclusions:* The FAAQ-II demonstrated robust psychometric properties in this sample, supporting its use in assessing food cravings during pregnancy. Its clinical utility in identifying individuals at risk for disordered eating highlights its value for research and intervention.

Keywords: food cravings, pregnancy, psychological flexibility, Food Craving Acceptance and Action Questionnaire, confirmatory factor analysis

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2F–1

Characteristics of problem gambling and gambling-related harm among the general gamblers in Japan

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In anticipation of the planned opening of casinos around autumn 2030, the Japanese government is taking measures to address gambling disorder. As part of these efforts, the National Hospital Organization Kurihama Medical and Addiction Center conducted a nationwide survey, which revealed that a significant proportion of respondents (75.5%) had engaged in gambling at least once in their lifetime, while 35.2% had participated in gambling within the past year. Furthermore, the Problem Gambling Severity Index (PGSI) indicated that 1.6% of participants may warrant further attention with regard to potential gambling disorder. According to the Japan Productivity Center (2023), the overall number of individuals participating in gambling in Japan is declining, while the market size is expanding. This trend suggests an increase in gambling frequency and expenditure per participant, which may potentially lead to an increase in gambling-related harm among the general population. Despite these risks, it is concerning that the number of individuals accessing treatment services or self-help groups remains disproportionately low compared to the scale of the problem. This presentation will provide an overview of gambling participation trends in Japan and examine the characteristics of a general sample of gamblers, focusing on the implications of these findings for addressing gambling-related harm in the population.

Keywords: gambling, help-seeking behaviors

2F–2

Help-seeking experiences of regular gamblers for gambling problems

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Background: A significant barrier to seeking help persists for individuals suspected of having gambling disorders. This study aimed to explore the help-seeking behaviors of community-dwelling regular gamblers. *Method:* Participants were randomly selected from a web panel

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maintained by a research company. Regular gamblers were defined as individuals aged 20–75 years who gambled at least once per month over the past year. A two-year longitudinal follow-up was planned, with this analysis focusing on data from baseline and six months later. Gambling problems were assessed using the Problem Gambling Severity Index (PGSI; cut-off point of 8). Help-seeking experiences were evaluated through a single question asking whether participants had ever sought help for gambling problems. Those who reported seeking help were asked to specify the resources they utilized. *Results:* In total, 2,575 valid responses (1,328 men and 1,247 women) were obtained. At baseline, 21.2% of participants had a PGSI score of 8 or higher, compared to 18.9% at the six-month follow-up. In the second survey, 24.8% of participants reported seeking help for gambling problems. Among those who sought help, family and friends were the most commonly used resources (92.0%) followed by public support services (10.5%). Notably, 6.6% of regular gamblers sought help for the first time during the six-month period. *Conclusions:* The rate of help-seeking among regular gamblers in this study was higher than that observed in our national survey conducted during the same period. Future research should examine factors that can promote increased help-seeking behaviors.

Keywords: gambling, help-seeking behaviors

2F–3

Effectiveness of Internet-based personalized normative feedback for help-seeking behaviors among individuals experiencing problem gambling

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Objective: This study investigated the impact of a fully automated, Internet-based personalized normative feedback intervention on help-seeking actions and gambling behaviors. *Method:* A randomized parallel-group superiority design was employed to evaluate whether GAMCHECK was more effective than an assessment-only (AO) control condition at 12-week follow-up. Data collection was conducted online through questionnaires and the LINE app, with participants recruited via online surveys. All outcomes were measured using Internet-based questionnaires. The outcome included help-seeking behaviors, the Gambling Symptom Assessment Scale (GSAS), the Gambling Related Cognitions Scale (GRCS), Patient Global Impression of Change (PGI-C), frequency of gambling days, and monetary expenditure on gambling. *Results:* Data from 274 participants (GAMCHECK: n = 141; AO: n = 133) revealed that GAMCHECK demonstrated greater effectiveness than AO on

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the GRCS at both one-week and four-week follow-ups. By the 12-week follow-up, significant improvements in gambling symptoms (GSAS), gambling frequency, weekly monetary expenditure, GRCS scores, and PGI-C ratings were observed in the GAMCHECK group compared to the AO group. However, no notable differences were detected in help-seeking behaviors. *Conclusions:* GAMCHECK significantly improved gambling symptoms, gambling frequency, monetary spending on gambling, and cognitive distortions. Nevertheless, its ability to enhance help-seeking behaviors was limited, highlighting the need for further optimization to better motivate individuals with gambling problems to seek support.

Keywords: gambling, help-seeking behaviors

2F–4

Clinical usefulness of DSM-5 diagnostic criteria in assessing severity of gambling disorder

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Aims: The clinical usefulness of the diagnostic criteria for gambling disorders (GDs) set forth in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), remains controversial. Our study aimed to examine the clinical usefulness of the DSM-5 diagnostic criteria in assessing the severity of GD based on data from a multicenter collaborative prospective study of patients with GD, namely the Japan Collaborative Clinical Study on Gambling Disorder (JaCCS-G). *Methods:* Twenty medical institutions with outpatient gambling clinics participated in the JaCCS-G. Patients with GD who visited the participating facilities and were diagnosed using the DSM-5 participated in the JaCCS-G. Semi-structured interviews were conducted to assess gambling behavior and psychiatric comorbidities. In addition, we administered the Gambling Symptom Assessment Scale to assess gambling symptom severity, the Gambling Related Cognitions Scale to assess irrational thoughts of GDs, and the Barratt Impulsiveness Scale to assess impulsivity. This study was approved by the ethics committee of the Kurihama Medical and Addiction Center. After study procedures were explained, all patients provided informed written consent. *Results:* Our study found that the severity of GD was associated with comorbid psychiatric disorders, such as major depressive disorder and antisocial personality disorder (ASPD), and logistic regression analysis revealed that cognitive distortions, impulsivity, and ASPD determined the severity of GD. A follow-up study using survival analysis revealed that baseline severity was significantly associated with treatment outcomes. *Conclusion:* These results suggest that measuring the severity of GD using the DSM-5 diagnostic criteria may have clinical utility.

Keywords: gambling, help-seeking behaviors

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2G–1

Attentional biases in gambling and video gaming problematic use: An ERP study

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Background: Attention biases, that is, how a person's perception is affected by selective factors in their attention, have been considered a crucial element involved in the transition from being an occasional user to become addicted to substances (e.g., Stacy & Wiers, 2010). Interestingly, earlier research has suggested that attentional biases also play a significant role in maintaining addictive processes and contributing to the risk of relapse (e.g., Field & Cox, 2008). Subsequently, investigations related to behavioural addictions provided evidence that biased attention towards gambling stimuli might also contributes to the development and maintenance of this harmful gambling (e.g., Ciccarelli et al., 2016). However, research on the role of attentional biases in other behavioural addictions, such as problematic video gaming, is still scarce. The current work aims to overview the cognitive abilities including attentional processes underlying gambling and video gaming problematic use, including also opening loot boxes. *Method:* The study will use data from self-report questionnaires, a behavioural task and from neuroimage techniques such as electroencephalography (EEG). Results: Will be updated later and presented during the oral presentation. *Conclusions:* A discussion of the results of current neuropsychological research on attentional biases in behavioral addictions will be presented. Examining the attentional cognitive mechanisms underlying behavioural addictions could help us better understand how the addictive processes develop and ultimately design effective intervention programs, for instance, by using additive cues to extinguish those conducts (e.g., Ciccarelli et al., 2020).

Keywords: attentional biases, gambling, video gaming

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2G–2

Converging or diverging paths? The dynamic relationship between excessive gambling and excessive gaming

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The convergence of gambling and gaming has been recognized as a potential risk for excessive gambling and gaming. There is a need for more longitudinal studies on their potentially dynamic relationship. We utilized a sample of 18–75-year-olds (N = 1,530) from mainland Finland, collected biannually from 2021 to 2024. Data covers 1,530 individuals in 8 time points and 8,347 observations in total. Outcome measures included excessive gambling, measured with the Problem Gambling Severity Index, and excessive digital gaming, measured with the Internet Gaming Disorder Test. Independent variables included measures of gambling and gaming activities based on multiple items. Models also control for excessive internet use and psychological distress using the Compulsive Internet Use Scale and the 5-item Mental Health Inventory. Data were analyzed using dynamic panel models, estimated using maximum likelihood within a structural equation modeling framework. We found a strong within-domain persistence indicated by autoregressive effects of excessive gambling. Lagged gambling activity also significantly predicted subsequent excessive gambling. Lagged gaming activities did not predict excessive gambling. We found some evidence on lagged effects of excessive gaming on excessive gambling, but they were negative, indicating that excessive gaming predicted decreases in excessive gambling. Autoregression of excessive gaming was also found, but gambling or gaming activities did not have lagged effects on excessive gaming. Psychological distress and excessive internet use were consistent predictors of both outcomes. The findings highlight strong within-domain persistence of excessive gambling and gaming but limited cross-domain effects over time. The concerns of problematic gambling and gaming mutually reinforcing each other over time might therefore be over-exaggerated, at least within the adult population. However, more longitudinal studies covering different age groups are needed. Further research is also needed to determine whether encouraging problem gamblers to substitute gambling with digital gaming could be beneficial. While digital gaming also carries addiction risks, it is likely to be less harmful, particularly in terms of financial burden and other associated negative outcomes.

Keywords: gambling, digital gaming, risks, longitudinal study, general population

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2G–3

Perceived social support as a mediator of the relationship between insecure attachment and problematic gaming and gambling in emerging adults

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Background: Attachment anxiety and avoidance (i.e., insecure attachment) has been consistently linked to substance use problems, as well as certain behavioral addictions. Attachment style tends to be relatively stable, complicating efforts to modify this vulnerability for addictions. One modifiable interpersonal factor related to attachment is social support (i.e., the perception of having people who are available for assistance and support), which is often negatively impacted in insecure attachment due to a lack of trust in others. In this study, we used structural equation modeling to examine social support (from friends, family, and significant others) as a mediator of the relationship between insecure attachment and problematic gaming/gambling in emerging adults (i.e., aged 18-25). *Methods:* A total of 2763 emerging adults who gambled in the past 12 months and 3269 emerging adults who played video games in the past 12 months completed a cross-sectional survey measuring insecure attachment, problematic gaming, problematic gambling, and perceived social support from friends, family, and significant others. Results: For both gaming and gambling, we found excellent model fit. Lower perceived social support from friends mediated the relationship between greater insecure attachment and higher levels of problematic gambling. Lower perceived social support from significant others, family, and friends mediated the relationship between greater insecure attachment and higher levels of problematic gaming. *Conclusions:* Results indicate that social support may be an important protective factor for problematic gaming and gambling among emerging adults with insecure attachment styles. As emerging adulthood is a critical period of the onset of problems with addictive behaviors, it follows that social support may be particularly implicated in the onset and development of problematic gaming and gambling. Since social support is modifiable, with social support from friends being the most easily modified, these results have the potential to inform treatment strategies.

Keywords: attachment, gaming, gambling

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2G–4

Videogaming, loot box use, and gambling in adolescents: The role of maladaptive cognitions related to videogaming

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In recent decades, attention has been paid to the relationship between videogaming, gambling and the use of loot boxes, finding that loot boxes could represent a convergence between videogaming and gambling. Indeed, loot boxes are accessible using videogames and can be considered a precursor for gambling, due to similar structural mechanisms. However, no studies investigated these relationships in adolescents by considering the role of maladaptive cognitions related to videogaming, i.e., cognitions that are related to the development of problematic videogaming. In this study, a path analysis was conducted to explore the relationships between maladaptive cognitions related to videogaming, problem videogaming, engagement in and risky use of loot boxes, gambling frequency, and problem gambling. Participants were 803 high school students (60% male, mean age = 16.36 years, SD = 1.24) attending different high schools in Italy. Results indicated that maladaptive cognitions related to videogaming had significant direct and positive effects on problem videogaming, engagement in and risky use of loot boxes. Significant and positive indirect effects were found from maladaptive cognitions related to video-gaming to problem gambling through loot box engagement and risky use of loot boxes. Knowledge about the role of maladaptive cognitions related to videogaming in the relationship between videogaming, the use of loot boxes, and gambling in adolescents has been expanded. Implications for interventions can be drawn.

Keywords: maladaptive cognitions, videogaming, loot boxes, gambling

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2G–5

Urgency, emotion regulation and motives as potential moderators of sensitivity to experimentally induced compulsivity and craving

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Background: Addiction models highlight the role of craving in driving compulsive behaviors. Craving states are inherently emotional, and can be modulated by incidental and intentional emotion regulation mechanisms, operating either pre-consciously or during conscious craving stages. *Method:* Craving was experimentally induced through an audio-guided protocol. The study involved 70 intensive gamblers and 70 intensive video gamers, all showing signs of risky gambling/gaming below the clinical cutoff. State compulsivity (adapted GRACC scale) and craving levels (VAS) were evaluated pre- and post-induction. Baseline assessments included emotional impulsivity (urgency scales), emotion regulation strategies (ERQ), severity measures, behavioral patterns, and sociodemographic data. Post-induction, participants reported their perceived reasons for any craving increases. *Results:* As expected, measures of craving and state compulsivity largely overlapped. The induction procedure effectively increased compulsivity and craving to similar degrees in both samples. Higher levels of positive urgency were associated with greater induction sensitivity. Emotion regulation strategies showed no significant moderating effects. Coping and fun-related reasons for craving increase did not show significant moderating effects, but endorsement of perceived drive not related to declarative reasons (i.e. “It’s just an incontrollable urge”) significantly predicted induction sensitivity. *Conclusions:* The findings confirm the effectiveness of the induction procedure in increasing craving and state compulsivity levels. The observed relationship between positive urgency and induction sensitivity replicates previous research with retrospective self-report instruments. The seemingly larger role of perceived drive not traceable to declarative motives in gamblers, relative to video gamers, warrants further exploration.

Keywords: behavioral addiction, emotion regulation, craving, compulsivity

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2H–1

Gaming Disorder in adolescents: A case study highlighting multidisciplinary strategies for assessment and intervention

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South Metropolitan Health Service

Background: Fiona Stanley Hospital has established the first publicly funded Gamin Disorder Clinic in Australia that provides comprehensive assessment and intervention of the condition to deliver functional recovery, while addressing the full range of underlying drivers. *Method:* Case study illustrating the management strategy and clinical recovery. *Results:* A 14-year-old Australian male presented to the Gaming Disorder Clinic with Gaming Disorder in the context of concurrent anxiety, social withdrawal, and a history of family domestic violence. On admission to the clinic, the patient was gaming approximately 9 hours daily, and was functionally very impaired: he had withdrawn from the majority of his hobbies, had been refusing to attend school, and had become significantly socially isolated. Concerningly, there were reports of mounting aggression in the family home. For functional rehabilitation and recovery, our Gaming Clinic implemented a comprehensive and patient-centred plan including 'social prescribing', structured routines, family engagement and support, as well as coordination with educational services to support school re-entry and tailored tutoring. The patient then attended weekly activity groups in the clinic and received regular MDT reviews fostering healthy rapport and development of a close therapeutic relationship. Following these interventions, gaming time reduced to <1 hour daily, the patient developed diverse hobbies, returned to school with positive attitudes, and independently joined and regularly participated in a community social group. Family harmony significantly improved, with no ongoing reports of aggression, and the patient reported reduced anxiety. *Conclusion:* This case underscores the importance of holistic, family-centred, and multidisciplinary approaches that includes 'social prescribing' in addressing complex GD cases in young people.

Keywords: gaming disorder, social media addiction, radicalisation online, premenstrual dysphoric disorder, digital detox and rehabilitation

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2H–2

Inpatient admission for Gaming Disorder and Social Media Addiction in the context of social anxiety and attention-deficit/hyperactivity disorder (ADHD)

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Background: Social media and gaming addiction can lead to functional regression and extreme social isolation. *Method:* A case study illustrating the relevance of inpatient digital detoxification, social prescribing, and ongoing community follow-ups. *Results:* A 21-year-old female with existing diagnoses of ADHD, major depressive disorder, and social anxiety was referred to the Gaming Disorder Clinic. She had developed significant gaming and social media addiction with profound impairments. She had a relatively intact premorbid level of functioning: She met normal developmental milestones, completed secondary school, and worked briefly in a retail job before resigning due to work-related stress. Her inability to cope with adverse life events led her to immerse herself in gaming and social media, spending upwards of 14 hours a day engrossed in the digital world. This resulted in complete social isolation at home for five years. To treat her Gaming Disorder, the patient had a 28-day inpatient admission to the youth mental health ward, followed by a three-month inpatient admission to the women-only addiction ward following a relapse. These admissions consisted of digital detox, social prescribing, and medication optimization. While on the ward, a multidisciplinary team of psychiatrists, occupational therapists, and clinical psychologists supported the patient in building insight into her addiction and constructing a productive offline life routine outside her online digital consumption. Through persistent encouragement and the formation of strong therapeutic relationships, the patient was able to work on overcoming a negative self-concept. With the safety of the ward to fall back on, she was gradually exposed to a variety of real-world scenarios. Overall, the admission resulted in appreciable progress, and the patient was able to be discharged home with plans to reintegrate into society. This included enrolling in tertiary education, searching for independent accommodation, and ongoing engagement with social activity groups. *Conclusion:* This case highlights the benefits of inpatient admission for digital detox and functional rehabilitation, while underscoring the importance of social prescribing and assertive community follow-up.

Keywords: gaming disorder, social media addiction, digital detox, social prescribing, functional rehabilitation, social anxiety, ADHD

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2H–3

Clinical assessment and management of Gaming Disorder and Social Media Addiction that lead to extremism, threats of violence, risks to public safety and police involvement

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Background: Gaming Disorder and Social Media Addiction in extreme circumstances can lead to the risks of radicalization, developing extremist ideologies, and threats of violence to the public. The FSH Gaming Disorder Clinic has been approached by the Western Australian Police Countering Violence and Extremism (WA-CVE) Unit to assess and manage such cases. *Method:* A case study illustrating the relevance of in-patient admission for assessment, digital detoxification and complex management, working together with the family, police and other agencies. *Findings:* The case involves a male in his thirties with excessive internet use, autistic spectrum disorder and DiGeorge syndrome. No previous forensic and or psychiatric history. He had posted very violent material online with racist, sexist and far right content and had made preparations for a copy-cat attack of the mass stabbings in a shopping centre in Sydney. He is the only child of elderly parents of Asian heritage; and completed secondary education in a competitive school where he had a limited social network and was the victim of bullying. Social isolation increased after leaving school and worsened during Covid19 lockdown. His activities, interests and relationships all declined and were replaced by interactions with far-right individuals online. Disability support services had been stopped six months earlier because of his verbal aggression and threats of physical aggression. Assessment of comorbid conditions indicated that he has ADHD, cognitive and functional impairments and mental illness. His management has involved a digital detox, encouraging social activities and medication optimization. Investigations included MRI brain scan, neuro-psychological testing and functional assessment. An application has been made to the State Administrative Tribunal for guardianship. *Conclusion:* Extensive liaison with his family, WA-CVE and disability services have been pivotal to his care. The presentation will highlight the vulnerability of autistic people to online harm and radicalization. It will also discuss the potential for harmful consequences from excessive internet use.

Keywords: gaming disorder, social media addiction, radicalisation online, premenstrual dysphoric disorder, digital detox and rehabilitation

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2H–4

Resource-Strengthening Training for Adolescents with Problematic Digital-Media Use (Res@t-A): Results of a pilot study in the clinical group setting

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Background: Adolescents are especially vulnerable to develop problematic digital media use (PDMU), i.e., an addiction to gaming, video streaming, and the use of social media and other digital services. An early intervention is highly necessary to prevent chronification and long-lasting negative consequences in significant areas of the young person's lives. Res@t-A is a manualized treatment program that has been developed by clinical and scientific experts in the field of addiction together with adolescents with lived experiences and their parents at the German Center for Addiction Research in Childhood and Adolescence. The current study aims to investigate the feasibility and the potential of Res@t-A to reduce symptoms of addictive usage patterns and accompanying psychological problems. *Methods:* N=68 patients with PDMU participated in the 8-weeks clinical group program. They filled out standardized questionnaires on PDMU (primary outcome), self-efficacy, psychological distress perception, emotional dysregulation, and sleep problems (secondary outcomes) at three measuring points before, at the end of the treatment, and at a six-weeks follow-up. Linear and quadratic multilevel modeling was performed on the primary and secondary outcomes. *Results:* Patients showed a significant reduction in symptoms of PDMU and psychological problems. Moreover, high feasibility and acceptance could be shown. *Conclusion:* Res@t-A has the potential to become a valuable program to reduce PDMU in the young age group. It should be combined with a parallel parental program (Res@t-P) within a family-oriented wholistic therapy approach. Randomized controlled trials (RCT) to investigate program efficacy are currently planned. Furthermore, adaptions will be made to address cultural diversity and the needs of young adults. An app-based version of Res@t was developed which is evaluated in a multicenter RCT study.

Keywords: gaming disorder, social media addiction, radicalisation online, premenstrual dysphoric disorder, digital detox and rehabilitation

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3A–1

Advances and innovations in behavioral addiction assessment

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Background: The assessment of Internet use disorders (IUDs) has suffered from a number of weaknesses. Compared to other areas of mental health, assessment tools have been based on different theoretical backgrounds to define and classify the different disorders. As a result, a plethora of instruments were developed and no gold standards were available. Approaches have been criticized for lack of clinical relevance and overpathologization. Meanwhile, theories, classifications, and measures of behavioral addictions have evolved and will be summarized in this presentation. *Methods:* Findings are based on a narrative review of the literature, guidelines developed in Germany, and unpublished developments by a World Health Organization (WHO) working group on the development of assessment instruments for gaming disorder. *Results:* With the inclusion of gaming disorder in the 11th International Classification of Diseases (ICD-11), a more conservative approach is available and is less likely to be associated with overpathologization. As a result, a number of new instruments have been developed, most of which address gaming disorder. However, the ICD-11 framework has also been used for the assessment instruments on Social Network Use Disorder and Streaming Disorder. The majority of the instruments are screening questionnaires and suffer from a lack of clinical validation. Two questionnaires have been developed to screen for multiple behavioral addictions. Clinical interviews are still rare. A new tool developed by the WHO - the Diagnostic Interview Schedule for Gaming Disorder (DISGaD) - is available and is being further validated. Screeners for shopping disorder or pornography use disorder are available, but show some weaknesses. *Conclusions:* Progress has been made in some areas in overcoming the shortcomings of behavioral addiction assessment instruments. There is still a need for more robust instruments with clinical validation.

Keywords: online behavioral addiction, gaming disorder, assessment tools, prevention strategies, effectiveness

3A–2

Red box, green box: Evaluating an alternative behavioural frequency measure for gaming disorder research

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Background: Behaviour frequency measures in behavioural addictions research fail to account for how engagement in the activity relates to each respondent's personal circumstances. In 2024, we (Daniel L. King, Joël Billieux, & Paul H. Delfabbro) proposed a "Red Box, Green Box" method, which asks respondents to report two distinct time-based values: (1)

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Green box: time spent engaged in the activity during 'free' time, and (2) Red box: engagement in the activity at times when the respondent should be doing something else (e.g., studying, working, sleeping, exercising, etc). The aim of the presented research was to conduct a quantitative evaluation of the red/green box approach. *Methods:* We surveyed 1,284 gamers who completed the 'red box, green box' measure of gaming, as well as standard measures of gaming disorder (GD) symptoms, psychological distress, impulsivity, and gaming need satisfaction and frustration. We also provided brief vignettes describing different gaming-related situations to measure gaming urge, risk assessment, intentions to play, and difficulty in resisting gaming. We used these data to examine the utility and psychometric performance of the green and red box values. *Results:* This talk will summarise the first psychometric investigation of the red and green box method, including its relationships with conventional variables in GD research. Planned analyses include linear mixed modelling and ROC curve analysis to determine how well red box values correspond with IGDT-10 scores, as well as other tests of variables of interest. *Conclusions:* Measuring gaming behaviour using self-report methods has been fraught with limitations in research and clinical practice. The 'red box, green box' method contributes a simple and relatively low-effort alternative to existing approaches that may prove useful for calibrating frequency estimates to emphasise risk and life interference.

Keywords: online behavioral addiction, gaming disorder, assessment tools, prevention strategies, effectiveness, measurement; gaming behaviour; gaming disorder; psychometric

3A–3

Effectiveness of prevention of gaming disorder and internet addiction in adolescents through CBT vs. media-literacy: A randomized controlled longitudinal study in 92 school classes in Germany

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Theoretical Background: Preventing Gaming Disorder and internet addiction in school settings is of significant educational and public health relevance. Despite high demand from schools, few evidence-based approaches exist. Addressing large populations, as encountered in schools, requires differentiated strategies with an effective cost-benefit ratio. It remains unclear which students benefit most from specific interventions and what competencies are required for their effective implementation. *Research Questions:* This study examined the preventive efficacy of two interventions (CBT-based vs. media lietracy-based) as well as differential effects of these interventions depending on adolescents' individual symptom and vulnerability profiles and the quality of intervention delivery. *Methodology:* In a two-arm, randomized controlled school-based study involving a sample of 1,793 students (mean age = 13.1, SD = 1.5) from 92 classes (40 schools), a CBT-based intervention—previously shown effective for adolescents with elevated symptoms (indicated prevention)—was compared to a media-literacy-based intervention, commonly used in practice as a universal prevention

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strategy for unselected student groups. Symptom changes were assessed after 1, 4, and 12 months. A total of 90 trainers from various professional backgrounds received intensive theoretical and practical training and delivered both interventions under live supervision, with implementation quality coded. *Results:* The CBT condition achieved significantly greater symptom reduction over 12 months compared to the media literacy condition, though with small effect sizes. Large effects were observed in the high-risk subsample with high superiority of CBT over media-literacy. *Discussion:* The findings are discussed in light of the guiding question: which prevention approach (universal vs. indicated) with which content (psychoeducation, CBT-based) is recommended for which target groups (risk profiles), and what quality of implementation is necessary to achieve the desired outcomes.

Keywords: online behavioral addiction, gaming disorder, assessment tools, prevention strategies, effectiveness, gaming disorder, internet addiction, prevention, school, adolescents

3A–4

App-based intervention for Problematic Internet Use (PIU) in children and adolescents from 9 countries

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Background: Children and adolescents are particularly at risk of Problematic Internet Use (PIU) and therefore vulnerable to the resulting impairments. PIU can be conceptualized as a marker of impaired self-management. The umbrella term PIU covers different types of

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maladaptive online activities involving reduced control or risky patterns of use. *Method:* The development of an app-based intervention is embedded in the international multidisciplinary study Boosting Societal Adaptation and Mental Health in a Rapidly Digitalizing, Post-Pandemic Europe (BootStRaP), which involves a scientific consortium from 14 countries and 22 institutions and is funded by the European Union. The study aims to reduce the mental health burden of PIU among children and adolescents (aged 12-16 years) and to promote healthy self-management of Internet use by providing personalized approaches related to the risk of PIU. *Results:* Machine learning algorithm results are used to identify risk factors for PIU. The CBT-based self-management app with behavioral interventions has been developed and will be delivered to adolescents from 9 different countries. According to evidence-based models, PIU can be divided into two underlying mechanisms: Affect regulation, and inhibitory control. Based on a systematic review of the research literature, evidence-based strategies to address these two mechanisms have been synthesized. Results of the app-based intervention development and co-creation sessions with stakeholders to maximize cultural applicability and engagement will be presented. *Conclusion:* The study provides scientific evidence on the underlying mechanisms of PIU and the effectiveness of interventions targeting affective regulation and inhibitory control to promote a healthy Internet usage.

Keywords: online behavioral addiction, gaming disorder, assessment tools, prevention strategies, effectiveness, app-based intervention, prevention, problematic internet use

3A–5

A new measurement tool to assess problems related to the use of screen-based devices

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Background: While screening for problematic digital media or internet use in general is a valuable and rapid initial step of assessment, recent technological advancements and the near-constant online connectivity require an update of terminology, methodology, and measurement instruments. The present study aimed to develop a new scale designed to assess problematic screen-based device use. *Methods:* An initial pool of 33 items was generated, informed by the Problematic Internet Use Questionnaire (PIUQ) (Demetrovics et al., 2008; Laconi et al, 2019), and incorporating ICD-11 and DSM-5 diagnostic criteria of (internet) gaming disorder. The items were administered to 2,004 participants, proportionate of the UK population in terms of gender, age, and ethnicity (48.05% men, 51.00% women, and 0.60% other gender; age: M [SD]=46.56 years [15.66], range: 18-87 years). The questionnaire was readministered three weeks later to a subsample of participants. *Results:* Through exploratory and confirmatory factor analyses, a 25-item long form (ProbScreen-25) and a 12-item short form (ProbScreen-12) of the Problematic Screen-Based Device Use Scale were created. Both versions capture the same four distinct dimensions of problems associated with screen-based device use: impaired control (IC), functional impairment (FI), dependence/craving (DC) and coping/escapism (CE). Both scales and all subscales demonstrated high levels of internal consistency, and significant, positive, and high test-retest correlations. Gender differences were minimal, with women exhibiting higher mean scores on impaired control, and men on functional impairment. Age showed weak to moderate negative correlations with total and subscale scores. *Conclusions:* The ProbScreen is a reliable and valid instrument, showing promise as a tool for assessing general problems related to the use of screen-based devices.

Keywords: digital media use, problematic screen-use, factor analysis, internet addiction, technology addiction, addictive behaviors

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3B–1

Characteristics of self-regulation in women with Gaming Disorder during follicular and late luteal phases

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Background: Gender differences in the presentation and mechanisms of gaming disorder are well-documented. However, studies focusing on women, particularly with consideration of the menstrual cycle, are scarce. This study evaluates the severity of gaming disorder and self-regulation among women with gaming disorder across different phases of the menstrual cycle. *Methods:* Forty-six women diagnosed with gaming disorder and forty-six healthy controls participated in this study, which was conducted following psychiatric interviews based on the ICD-11 criteria. Participants completed the Self-Regulation Questionnaire (SRQ) and the Chen Internet Addiction Scale - Gaming version (CIAS-G) during both the follicular and late luteal phases. *Results:* Women with gaming disorder scored higher on the CIAS-G compared to controls. No significant differences were found in SRQ scores during the follicular phase.

Keywords: gaming disorder, internet addiction, gender, Hikikomori, treatment

3B–2

Are Hikikomori and Gaming Disorder different conditions?

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Background: Gaming Disorder and the Hikikomori, a cultural-based form of social withdrawal initially described in Japan yet on the rise in western countries, are both conditions that potentially assume a compensatory immersion in the virtual world at the expense of the physical world. However, while in the former case the isolation would be caused by the loss of control over gaming behavior, in the latter the investment in gaming would be a survival strategy to social withdrawal, with important treatment repercussions. Noteworthy, the literature investigating the interplay between Hikikomori and Gaming Disorder is at a very early

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stage. This study aims at investigating the link between the two conditions via the Compensatory-Dissociative Online Gaming (C-DOG) model. *Methods:* Via Prolific, we surveyed a finely screened sample of 453 young adults (18-25) online gamers with measures of Gaming Disorder (GAMES), Hikikomori (HQ-25), compensatory and dissociative gaming processes (C-DOGs), emotional distress (BSI-18) and satisfaction/frustration of basic psychological needs (BPNSFS). Cluster analysis will be performed to identify reliable sub-groups of psychological processes associated with the two conditions. *Results:* Results are forthcoming and will be available for ICBA2025. Preliminary analyses showed that 35% (n=158) of the total sample scored positively for Gaming Disorder. Among them, 70% (n=109) scored positively for Hikikomori too. *Conclusions:* This study will investigate under which circumstances Gaming Disorder and Hikikomori are concurrent versus distinct conditions. Implications for prevention and treatment will be discussed.

Keywords*:* gaming disorder, internet addiction, gender, Hikikomori, treatment

3B–3

Evolution of treatment of gaming disorder and internet addiction in Japan

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Background: In 2019, the prevalence of probable gaming disorder (GD) in Japan among people aged between 10 and 79 years was estimated at 2.4%. In the context of a growing demand for treatment, the number of medical facilities providing specialist treatment increased steadily from 2011. Our center has conducted a series of surveys in order to better understand how treatment of GD and internet addiction (IA) is conducted at these facilities. *Method:* We identified specialist facilities with the assistance of the Mental Health and Welfare Center of each prefecture and large city, in 2016 and 2018. In addition, we conducted detailed surveys in 2020 and 2023 to understand the nature of facilities, reasons for providing specialist treatment, treatment programs, difficulties in treatment, treatment goals, and patient characteristics. *Results:* There was an increase in treatment programs specifically targeting the treatment of GD and IA and a decrease in treatment difficulties at these facilities between 2020 and 2023. Nearly all facilities reported that treatment goals included reduction in gaming and internet use. More than 80% reported that the key treatment priority was to improve real world outcomes rather than simply reducing gaming time. The development of services has resulted from the efforts of individual facilities to meet the treatment demand from families and patients. Regarding comorbidities, autism spectrum disorder and attention deficit hyperactivity disorder were the most prevalent and did cause treatment difficulties. *Conclusions:* Two nationwide surveys suggested that specialized treatment programs targeted at GD and IA have become more comprehensive, treatment skills of specialists appear to have improved, and the

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geographical distribution of these facilities has become more even. As medical treatment is just one part of the solution, future challenges will be to incorporate government-led planning and to implement comprehensive measures.

Keywords: gaming disorder, internet addiction, gender, Hikikomori, treatment

3B–4

The state of Play: gaming disorder in the Indonesian landscape and emerging treatment options

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Gaming disorder has become an emerging condition in Indonesia, both during and after the COVID-19 pandemic, with the widespread accessibility of online gaming applications to children, adolescents, and young adults. A 2022 national study involving 1,200 adolescents and young adults revealed a 1.9% prevalence of gaming disorder, with adolescents being 1.5 times more likely to experience it compared to young adults. Adolescents predominantly played MOBA and MMORPG games, while MOBA games were the most popular among young adults. Post-pandemic data from a study in two major cities, involving 2,676 participants indicated a 46% prevalence of gaming disorder, with an equal distribution between genders. Factors associated with gaming disorder included issues with peers ($p < 0.002$), sleep quality ($p < 0.008$), emotional problems ($p < 0.000$), self-esteem issues ($p < 0.000$), and prosocial behavior problems ($p < 0.000$). This study also found a comorbidity between gaming disorder and the use of new psychoactive substances (6.8%). To address the growing prevalence, various therapeutic modalities were developed. An RCT study was conducted to evaluate the effectiveness of cognitive training exercises over nine weeks, with sessions held three times a week. Each session involved three types of tasks, including short-term and episodic memory, working memory, reasoning and response, and visuospatial attention. The intervention significantly reduced gaming disorder symptom scores ($p = 0.0017$), impulsivity by 24%, and cravings pre- and post-intervention ($p = 0.018$). Another approach, group-based dialectical behavior therapy, was conducted in eight weekly sessions. This method effectively reduced Internet Addiction Test scores, enhanced motivation for behavioral change, and shortened gaming durations.

Keywords: gaming disorder, internet addiction, gender, Hikikomori, treatment

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3B–5

Efficacy of treatment camp (SDiC) for internet addiction

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Background: We have conducted a 9-day / 8-night treatment camp for internet addiction (IA), called the Self-Discovery Camp (SDiC), in association with the National Institution for Youth Education, once a year since 2014. This program consists of the main SDiC camp plus a 3-day / 2-night follow-up camp three months later. The programs of the camp include a combination of treatment programs, such as group CBT, individual counseling and lectures on IA, together with ordinary camp programs, such as outdoor cooking, mountain climbing and field athletics. In this study, we evaluated the treatment efficacy of SDiC for these camp participants. *Methods:* The subjects of this study were 91 young males with IA, aged between 13 and 24 years old, who participated in SDiC between 2015 and 2022. Among these, follow-up data on 60 participants were available and were analyzed. The efficacy of the camp was evaluated, comparing the results of self-reported questionnaires between the main camp and the follow-up camp. The questionnaires included the Japanese versions of the Internet Addiction Test (IAT), Diagnostic Questionnaire (DQ), the 10-Item Internet Gaming Disorder Test (IGT-10) and the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). This study was approved by the ethics committee of our Center. *Results:* Compared to the main camp, the scores of IAT, DQ, IGDT-10 and the taking steps subscale of SOCRATES siginificantly had decreased by the follow-up camp. The result also suggested that the duration of daily and weekly internet activity had significantly decreased. *Conclusions:* This study suggested that the SDiC was efficacious for the improvement of IA, although the design was a pre- and post-intervention comparison and the follow-up period was relatively short. Future studies warrant a randomized control, longer follow-up, and multi-center study.

Keywords: gaming disorder, internet addiction, gender, Hikikomori, treatment

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3C–1

The role of social media, emotional distress, emotion regulation, and social support on body dissatisfaction in older adults

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Background: Body dissatisfaction is defined as negative thoughts and feelings about one's body. Body dissatisfaction is influenced by social media due to its power to promote the ideal body. Social media use among older adults has been shown to have an impact on mental health. However, little research has focused on body dissatisfaction in this population. Various factors could influence body dissatisfaction in older adults such as the use of social media, emotional distress, emotion regulation, and social support. Therefore, this study has three main aims. Firstly, the relationships between the variables of interest were examined (i.e., body dissatisfaction, social media, emotional distress, emotion regulation, and social support). Secondly, the study assessed sex differences. Thirdly, this study aimed to explore the potential predictors of body dissatisfaction among all the variables mentioned. *Methods:* The sample included 736 participants over 60 years who completed several instruments related to body dissatisfaction, problematic use of social media, emotion regulation, emotional distress, and social support. *Results:* The results demonstrated sex differences. Firstly, older women had higher levels of body dissatisfaction than older men. Moreover, strategies such as blaming others and lower social support predicted increased dissatisfaction in older women. Conversely, compulsive use of social media, anxiety, and impaired emotion regulation predicted greater body dissatisfaction in older men. *Conclusions:* In conclusion, the findings suggest that older adults might be vulnerable to body dissatisfaction. Thus, an ideal intervention should include social media education, the development of adaptive emotion regulation strategies, and body acceptance.

Keywords: body dissatisfaction, problematic use of social media, older adults

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3C–2

The experience of social media influencers in delivering online content to support people with eating disorders: Findings from the Interconnect-EDs project

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Backgroun:. There is promising evidence that social media influencers can promote healthy attitudes and behaviors by leading to greater adoption of these attitudes and behaviors by their followers. However, the experiences of content creators with lived experience of an eating disorder (ED) have received little research attention. The aim of this qualitative study is to explore how content creators with lived experience use their social media platforms to promote healthy content and encourage engagement with interventions. *Method:* We recruited 10 female content creators with lived experience of an eating disorder (AN=5; BED=3; BN=2; mean age 32.2 years) who participated in the Italian Interconnect-EDs project. They were interviewed by the research team and responded to four open-ended questions about: the usefulness of social media for adolescents and young adults with ED; the role of social media as a risk and maintenance factor for the illness; the benefits content creators experience in sharing their recovery journey; and how it can be used to prevent worsening of ED. *Results:* Two-thirds of participants used their Instagram profiles to inspire hope and promote treatment uptake among followers suffering from ED. Three themes emerged from reflexive thematic analysis: a) the importance of social media in countering unrealistic and misleading body image posts, and in sensitizing family and peers to the negative impact of pro-ED content; b) Instagram posts as a way of exploring the transition to another stage of recovery; c) providing helpful content via social media can help to build a model of bottom-up prevention. *Conclusions:* This study represents the first stage of a co-designed integrated programme to implement the promotion of eating wellbeing. The results can inform the development of social media vlogs as a potential intervention to improve EDs.

Keywords: social media, influencers, eating disorder, qualitative research

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3C–3

Do state appearance comparison and body satisfaction vary with exposure to social media images? An ecological momentary assessment study with Italian adolescents

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Background: In recent years, social media (SM) use has become almost ubiquitous, with an estimated 60.43% of Italian adolescents reporting intensive or problematic SM use (Boer et al., 2020). Although a number of correlational studies have found that SM use is associated with body image concerns (e.g., Fioravanti et al., 2022; Rodgers et al., 2020), there is limited longitudinal evidence on state-like associations between exposure to images and adolescents' appearance comparison and body satisfaction. The present study uses ecological momentary assessment to examine (I) the associations between exposure to images on SM and concurrent and later appearance comparison and body satisfaction, and (II) the role of social media addiction and baseline body dissatisfaction as moderators of these associations. *Method:* Participants were 78 adolescents (M age = 14.59; 71.79 % female), who provided EMA data twice daily for 21 consecutive days via a mobile application. Baseline data on social media addiction (using the Bergen Social Media Addiction Scale) and body dissatisfaction (using the Body Dissatisfaction Scale of the Eating Disorders Inventory-III) were also collected. *Results:* Dynamic structural equation modelling (DSEM; McNeish & Hamaker, 2020) revealed that image exposure, appearance comparison and body satisfaction had significant positive autoregressive parameters. In contrast, the results did not reveal statistically significant cross-lagged associations between the variables. At the between-person level, the results revealed the moderating role of adolescents' body dissatisfaction. *Conclusions:* Although viewing images in SM may be associated with body dissatisfaction, the temporal relationship between exposure, appearance comparison, and body image is complex and seems far from clear among adolescents. Future studies could assess how the identification of risk and protective factors might be addressed.

Keywords: ecological momentary assessment, social media use, appearance comparison, body dissatisfaction

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3C–4

Attachment, emotion regulation, and their role in exercise addiction and eating disorders

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The co-occurrence of exercise addiction (EA) and eating disorders (ED) represents a significant concern, given their shared psychological characteristics, including distorted body image and emotion regulation difficulties. This study examines how attachment styles and emotion regulation deficits contribute to these behaviors, aiming to provide insights for better prevention and intervention strategies. A sample of 626 participants (69% women; mean age = 38.54) completed validated assessments, including the Experiences in Close Relationships Scale (ECR) for attachment, the Difficulties in Emotion Regulation Scale – Short Form (DERS-SF), the Eating Attitudes Test (EAT-26), and the Exercise Addiction Inventory (EAI). Path analyses revealed that attachment anxiety was significantly associated with symptoms of both ED and EA, while attachment avoidance primarily influenced EA symptoms. Emotion regulation deficits mediated the relationship between attachment styles and disordered behaviors, with distinct patterns observed. Lack of emotional awareness was more strongly linked to ED, while non-acceptance of emotional responses was more predictive of EA.

These findings highlight the importance of considering attachment-related vulnerabilities and specific emotion regulation deficits in understanding and addressing ED and EA. Tailored interventions focusing on improving emotional awareness for ED and fostering emotional acceptance for EA could offer promising pathways for treatment. Additionally, addressing attachment-related factors, such as insecure attachment, may reduce the risk of these behaviors developing or persisting.

This study adds to the growing body of literature on the psychological mechanisms underlying EA and ED. While preliminary, these results suggest that integrating attachment and emotion regulation perspectives can inform targeted prevention and intervention strategies. Further research research is needed to explore longitudinal patterns and cultural influences to refine these findings and enhance their applicability.

Keywords: Exercise Addiction (EA) Eating Disorders (ED) attachment styles emotion regulation psychological mechanisms

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3C–5

Vicarious world of Mukbang: Does problematic eating meet problematic social media consumption?

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Mukbang, a rising trend on social media, is a complex behaviour that involves individuals recording themselves on camera, eating copious amounts of food accompanied by intimate and graphic sounds of chewing (OxfordLearnersDictionaries,2023)-- autonomous sensory median response (ASMR), in which sounds induce a tingling sensation among viewers (Engelbregt et al., 2022). In their groundbreaking work, Billieux et al., (2015) highlight the risk of 'behavioural addiction' as a valid construct posed by the propensity for researchers and clinicians to over pathologize normal daily activities carried out to excess . Our research attempts to thoroughly comprehend the increasing trend of Mukbang in the Indian context in two stages. The first stage involves focus group discussions (FGD's) with 'mukbangers' (creators) gauging themes such as eating behaviours, ASMR, and fetishization. In stage two of our study, we will administer scales such as the Mukbang Addiction Scale (Kircaburun et al., 2020), the Binge Eating Scale (BES), the Mukbang Gratification Scale (Kagan Kircaburun et al., 2022), and ASMR scale(s) to mukbang viewers to collect quantitative data. This approach will help highlight probable complex interactions between environmental, social, and psychological influences on a person's behaviour with respect to both creating as well as watching mukbang videos. Some mukbangers encourage toxic viewer engagement through provocative content, reflecting how social media algorithms prioritize interaction—whether positive or negative—without regard to the content's implications. This phenomenon thus raises critical questions about the influence of mukbang on mental health, body image, and in general the ethics of digital content consumption in India.

Keywords: Mukbang, social media, eating behaviours, sexual objectification

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3D–1

Effectiveness of tracking tools used for identifying problem gamblers: A systematic review

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Background: With the proliferation of online gambling and the introduction of gambling prevention policies, online operators have implemented harm prevention strategies like screening tools. These tools are designed to identify problematic gamblers by using account-based gambling tracking data such as time spent playing, winnings and losses, etc. Numerous studies have investigated which of these behavioral data are statistically significant in identifying problematic gamblers and several have explored players' acceptance of these tools. This systematic review aims to analyze the findings of these studies to assess the efficacy of the tools, as well as to explore gamblers' awareness, usage and acceptance of them. *Method:* We conducted our search across six databases (i.e., PubMed, DOAJ, Web of Science, PsycINFO, Embase, and Scopus), following PRISMA guidelines and the PICO framework, and we registered the protocol on PROSPERO (ID: 493330). The included studies had to meet the following criteria: they needed to be quantitative, written in either English or French, include online gamblers, and focus on screening tools (often underpinned by machine learning algorithms). After data extraction, the articles were sorted in two stages by two independent coders. The kappa coefficient was calculated at each stage of the sorting process. The Quality Assessment Tool for Studies with Diverse Designs (QATSDD) was then used to assess the quality of the included studies. *Preliminary results*: A total of 5 514 articles were extracted from the databases. After the first sorting stage, 72 articles were retained (kappa's k = .69). After the second sorting stage, 25 articles were retained (kappa's k = .60). *Conclusion:*. These results will highlight both the strengths and limitations of current screening tools and, consequently, provide recommendations for their further development and functioning.

Keywords: screening tools, behavioral data, problematic gambling

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3D–2

The use of machine learning to detect problem gamblers using cross-platform data: A study protocol

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Background: While most individuals treat gambling as a hobby, for some it is associated with distress and functional impairment. According to the Canadian Problem Gambling Index (CPGI), among all French gamblers who have gambled at least once in the year, 5.0% appear to be low-risk gamblers, 1.7% are moderate-risk gamblers, and 0.8% are excessive gamblers. Online gambling, which accounted for 16.1% of gamblers in 2019, compared to 7.3% in 2014, is particularly risky and requires advanced harm-reduction measures. However, current responsible gambling efforts often lack standardization and are operator-specific, limiting their effectiveness in addressing this issue, especially when it comes to the screening of problem gamblers. This study aims to compare the problem gamblers screening performance of a machine-learning (ML) model using account-based gambling data from multiple licensed operators versus a ML model using account-based gambling data from a single licensed operator. *Method:* Gamblers recruitment will be handled by Winamax, a French gambling operator, that will systematically contact its users having an active account. The recruitment period will occur until the inclusion of 10000 participants. The CPGI will serve as the benchmark for evaluating each ML model's performance. Their performance will be compared using the Area Under the ROC Curve score, but also using other metrics derived from the confusion matrix (e.g., sensitivity and specificity). A nested cross-validation method will be used to optimize ML algorithms (e.g., Random Forest and Support Vector Machine). *Expected results:* The ML model generated with multi-operator data is expected to outperform the other one. Another expected outcome is a validated problem gamblers screening tool that aligns with national and international harm-reduction standards. *Conclusion:* This ML model will benefit regulators, operators, and public health efforts, contributing to the development of more effective and standardized responsible gambling practices.

Keywords: online gambling, problem gambling, machine learning, harm prevention, risk indicators

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3D–3

Predicting gambling disorder using player tracking data and longitudinal GD screening data

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Background: The worldwide growth in online gambling markets requires an adequate expansion in prevention measures. Research on player tracking data is very promising and has so far had two foci: 1) correlating the data with problem gambling proxies like self-exclusion or 2) associating them to problem gambling screenings to create responsible gambling artificial intelligence (AI) algorithms. This talk presents results of player tracking data in combination with a DSM-5-based gambling disorder (GD) screening to longitudinally predict the development or maintenance of GD. *Methods:* In a longitudinal case-control study with 607 online sports bettors (18-55 y.) at baseline and 325 at a one-year follow-up, we combined player tracking data with survey data including a GD screening at baseline and at follow-up. Participants were recruited through the provider and had opened their current account more than 6 months ago. All participants had previously been classified for risky gambling with the company's AI algorithm giving us the unique opportunity to compare AI data with screening data. *Results:* Most player tracking outcomes, especially regarding losses and stakes, as well as outcomes regarding live action betting, deposits, and odds are strongly associated with and predictive of GD. We are also going to present results on how well the AI algorithm corresponds to both GD screenings (baseline and follow-up). *Conclusion:* We found evidence that most of the online gambling behaviour outcomes predict the maintenance and development of GD, making them clinically significant. It is important to review their inclusion into AI algorithms to better predict the development of GD and to review their inclusion into gambling disorder prevention policy.

Keywords: longitudinal, gambling disorder, online sports betting, player tracking data, prevention

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3D–4

Impulsivity and online sports betting behavior: Untangling the causal relationship

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Background: The rapid expansion of online sports betting has raised significant concerns about its impact on individual health, particularly its role in the development of gambling disorder (GD). Understanding the causal processes underlying GD is crucial for advancing etiological models. High impulsivity and risky online gambling behavior have been identified as potential early indicators of GD. This study tested the mediation hypothesis that increased impulsivity leads to risky online gambling behavior, which subsequently contributes to GD. *Methods:* A longitudinal cross-lagged panel design was used to assess impulsivity, risky gambling behavior, and GD symptoms at three time points spaced three months apart. The sample consisted of n=954 regular account holders from the online gambling provider Tipico (n=646 at t2, n=427 at t3). Impulsivity and GD severity were measured using online experimental tasks and self-report questionnaires, while player tracking data from Tipico provided objective measures of risky gambling behavior. Hypotheses were tested using random intercept cross-lagged panel models. *Results:* Increases in impulsivity were found to predict future GD severity among online sports bettors. However, the hypothesized effect of risky gambling behavior as a mediator was not supported. *Conclusions:* Impulsivity appears to be a direct driver of GD, independent of specific gambling behaviors. These findings underscore the importance of targeting impulsivity in early prevention strategies. Further research should explore more potential mediators to refine etiological models of GD.

Keywords: sports betting, impulsivity, player tracking data, longitudinal design

3D–5

‘An amazing party – while I am drowning’: Ideas for intervention from young people who gamble

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This study draws on qualitative data from young people (ages 16-29) who gamble in the Netherlands (n=30). It presents their ideas on interventions to reduce or stop gambling and gambling-related harms. Respondents describe two distinct worlds regarding gambling. The first is a world where gambling is highly normalized and omnipresent through commercials.

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Young people are introduced to gambling at sports clubs, by friends, colleagues, or even their bosses. Gambling is often presented as an easy way to make money—if done "smartly." People mostly brag about their wins, but they also speak mockingly about losing large amounts, such as 1,000 euros. The second world involves people being largely unaware of the prevalence of gambling and its harms. Respondents describe gambling as invisible to those who have no interest in it, particularly online gambling. Most young gamblers report being at high risk for years while living with their parents, who remain unaware of their activities. In this second world, gambling is viewed as socially unacceptable. There is a gap between these two worlds, and crossing it often causes feelings of shame, guilt, and stigmatization—both from parents and from successful gamblers. One respondent describe his experience with gambling as 'an amazing party, while I am drowning', nicely illustrating the clash between both worlds. Respondents note that, compared to the high density of commercials promoting gambling they are exposed to, knowledge about gambling-related harms or available treatment options is largely absent unless one actively seeks it out. Although legal gambling providers in the Netherlands are required to intervene when they detect a person is at risk, respondents report rarely encountering such interventions. In contrast, they share multiple examples of being manipulated by the gambling industry to continue gambling. Thus, both worlds are significantly imbalanced: the positive aspects of gambling are heavily emphasized, while interventions are minimal. This imbalance affects individuals' ability to make autonomous decisions. The prevention and intervention side of gambling needs to step up its game, while the normalization needs to be reduced through legislation. Respondents are doubtful about the possibility of early intervention, as gambling is not perceived as a problem in the first world. Many believe that an individual must "hit rock bottom" before they are motivated to quit. However, the high normalization of gambling among young people presents opportunities for peer interventions. Some respondents regularly offer support to friends who gamble or to other gamblers on forums. They also describe peer support as crucial in their own recovery.

Keywords: gambling, normalisation, treatment, prevention, regulation

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3E–1

Gendered pathways in gambling behaviours: Exploring women's experiences and challenges

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Background: The 2018-2028 Interministerial Action Plan on Gambling in Québec highlights the importance of gender-sensitive interventions to address the unique needs of women. Social pressures related to traditional gender roles, such as motherhood and domestic responsibilities, impact women's gambling behaviours. These pressures, coupled with societal stigma, create barriers to seeking help. This study examines the complex trajectories of gambling problems among women, focusing on the factors influencing their relationship with gambling and recovery. *Method:* Twenty-six qualitative interviews were conducted with women experiencing gambling-related harms from various regions of Québec, both those who sought treatment and those who did not. Paillé and Mucchielli's analytical framework was used to analyze participants' narratives and identify key patterns. *Results:* Women often begin gambling as a coping mechanism in response to dysfunctional family environments, abuse, or trauma, using it to manage emotional distress and anxiety. Societal expectations related to gender, particularly the role of "guardian of the home," contribute to feelings of guilt—both for the gambling behaviour and for violating social norms. Many women minimize their gambling, failing to recognize it as problematic despite significant financial losses, as gambling is normalized in their daily lives and influenced by gendered stereotypes. Women rarely seek help unless encouraged by their social circles. Gender also affects risk perception, with women more likely to avoid certain gambling settings due to concerns about physical safety. Recovery pathways are highly individual, with some women recovering quickly while others need more prolonged, tailored support. *Conclusions:* The study underscores the need for personalized, gender-sensitive support services that address the unique challenges women face, including social inequalities, stigma, and safety concerns. Recommendations include raising awareness of gambling risks, strengthening family support networks, and implementing targeted harm reduction programs.

Keywords: gaming, women, recovery trajectories, gender, support services

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3E–2

The efficacy of Virtu-A treatment: Results at T3 and practitioners' views

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Worldwide, nearly 3% of young people have a video game disorder. In Quebec, the Virtu-A intervention was developed to help young people aged 15-25 seeking help in addiction treatment facilities (Dufour et al., 2023). To make a preliminary assessment of the results of this new intervention, a comparative study, with a control group, was carried out in 15 addiction treatment centers in Quebec. The control group comprised 26 youths, while the Virtu-A group consisted of 24 youths with an average age of 17. A pre-post and 6-month evaluation measured video game use habits, the severity of Internet and video game addiction problems, psychological distress, self-control strategies and social relationships. Preliminary results show a reduction in use patterns, problem severity and psychological distress for both the control and Virtu-A groups. In addition, the practitioners emphasize how Virtu-A has had several benefits on their interventions, notably on their understanding of behavioral dependency problems and on the structure of their interventions.

Keywords: gaming, recovery, trajectory, treatment video game, treatment evaluation, stakeholders

3E–3

Recovering from problem gambling: Treatment trajectories and helpfulness

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Approximately 20% of individuals struggling with gambling problems actively seek formal treatment. This presentation explores the critical period between first recognizing gambling issues and engaging in treatment. Sixty-five adults in treatment for gambling problems were recruited across Canada. Using a mixed-methods approach, the study examines treatment trajectories, identifying referral sources and capturing qualitative experiences with various

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types of specialized support. Thematic analyses reveal key trigger points for seeking help and offer insights into improving access to and effectiveness of available resources. By addressing the diversity of pathways individuals follow when seeking support, this research highlights the perceived helpfulness of various treatment options. The findings aim to inform better-targeted interventions and enhance the understanding of recovery processes for gambling-related problems.

Keywords: gaming, recovery, trajectory, gambling; treatment; recovery pathways

3E–4

Toward implementation of specialized services in public rehab centers in Quebec: The challenge of adapting care trajectories

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Several government departments of the province of Quebec have joined forces to establish a concerted plan of action for the prevention, reduction and treatment of addictions. The goal is to facilitate the access, improve the trajectories of care and the quality of services. Several measures were put in place and millions of dollars invested. We're beginning to see some results. Two treatment programs were financed to equip caregivers to help people who come to them for help with gambling addiction or problematic Internet use. This initiative is based on collaboration between research and clinical experience and rooted in local knowledge. How do clinical environments welcome these programs and what is the impact on the quality of services offered to people in treatment? More than 150 people have already received those trainings, and we can say that there are challenges in terms of adapting to service trajectories. This presentation will highlight the positive effects of training caregivers and the challenges to be overcome in order to continue improving services.

Keywords: gambling, gaming, recovery, trajectory, training, specialized services, problematic internet use

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3F–1

Clinical correlates of co-occurring food addiction and attention-deficit hyperactivity disorder

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Food addiction and attention-deficit hyperactivity disorder (ADHD) frequently co-occur. Although previous studies suggest that comorbid food addiction and ADHD is associated with greater impulsivity, little is known regarding other clinical correlates (e.g., emotion dysregulation, mental health, other addictions) of this comorbidity. The present study addressed this gap. Participants were recruited through six universities across Canada as well as a crowdsourcing site. Participants included in this sample consisted of individuals who met the cut-off of food addiction (N = 664) using the modified Yale Food Addiction Scale (2.0). Participants completed an online cross-sectional survey including ADHD symptom severity, psychological (e.g., emotion dysregulation, impulsivity), mental health (e.g., anxiety), and addictions (e.g., cannabis use) correlates. A total of 220 (32.7%) individuals met the cut-off score for ADHD. Individuals with probable ADHD reported significantly higher rates of adverse childhood experiences (ACEs), greater difficulties in regulating emotions, negative and positive urgency, and lower premeditation and goal orientation. They also reported greater depression, anxiety, PTSD, and social anxiety symptoms. Participants were also more likely to engage in problematic use of alcohol and cannabis and engage in problematic sexual behaviour and problematic buying behaviour. A multivariate binary logistic regression was conducted to examine associations between various psychological, mental health, and addictions factors and the likelihood of co-occurring food addiction and ADHD. Significant predictors in the model were positive urgency, difficulties in engaging in goal oriented behaviour, and symptoms of depression, anxiety, PTSD, and social anxiety. Taken together, the results suggest that food addiction and ADHD may commonly co-occur and that individuals with this comorbidity present with greater clinical complexities. Future research is needed to examine the causal mechanisms underlying these associations.

Keywords: food addiction, ADHD, comorbidity

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3F–2

Risk factors for BE among patients with ADHD: Association with PTSD and ADHD symptoms and possible mediation by emotion regulation

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Introduction: ADHD and PTSD are both associated with binge eating (BE), but it is unclear whether they may act through a shared or two different pathway(s). Emotion dysregulation, which is associated with BE, ADHD and PTSD, may be a shared mediating factor of these relationships. Focusing on patients with adult ADHD may provide a unique opportunity to assess these hypotheses given the high prevalence for PTSD and BE in this population. We investigated the risk factors for BE in outpatients consulting for ADHD and with a confirmed diagnosis of ADHD, by taking into account simultaneously PTSD and ADHD symptoms. We also tested the possible mediational role of emotion dysregulation in these relationships. *Material and Methods:* We assessed 97 adult patients seeking treatment for ADHD in an outpatient consultation (University Hospital of Tours, Department of Addiction; diagnosis made by a psychiatrist, DIVA-5) for BE (Binge Eating Scale), PTSD (LEC-5 and PCL-5) and ADHD symptoms (ASRS-18 and WURS), as well as emotion dysregulation (DERS-16). *Results:* Significant BE was observed in 27.8% of our sample (mean BES score=11.8±9.1), with 91.8% of our sample having experienced at least one traumatic event (mean PCL-5 score =28.9±20.8). In multiple linear regression, adult ADHD symptoms ($t=2.60$; $p=.011$) and PTSD symptoms ($t=4.23$; $p<.001$) were two independent risk factors for BE ($F(2,94)=7.43$; $p<.001$). The ADHD – BE was fully mediated by emotion dysregulation. The PTSD – BE relationship was partially mediated by emotion regulation, with also a direct PTSD - BE effect. *Discussion:* Among patients with ADHD, both ADHD and PTSD symptoms were risk factors for BE. Emotion regulation may be a shared transdiagnostic risk factor for BE that may be targeted to manage BE among patients with ADHD. We will also discuss here the complex relationships between PTSD and ADHD among patients with BE, and more generally, among patients with behavioral addictions.

Keywords: ADHD, binge eating, emotion regulation, post-traumatic stress disorder

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3F–3

Passionate engagement and emotional dynamics in video gaming among individuals with and without ADHD: Adaptive and maladaptive patterns

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Background: Video game practice can be seen as a way to escape from daily life or alleviate negative emotions. For some individuals, it is perceived as an adaptive strategy for managing ADHD symptoms. The primary objective of this study is to determine whether significant differences exist between individuals with and without ADHD regarding passionate engagement, tilt, and flow states. Among individuals with ADHD, we aim to identify three player profiles as proposed by Infanti et al. (2023)—at-risk players, engaged players, and casual players—based on the two dimensions of passionate engagement. *Method:* An online survey will be conducted with 360 participants, including 210 with probable ADHD (identified using the ASRS) and 150 without ADHD (ongoing data collection). Participants will complete the following measures: Adult ADHD Symptoms Rating Scale (ASRS), Passion Scale, Scale of Positive and Negative Experience (SPANE), Online Flow Questionnaire, Video Gaming Tilt Scale (VGTS), and Escapism Scale.*Results:* Individuals with probable ADHD compared to those without ADHD, are expected to exhibit more obsessive engagement in video games, experience tilt episodes more frequently, and report lower flow scores. Within the ADHD group, at-risk players are hypothesized to display higher levels of obsessive passion, negative emotional experiences, suppression-type escapism, tilt, and lower flow scores. Conversely, engaged players are expected to report higher scores in harmonious passion, positive emotional experiences, and flow. *Discussion:* The results will highlight the adaptive and maladaptive aspects of video game use and the associated variables. These findings could inform prevention strategies and improve support for individuals with ADHD who engage in video gaming.

Keywords: gaming, ADHD, passion, emotion

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3F–4

Conditions that pose a risk of addiction: ADHD or Cognitive Disengagement Syndrome?

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Backround: Research indicates that recently problematic internet use is becoming more widespread. Cognitive Disengagement Syndrome; is a timely issue for child psychiatry characterized by slowness, excessive daydreaming and lethargy and often shows comorbidity with Attention Deficit and Hyperactivity Disorder. Previous studies indicated that ADHD positively predicts problematic internet use, but to our knowledge, there is no prior study focusing on the relationship between CDS and problematic internet use among child-adolescent age group, which the current study attempts to examine. *Method:* This cross-sectional study recruited participants with ADHD (n=37), ADHD+CDS (n=38) and a control group (n=39) aged between 12-18. Participants completed sociodemographic data form, Young Internet Addiction Scale, ADHD scale, and Slow Cognitive Tempo Scale. A regression model was tested to assess the predictive factors of ADHD and CDS sub-dimensions for PIU development. *Results:* In the comparison of groups using the Young Internet Addiction Scale, the ADHD group was found to have significantly higher scores than the control group, whereas post-hoc analyses revealed no significant differences between the groups. The *results* indicated the main predictors of PIU among ADHD and CDS sub-dimensions were found to be Slow and Sleepy. Slow sub-dimension was found to positively predict PIU; whereas Sleepy was a negative predictor of PIU. *Conclusion:* Our results indicate that CDS may have an effect on PIU independently of ADHD. The study recommends conducting longitudinal studies with larger sample sizes for a more comprehensive understanding of the CDS and PIU relationship.

Keywords: addiction risk, CDS, ADHD

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3G–1

Development and validation of the Stages of Gaming Disorder Scale (S-GDS): A clinical staging perspective

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Background: Existing diagnostic systems for Gaming Disorder (GD), such as DSM-5 and ICD-11, predominantly rely on a dichotomous approach, which fails to capture the chronic, evolving nature of GD and may contribute to heterogeneity and thus hinders effective intervention. The clinical staging approach, borrowed from evidence-based medicine, offers a promising framework for addressing these challenges by categorizing illness progression into stages, with boundaries defined by clinical phenotypes. Therefore, we propose that GD spans a continuum, with early stages characterized by euphoria from gaming and later stages by compulsive gaming, based on theory-driven and word cloud analysis. This study aims to identify GD subtypes using these phenotypes and develop a tool to assess GD stages. *Method:* Two gamers' datasets from China were used: a primary adolescent sample (N = 6774, three waves, M_age=16.91,SD=1.11; 52.30% female) while a young adult sample (N = 741, M_age=24.22,SD=4.22; 35.76% female) was interrogated for independent sample validation. The Stages of Gaming Disorder Scale (S-GDS) was developed to measure GD stages based on key behavioral phenotypes. Latent Profile Analysis was used to identify distinct profiles and Latent Transition Analysis examined the stability and progression over time. Multiple reliability (internal consistency, test-retest) and validity indices (construct, criterion-related, and incremental validity) were examined. *Results:* The findings revealed a progression in GD, transitioning from a "high euphoria" phase to a "high compulsivity" phase, resulting in four identified stages: Stage 0 (Non-GD), Stage 1 (Early Risk-GD), Stage 2 (Middle-GD), and Stage 3 (Late-GD). Factor analyses (Exploratory and Confirmatory) confirmed that the S-GDS includes four dimensions: euphoria, obsessive-compulsive severity, resistance, and control. Reliability and validity analyses supported the tool's robustness. As individuals progressed through the stages, gaming-related experiences all significantly intensified. Adolescents showed 54.86% stability over one year, with a high probability (77.4% to 93.7%) of transition to adjacent stages. Adult stage patterns mirrored those of adolescents. *Conclusions:* The S-GDS is a reliable and valid tool for assessing an individual's status along the GD continuum, providing a more nuanced understanding of GD and paving the way for personalized and stratified interventions.

Keywords: Gaming Disorder, scale, clinical staging, compulsivity, euphoria

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3G–2

Latent vs. network psychometric validation: The example of cross-national evaluation of the Internet Gaming Disorder Scale in European adolescents

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Background: Effective measurement practices are critical in addiction-like disorder research to avoid overpathologization or underdetection of health risks. While factor analytic (FA) approaches dominate questionnaire validation, their causal assumptions are rarely discussed. Additionally, model fit evaluations often rely on Hu and Bentler's (1999) guidelines, which may not generalize beyond their original simulation conditions. *Method.* This study applied both factor and network psychometric approaches to validate the 9-item Internet Gaming Disorder Scale (Lemmens et al., 2015) using data from the Health Behavior in School-aged Children project (N = 44,126; adolescents aged 11–15 from 12 European regions). The approaches were compared for utility, theoretical soundness, and empirical outcomes. *Results:* Findings revealed that: (1) conventional fit index cut-offs could yield divergent validity interpretations; (2) the network approach provided nuanced insights into invariance patterns across data; and (3) dynamic fit index cut-offs (e.g., McNeish & Wolf, 2023) offered a more robust assessment of model fit. Additionally, exploratory graph analysis and network trees were critically evaluated for their benefits and limitations. *Conclusions.* Validation studies should align causal theoretical assumptions with appropriate statistical methods. Advances in psychometrics provide refined tools that improve measurement practices. These findings contribute to ongoing debates on the conceptualization and measurement of gaming and other addiction-related disorders.

Keywords: psychometrics, factor analysis, network analysis, gaming disorder, good practice

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3G–3

Latent classes of internet gaming disorder trajectories after EABM training and predictors of classes: Insights from I-PACE and Dual-Systems Theories

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Background: Previous research has demonstrated that our emotional association bias modification (EABM) training can effectively reduce internet gaming disorder. However, according to the I-PACE theory, addictive behaviors are influenced not only by personal emotional and cognitive characteristics but also by individual traits and executive control. Few studies have investigated which individual traits significantly predict the intervention effects of EABM training. Therefore, this study aims to explore how pre-training fun-seeking and self-control predict latent classes of internet gaming disorder trajectories after EABM training, based on the dual-system theory. *Methods:* We recruited 87 participants. Latent class growth modeling (LCGM) was performed to identify latent classes of their intervention effects of EABM training. Then, logistic regression analysis was conducted to explore predictors of the classes. Gender and age were controlled in the analysis. *Results:* Self-control ($B = 2.29$, $p = 0.002$) and BAS fun-seeking ($B = -1.66$, $p = 0.009$) significantly predicted latent classes of internet gaming disorder trajectories after EABM training. Low fun-seeking and high self-control predicted greater IAT score reductions, while high fun-seeking and low self-control predicted smaller reductions. No significant differences were found in pre-training IAT scores between groups ($p = 0.294$). *Conclusion:* The results further support the important influence of the interaction of individual characteristics, affective and cognitive characteristics, executive control on Internet gaming disorder in the I-PACE theory. Additionally, they also validate the dual-system theory's emphasis on the balance between impulsivity and self-control. This provides a theoretical foundation and empirical support for optimizing intervention strategies based on personalized traits.

Keywords: internet gaming disorder, emotional association bias modification, self-control, fun-seeking, latent class growth model

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3G–4

Adolescents and young adults seeking treatment for cannabis use disorder or gaming disorder: Similarities and differences

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Background: In France, adolescents and young adults (AYAs) with cannabis use disorder (CUD) or gaming disorder (GD) have access to treatment in the same health care setting. However, the similarities or differences between these two disorders have been little studied, especially in terms of comorbidities and psychological processes. Therefore, the aim of this study was to compare CUD and GD in AYAs seeking treatment in terms of depression, social anxiety, internalising and externalising problems, emotional profile (positive and negative affect, state-trait anger, emotional reactivity, and intrapersonal and interpersonal emotion regulation) and identity formation processes. *Method:* Data (from eleven standardized questionnaires) were collected from 50 AYAs seeking treatment for CUD (mean age = 20.08, 60% male) and 50 AYAs seeking treatment for GD (mean age = 16.96, 96% male). *Results:* The results showed that, compared to those seeking treatment for GD, AYAs seeking treatment for CUD had higher scores for comorbidities, i.e. depression, interaction and performance anxiety, internalising and externalising problems. They also had higher scores for negative affect, anger expression-out, anger control-out, anger control-in, emotional reactivity (sensitivity, intensity and persistence), non-acceptance of emotional response and limited access to emotion regulation strategies. They had a higher tendency to reduce negative emotions and perceive this strategy as effective, and a higher tendency to increase positive emotions. AYAs seeking treatment for GD had higher scores for lack of emotional identification and difficulties in controlling impulsive behaviours. In terms of identity processes, AYAs seeking treatment for CUD had higher exploration in breadth scores. *Conclusion:* Our results showed different profiles between AYAs with a CUD and those with a GD, implying adapted psychotherapeutic interventions.

Keywords: adolescent and young adult, cannabis use disorder, gaming disorder, comorbidities, identity, emotion regulation, interpersonal emotion regulation

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3H–1

The relationship between personality disorders and behavioral addictions: A systematic review and meta-analysis

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Background: The relationship between substance use disorders and personality disorders has been extensively analyzed. However, with the exception of gambling disorder, there has been no comprehensive review or meta-analysis examining the relationship with personality disorders and behavioral addictions. It can be assumed that the prevalence and severity of personality disorders are higher in individuals with behavioral addictions compared to healthy controls. The present aimed to investigate the relationship between all types of behavioral addictions and any personality disorders as defined by diagnostic systems. Specifically, it sought to systematically review and meta-analyze empirical research on this topic. Methods: Studies published between 1989 and 2023 were identified through a systematic search. Based on inclusion criteria, 74 relevant studies were selected. 37 studies were eligible for narrative analysis and data from 37 articles were included in one of three meta-analyses. *Results:* The results indicate that (1) there is a significant positive correlation of moderate strength between behavioral addictions and personality disorders (r = 0.306); (2) the severity of personality disorders is significantly higher in individuals with behavioral addictions compared to controls, with a medium effect size (g = 0.458); and (3) the prevalence of personality disorders is significantly higher in individuals with behavioral addictions compared to those without (OR = 3.321). These associations were consistent across sex and age. Moderator analyses revealed that the strongest associations were observed for cluster B disorders, particularly borderline and antisocial personality disorders, across all behavioral addictions. *Conclusions:* This meta-analysis demonstrates that although less empirical research has been conducted on the relationship between behavioral addictions and personality disorders compared to substance use disorders, the results suggest that both behavioral and chemical addictions exhibit similar patterns. The results raise the possibility that factors contributing to the development of personality pathology, such as early trauma and maladaptive patterns, may play a role not only in both substance related and behavioral addictions. Additionally, it is hypothesized that addictive behaviors may represent maladaptive coping mechanisms arising from underlying personality disorders. *Funding:* The study was supported by the National Research, Development and Innovation Office (FK134807). Bernadette Kun received the János Bolyai Research Fellowship from the Hungarian Academy of Sciences.

Keywords: personality disorders, behavioral addictions, meta-analysis

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3H–2

Substance and behavioral addictions – comparison though childhood trauma, early maladaptive schemas and personality disorder in a dual diagnosis inpatient sample

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Childhood trauma is known to be the main cause for early maladaptive schemas (EMS), personality disorders (PD), and additions as a self-soothing, self medicating component later in life. The purpose of this research was to determine difference between substance related and behavioral addictions regarding those factors in participants of a specialized treatment program for patients with dual diagnosis. Measurements including Childhood Trauma Questionnaire (CTQ-SF), Young Schema Questionnaire Short Form 3 (YSQ-S3) in addition to data concerning PD diagnosis and addictive behaviors were accessed. The data of 146 patients was analysed, measuring the impact of traumas, schemas in relation to personality disorder diagnosis and comorbid addictions. Nearly one third of this population was affected with behavioral addictions as well as substance related addicitons, which lead us to differentiate between a clear substance addicted and a mixed, multi-addict group. Findings underline that the multi-addict group is affected with multiple traumatic childhood events, linked to the most severe schemas, and in most cases to borderline personality disorder. The most significant dimension of the CTQ-SF was emotional abuse which had strong predictive validity for several schema dimensions. A significant difference between the substance abuse and the multi-addict sample as found in severity of schemas and the impact of childhood experiences. These findings are in line with the self medication hypotheses, showing us that more traumatic events lead to significantly more severe addictive behaviors due to relief seeking. Limitations worth noting are a lack of a control group and the clinical sample size, particularly the uneven distribution of personality disorders within the sample. In conclusion, trauma and EMS were found to play a role in personality disorders and addictions. These findings, in addition to existing literature, provide insights that are meaningful in clinical settings.

Keywords: childhood trauma, early maladaptive schemas, personality disorder, dual diagnosis

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3H–3

Preventing non-substance and substance addictive behaviors in youth: Testing the efficacy of an integrated intervention

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International data testify that both substance use, particularly cigarette smoking and alcohol consumption, and the use of new technologies, especially smartphone use, are widespread among pre-adolescents and adolescents, with a high risk of developing substance and non-substance forms of addiction. Despite this, there is a lack of experimental studies on the development and evaluation of efficacy of integrated prevention interventions, i.e., which have considered both substances use and the use of new technologies in this age group. Therefore, this project aims to build, implement and test the efficacy of a prevention intervention acting on substance (i.e., tobacco and alcohol) and non-substance (i.e. smartphone use) addictions among adolescents. To achieve these goals, the metacognitive model was adopted as theoretical framework, since several studies have shown that metacognitive beliefs are involved in addictive behaviors. In detail, positive metacognitions (i.e., the beliefs about the beneficial effects of engaging in addictive behavior to regulate cognition and affect) appear to be involved in initiating addictive behavior. An experimental design with random assignment to the experimental and control groups and with pre- and post-tests was set up to test efficacy. The participants are 389 students attending middle school and 649 students attending high school in Tuscany (Italy). The intervention consists of four weekly sessions conducted in the school context (i.e., in the classes) by two expert psychologists. Psychoeducation (e.g., about the mechanisms implicated in both substance and non-substance addiction, with a specific focus on positive metacognitions) and skill training (e.g., enhancement of self-efficacy) based on the conceptual change model were used as intervention strategies. Expected results are a reduction in positive metacognitions about addiction-related thoughts and behaviors and in the frequency of smartphone use, the amount of cigarette and alcohol units consumption.

Keywords: metacognitions, smartphone use, alcohol, tobacco

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3H–4

The impact of naturalistic psychedelic use on behavioral addictions: An online survey

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Background: Psilocybin and other psychedelic compounds have shown promising findings in the treatment of SUDs. A notable feature of psychedelics in the treatment of addictive behaviors is that they seem to hold potential for not just a specific substance class, but for addictions more broadly. However, no research has been conducted on the association between psychedelics and non-substance behavioral addictions. *Method:* An anonymous web-based survey methodology was utilized to characterize aspects of an individual's psychedelic experience on behavioral addictions (i.e., gambling, video gaming, internet/social media use, pornography and other sexual behaviors, and shopping/spending behaviors). Inclusion criteria for participation includes: 1) being 18 years or older, 2) fluent in English, 3) self-identify as having had a problem with a behavioral addiction prior to psychedelic use, and 4) endorse having taken a psychedelic following the development of a behavioral addiction. *Anticipated Results:* The present study is currently ongoing with data collection beginning in September 2024 (n = 108 at time of abstract submission). Preliminary findings will be presented aimed at identifying the association between the use of psychedelics and their impact on the five measured behavioral addictions. Descriptive statistics of the sample will be provided, while utilizing inferential statistics to describe patterns of change in behavioral addictions before and after psychedelic use, in addition their association with demographic characteristics, behavioral addiction problem severity, type of psychedelic use, intensity of experience, contextual factors, and measures of current mental health. *Conclusions:* The present study is the first of its kind to empirically evaluate utilizing survey methodology the impact of naturalistic psychedelic use on behavioral addictions. The data will provide insights into the potential risks and benefits of psychedelic use and their impacts on adults who have previously or are presently struggling with a behavioral addiction.

Keywords: behavioral addictions, psychedelics, survey, observational, pre-post

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3H–5

Your ideal life shapes your shopping: Latent profiles of life goals and their association with shopping addiction

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Background: The rising global prevalence of shopping addiction (SA) highlights the necessity to identify salient motivational correlates (e.g., life goals) to inform the development of cost-effective preventive strategies. The present study aimed to examine the relationship between SA and three different ideal life goals (i.e., hedonistic, eudaimonic, and psychologically rich) by latent profile analysis. *Method:* We conducted an anonymous telephone survey with two-stage cluster random sampling among community-dwelling Chinese adult residents in Macao, China, resulting in a probability sample of 1010 Chinese adults aged 18 to 88 years (55.2% females; age: M = 38.52, SD = 14.53). *Results:* The best-fitting model indicated two profiles of ideal life pursuers: unbalanced hedonistic pursuers and balanced high-level pursuers. Compared to balanced high-level pursuers, unbalanced hedonistic pursuers displayed a significantly elevated incidence of probable SA and a distinct pattern regarding endorsed SA criteria. Furthermore, unbalanced pursuers reported greater rates of shopping-related financial problems and increased frequencies of both online and livestream shopping than balanced pursuers. *Conclusions:* Individuals' pursuits of ideal life significantly shaped their shopping behaviors and susceptibility to SA, with unbalanced hedonistic pursuits linked to a higher prevalence of probable SA. Our findings offer the first piece of initial evidence supporting the integration of life goals into SA preventions, while further research is warranted to identify optimal life goal combinations that can maximize the efficacy of mitigating SA risk.

Keywords: shopping addiction, life goal, latent profile analysis

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3H–6

Reputation, macroeconomic benefit, and fair share: SKAD analysis of the discourse surrounding Gibraltar's new Gambling Bill

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Background: As a global online gambling hub, Gibraltar plays an outsized role in the sector, providing a case study to understand the evolving role of gambling in global society. Licensees in Gibraltar serve approximately half the global market, and the sector accounts for 28% of local GDP. This study examines the impact of global changes on the discourse surrounding Gibraltar's new Gambling Bill. *Methods:* This interpretive study analyses the discourse in the months before enactment. Written discourse is represented in the new Gambling Bill and spoken discourse in interviews with the key decision makers who shaped the Bill (government, regulatory, and industry spheres). The Sociology of Knowledge Approach to Discourse (SKAD) (Keller, 2018) provides the theoretical foundation and analytical toolbox. Two features of SKAD were essential to the analysis: centring speakers as social actors and Foucault's problematization concept, whereby power shapes the prioritization of problems and implementation of legal and regulatory solutions. *Results:* Results uncover and analyse the speakers' inter-connectedness and classification scheme for the role of gambling in society. Two core narratives emerged: Gibraltar's pioneering role in online gambling with the original Gambling Act 2005, and the co-creation of the new Bill. Three interpretive frameworks shape the discourse: the need to guard Gibraltar's reputation, the pursuit of macroeconomic benefit for a small state that lacks the means of production, and fair share contributions by industry. These frameworks guided speakers in establishing objectives, identifying and defining problems, and solving them through the new Bill. *Conclusion:* This study demonstrates the power of SKAD to analyse legislative, regulatory, and industry discourse and uncover how power shapes the role of gambling in society.

Keywords: gambling regulation, discourse analysis, online gambling

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4A–1

The pitfalls of recycling substance use disorder criteria to define behavioral addictions

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Background and aims: A growing body of evidence supports the notion that intensive involvement in appetitive activities is not inherently problematic nor necessarily associated with negative consequences or functional impairment. This suggests the existence of behavioral patterns characterized by intensive – yet non-problematic – engagement. Previous research has shown that traditional substance use disorder criteria might fail to discriminate intensive but healthy involvement in appetitive behaviors from pathological involvement. *Methods:* Critical analysis of the existing literature. *Results*: Substantial evidence shows that, when applied to behavioral addictions, some substance use disorder characteristics (e.g., cognitive salience, tolerance, mood modification) reflect peripheral features that are not necessarily indicative of pathology. On the other hand, other characteristics (e.g., loss of control, continued use despite adverse consequences, withdrawal) reflect core features that can be used to adequately identify pathological behavior. Critically, most scales assessing "emerging" or "new" behavioral addictions mix peripheral and core features, potentially compromising their validity. *Discussion and conclusions*: It is imperative that researchers in the field of behavioral addiction refrain from developing new scales based solely on recycled substance use disorder criteria. This will help reduce (over)pathologization, stigmatization, and biased prevalence estimates. An additional benefit is that such a shift will enhance the credibility of the field of behavioral addiction as a scientifically sound discipline from a methodological standpoint.

Keywords: assessment, components model of addiction, diagnosis, pathologization, psychometrics

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4A–2

Variables associated with intensive but healthy versus problematic gaming: Insights from a large sample of Japanese adolescents

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Background and aims: Problematic gaming and gaming disorder are growing concerns in East Asian countries. Yet, substantial scientific evidence calls for distinguishing intensive but healthy involvement from problematic involvement in gaming. In this context, this study investigates gaming behaviors in Japanese adolescents to inform prevention programs for adolescents and parents. *Methods*: Data were collected from 9,732 Japanese adolescents (aged 12 to 18) via an online survey using the 7-item Gaming Addiction Scale (GAS-7). Confirmatory factor analyses of the data suggested that the GAS-7 assesses two factors: core symptoms (reflecting gaming addiction) and peripheral symptoms (reflecting gaming engagement). The relationships between these factors and variables such as age, gender, time spent gaming, depressive symptoms, and five domains of psychosocial issues (related to family, friends, leisure, sleep, and study) were explored using a zero-inflated negative binomial (ZINB) model. *Results:* Our preliminary results suggest that time spent gaming was positively associated with gaming engagement, but not with gaming addiction. In contrast, depression symptoms were positively associated with gaming addiction, but not with gaming engagement. All five examined psychosocial issues were positively associated with a higher gaming addiction score, highlighting their role as risk factors for problematic gaming. *Discussion and conclusions:* Our results highlight the differential roles of mental health and psychosocial factors in gaming engagement and addiction. Our findings suggest that it is essential to target mental health and psychosocial problems, while time spent gaming should not necessarily be the primary focus of interventions.

Keywords: assessment, components model of addiction, diagnosis, pathologization, psychometrics

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4A–3

Are you sure you're assessing a behavioral "addiction"? A critique based on the pathologization of social media use

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Background and aims: The components model of addiction posits that all addictive disorders – whether substance-related or behavioral – share six components: salience, tolerance, mood modification, relapse, withdrawal, and conflict. This popular model has led to the development of many psychometric instruments that measure addictive behaviors according to these criteria. However, a growing body of evidence demonstrates that, in the context of behavioral addictions, certain components fail to distinguish non-pathological from pathological involvement in appetitive behaviors. Using social media "addiction" as a representative example, we examined this perspective by testing whether all six components assess central features of addiction or whether some of them assess peripheral features that are not indicative of a disorder. *Methods*: Four independent samples totaling 4,256 participants from the general population completed the Bergen Social Media Addiction Scale, a six-item psychometric instrument derived from the components model of addiction designed to assess social media "addiction". Data were analyzed using structural equation modeling and network modeling. *Results*: Our results showed that the six components did not form a unitary construct and, critically, that two of the six components (namely salience and tolerance) were not associated with measures assessing psychopathological symptoms. *Discussion and conclusions:* Taken together, our results corroborate and extend the evidence that the components model confounds central and peripheral features of addiction when applied to behavioral addictions. This implies that psychometric instruments based on this model pathologize involvement in appetitive behaviors. Our findings further emphasize the need to revise the conceptualization and assessment of behavioral addictions.

Keywords: assessment, components model of addiction, diagnosis, pathologization, psychometrics

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4A–4

A tale of two scales: A two-factor approach to social media use with the Social Media Disorder Scale and the Bergen Social Media Addiction Scale

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Background and aim: In the past decade, problematic social media use (PSMU) has been conceptualized using the components model of addiction (Griffiths, 2005). However, recent research distinguishes between core criteria – mood modification, relapse, withdrawal, and conflict – indicating problematic behavior, and peripheral criteria – salience and tolerance – reflecting non-problematic engagement (Billieux et al., 2019; Fournier et al., 2023). This study aims to evaluate the viability of a two-factor latent structure distinguishing core and peripheral criteria in the two most popular PSMU scales. It also examines the associations between these factors and mental health variables. *Methods:* A total of 2,761 Spanish adolescents aged 12 to 20 years (mean age = 14.80) from Madrid and Valencia participated. Participants completed the Bergen Social Media Addiction Scale (BSMAS), the Social Media Disorder Scale (SMD), measures of depression (PHQ-9), anxiety (GAD-7), life satisfaction (SWLS-3), loneliness (TILS-3), and self-esteem (SISE). Analyses included confirmatory factor analyses (CFAs) and structural equation modeling (SEM). *Results*: The two-factor model distinguishing core and peripheral criteria provided a better fit than the unifactorial model for both the BSMAS and SMD scales. In SEM analyses, core criteria were positively associated with depression, anxiety, and loneliness, and negatively associated with life satisfaction and self-esteem. Conversely, peripheral criteria showed negative associations with depression, anxiety, and loneliness, and positive associations with life satisfaction and self-esteem. *Discussion and conclusions*: These results suggest that the components model of addiction may not adequately capture PSMU, potentially increasing false positives due to the inclusion of non-problematic criteria.

Keywords: assessment, components model of addiction, diagnosis, pathologization, psychometrics

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4A–5

Are we training ourselves to be addicts? The paradox of ultra-distance athletes and the current model of behavioral addiction

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Background and aims: Ultra-distance is any race beyond the marathon distance with no apparent limit. Exercise addiction (EA) is considered to be a pattern of behavior characterized by excessive engagement (e.g., exaggerated training volumes) that leads to a loss of control over exercise and results in self-harm. The model of addiction, based on criteria adapted from substance use disorders, may blur the boundaries between healthy or competitive practice and excessive behavior in ultra-distance athletes, where assessment criteria are often aligned with the demands and requirements of the sport. This study examines whether the EA model is influenced by the characteristics of the assessed sport. *Methods*: An online survey was used to recruit 368 participants from 38 countries (251 males, 115 females) from the population of ultra-distance athletes. The Revised Exercise Addiction Inventory (EAI-R) was used together with the training load, which was assessed by the number of kilometers run per month. *Results*: Seventy-two of the athletes scored ≥ 29, indicating a risk of EA according to the usual cut-off point. The highest scores were observed for mood modification (M = 4.68, SD = 1.24) and tolerance (M = 4.54, SD = 1.38) items. This pattern remained unchanged when we focused on the athletes with the highest training load [mood modification (M = 4.76; SD = 1.21); tolerance (i.e., M = 4.69; SD = 1.34)]. *Discussion and conclusions*: The present results suggest that the components model of addiction and the EAI-R items might conflate addiction symptoms, high involvement, or training needs.

Keywords: assessment, components model of addiction, diagnosis, pathologization, psychometrics

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4B–1

How does the conceptualization of out-of-control sexual behavior shape social, clinical, and legal reactions?

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Background: The conceptualization of out-of-control sexual behaviors (OCSB) remains contentious, with perspectives framing these as reflecting an impulse control disorder, addiction, sexual disorder, or a variation of normal behavior. Neuroscientific evidence and beliefs about sex and biological causation often shape these debates. While OCSB is included in ICD-11 as an impulse control disorder (i.e. compulsive sexual behavior disorder), the broader discussion continues, not always considering the social, clinical, and legal consequences for affected individuals. This omission is surprising given the DSM-5's rejection of OCSB inclusion partly due to concerns about such consequences. Little is known about how different conceptual frameworks impact outcomes for men and women experiencing OCSB. *Objective:* This project addresses this knowledge gap by examining the social, clinical, and legal consequences of key conceptualizations: impulse control disorder, addiction, sexual disorder, or neither. It also explores the effect of neurobiological framing (e.g., altered brain structure) and potential gender differences in perception. *Method:* Three studies using web-based vignettes will investigate these issues: *1. Social Impact:* Study 1 evaluates how conceptualizations influence stigmatization of men and women with OCSB. *2. Clinical Impact:* Study 2 examines how conceptualizations influence mental health professionals' clinical decisions and empathy toward men and women with OCSB. *3. Legal Impact:* Study 3 assesses how conceptualizations influence judges' sentencing and evaluations of legal responsibility in hypothetical cases of sexual offenses committed by men and women with OCSB. *Conclusion:* This research will provide crucial insights into how conceptual frameworks influence the social, clinical, and legal experiences of those with OCSB. The findings aim to inform future discussions and policies regarding the conceptualization and management of OCSB.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gaming disorder, social awareness, clinical implications

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4B–2

Exploring societal awareness, attitudes, and stigmas surrounding CSBD: Insights from a nationwide survey in Poland

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Background and Aims: There is a notable paucity of research regarding societal awareness, perceptions, and understanding of compulsive sexual behavior disorder (CSBD), as well as the stigma experienced by individuals affected by the disorder. Additionally, several critical factors remain underexplored, including the role of media and culture in shaping public perceptions of CSBD as a mental health condition, the availability of treatment and support resources, the factors influencing individuals' decisions to seek treatment, and the barriers encountered when accessing care. The primary objective of this study is to address these gaps by investigating public knowledge, attitudes, perceptions, and behaviors related to CSBD within a large, representative sample of Polish adults. *Method:* Data were collected from 2,401 adults, selected through a rigorous sampling process to reflect the demographic diversity of the Polish general population. An online survey was administered to gather the relevant data. *Results:* The results of this study will be presented at the conference. This research represents the first comprehensive analysis of public knowledge and attitudes toward CSBD in Poland. It focuses on several key areas, including societal awareness of CSBD, public perceptions and understanding of the disorder, attitudes and expectations toward individuals affected by CSBD, gender biases, stigma associated with CSBD and its impact on help-seeking behavior, the influence of media and culture on public perception, and the availability of treatment and support resources. Additionally, the study examines the motivations for seeking treatment and the barriers that individuals face in accessing help. *Conclusions:* This study underscores the societal norms and stigmas surrounding CSBD, providing valuable insights that can inform the development of targeted education and awareness campaigns. These initiatives are crucial for enhancing public understanding, reducing stigma, and fostering a more supportive environment for individuals affected by the disorder.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gaming disorder, social awareness, clinical implications

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4B–3

Problematic pornography use among Swedish adolescents: Characteristics and clinical implications

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Background: Pornography use is prevalent among adolescents, with a subset developing Problematic Pornography Use (PPU). The most common manifestation of Compulsive Sexual Behavior Disorder is PPU, often beginning in adolescence. This study investigates the prevalence and associated factors of self-reported PPU among Swedish adolescents. *Method:* Data were collected from a representative sample of 3,016 Swedish third-year high school students. The survey included sociodemographic variables, health and abusive experiences, and sexuality and pornography-related factors. PPU was defined by difficulties in refraining from or stopping pornography use. Descriptive statistics and logistic regression analyses were used to explore associations between PPU and the collected variables. *Results:* PPU was reported by 19% of boys (n = 257) and 4% of girls (n = 67). It was associated with increased time spent on pornography and higher exposure to violent or concerning sexual content. Adolescents with PPU had higher rates of abusive experiences, mental health issues (e.g., emotional dysregulation, trauma symptoms), and risky behaviors. Boys exhibited more nonconsensual sexual acts, while girls showed increased substance use and earlier sexual activity. *Conclusions:* The study highlights a significant prevalence of PPU among Swedish adolescents, especially boys. It underscores the need for professionals to address pornography use and provide support. The link between PPU and emotional dysregulation and trauma symptoms suggests that addressing underlying psychological issues is crucial in prevention and treatment. Future research should focus on longitudinal studies and developing effective interventions for at-risk adolescents.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gaming disorder, social awareness, clinical implications

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4B–4

Longitudinal study of compulsive sexual behavior disorder profiles: Their prospective impact on psychopathology in the aftermath of traumatic events

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Background and aims: Research has shown evidence that Compulsive sexual behavior disorder (CSBD) and problematic pornography use (PPU) are associated with heightened psychopathology; however, less is known regarding how CBSD and PPU contribute to the evolvement of psychopathology in the aftermath of traumatic events. The study aims to apply latent profile analysis (LPA) to identify distinct latent profiles of participants' CSBD and PPU across 2017 and 2022, prior to the October 7th, 2023, traumatic events in Israel, and to examine how these profiles prospectively predict the evolvement of psychopathology three and six months after these events. *Methods:* A longitudinal study surveying the adult Jewish population in Israel, aged 18-70, was conducted across four waves: Two waves before October 7th traumatic events (2017, 2022), and two waves after the trauma (December 2023, March 2024). Participants completed self-report measures of CSBD and PPU, psychopathology (global distress, emotional dysregulation, PTSD, anxiety, depression), and level and kind of exposure to the October 7th traumatic events. *Results:* LPA revealed four distinct CSBD/PPU profiles during the two pre-trauma waves: 'resilience' (n = 952; 80.54%), 'recovery' (n = 138; 11.68%), 'delayed onset' (n = 50; 4.23%), and 'chronic' (n = 42; 3.55%). Significant differences were found between these profiles in socio-demographic measures as well as CSBD, PPU, and psychopathology following the October 7th trauma. Additionally, the level and kind of exposure to the October 7th events moderated differences in psychopathology across CSBD profiles. *Conclusion:* This research offers a nuanced understanding of CSBD profiles, showing how these profiles impact the evolvement of psychopathology after trauma.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gaming disorder, social awareness, clinical implications

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4B–5

Effects of testosterone on problematic pornography use and gaming disorder symptoms

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Background: According to recent theoretical models, predisposing variables (e.g., biological factors, chronic stress) are assumed to play a role in the development and maintenance of addictive behaviors, such as problematic pornography use (PPU) and gaming disorder (GD). To date, the role of endocrinological factors is vastly understudied in the field of behavioral addictions. Additionally, the few existing findings show mixed results. This study aimed to examine effects of testosterone on tendencies towards PPU and GD, and whether possible effects can be explained by the dual-hormone hypothesis through cortisol-dependent changes in measures of risky decision-making. *Method:* The sample (N=248) was part of the multicenter study (FOR2974), including male participants with varying symptom severity of GD (n=168) or PPU (n=80) as confirmed by diagnostic interviews. Hormonal levels were assessed by hair-sampling, representing levels within the previous three months. Furthermore, decision-making paradigms (i.e., delay-discounting-task & Game of Dice Task) as well as questionnaires were used to assess addictive tendencies, impulsivity, and further behavior-specific measures for exploratory analyses. *Results:* Levels of testosterone show positive associations with PPU-tendencies across the whole sample as well as in both subgroups of porn users and gamers. Associations between testosterone and tendencies towards GD were not significant. In all groups, neither did cortisol act as a moderator between testosterone and decision-making, delay-discounting or impulsivity, nor was the association between testosterone and GD or PPU mediated by these mechanisms. Exploratory correlations between hormonal levels and usage motives showed that testosterone was associated only with the gaming motive of competition. *Conclusions:* Testosterone seems to be linked to higher levels of PPU in men. In contrast, gaming disorder symptoms are not associated with testosterone levels. Hypothesized interactions between testosterone, cortisol and risky decision-making could not be supported but might be dependent on the measurement of decision-making.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gaming disorder, social awareness, clinical implications

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4C–1

On artificial intelligence and problematic social media use

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Artificial intelligence (AI) is increasingly embedded in a wide range of digital products, with social media being one of the most prominent examples. AI plays a crucial role in personalizing newsfeeds through algorithms that likely increase users' online time and engagement with the social media platforms. Against this background, the presentation will reflect on how AI technology might contribute to problematic social media use (PSMU). Furthermore, insights will be provided into how attitudes towards AI are linked to PSMU and how such associations might be explained.

Keywords: social media, artificial intelligence, platform design

4C–2

Screen addiction: Exploring criteria of use disorder as indicators of disordered use of screen-based activities

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Excessive use of screen-based activities could be associated with addictive-like characteristics. To be recognized as an addiction, research is encouraged to explore clinically relevant indicators of impairment, and comparison with other (substance and behavioral) addictions. *Objective and method:* This study examined use of screen-based activities, under the prism of the 11 diagnostic criteria of substance use disorder (SUD), adapted for screen use, among patients requesting treatment for an addiction (substance or behavior) at the CH. Charles Perrens in Bordeaux. *Results:* This study included 246 participants (72% men), 4,9% were requesting treatment for their screen use, and 28,4% reported problematic screen use (PSU) in the past 12 months. Within this 28.4%, the average number of criteria was 4.9 (/11), while for participants not reporting PSU the average severity score was 1.0. Among those reporting PSU, the main problematic screen-based activities were social media (SM) (51%), streaming videos (SV) (20%), video games (VG) (12%), other (8%) e.g. pornography, internet browsing (IB) (4%), messaging (1%) and buying online (1%). Further analyses focused on SM, SV, and VG. Screen use severity (0–11) was 5.25 for SM (mean = 5.25, SD = 0.30), 4.79

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for SV (mean = 4.79, SD = 0.64), and 5.00 for VG (mean = 5.00, SD = 0.80). However, no significant differences were found between the groups (ANOVA, p = 0.8191). Among the 11 diagnostic criteria, the most frequent criteria were: “Large amount/longer” (SM: 48,5%, SV: 18,6%, VG: 11,4%) “Difficulty to quit or control” (SM: 42,9%, SV: 15,7%), “Time spent” (SM: 30%, SV: 12,9%, VG: 8,5%). “Craving” was reported by 24,5% of SM and 8,7% of SV and VG users. *Conclusion:* This study highlights distinct patterns of use-disorder criteria across screen-based activities. Further analyses will explore patterns of criteria endorsement, and interrelationships thanks to IRT and Network analyses.

Keywords: screen addiction, diagnostic criteria, craving

4C–3

When fanship goes digital: Exploring the associations of celebrity worship with problematic and nonproblematic social media use

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Introduction: The digital era has transformed the ways individuals engage with celebrities, sometimes leading to an excessive admiration towards celebrities. This study examines how different dimensions of celebrity worship, specifically, entertainment-social (ES) and intense-pathological (IPBP), relate to problematic and frequent but nonproblematic social media use. *Methods:* A total of 695 participants took part in the study who declared having a favorite celebrity (50.2% women; M_{age} = 35.48, SD = 12.90). Data were derived from a representative sample of Hungarian adults. The Celebrity Attitude Scale (CAS-7) and the Bergen Social Media Addiction Scale (BSMAS) were administered along with the time spent using social media (in hours). *Results:* Findings revealed significant associations between celebrity worship and problematic social media use. BSMAS positively predicted both ES (β = .266, p < .001) and IPBP (β = .480, p < .001), with IPBP showing a significantly stronger association than ES (95% CI: ES [.189, .344], IPBP [.405, .554]). Time spent using social media was not associated with either ES or IPBP. *Discussion:* These findings suggest that while both dimensions of celebrity worship are linked to problematic social media use, the IPBP factor has a substantially stronger association. This aligns with prior research indicating that higher levels of celebrity worship are associated with behavioral addictions.

Keywords: celebrity worship, problematic social media use, social media addiciton

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4C–4

Focusing on the virtual body disconnects from one's physical body: Examining the effects of Problematic Social Media Use on mind-body detachment through a longitudinal study

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Background: The hypothesis of a relationship between non-integrated self-states and excessive technology use is supported by empirical and clinical literature, which has found dissociation to be significantly associated with various Internet-related addictive behaviors (Imperatori et al., 2023), including Problematic Social Media Use (PSMU). Since the most popular social networking sites and social media are appearance-focused, this study aims to build upon previous research by focusing on the link between PSMU and body dissociation. *Method:* A sample of 225 undergraduate Italian students (80% female; Mage = 20.42 ± 2.24) was recruited, and data on dissociative experiences, maladaptive daydreaming, bodily dissociation, and PSMU were collected at two different times (six months apart) using well-known self-report measures. *Results:* Almost all participants (91.1%) reported Instagram and TikTok (i.e., appearance-based social networks/media) as the most used social media. A cross-lagged panel analysis was employed using the lavaan package for the R statistical software (version 4.2.1) with Robust Maximum Likelihood (RML) estimation. The model tested the bidirectional relations between all dissociative symptoms and PSNSU. The model produced good fit indices ($\chi^2 = 42.888$, df = 20, $p < .01$; $\chi^2/df = 2.14$; RMSEA = 0.071, 90% CI [0.047, 0.096]; CFI = 0.976; TLI = 0.922; SRMR = 0.086). All stability paths were statistically significant (autoregressive path coefficients ranged from .61 to .78, $p < .01$). PSNSU at Time 0 predicted bodily dissociation at T1 ($\beta = 0.14$, $p = .007$), and no other cross-lagged effects were detected. *Conclusions:* This study indicates that lack of control over appearance-based social media platforms (and associated symptoms of problematic use) might favor mind-body detachment, whereas the hypothesis that individuals with pre-existing body dissociation symptoms are more attracted to these Internet services was not supported. Implications for treatment will be discussed.

Keywords: dissociation, longitudinal studies, problematic social media use

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4C–5

The impact of bullying perpetration and victimization on social media addiction: A meta-analytic review

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Social media addiction (SMA) has emerged as a growing public health concern. However, how bullying perpetration and victimization (BPV) influence SMA still remain unknown. Grounded in social compensation theory and maladaptive schema theory, this study posits that individuals facing difficulties in meeting social needs due to BPV, which may lead to social media use for compensation. However, these negative bullying experiences may form persistent cognitive patterns of rejection and isolation that social media use fails to resolve, increasing the risk of addiction. Using the PRISMA framework, we conducted a meta-analysis to examine the association between BPV and SMA. A systematic literature search identified 46 studies, including 81 effect sizes and 279,812 participants. A mixed-effects model was used to account for dependencies among effect sizes from the same studies. A moderate positive association between BPV and SMA was found ($r = 0.251$, S.E. = 0.0178, $p < .001$). Moderator analysis showed that the type of BPV significantly moderated the association. All four types – traditional bullying, traditional victimization, cyberbullying, cybervictimization – were positively associated with SMA ($r > 0.2$). Traditional victimization and cyber-victimization had weaker associations with SMA than bullying types (traditional bullying and cyberbullying), and the cyber-victimization showing the lowest effect. Age was also found as a significant factor to moderate the link between BPV and SMA. These findings highlight the need for targeted interventions for SMA based on bullying perpetration and victimization.

Keywords: social media addiction, negative peer experiences, bullying, victimization, meta-analysis, systematic review

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4D–1

Routine screening for gambling disorder and gambling-related harm within mental health and drug and alcohol services: A feasibility and pilot study

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Harmful gambling is a public health issue linked to adverse health outcomes as well as high levels of suicidality, and there is pressing need for initiatives to minimise such harms. However, gamblers experiencing harm do not ordinarily seek help, and if they do it is typically 'crisis driven', only occurring after experiencing severe harm. Community healthcare services for mental health and substance misuse and third sector organisations may be well placed to provide secondary prevention initiatives (i.e., routine enquiry/referral to treatment) for harmful gambling. There is a need to ascertain a range of perspectives on the viability and barriers of a secondary prevention intervention from such services. The aims of this project were twofold: to ascertain the feasibility of introducing gambling screening in mental health and drug and alcohol services and what the facilitators and barriers are in both screening and referral; to test if screening will identify substantial proportions of individuals who are experiencing harmful gambling. Study 1 consisted of qualitative interviews with clients and practitioners (8 x focus groups (n=64) and 80 interviews (50 clients/ 30 staff) to collate a range of perspectives on the acceptability, viability and feasibility of screening for gambling-related harm within mental health and drug and alcohol services. Study 2 consisted of a quantitative questionnaire distributed across 20 + NHS trusts and charities (n=3000) to test if screening will identify substantial proportions of individuals who are experiencing harmful gambling. Results showed that most services were receptive to screening for gambling harms. An earlier pilot study established that 7.6% of respondents from a Mental Health Service and 21.1% of respondents from a Substance Misuse Service screened positive for harmful gambling. Here we report further findings on the prevalence of those screening positive for harmful gambling, as well as comment on the barriers and facilitators to screening as identified in study 1. Our research will improve understanding of the feasibility of mental health and drug and alcohol services for identifying and referring people experiencing harmful gambling. It will allow / facilitate earlier pre-crisis identification, thus reducing the harms that are often a consequence of gambling.

Keywords: gambling harm, screening, treatment, substance use, mental health

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4D–2

Predictors of (early) treatment effect in CBT treatment for Gambling disorder

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Background: There is considerable variation in treatment success achieved from psychological treatment for gamblig disorder (GD). One explanation for the differences in success rates could be the heterogeneity within the GD population, where treatment is complicated by co-occurring psychiatric disorders in patients diagnosed with GD in the healthcare system. There are several predictors of both positive and negative treatment outcomes for patients with GD. Positive predictors include male gender, low levels of depression, openness and support from peers and significant others and predictors of poorer treatment outcomes have been identified as comorbid depression, anxiety, substance use, ADHD, negative urgency, high trait impulsivity, cognitive distortions, low education, and poor cognitive flexibility. We aimed to investigate which predictors affect the amount of treatment time needed for a positive treatment effect, measured by gambling behavior. *Method:* This was a cross-sectional study in a clinical population with patients seeking treatment for GD. We analysed a total sample of n=257 with the mean age of 36.7 years. We examined the associations between predictor variables and the outcomes of cognitive-behavioral therapy after four and eight weeks of treatment. *Result:* First, our findings revealed that 85% of patients were gambling-free by the end of the eight-week treatment period. Notably, most patients experienced this positive outcome by the four-week mark. Secondly, we found that difficulties with emotion regulation were associated with lower odds of being gambling-free at four weeks. Thirdly, trends suggested that being male, age and having a job at the initial clinic visit were positive predictors of being gambling-free at four weeks of treatment. *Conclusion:* Only 1 in 5 individuals struggling with GD seek help, and those with less severe problems tend to seek help even less frequently One explanation for this low rate of help-seeking could be limited access to treatment and a lack of knowledge about available options.To be able to offer a shorter treatment length to a subgroup of patient with GD would possibly lower the threshold for seeking treatment. We hope that by studying predictors of treatment success in GD it may allow for the customization of treatment length for each patient to better meet the individual needs of the patients.

Keywords: treatment, predictors, gambling disorder, CBT

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4D–3

Residential treatment efficacy in men and women experiencing gambling harm in the UK

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Approximately 0.8% of men and 0.2% of women who gamble experience harm (Gambling Commission, 2022). Treatment for gambling harm in the UK includes peer support, group cognitive behavioural therapy (CBT) in the community, and group and one-to-one CBT in residential settings. Gordon Moody provides residential treatment for gambling harm in men and women through two different treatment programmes. This talk evaluates and compares the efficacy of these programmes: a six-week on-site treatment programme and a hybrid programme involving two four-day retreats and remote group sessions. Men and women attending both programmes will complete questionnaires evaluating problem gambling (PGSI), psychological distress (CORE-10), anxiety (GAD-7) and depression (PHQ-9) before, immediately after, three months and six months post treatment. A 2*2 ANOVA (sex*programme) will be performed to compare the efficacy of treatment for each group. We expect that women will show greater levels of depression and anxiety before entering both treatment programmes compared to men, reflecting the fact that women may internalise gambling harm to a greater degree than men. We predict that the average PGSI scores to drop across all four conditions, but posit that the six week on-site option will show the biggest decrease in harmful gambling behaviours in both men and women, which will be sustained six months later. The talk will also discuss benefits of each programme in meeting people's needs and use evidence to predict the future of gambling treatment for men and women, and describe insight into how programmes should be tailored for vulnerable groups (i.e. those from LGBTQ+ communities and/or BAME backgrounds).

Keywords: sex differences, women, treatment, gambling harm

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4D–4

Leveraging the potential of digital interventions for gambling: Integrating Ecological Momentary Assessment (EMA) and Biometric Monitoring Technologies (BioMeTs)

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Gambling addiction remains a significant behavioral problem with profound negative consequences for individuals and society. Innovative approaches are needed for effective prevention and intervention. This study explores the potential of digital interventions to address problem gambling by integrating ecological momentary assessment (EMA) and biometric monitoring technologies (BioMeTs). EMA facilitates the collection of real-time data to monitor behavioral and psychological changes, while BioMeTs provide detailed insights into physiological states through continuous signal monitoring. The study was conducted in South Korea and Switzerland and enrolled 50 adult gamblers from each country (N = 100). Eligibility criteria included a moderate-to-severe gambling problem and gambling at least once a week. Over a 28-day period, participants completed pre- and post-study surveys and responded to brief daily assessments via survey links three times a day (morning, afternoon, and evening). These assessments consisted of seven core items measuring gambling behavior, craving, stress, vitality and boredom, depression, and anxiety. Morning surveys also included questions about the previous day's gambling, sleep quality, and physical activity. Physiological signals were collected using wearable devices (Apple Watch) that participants were instructed to wear for at least 10 hours per day, including during sleep. This study explores the integration of EMA and BioMeTs into digital interventions, focusing on the relationship between physiological signals, gambling behavior, and cravings. The findings highlight the benefits of real-time data collection in tailoring interventions for the prevention, early detection, and personalized treatment of gambling problems. In particular, this approach underscores the potential of data-driven strategies to induce behavioral change and support sustained recovery. The findings contribute to the advancement of theoretical and technological frameworks for improving digital interventions for behavioral addictions, and provide valuable insights for developing more effective, evidence-based strategies.

Keywords: gambling addiction, digital interventions, ecological momentary assessment (EMA), biometric monitoring technologies (BioMeTs), behavioral addiction, personalized intervention

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4D–5

Gender-sensitive approach to addressing gambling-related harms among women

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Background: The 2018-2028 Interministerial Action Plan on Addiction in Québec calls for gender-sensitive interventions to address these needs. Social pressures tied to traditional gender roles, such as motherhood and domestic responsibilities, impact women's gambling behaviors. These pressures, combined with societal stigma, create barriers to seeking help. This research explores women's gambling trajectories, help-seeking challenges, and recovery factors. *Method:* Twenty-five qualitative interviews were conducted with women experiencing gambling-related harms from different regions of Quebec, who had and had not sought treatment. The study aimed to identify barriers to service access and understand how gender influences gambling behavior and recovery. Paillé and Mucchielli's analytical framework was used to examine participants' narratives and identify key patterns. *Results:* Key findings emerged from the women's discourse about their gender roles and help-seeking challenges. Societal expectations and the stress of balancing multiple roles (e.g., mother, worker, caregiver) contributed to gambling as a coping mechanism. Many women minimized their gambling problems, a tendency linked to stereotypes associating gambling addiction with men. However, some participants recognized the connection between their behavior and these gendered expectations. Participants emphasized the need for services that consider their family responsibilities, provide flexibility, and offer peer support. *Conclusions:* Gender-sensitive interventions are crucial to addressing gambling harms among women, particularly considering the unique challenges they face, such as societal expectations and the stigma surrounding women's gambling behavior. Services should be flexible, confidential, and empathetic, integrating psychological care with strategies for managing family stress. Training for service providers on gender-specific needs and the creation of peer support networks can significantly enhance recovery outcomes.

Keywords: gender, gambling, women's health, treatment services

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4D–6

Acute and accumulated effects of mindfulness on craving in gambling disorder: A replication case-series study

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Background: Craving plays a crucial role in gambling disorders and other potentially problematic behavior patterns involving rewarding activities. Therapeutic techniques based on mindfulness have proven effective in reducing craving, improving self-regulation, and decreasing compulsivity. Our results from a previous case-series study with individuals diagnosed with gambling disorder –carefully analyzing daily craving dynamics– suggested not only a reduction in gambling craving following a mindfulness program but also a dissociation between acute and accumulated effects of mindfulness sessions. *Method:* Here, we try to replicate this study while maintaining the same methodological design. The program consists of two weeks of baseline measurement prior to the mindfulness intervention, four weeks of intervention, one week of return to baseline, another four weeks of intervention, and two final weeks post-intervention. Throughout all these phases, participants are instructed to record their daily levels of craving (and several craving-related measures) using an electronic diary. *Results:* For analyses, we use a mixed-effect model, including random intercepts for participants, and random slopes for mere time passage, whereas the time passed since the last meditation session and the total accumulated meditation time will enter the model as separate quantitative fixed-effect predictors of day-by-day craving and craving-related measures. *Conclusions:* This study aims to confirm previous findings, not only showing the effectiveness of a mindfulness intervention in reducing problem gambling symptoms, but, most importantly, corroborating that the impact of accumulated meditation time can be distinguished from the effects of the last meditation session or the mere passage of time.

Keywords: gambling, craving, mindfulness, case-series study

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4E–1

Development of compulsive buying in various segments of consumer society: The case of Poland

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Background: The paper is based on the results of 6 cross-sectional studies conducted in Poland in the period between 2010 and 2023. The purpose of these studies was to measure the prevalence of compulsive buying and the factors differentiating susceptibility to such behaviour. Differences in this respect between various subgroups defined in a psychological (self-esteem, materialism), socio-demographic (e.g. gender, generations), socio-cultural (e.g. social value orientations), or behavioural sense (e.g. online shopping, omnichannel and shopping centres customers) have been the subject of particular interest. *Method:* All presented studies are based on statistically representative samples of at least 1,000 respondents aged 18+. The procedure of sampling consisted in the random selection among representatives of online panels managed by research institutes (GfK, Kantar, Ariadna) or involved drawing a sample from the Identity Personal Number Database (in the case of face-to-face interviews). In each case, susceptibility to compulsive buying was measured by the German Compulsive Buying Indicator. *Results:* Although the prevalence of compulsive buying in the general population in Poland remains relatively stable between 2010 and 2023 (2-5%), it looks different when analysing particular subsamples. For example, the 2022 study showed that the share of compensative buyers (pre-stage of compulsive buying) in Gen Z has more than doubled compared to the pre-pandemic period (from 16% to 36%). The same study showed that an especially strong susceptibility to compulsive buying were found among materialistically oriented young female online shoppers characterised by low self-esteem. *Conclusions:* Increasing prevalence of compulsive buying in certain socio-demographic and socio-cultural subgroups might be an indicator of spreading compulsive buying in future. A factor accelerating this effect may be the development of a consumer society and its materialistic orientation.

Keywords: compulsive buying, pathological buying, buying addiction, behavioral addiction

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4E–2

Materialism and compulsive buying: A systematic review and meta-analysis

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The aim of the present study was to clarify the relationship between materialism and Compulsive Buying (CB). A systematic review and meta-analysis were conducted in accordance with the PRISMA guidelines, searching for contribution in several scientific databases up to March 2024. Fifty-six studies met the inclusion criteria. Result revealed significant positive correlation between CB and all dimensions of materialism. In some cases, variations depending on the measurement scale were observed with studies employing the Compulsive Buying Measurement Scale reporting stronger correlations. In contrast, age and gender were not found to be statistically significant moderators. The moderation effect observed may be due to the specific focus of the CBMS on CB in general populations. Further research may extend the current knowledge, in particular longitudinal studies and/or greater focus on older adults.

Keywords: compulsive buying, pathological buying, buying addiction, behavioral addiction

4E–3

Effects of acute stress on cue reactivity and implicit cognitions in online compulsive buying-shopping disorder

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Background: There is a lack of research on the impact of acute stress on the interaction of affective and cognitive processes in online compulsive buying-shopping disorder. Therefore, this project addressed stress response, cue reactivity, attentional bias, and implicit associations in individuals with pathological online buying-shopping. *Method:* Women with pathological online buying-shopping (n = 63) and women with non-problematic online buying-shopping (n = 64) were randomly assigned to the Trier Social Stress Test or a non-stress condition.

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After the stress/non-stress induction, participants performed a cue-reactivity paradigm, a dot-probe paradigm, and an implicit association task, each with addiction-related (online buying-shopping) and control (social networks) cues. *Results:* Individuals with pathological online buying-shopping showed stronger affective responses towards the addiction-related and control cues than the control group and rated the addiction-related pictures with higher 'arousal' and 'urge' than the control images. No group differences emerged in the dot-probe paradigm and implicit association task. Acute stress showed no effect on performance in the behavioural tasks. Regression models investigating the impact of craving on the relationship between stress response and implicit cognitions within the group with pathological buying-shopping were not significant. *Conclusions:* The findings demonstrate the involvement and generalization of cue reactivity in compulsive online buying-shopping disorder, but do not provide support for effects of acute stress on cue reactivity, attentional bias and implicit associations. Conclusions: Future studies should not be restricted to women and combine laboratory and naturalistic study designs to investigate the complex psychological mechanisms in online compulsive buying-shopping disorder.

Keywords: compulsive buying, pathological buying, buying addiction, behavioral addiction

4E–4

Cue-induced craving and selective attention in the context of buying-shopping disorder

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Background: Buying-shopping disorder (BSD) is considered a behavioral addiction characterized by an excessive preoccupation with purchasing, leading to adverse psychological and social consequences. The role of selective attention in addiction processes has garnered increasing attention, as it may influence how individuals prioritize addiction related stimuli. This study investigates the relationship between selective attention and BSD tendencies, positing that individuals with high levels of BSD will demonstrate heightened attention to shopping-related cues. *Method:* An experimental design was employed, involving 100 participants who completed self-report measures to assess their BSD tendencies. Following this, a cue-reactivity paradigm comprising shopping-related and neutral pictures was applied. To assess selective attention a modified Stroop task including the same pictures was administered. Within the task participants had to respond as fast as possible to four different colors irrespective of the administered pictures. The craving reactions (at three points in time) were assessed via questionnaires. *Results:* Craving increases throughout the course of the experimental procedure. Craving responses and symptom severity are highly correlated. However, no associations are found with the interference measurements of the modified Stroop task. *Conclusions:* The results underline the pivotal role of craving in the context of BSD, but do

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not provide support for effects of selective attention towards shopping related cues. This is in line with previous studies that report heterogeneous results regarding the interaction between craving and attention processes. Future research is recommended to explore standardized tasks to investigate the potential interactions between craving and attention. Regulation of craving strategies could be meaningful in reducing excessive buying behaviors in the context of BSD.

Keywords*:* compulsive buying, pathological buying, buying addiction, behavioral addiction

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4F–1

The bridge connecting substance use disorders and behavioral addiction: A study of somatic symptoms among neurological and psychiatric populations

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Somatic symptoms, such as insomnia and chronic pain, are frequently reported among individuals with substance use disorders and behavioral addictions, and they may be associated with craving-related clinical presentations. Similarly, in Parkinson's disease, non-motor symptoms are highly prevalent and, at times, more disabling than motor symptoms; interestingly, these non-motor symptoms can fluctuate throughout the day in tandem with on-off motor fluctuations, suggesting a potential relationship with dopaminergic circuit dysfunction. To test the hypothetical link between somatic symptoms and addiction, we conducted a pilot retrospective observational case-control study involving patients with Parkinson's disease, substance use disorders and pathological gambling. Our findings revealed that patients with Parkinson's disease who experienced chronic pain, as assessed by the King Pain Scale (Chaudhuri et al., 2015), exhibited a significant higher Levodopa daily dosage. They also had a higher prevalence of positive scores on the Dopaminergic Dysregulation Syndrome item and the Questionnaire for Impulsive-Compulsive Disorders of the of the Unified Parkinson's Disease Rating Scales (UPD-RS; Goetz et al., 2008). Lastly, they presented with high scores on depression and insomnia, as measured by the Non-Motor Symptom Scale of the UPD-RS. Similar somatic symptoms, such as chronic pain, insomnia and depression, were also observed among individuals with substance use disorders and pathological gambling, as measured by comparable assessment tools. These results suggest that the presence of somatic symptoms among people with Parkinson's disease may reflect an underlying dysfunction of the dopaminergic circuit and could serve as a therapeutic target in addiction and related disorders.

Keywords: impulsivity, cognition, Parkinson's disease, ADHD, sexuality

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4F–2

Cognitive dynamics of decision making and impulse-control in addiction

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Addictive disorders (ADs) are characterized by impulsive decision-making, often manifested as an inability to delay gratification. Indeed, in intertemporal choice (ITC) tasks, patients with ADs usually display a marked tendency to prefer smaller-sooner over larger-later rewards. However, ITC tasks may not fully capture underlying implicit biases. This study investigated implicit decision-making mechanisms in gambling disorder (GD) and cocaine use disorder (CUD) by employing the process-tracing method of mouse kinematics. ITCs and kinematics measures were recorder from patients with CUD, GD and in matched healthy controls (HCs). Participants also underwent a complete psychiatric and neuropsychological evaluation. Results confirmed higher discount rates in CUD, aligning with previous findings. Crucially, mouse tracking revealed distinct movement patterns: CUD patients exhibited straighter trajectories when choosing immediate rewards, suggesting a strong initial bias towards immediate gratification. Conversely, they displayed more curved trajectories when selecting delayed rewards. GD patients also showed increased discounting compared to healthy controls, alongside a similar bias towards immediate rewards reflected in their movement patterns. These findings suggest that implicit biases, captured by mouse tracking, provide valuable insights into the decision-making processes in ADs. This approach has implications for developing more nuanced therapeutic interventions, predicting relapse risk, and refining neurobiological classifications of these disorders.

Keywords*:* impulsivity, cognition, Parkinson's disease, ADHD, sexuality

4F–3

ADHD in adults and neurodegeneration

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Background: The current literature on the risk of developing Parkinson's disease (PD) in individuals with Attention-Deficit Hyperactivity Disorder (ADHD) is limited, and little is known about the characteristics of ADHD expression in patients already diagnosed with PD. *Methods:* Building on a critical review of the literature and insights from our case histories, we propose a decision-making algorithm for the diagnosis and treatment of ADHD in Adults

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and individuals with PD. Results: Our approach to diagnosing ADHD in adults begins with assessing ADHD symptoms in the patient's history using a dedicated neuropsychological retrospective battery, including WURS (Ward et al., 1993), ASRS-5 (Kessler et al., 2005), DIVA-5 (Kooij & Francken, 2010), BAARS-4 (Barkley, 2011). Before considering pharmacological treatments such as methylphenidate, atomoxetine, bupropion or vortioxetine, it is crucial to identify and address psychiatric comorbidities. To evaluate the risk of PD, other risk factors (i.e. REM sleep Behavior Disorder, hyposmia, stypsis, family history) should be considered. Transcranial sonography of the substantia nigra could be performed and, if findings are positive, a DAT scan should follow. In case of positive UPDRS (Goetz et al., 2008) part III scores, an L-dopa test is mandatory. Interestingly, among our cohort of 60 PD patients with ADHD (as diagnosed using DIVA), there was a high prevalence of impulse control disorders.*Conclusions*: ADHD is one of the most common neurobiological disorders, with a childhood onset and a prevalence of approximately 5% of population worldwide. Notably, about 60%-80% of ADHD symptoms persist into adulthood. Identifying an efficient diagnostic and therapeutic approach for ADHD may reduce the risk of neurodegeneration and encourage neuroprotective lifestyle strategies. Furthermore, diagnosing ADHD in patients with PD may improve their cognitive performances and overall quality of life.

Keywords*:* impulsivity, cognition, Parkinson's disease, ADHD, sexuality

4F–4

Typologies of patients with behavioral addiction and ADHD: Common patterns, specificities

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Introduction: Attention Deficit Hyperactivity Disorder (ADHD) is strongly associated with Behavorial Addictions (BAs) like gambling disorder (GbD) (Grall-Bronnec et al., 2011), sex addiction (SA) (Schreck et al., 2023), or even food addiction (FA) (Brunault et al., 2019). This study aims to precisely describe patients with BA/ADHD+ and to compare them versus patients with BA/ADHD- in terms of clinical, psychopathological and neuropsychological profiles. *Methods:* Patients were recruited from the BANCO (NCT03202290) and BANCO 2 (NCT03967418) studies, targeting patients >15.25 years seeking treatment for GbD, SA, or FA at the Addictology Department, Nantes University Hospital. ADHD was screened using ASRS V1.1 and WURS-C and the review of patients' medical records. GbD, SA and FA were respectively assessed with the NODS, an adapted version of the NODS and the YFAS 2.0. Past and current psychiatric disorders were explored (MINI and the HADS), as well as impulsivity (UPPS-P), self-esteem (RSES), personality traits (TCI-125) and alexithymia (TAS-20). Neuropsychological functioning was assessed using a battery of neurocognitive tests, included sustained (d^2 task) and selective (VDP task) attention, inhibitory control (Stroop, Go-nogo and Stop-signal tasks), decision making (IGT), flexibility (verbal fluency task, TMT, M-WCST), premorbid intelligence (fNART), visuoconstruction (Rey-Osterrieth

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complex figure), planning (Hanoï tower), visuospatial abilities (Squares), delay discounting (SKIP), and social and emotion cognition (Mini-SEA). A multidimensional descriptive analysis in principal component analysis will be performed in BA/ADHD+ patients. Comparison tests will be performed between clinical, psychopathological and neuropsychological variables in BA/ADHD+ versus BA/ADHD- groups. *Results:* Inclusion of 90 patients is expected. Given the prevalence of BA/ADHD comorbidity (El Archi et al., 2023), we anticipate including 26 patients with dual disorders. Currently, 77 patients have already been enrolled (24 GbD, 23 SA, 30 FA). *Discussion:* Findings will be contextualized within current knowledge on ADHD with and without co-occurring addictive disorders, highlighting implications for personalized treatment strategies.

Keywords: impulsivity, cognition, Parkinson's disease, ADHD, sexuality

4F–5

Sexuality in adults with ADHD: Gender differences, assessing for problematic sexual behaviours, and holistic treatment

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Background: Attention-Deficit/ Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder affecting approximately 3% of adults and is characterized by attentional self-regulation deficits, hyperactivity, and impulsivity which all may impact psychosexual functioning and wellbeing. There are also significant associations between symptoms of ADHD and aspects of hypersexuality and problematic pornography use (PPU). *Method:* A review of research focusing on the relationships between sexuality, ADHD, CSB, PPU, will be shared highlighting gender differences along with holistic mind-body treatments that target symptoms. *Results:* Data show a higher prevalence of sexual dysfunctions among men and women with ADHD compared to the general population. PPU has been shown to have a positive and moderate association in men with ADHD. Women with ADHD may experience challenges in romantic relationships, such as low satisfaction and remaining in imbalanced lower relational power dynamics, and they may use sex to cope with stress and anxiety or for validation seeking. They also may engage in sexual risk-taking behaviors resulting in regretted sex or may be at an increased risk for sexual victimization. Integrating mind-body interventions in treatment have been shown to be effective in addressing the symptoms of ADHD, sexual dysfunction, and CSBs. *Conclusions:* There are gender differences in the presentation of ADHD symptoms, which calls for assessment measures and treatment interventions to be gender informed. To enhance quality of care for those with ADHD, assessments for sexual dysfunction, CSB, and PPU are warranted. Future research may investigate holistic mind-body integrated treatments, such as contemplative embodied practices, shown to facilitate emotional regulation by creating states of connected calm focus in order to assess if these modalities target the core symptomatology of ADHD and comorbid sexual functioning concerns.

Keywords: impulsivity, cognition, Parkinson's disease, ADHD, sexuality

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4G–1

Gambling in the digital age: A nearly decade-long evolution among European adolescents (ESPAD 2015–2024)

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Introduction: Adolescent gambling remains a significant public health issue in Europe, yet comprehensive cross-national data on its evolution over time have been scarce. The European School Survey Project on Alcohol and Other Drugs (ESPAD) 2024 provides, for the first time, a longitudinal analysis of gambling behaviors among 16-year-olds across multiple European countries, using data collected over the past decade (2015, 2019, and 2024). This study aims to identify emerging trends, shifts in problematic gambling behaviors, and the influence of regulatory and digital transformations on adolescent gambling habits. *Methods:* Data were drawn from the ESPAD 2015, 2019, and 2024 surveys, involving students aged 15–16 from over 30 European countries. The study examines gambling participation rates (including online and offline gambling), engagement with loot boxes, and indicators of problematic gambling behavior. Logistic regression models were employed to assess changes over time and to explore associations between gambling behaviors and sociodemographic factors, adjusting for country-specific regulatory environments. *Results:* Preliminary findings indicate an increase in adolescent gambling participation from 2015 to 2024, with notable rises in online betting. The data reveal a shift in risk factors, with digital accessibility and social media exposure playing a more pronounced role in gambling initiation. Additionally, a significant proportion of surveyed adolescents exhibit problematic gambling behaviors, with variations observed across different European regions. The findings highlight the need for updated prevention strategies tailored to new digital gambling landscapes. *Conclusion:* This study sheds light on evolving patterns of adolescent gambling in Europe over the past decade, emphasizing the impact of technological advancements and regulatory changes. The findings underscore the importance of continuous monitoring and the development of targeted prevention strategies to address emerging risks associated with adolescent gambling behaviors.

Keywords: ESPAD, gambling, adolescent

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4G–2

Typology of online gambling behaviors during the COVID-19 pandemic: A longitudinal study based on Swedish and French gambling tracking data

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Background: Since the COVID-19 outbreak, people's habits have changed significantly. To limit the spread of SARS-CoV-2, governments implemented restrictive measures that affected individuals' daily lives. Gambling opportunities were particularly impacted, especially in terms of sports events and horse racing. *Aims:* To analyze individual gambling trajectories of representative French and Swedish gamblers during the pandemic (2020) compared to 2019 and identify at-risk subpopulations likely to increase their gambling activity in response to COVID-19. *Methods:* Gambling tracking data were collected from three sources: the Swedish state-owned operator Svenska Spel Sports & Casino (offering sports betting, bingo, casino games, and poker), the French National Online Gambling Authority (ANJ, overseeing poker, horse race betting, and sports betting), and the French national lottery operator Française des Jeux (FDJ, covering online lotteries). Representative samples included 60,000 online gamblers from Svenska Spel and 40,000 gamblers each from ANJ and FDJ. All gamblers who gambled at least once between 01/01/2019 and 31/12/2020 were included. The data encompassed weekly aggregated gambling activity, including metrics such as money wagered, gambling frequency, level of involvement, etc. Latent Class Mixed Models (LCMM) were applied to identify distinct gambling trajectories for each gambling type and indicator. Subsequently, Latent Class Analysis (LCA) was used to classify gamblers with similar trajectories, focusing on changes in gambling behavior during the COVID-19 pandemic. *Findings:* Various profiles of online gamblers were identified in both France and Sweden. In France, five profiles were found for sports bettors, horse race bettors, poker gamblers, and five additional profiles for those involved in lotteries, while in Sweden, seven profiles were identified for online gamblers involved in sports betting, horse race betting, bingo, and casino. The majority of gamblers showed low and stable activity, with minimal impact from the pandemic. Some sports bettors, especially males, experienced a sharp decline in 2020, followed by a surge when sports resumed, exceeding pre-pandemic levels. A small group of Swedish gamblers, including women involved in bingo and casinos, increased their activity during sports cancellations but returned to pre-pandemic levels once sports resumed. *Conclu-*

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sions: It seems essential to learn from significant events like the pandemic and implement measures to protect gamblers during future crises. These measures should include temporary limits on gambling and tailored interventions based on individual factors such as gambling involvement, age, and gender.

Keywords: COVID-19, online gambling, gambling tracking data, France, Sweden

4G–3

The association between empathy and gambling disorder

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Empathy, a social capability that functions in interpersonal interactions, has attracted researchers' increasing attention on its role in addiction. To further investigate the association between empathy and gambling disorder (GD), this study conducted a scoping review, systematically searching seven databases (five in English and two in Chinese) up to December 2024. A total of three eligible studies were included. Despite the exclusive use of cross-sectional designs, this review highlighted (1) the significant association between empathy and GD, (2) the more pronounced role of cognitive empathy compared to emotional empathy in mitigating GD, and (3) the potential mediating role of attitudinal factors in the empathy-GD relationship. Although the number of studies examining the empathy-GD relation remains limited, existing research consistently supported their significant relationship at both neural and behavioral levels. This review also identified research gaps that future studies could address by incorporating longitudinal or experimental designs to further explore how and why different types of empathy might protect individuals from excessive and maladaptive gambling behaviors. Furthermore, future GD prevention, screening, and treatment programs may benefit from a heightened emphasis on the role of empathy.

Keywords: empathy, gambling disorder, scoping review

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4G–4

Development and validation of the Experiences of Trading Questionnaire: Preliminary results

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Introduction: Although several studies have highlighted that dysfunctional behaviors in financial trading are associated with significant negative individual and social consequences, there is a lack of instruments capable of providing a comprehensive evaluation of problematic trading. This gap is partly due to the fact that existing tools have been developed by applying gambling disorder criteria to trading, without adequately addressing the unique characteristics of trading behaviors. Method: We developed the Experiences of Trading Questionnaire, comprising 79 items that describe a wide range of problematic trading behaviors based on findings from two preparatory studies (a systematic review and a qualitative study). A sample of 107 cryptocurrency traders was recruited to complete this questionnaire alongside existing measures of problematic trading. *Results:* Exploratory factor analysis revealed several factors capturing problematic trading behaviors in response to significant financial losses, substantial profits, and negative impacts on daily life, such as self-critical rumination. Correlations between these factors and other measures of problematic trading were weak to moderate. *Conclusions:* The results suggest that the Experiences of Trading Questionnaire demonstrates good psychometric properties and enables the assessment of both specific problematic trading behaviors and issues resembling those seen in gambling disorder. Further research is needed to provide additional evidence supporting the validity of this instrument.

Keywords: trading, cryptocurrencies, questionnaire

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4G–5

Development and validation of the Indian Aggression Toolbox (I-AT)

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Background: Computerized picture-based assessments and interventions are becoming increasingly recognized for clinical and research purposes. Currently, there is no such comprehensive toolbox available for aggression in the Indian population. The current study aimed to develop Indian Aggression Toolbox (I-AT) across five categories of aggressive behaviors, namely, aggressive expressions, verbal aggression, aggression against objects, aggression against others, and aggression against self. *Methods:* This cross-sectional study included different stages and employed a mixed-methods approach. In the first stage, 10 male patients (Mean age: 30.8 ± 6.36 years) diagnosed with comorbid substance use disorders and gambling behavior were recruited for brief qualitative interviews which facilitated the construction of 100 aggressive stimuli using two Artificial Intelligence (AI) image generation platforms, with 20 images from each category representing each category of aggressive behaviors. The platforms used were 'OpenArt.ai' and Adobe Firefly. The matched non-aggressive stimuli were also generated through the same platforms. The initial set of aggressive and non-aggressive images underwent revision in five rounds, incorporating feedback and suggestions from three mental health experts (Professors of psychiatry or clinical psychology with 13 - 31 years of clinical and research experience). Subsequently, a second round of validation incorpoarted 30 male patients (Mean age: 30.8 ± 4.95 years), including 18 individuals with substance use disorders and 12 with both substance use disorders and gambling behavior. These patients evaluated the images based on three dimensions of intensity, clarity, and genuineness. Inter-rater agreement and total mean scores were then used to select the final set of aggressive images. Inter-rater agreement was also employed to assess any extent of perceived anger within the non-aggressive stimuli. It was decided that an inter-rater agreement of over 50% of participants identifying a non-aggressive stimulus as ‘aggressive’ was considered significant. The data were analyzed using Statistical Package for Social Sciences (SPSS) version 21.0.0.0 and Microsoft Excel. *Results:* Following the final phase of validation, the highest rated 10 pictures were retained in each category, leading to the development of a final selection of 50 aggressive stimuli along with 50 matched non-aggressive stimuli. *Conclusions:* The I-AT database is a culturally sensitive resource validated for individu-

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als with comorbid substance use disorders and gambling behaviors, particularly those from lower socioeconomic backgrounds. It shall serve as a tool for conducting assessment-based and interventional research in the field of aggression among the Indian population.

Keywords: addiction, substance use disorder, gambling behaviour, aggression, toolbox, pictorial stimuli

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4H–1

Digital mirrors: Body image and problematic internet use across and related comorbidies in ten countries

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Body image is increasingly shaped by social media, which promotes unattainable and unrealistic beauty standards, potentially impacting individuals' mental health and encouraging harmful appearance-related behaviours. This study aimed to explore the association between problematic internet use (PIU) and body image disorders, focusing on related comorbidities such as exercise addiction and the use of image and performance-enhancing drugs (IPEDs) to boost appearance, across ten countries. It also examined how appearance anxiety is predicted by PIU, excessive physical exercise, and IPEDs use. Participants completed a web-based survey assessing sociodemographic data, appearance anxiety (AAI), problematic internet use (PIUQ-9), excessive exercise (EAI), and intake of IPEDs. A total of 3,532 participants from ten countries (Gibraltar, Hungary, Italy, Japan, Lithuania, Mexico, Portugal, Singapore, Spain, and the United Kingdom) were included in the study. Appearance-related anxiety was observed in 12.4% of participants, with the highest prevalence in Mexico, Japan, and Italy. Problematic internet use (PIU) had the highest median scores among participants from Mexico and Singapore, whereas excessive exercise was reported by 3.6%, with no significant differences between countries. IPEDs use was reported by 28.4% of participants, with the highest rates in Gibraltar (61.1%) and Japan (60.6%). Logistic regression revealed that PIU, excessive exercise, and IPEDs use were significant predictors of appearance-related anxiety. The findings demonstrate cross-cultural variability, indicating that sociocultural dynamics play a critical role in shaping body image concerns and related behaviours. The significant associations between PUI, excessive exercise, and IPEDs intake with heightened appearance-related anxiety underscore the multifactorial nature of these issues and their potential implications for mental health. The high prevalence of IPEDs use, particularly in Gibraltar and Japan, raises important public health concerns and calls for targeted interventions addressing the normalization of appearance-enhancing substances. These results highlight the urgent need for culturally sensitive prevention strategies and health education programs aimed at reducing digital exposure to unrealistic body ideals and mitigating the psychological and behavioural consequences linked to body dissatisfaction.

Keywords: social media, appearance anxiety, problematic internet use, image and performance-enhancing drugs, excessive exercise

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4H–2

Bidirectional relationships between loneliness and problematic media use: A meta-analysis of longitudinal studies

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Background: Previous research has shown a link between loneliness and problematic media use, but the direction of causality is unclear. This meta-analysis explores the longitudinal relationships between loneliness and problematic media use. *Method:* Systematic searches across three online databases identified 26 longitudinal studies with 24,798 participants. Random-effect models were used to analyse the data, focusing on beta coefficients to estimate the longitudinal relationships. Subgroup analyses were conducted to assess the stability of results across different study designs. *Results:* The findings revealed bidirectional relationships between loneliness and problematic media use, although the effect sizes were weaker than expected. Subgroup analyses revealed consistently stable beta coefficients across different study designs. The study also identified potential methodological limitations and emphasises the need for further research into longitudinal relationships in this area. *Conclusions:* The findings support a bidirectional model in which loneliness and problematic media use influence each other over time. However, the relationships are weaker than anticipated, suggesting the need for more robust methodologies in future studies to better understand these dynamics.

Keywords: loneliness, problematic media use, longitudinal studies

4H–3

Impact of modern dating trends in dating apps on self-esteem and body image

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Invention of the internet, has certainly facilitated flow of information and enhanced communication across the globe. It has invariably become an indispensable aspect of human life. Within this context, both dating websites and mobile applications have grown significantly in the recent past. Modern dating has undergone a digital evolution that has given rise to modern dating trends. Ghosting - When someone abruptly ends all communication with another person without warning has been significantly correlated with psychological distress, feeling invisible, lonely and sad by the person who experiences it (Jahrami et al., 2023; Navarro et

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al., 2020). It aligns with addiction components in Griffiths model (Bonilla-Zorita et al., 2021) like salience – prioritising constant use of dating apps, mood modification – seek validation and escape negative feelings, and conflict – social reality of the users thus affecting self-esteem and body image. Dating apps promote the gamification of romantic relationships and are curated around visual-based judgements (Nader, 2024). People experience rejection on these based on their ideal self which undermines their self-esteem and body image. Despite its widespread prevalence, limited research has been done on the implications of ghosting on dating apps. This study aims to understand how these trends impact the behaviour of young adults, generation Z (18-27) concerning self-esteem and body image potentially identifying moderating factors like frequency of app use and social support. It will also explore the gap in how gender differences influence this impact. The research questions proposed are A) Is there a correlation between ghosting on dating apps and self-esteem? B) Is there a correlation between ghosting on dating apps and body image? C) Are there any gender differences in the impact of ghosting on self-esteem and body image? The study employs a mixed-method approach. Quantitative data will be obtained from at least 100 participants via Google form using the GHOST questionnaire, the Rosenberg Self-Esteem questionnaire, and the Body Image Satisfaction Scale. This will be followed by in-depth semi-structured interviews with 25 participants with extreme scores. The findings of this study may call attention to the need to understand problematic digital behaviours and their effects on mental health and well-being. Future research can highlight how to navigate and mitigate these effects.

Keywords: ghosting, problematic digital behaviours, dating apps, self-esteem, body image.

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4H–4

The association between problematic social media use and substance use among adolescents in Latvia

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Introduction: Social media use is an integral aspect of adolescents' daily lives, facilitating relationship maintenance and fostering social connectedness. However, previous research has indicated that problematic behaviors, including excessive and problematic social media use, may be linked to adverse mental health outcomes, such as anxiety, depression, and an increased risk of substance use. This study aimed to examine the prevalence of problematic social media use and its association with substance use among adolescents in Latvia. *Methods:* Data were obtained from a nationally representative sample of Latvian adolescents aged 15-16 years (n = 2726) participating in the 2019 European School Survey Project on Alcohol and Other Drugs (ESPAD). Problematic social media use was assessed through self-reported responses on the "Self-perceived problems related to social media use" scale. Substance use indicators included alcohol use in the past 30 days, instances of being drunk in the past 30 days, electronic cigarette use in the past 30 days, daily cigarette smoking, and cannabis use in the past 12 months. Logistic regression models were employed to evaluate unadjusted and adjusted associations between problematic social media use and substance use, as well as examining the interaction with sex. *Results:* Problematic social media use was reported by 50.6% of adolescents, with higher prevalence among girls ($p < 0.001$) and adolescents from families with higher self-perceived economic status ($p < 0.05$). Problematic social media use was associated with higher odds of using alcohol in the past 30 days – aOR=1.45 ($p < 0.001$), and 40% higher odds of being drunk in the past 30 days ($p < 0.05$) than adolescents without problematic social media use. For boys problematic social media use was associated with higher odds of cigarette smoking – aOR=1.41 ($p<0.05$). No statistically significant associations were found with cigarette smoking for girls, e-cigarette use, or cannabis use. *Conclusions:* Problematic social media use was significantly associated with higher odds of alcohol consumption and being drunk in the past 30 days among adolescents, and cigarette smoking for boys. These findings align with the theory of adolescent risk behaviors, and suggest that exposure to alcohol and smoking-related content on social media may influence substance use patterns in this population.

Keywords: social media, alcohol, smoking

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4H–5

Problematic usage of internet among young adults in Georgia: Insights from the first pilot study

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Background: Problematic Usage of the Internet (PUI) is affecting 6-14% of the global population, among them, around 11% of young adults, according to recent meta-analyses. In Georgia, there is no study to date on PUI and its manifestations, using standardized and validated instruments. *Method:* A computer-based anonymized survey including 132 items pertaining to generalized and specific types of PUI was conducted during Sept-Oct, 2024. A total sample comprised of 215 students (F = 114), aged 18-25 (M = 20.1, SD = 1.68) and residing in Tbilisi: 112 Georgians, 103 – foreigners (73 Indians, others – from African or Asian countries). Participants completed the Compulsive Internet Use Scale (CIUS-14), Bergen Social Media Addiction Scale (BSMAS-6), Internet Gaming Disorder Test (IGDT-10), Problem Gambling Lie-Bet-2 test, Generalized Anxiety Disorder Assessment (GAD-7) test, Jenkins Sleep Index (JSS-4), and the WHO-5 Well-Being Index (WHO-5). The double back translation procedure was used to adapt the PUI instruments from English to Georgian cultural context. *Results:* Majority of students were spending more than 4 hours per day on the Internet during weekdays and weekends (71% and 87% respectively), while many spent more than 6 daily hours (38.1%, and 49.8%, respectively). Above-threshold summary scores on CIUS-14 (>28) were registered among 37.2% of the surveyed population, while 8.8% reported scores that correspond to severe level of CIUS (>42). Overall, female students seem more affected, reporting significantly higher average summary scores on CIUS-14 (F: 27.9±10.3 vs M: 23.7±10.0, p=0.003) and frequently indicating above-threshold levels of CIUS (F vs M ratio of 45.6% vs 27.7%, Pearson Chi-square 9.2, P=0.01). Problematic social media usage investigation indicated that 28.4% reported above-threshold BSMAS-6 summary scores (≥18), while 7.4% - scores (≥24) that correspond to severe social media usage. Assessment of problematic gaming (with IGDT-10 summary >5) indicated it among 4.7% of the population. In addition, problematic gambling was registered in 9.3%, severe sleeping disorder in 8.8%, severe anxiety in 12.1%, and depression level in 13.5% (as assessed with corresponding measures). Positive correlation was found between CIUS-14 and the following behaviours: social media use, online shopping, online streaming, and, especially, - severe anxiety. Overall, Georgian students have reported lower average summary scores on CIUS-14-Sum than foreigners (M: 24.5±10.3 vs 28.0±10.4, P=0.01). Above-threshold summary scores on CIUS-14 were reported by 29.5% of Georgian students as compared to 45.6% of the non-Georgian population. (Pearson 6.0, P=0.014). GAD-7-sum levels also demonstrated the difference in anxiety level: 8.2±0.6 in foreigners vs. 5.8±0.5 among locals (P<0.0005). *Conclusions:* Our results indicate that PUI seems more prevalent among female and foreign

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student populations residing in modern-day Georgia. Problematic internet behaviors are positively correlated with social media usage, online shopping, online streaming behaviours, as well as anxiety, depression, and sleep disorders.

Keywords: Problematic Usage of Internet (PUI), young adults, Georgia, Problematic Social Media Use, anxiety

4H–6

Loneliness and Problematic Social Media Use: The Mediating Roles of Social Comparison and Fear of Missing Out

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Background: Problematic social media use (PSMU) refers to excessive engagement with social networking sites (SNSs) that negatively affects an individual's personal, social, or professional life. PSMU has been associated with disrupted sleep patterns, reduced psychological well-being, lower life satisfaction, impaired face-to-face interactions, diminished academic performance, and decreased self-esteem. Recent systematic reviews suggest that the relationship between loneliness and PSMU is multifaceted and not entirely understood (O'Brien et al., 2023). Consequently, it is essential to explore not only the direct association between loneliness and PSMU but also the mediating and moderating factors that might influence this relationship. The present study aimed to address gaps in the literature by investigating the effects of two proposed serial mediators (i.e., fear of missing out [FoMO] and social comparison orientation [SCO]), to provide a more comprehensive understanding of these mechanisms. *Method:* A total of 359 Italian daily SNS users (e.g., Facebook and Instagram) participated in the study. Participants were aged between 18 and 35 years ($M = 23.7$, $SD = 3.35$), with 73% identifying as female. They completed an online survey that included validated scales assessing loneliness, fear of missing out, social comparison orientation, and problematic social media use. *Results:* Mediation analysis showed that the relationship between loneliness and PSMU was partially mediated by the combined effect of social comparison ($B = 0.11$, $SE = 0.02$, $\beta = 0.07$, $p < 0.001$) and FoMO ($B = 0.03$, $SE = 0.02$, $\beta = 0.01$, $p < 0.05$). Gender and time spent on social media were included as covariates in the mediation model. *Conclusion:* The findings reinforce previous research suggesting that higher loneliness is associated with a greater risk of PSMU. Additionally, the mediating roles of social comparison and FoMO offer new insights into the mechanisms linking loneliness to problematic social media use.

Keywords: loneliness, fear of missing out, problematic social media use

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5A–1

Addictive behaviors from global to national policy making

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Addictive behaviors started to be concerning for health professionals since mid-90s. Online form of known disorders in the impulsive compulsive spectrum such as Gambling Disorder; and new disorders with no blueprint for treatment approaches and no specific nor adapted care offer such as Problematic Use of the Internet (PUI) including Gaming Disorder (GD). Numerous lacks which were highly contrasting with the growing demands from health service users. The magnitude these concerns were gaining over time in different parts of the world, along with the accumulating scientific evidence of clinical and neurobiological consistency with previous addictive disorders, led to a global public health bundle of achievements and ongoing projects. Inclusion of Gaming Disorder (GD) besides Gambling Disorder by World Health Organization (WHO) in ICD-11 draft, in 2018 and its endorsement by World Health Assembly (WHA), in 2019 as addictive conditions, is one of the milestones reached to stimulate health systems preparedness to tackle these disorders. However social media related disorders are not yet well defined and no gold standard for identifying them exists so far. This talk draws an overview of Policy and Program response worldwide to different addictive behaviors, those recognized and those still to be recognized as addictive disorders in ICD-11. It introduces WHO mapping of Policy and Program response to GD over the globe. To illustrate the challenges of the transition from ICD-11 new classification for addictive disorders release to the national implementation , a case study from Switzerland is presented. It includes some relevant findings of WHO Field-testing of ICD 11 for addictive behaviours to consider for country implementation. In conclusion ICD 11 improved the understanding of the societal and economic impacts of new categories such as gaming disorder. However for its country implementation, it requires investment in training care professionals to use it, in communication to avoid over-pathologizing normal behaviours, and in country preparedness to integrate it in national health systems monitoring and planning. A smooth Transition between ICD-10 and ICD-11 is essential to maximize the benefits of the new classification system.

Keywords: addictive behaviors, gaming, gambling, Problematic Internet Use, policy making

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5A–2

Assessing the addictive potential of video games: Measurement instruments, challenges and practical implications

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Background: The development of gaming disorder (GD) is shaped by a complex interplay of gaming-related, personality, and environmental factors (Király et al., 2023). While personality and environmental determinants of GD have been widely studied, research focusing on gaming-specific risk factors remains limited. Recently, two independent research groups introduced instruments designed to assess the addictive potential of video games: the Risk Characteristics Checklist for Games (RCCG; Rehbein et al., 2024) and the Saini-Hodgins Addiction Risk Potential of Games (SHARP-G; Saini et al., 2024). Methods: In this study, these instruments were applied by undergraduate psychology students during research field practice courses across two semesters, evaluating a range of video games and engaging in critical discussions about instrument applicability. *Results:* Based on these discussions, a revised version of the SHARP-G, termed SHARP-G-R, was developed. The revised version improves item interpretability by simplifying the language for greater clarity and accessibility, eliminates items with limited empirical support, and adds new items that address additional relevant factors potentially contributing to the addictive potential of games. This presentation will examine the strengths and limitations of these instruments, highlight key challenges in their practical application, and present preliminary findings from an empirical study assessing the inter-rater reliability of the SHARP-G-R. Discussion: Additionally, the broader objectives, potential research and clinical applications, and policy implications of such assessment tools will be discussed.

Keywords: gaming disorder, structural characteristics, addictive features, ethical game design

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5A–3

Diagnosing the market? Leveraging marketing analytics to detect compulsive lootbox consumption in mobile games

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Background and aims: This research aims to bridge marketing analytics and clinical psychological diagnostics towards identifying mobile game users at risk of compulsive lootbox consumption—a behavior that may lead to in-game shopping and gambling addiction (Drummond & Sauer, 2018). Drawing on commonly available marketing analytics, specifically usage and purchase data combined with Net Promoter Score (NPS) survey results, it proposes that at-risk individuals could be identified through a paradoxical pattern: reporting very low NPS ratings (i.e., absolutely not recommending the game) yet exhibiting high levels of playtime and expenditure on lootboxes – reflecting deep ambivalence of the sort "I think this is not good but I cannot stop consuming it" (Winston, 1980; Baumeister, 2002). *Method:* A longitudinal dataset is extracted from a top-grossing mobile game with lootbox mechanics and mined for patterns. The dataset covers daily play and spending behavior and two NPS survey ratings for 141,966 users who played the game during the first three-day NPS survey period from 2019/3/4 to 2019/3/6. The second NPS survey contained in the dataset ran from 2019/4/8 to 2019/4/10. Overall, the dataset covers users' daily behavior for the period 2019/01/01 to 2019/04/25. It also records how long users have been playing the game, what device they are playing on, and from what country. *Results:* Analysis via random forest regressors and partial dependency plots surfaces that higher prior play and spending associates with lower NPS ratings on average. This result is unexpected as more engaged players would commonly be expected to enjoy and recommend the game more. More strikingly, we find that 9% of players rate the game very low on the NPS survey (0, 1 or 2 out of 10) and spend substantial amounts of time and money on the game in the subsequent month. A sizeable share of players hence exhibits paradoxical and highly ambivalent usage patterns that may be indicative of compulsive consumption and self-control problems. *Conclusions:* This study provides insights towards leveraging existing data infrastructure to address emerging behavioral health challenges and in-market detection systems to mitigate harmful consumption behaviors. Upon further validation, the proposed approach could inform industry and policy efforts to develop proactive measures for addiction prevention, such as early intervention frameworks or temporary consumption suspensions (Bavarian State Chancellery, 2020).

Keywords: game lootboxes, compulsive consumption, in-market prevention, marketing analytics

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5A–4

Should Gaming Disorder extend to all types of gaming? The case of collectible card games

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Harmful offline and online digital gaming is recognized in Gaming Disorder in ICD-11, but research on the potential harms or protective characteristics of non-digital gaming is limited. Tabletop games, including board games and card games, share characteristics with many digital games in play mechanics, objectives, and fantasy elements, and often have their own digital adaptations. Collectible Card Games (CCG) are tabletop games with customizable sets of cards. Players assemble decks from their own collections, and cards of increased rarity and strength may increase in monetary value. As players "collect to compete", the value of cards rise or fall. CCG have received little attention in research(Mattinen, Macey, & Hamari, 2023) but may provide insight into the relevance of harm in non-digital vs digital gaming. Magic: the Gathering (MtG) is a popular CCG released in a non-digital paper format in the early 1990s. MtG later developed two digital versions of the original game. All three have a large player base. With identical cards and gameplay across digital and non-digital formats, MtG provides a unique opportunity to compare the structural characteristics(ii) of digital and non-digital games and understand the relevance of non-digital games and CCG in the behavioural addiction research landscape. The presentation will provide 1) a review previous research related to non-digital and CCG games; 2) an overview of MtG non-digital and its two digital formats, highlighting key similarities and differences relevant to research; 3) a discussion on structural characteristics between these formats and their relevance to risk of harm; and 4) future directions for research on non-digital games and CCG.

Keywords: games non-digital games, Collectible Card Games, Magic the Gathering, gaming harm, tabletop

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5B–1

Usage motives, use expectancies, and coping in problematic social network use

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Background: Usage motives, use expectancies, and coping styles are driving factors that lead people to use social networks. These factors may also play a crucial role in the development and maintenance of a social network use disorder (SNUD). The current study investigates if usage motives, use expectancies, and coping styles differ between individuals with non-problematic, risky and pathological social networks use. *Method:* In a multi-center study (FOR2974), 290 participants were classified into three groups (non-problematic (CG), risky (r-SNU), pathological use of SNS (p-SNU)) using a diagnostic interview based on DSM-5 criteria for gaming disorder (modified for SNUD). Further relevant constructs have been assessed by self-reports. *Results:* The results showed significant differences between CG, r-SNU, and p-SNU groups in terms of usage motives, use expectancies, and coping styles. Individuals with P-SNU showed higher entertainment motive, more avoidance expectations, and used more maladaptive coping strategies than the CG. Individuals with R-SNU showed higher personality utility motive, more avoidance expectancies than the CG, but less than the p-SNU group. They used less adaptive/maladaptive coping-styles than individuals with p-SNU but did not differ significantly from the CG. Bivariate correlations demonstrated the relationship between symptom severity, usage motives, use expectancies, and coping styles. *Conclusions:* Individuals with different usage patterns of social networks differ regarding usage motives and use expectancies. In addition, individuals with SNUD are more likely to have maladaptive coping styles and use adaptive coping styles less frequently compared with individuals with non-problematic use. The strongest difference was found in avoidance expectancies (highest in individuals with SNUD). The findings illustrate the impact of motivational aspects and specific use expectancies, which could lead to the decision to use social networks for achieving specific emotional experiences and to avoid or reduce negative mood.

Keywords: problematic use of social media, motives, rumination, initiatory self-control, craving

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5B–2

A network approach to solitary experiences and problematic social media use in young adults: The role of underlying motivations

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Background: There is inconsistent evidence concerning the relationships between solitary experiences and problematic social media use (PSMU) in young adults (18–30 years old). Prior research has largely treated solitary experiences and PSMU as unitary constructs. Accordingly, the current study was aimed to explore the associations between core and peripheral symptoms of PSMU, dimensions of loneliness (i.e., trait loneliness, feelings of isolation, and lack of relational connectedness), positive solitude, the frequency of solitary behavior, and the motivations for solitary behavior (i.e., autonomous and controlled) and social media (SM) use (i.e., coping, conformity, enhancement, social motive) in young adults. *Method:* A total of 829 young adults (65% females) completed self-report measures assessing the variables of interest. A correlation network analysis was performed to examine the regularized partial correlations among the variables of interest using data from the entire sample. Separate networks were then estimated for males and females to explore potential gender differences, followed by the Network Comparison Test to examine the invariance of network structure and global strength. *Results:* Results showed that controlled motivations for solitary behavior and feelings of isolation were associated with symptoms of PSMU through certain motivations for SM use. Especially, network analysis revealed positive associations between core symptoms of PSMU and conformity and coping motivations for SM use. No significant gender differences were found in network structure and network global strength. *Conclusions:* Our findings suggest that PSMU may represent an attempt to temporarily escape or counteract negative solitary experiences. A multidimensional perspective on solitary experiences and PSMU symptoms may enhance the understanding of psychological factors underlying PSMU in young adults, aiding in designing targeted psychological interventions.

Keywords: problematic social media use; solitary experiences; young adults.

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5B–3

Repetitive negative thinking explains relations between depression and problematic social media use severity

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Background: Depression symptoms are moderately associated with severity of problematic social media use (PSMU). Yet, less commonly studied are cognitive/affective mechanisms (such as repetitive negative thinking) that may explain relations between depression and PSMU. *Method:* We analyzed survey data from 456 Midwestern US college students, collected in 2024. Participants completed the Patient Health Questionnaire-9 (PHQ-9) for depression, Ruminative Responses Scale for rumination, Penn State Worry Questionnaire for worry, and Bergen Social Media Addiction Scale for PSMU. We used Mplus 8 to estimate confirmatory factor analyses, treating items as ordinal, using weighted least squares estimation. *Results:* A single-factor depression model fit well, robust X2(27)=201.09, p<.001, CFI=.96, TLI=.94, RMSEA=.12, SRMR=.06. A two-factor rumination model (brooding and reflection) fit well, robust X2(34)=277.29, p<.001, CFI=.97, TLI=.95, RMSEA=.10, SRMR=.04. A single-factor worry model fit well, robust X2(44)=162.99, p<.001, CFI=.99, TLI=.99, RMSEA=.08, SRMR=.02. And a single-factor PSMU model fit well, robust X2(9)=98.20, p<.001, CFI=.96, TLI=.94, RMSEA=.15, SRMR=.04. A full structural equation model was specified - depression was the predictor; worry, brooding and reflection were mediators; PSMU was the dependent variable (adjusting for age and sex). The full model fit well, robust X2(44)=1744.45, p<.001, CFI=.95, TLI=.95, RMSEA=.06, SRMR=.12. Using mediation testing with 500 bootstrapped replications, two significant indirect effects were found: 1) brooding mediated relations between depression and PSMU severity; and 2) worry mediated relations between depression and PSMU. *Conclusions:* Results corroborate theoretical models such as the I-PACE Model of internet use disorders, supporting cognitive processes such as repetitive negative thinking as mechanisms that may explain why some depressed individuals may excessively engage in social media use.

Keywords: problematic use of social media, motives, rumination, initiatory self-control, craving

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5B–4

Enhancing the understanding of problematic social media use: Shared vulnerability and protective factors with affective and alcohol use disorders

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Background: Previous research has shown that various vulnerability and protective factors are associated with the severity of problematic use of social media (PUSM), affective disorders, and substance use disorders. Employing a Research Domain Criteria approach, the present study aimed to investigate whether protective and vulnerability factors, including emotion regulation capacities, dispositional self-regulatory behaviors, psychological flexibility, adult attachment styles, mentalization abilities, and childhood maltreatment could predict PUSM symptoms as well as those of affective (i.e., anxiety, depression) and substance (i.e., alcohol) use disorders. *Method:* A community sample of 1997 adult participants (M = 32.01; SD = 14.07; 24.89% males), completed self-report measures. The role of potential vulnerability and protective factors was tested through four different Bayesian models. The models included four different outcome variables (i.e., symptoms of PUSM, anxiety, depression, and alcohol use disorder, respectively) and the same above-reported vulnerability and protective factors as predictors. *Results:* The 95% Bayesian credibility intervals showed that lower levels of initiatory self-control emerged as a shared vulnerability factor for increased symptoms of PUSM, affective disorders, and alcohol use disorder. Higher levels of emotional abuse and lower levels of mentalization abilities were related to increased symptoms of PUSM and affective disorders, while lower levels of emotional neglect were associated with increased PUSM only. *Conclusions:* Lower initiatory self-control emerged as a vulnerability factor shared across symptoms of PUSM, affective disorders, and alcohol use disorder, emphasizing the link between functional impairment and the capacity for adaptive and proactive self-control. The severity of PUSM symptoms was influenced by both shared and specific protective and vulnerability factors, pointing toward the complexity of PSMU and supporting its conceptualization as a compensatory strategy to cope with negative affect.

Keywords: problematic use of social media, motives, rumination, initiatory self-control, craving

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5B–5

Regulation of craving and desire-thinking in problematic social media use using eye movement desensitization technique

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Background: Craving is pivotal for the development and maintenance of behavioral addictions. The Elaborated Intrusion Theory of Desire (EIT) posits that mental imagery is a central component in the experience of craving. Imagery-based desire thinking, characterized by the conscious elaboration of mental images, is hypothesized to contribute to craving responses in the context of problematic social media use. Eye Movement Desensitization (EMD), specifically using horizontal eye movements, has demonstrated efficacy in desensitizing both memories and imagery-based desire thinking. This study investigates the effect of horizontal eye movements on desensitizing imagery-based desire thinking and craving responses in the context of problematic social media use. *Method:* Non-clinical participants were randomly assigned to one of two conditions following a social media-related imagination task. The experimental group performed a structured, adaptive sequence of horizontal eye movements while focusing on a previously imagined picture. The control group focused on the image while fixating a central dot. Craving and desire thinking were assessed using the Craving Experience Questionnaire, the Desire Thinking Questionnaire and visual analogue scales for vividness and emotional valence. Severity of problematic social media use and clinical parameters such as anxiety and depression were measured using standardized questionnaires. *Results:* Results indicate that the experimental group (horizontal eye movements) showed a greater reduction in craving responses, as well as in vividness and emotional valence of imagery, compared to the control group (no eye movements). This reduction was particularly observed among participants with high symptom scores for problematic social media use. *Conclusions:* These findings align with previous studies demonstrating similar effects on gaming disorder and tobacco use disorder. This study suggests parallels in craving experiences between problematic social media use and addictive disorders, highlighting the role of imagery-based desire thinking. The potential of interventions such as EMD to target these mechanisms may offer new therapeutic strategies

Keywords: problematic use of social media, motives, rumination, initiatory self-control, craving

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5C–1

Over 10 years of research into problematic overstudying: What we have learned about an early form of work addiction

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Background: The problematic, compulsive overstudying ("study addiction") was introduced to a broader behavioral addiction literature in 2015. It was conceptualized as a potential early form of a more established construct of work addiction. Since then, dozens of scientific papers have been published reporting the results of systematic research into this phenomenon. *Methods:* The currently available data includes the results of a large-scale cross-cultural nine-year, six-wave longitudinal study, clinical interviews, intervention studies, biological correlates (EEG, cardiovascular reactivity), cross-cultural studies on three continents, and numerous cross-sectional surveys, including epidemiological on prevalence and comorbidities among undergraduate and high-school students. *Results:* Detailed analyses of heterotypic continuity (same phenomenon with different manifestations) with longitudinal data support the hypothesis that study addiction constitutes an early form of workaholism. The data on the associations with potential harm and functional impairments shows very high consistency, indicating that individuals compulsively studying experience high and chronic distress, mental and physical health problems, poor general health, sleep disturbance, loneliness, and generally lower quality of life. Analyses of its association with an obsessive-compulsive personality disorder (OCDP) clearly show that compulsive overstudying cannot be conceptualized simply as a symptom of OCDP. Clinical interviews and intervention studies suggest the presence of withdrawal symptoms among most students seeking psychological support for their compulsive overstudying. Epidemiological data shows that study addiction is comorbid with a wide range of psychopathology. Prevalence studies show that with 6% to over 20% of students at high risk (depending on the country and sample), problematic overstudying is among the most prevalent addictive behaviors. *Conclusions:* In conclusion, problematic overstudying is a relatively prevalent behavioral pattern associated with harm, functional impairments, and frequent comorbidities. It is an early form of work addiction that urgently needs wider recognition and integrated research effort to develop evidence-based early prevention programs and tailored treatment solutions.

Keywords: conceptualization, longitudinal, study addiction, work addiction, workaholism

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5C–2

What is the core of workaholism? A data-driven approach to unify workaholism research

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Working hard is perceived as a valued behavior. However, working hard may develop into workaholism, which is associated with many negative mental and physical problems that are known to undermine performance and well-being in the workplace. The topic has stimulated many publications on its prevalence, personality predictors, and cultural invariance. Unfortunately, concomitant with the number of publications, the number of workaholism measures has increased dramatically, limiting between-study comparison. Therefore, this study aims to provide a much-needed update and proposal on the conceptualization and operationalization of workaholism. For the operationalization of workaholism, we systematically searched for all published workaholism measures and their items. We processed identified items using an R-coded algorithm to select a representative item subset that considered semantics and item quality. In a cross-sectional online study, we administered the selected items to a sample of 461 participants. We used a second algorithm to select items with good convergent and discriminant validity. A factor analysis on this subset yielded a three-factor solution consisting of Work-Life Tension, Work Overinvestment, and Work Overdependency. Lastly, we used a greedy search algorithm, semantic similarity, and item correlations to select the five least tautological items for each factor. Together, the five items from each factor form a new Core Workaholism Scale. In the discussion, we reflect on the data-driven objective approach, how our three dimensions connect to previous theories, and how to use the Core Workaholism Scale in organizational and clinical research.

Keywords: workaholism, work addiction, algorithm, factor analysis, semantic analysis

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5C–3

Work addiction and its link to problematic technology use: The role of maladaptive cognitions

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Background and Objectives: Work addiction (WA) is a behavioral addiction linked to significant physical, psychological, and social impairments. Despite growing evidence of its associations with maladaptive behaviors, its potential role in fostering other behavioral addictions and risky behaviors remains underexplored. This study presents two novel analyses investigating: (1) the longitudinal relationship between WA and problematic internet and social media use, and (2) the association between WA and hazardous smartphone use, including mobile phone use while driving. Both analyses explore the mediating role of maladaptive cognitions, such as rumination, anxiety, and worry. *Methods:* The analyses utilized data from a three-wave longitudinal study conducted in Budapest with a representative sample of 18-34-year-olds (N = 2,563). The study employed Hungarian versions of the Bergen Work Addiction Scale, Problematic Mobile Phone Use Questionnaire, Problematic Internet Use Questionnaire, Bergen Social Media Addiction Scale, Ruminative Response Scale, Anxiety subscale of the Brief Symptom Inventory 18, and Penn-State Worry Questionnaire. The second analysis also included custom questions about mobile phone use while driving. Path models were employed to test mediation effects. Results: In the first analysis, rumination and worry at T2 mediated the relationship between T1 WA and T3 problematic internet and social media use. In the second analysis, anxiety at T1 and worry at T2 significantly mediated the association between T1 WA and T3 mobile phone use while driving. Rumination emerged as an initial factor but lost significance when all mediators were analyzed simultaneously. *Conclusions:* These findings reveal how WA may act as a precursor to both behavioral addictions and hazardous behaviors through maladaptive cognitive mechanisms. This underscores the importance of addressing ruminative and anxious thought patterns in WA prevention and intervention strategies. By reducing these maladaptive cognitions, it may be possible to mitigate WA's broader negative impacts, including problematic technology use and risky smartphone behaviors.

Keywords: work addiction, problematic internet use, problematic social media use, problematic mobile phone use, longitudinal, maladaptive cognitions

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5C–4

Heterotypic continuity of compulsive work-related behaviors: A cross-cultural longitudinal nine year six wave study

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Background: Compulsive work-related behaviors have been recognized in the Diagnostic and Statistical Manual (DSM) as a mental health problem since the mid-20th century. With the emergence and dynamic development of the behavioral addiction field, they are currently conceptualized as a potential addictive disorder, so-called work addiction/workaholism. Since addictions often begin to develop in youth, it can be expected that some adolescents and young adults may show addictive behaviors toward studying as an early form of workaholism. This study aimed to investigate whether compulsive work-related behaviors show heterotypic continuity across development, such that it manifests in compulsive studying in adolescence and later as compulsive overworking in adulthood. *Methods:* Longitudinal measurement invariance and nomological network analyses were employed to examine this hypothesis. The modified five-item version of the Bergen Study Addiction Scale (BStAS) and the Bergen Work Addiction Scale (BWAS), which measure analogous common addiction symptoms, were used over six study waves spanning nine years in Norway and Poland. The current analyses used data from participants studying in the first two waves (2013, 2014) and subsequently working in all the following waves (2016, 2018, 2020, 2022). A sample of 403 participants was obtained in Norway and 333 in Poland. Mean age at Wave 1 was 24.43 (SD = 4.77)/21.55 (SD = 1.73), respectively. *Results:*Results showed partial scalar measurement invariance for the BStAS/BWAS. Patterns of correlations with relevant variables from the nomological network showed strong similarities in all waves. *Conclusions:* It is concluded that study and work addiction represent the same underlying construct. It has important implications for understanding the developmental trajectories of workaholism and its micro, meso, and macro-level risk factors, including those associated with parenting and education. The current study paves the way for systematic investigations in this area, which may lay the foundation for developing evidence-based early prevention programs.

Keywords: longitudinal, measurement invariance, study addiction, work addiction, workaholism

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5C–5

Executive function deficits in work addiction and cannabis use disorder: A comparative analysis

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Introduction: Empirical research underscores the critical role of executive functions in both substance use disorders and behavioral addictions. While executive function deficits are well-documented in cannabis use disorder (CUD), the cognitive profile of work addiction (WA) has remained largely unexplored. In our previous study, individuals with WA showed impairments in inhibitory control and complex working memory, resembling patterns seen in other addictive disorders. Building on these initial findings, the present study investigates further the cognitive similarities and differences between WA and CUD through a direct comparison of these two groups. *Methods:* A total of 144 participants were divided into three groups based on their scores on the Work Addiction Risk Test (WART) and the Cannabis Use Disorder Identification Test - Revised (CUDIT-R). The High Risk WA group (HWA; n = 39; Mage = 37.56), High Risk CUD (HCUD) group (n = 44; Mage = 32.89), and control group (n = 61; Mage = 42.72) completed a two-hour assessment, including tasks measuring inhibitory control (Go/No-Go), cognitive flexibility (Card Sorting Task;CST), and working memory (Counting Span; CSPAN). *Results:* In the CSPAN task, the HCUD group showed poorer working memory performance than both the HWA and control groups, with the HWA group also performing significantly worse than controls. On the Go/No-Go task, both the HCUD and HWA groups exhibited worse performance compared to controls, with no significant difference between the HCUD and HWA groups. No significant differences were found between groups in the CST task. *Discussion:* This study suggests that WA may share significant cognitive similarities with CUD, as both the HCUD and HWA groups displayed impairments in executive functions, particularly in inhibitory control and working memory. The HCUD group exhibited more pronounced working memory deficits. Cognitive flexibility, however, appeared intact in both groups. Despite the ongoing debate over the definition and criteria for WA, this study highlights its addictive nature by identifying shared cognitive patterns with other addictions. *Funding:* supported by the EKÖP-24 University Excellence Scholarship Program of the Ministry for Culture and Innovation from the source of The National Research, Development And Innovation Fund.

Keywords: work addiction, cannabis use disorder, executive functions, cognitive profile

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5D–1

The role of deep technologies in addressing risk behaviours in gambling: A systematic review

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Deep technologies combine engineering innovation and scientific findings to solve complex problems, being particularly relevant to the gambling industry. With the global rise of gambling practices and the subsequent increase of gambling-related problems and disorders, deep technologies are emerging as a means to create a safer online gambling environment. However, there is still limited knowledge regarding their applicability and aftereffects. The present study aims to systematically review the existing literature on the use of deep technologies in gambling environments, such as online casinos and betting platforms, and to explore their potential benefits, risks, and overall effectiveness. This review followed the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) guidelines. Web of Science, PubMed, Scopus, EBSCO, and IEEE databases were searched, and 45 studies were eligible for inclusion. In general, four primary applications of deep technologies in online settings were found: behavioural monitoring and feedback, predictive risk modelling, decision support and AI classifiers, and limit/self-exclusion tools. These served mainly to identify and classify problematic gambling, prompt individual action, control gambling behaviours, raise awareness of the risk level, promote responsible gambling practices, and inform research, intervention, and gamblers protection initiatives. Altogether, findings suggest that deep technologies offer opportunities to improve gamblers' safety and reduce potential risk, although challenges may arise from their implementation, such as privacy and ethical concerns, malicious data use, misclassification of risk level, and difficulty in large-scale application. Limitations and directions for future studies are discussed.

Keywords: deep tech, gambling disorder, responsible gambling, harm reduction, systematic review

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5D–2

GAmbling Multimodal strategies implEmentation for Risk reduction in Primary Care (GAMER-PC)

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Introduction: The growing increase and diversification of gambling offer is a source of concern around the world. Problem gambling, defined as the loss of control over a gambling behaviour, with negative consequences, affects 2.9% of the French population. Despite the existence of a range of care structures and support tools for gamblers , there is a 'treatment gap': only 12% of problem gamblers seek help. Most research on gambling has focused on specialist care, and very little on the general population and primary care. Yet primary care is a major place in prevention and access to healthcare services. Two studies have explored problem gambling in primary care, and identified prevalence rates of 6.2% and 15% , both well above the rate reported in the general population. However, these two studies are old and the practice of gambling has increased considerably in recent years. So it raises questions about possibilities of improving strategies for screening and early identification of gambling behaviour in primary care. *Methods:* We first led a literature review on this topic and we have built a research program based on a mixed methodology to develop an early intervention for problem gambling in primary care *Results/discussion:* Several obstacles in the literature to support for problem gamblers were identified : a lack of gambling screening in primary care, self remission abilities unknown by primary care, barriers to specialized care. Strategies of early intervention could be developped and explored in primary care for problem gamblers. Thanks to these constatations, a research protocol, based on a mixed methodology in 3 phases, was defined. This study protcol will be presented.

Keywords: gambling, primary care, early screening

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5D–3

Innovative prevention practices in Malta

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Malta's prevention services employ innovative, targeted approaches to address substance use and addiction through diverse interventions across educational, workplace, and community settings. *Post-Secondary B.A.S.H. (Beyond Alcohol and Substance Highs) Programme:* This programme delivers themed exhibitions in post-secondary institutions, providing students with essential information and harm reduction strategies. Topics include alcohol awareness during festive seasons (Think Before You Drink), stress management during exams (Stay Chill, Use a Coping Skill), and substance education with a focus on cannabis laws (Know Your Facts—For Real!). These timely interventions aim to equip students with knowledge and coping mechanisms to mitigate risks associated with substance use. *S.A.F.E. (Skills for Addiction-Free Employees) Programme:* Perating for over 28 years, the S.A.F.E. programme supports Maltese and Gozitan businesses in fostering healthier workplaces. Tailored workshops address critical issues such as substance addiction, gambling, stress, and workplace bullying. Management-specific sessions provide tools for handling employees with addiction challenges. The programme also assists companies in developing or refining substance abuse policies and offers a referral system to Aġenzija Sedqa services. This enhance the chance for retention of employees whilst strive towards a healthier workplaces. With over 36,000 employees impacted, S.A.F.E. exemplifies the effectiveness of workplace prevention. *Selective Prevention Interventions:* These interventions target high-risk groups such as adolescents, children of individuals with substance use disorders, or those in vulnerable communities (for instance refugees, prison inmates amongst others). Initiatives focus on reducing specific risk factors like peer pressure, stress, or trauma, while fostering protective factors such as resilience and informed decision-making. Approaches include school-based life skills training, family counseling, community engagement, and culturally sensitive programs tailored to diverse populations. We would show our satisfaction survey in these programmes by th participants that made use of this service. By integrating these efforts, Malta demonstrates a robust, proactive commitment to preventing addiction, fostering healthier communities, and addressing social and workplace factors that contribute to substance misuse.

Keywords: prevention, workplace, youths, satisfaction survey

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5D–4

Are esport gamblers at a higher risk of gambling disorder? An exploratory study

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Background: Along with the popularity of electronic sport (i.e., esport), an emerging genre of gambling activity, esport betting, has arisen. Further knowledge of the psychological features and gambling-related behavioral patterns of esport gamblers would be beneficial for understanding the need, if any, for preventive programs for gambling disorder among them. This cross-sectional study aims to examine not only any differences in gambling behaviors (i.e., gambling disorder and regulated gambling) between esport and non-esport gamblers but also the explanatory value of desire thinking on their gambling behaviors. *Method:* We recruited a convenient sample of 1019 gamblers (Mage = 29.13, SDage = 7.77, 50.1% female), of whom around half (N = 525, 51.5%) are esport gamblers, via an online survey. In addition to items for their demographic information, validated self-reported measures were used for assessing participants' gambling disorder, regulated gambling, and desire thinking about gambling (DTG). *Results:* The results of the t-test showed that esport gamblers reported higher levels of DTG and gambling disorder as well as a lower level of regulated gambling than their counterparts. No significant group differences were observed in their age and gender. In both esport and non-esport gamblers, DTG consistently explained both gambling disorder and regulated gambling after controlling for the demographics. *Conclusion:* Our results show that, compared to non-esport gamblers, esport gamblers are at a higher risk of gambling disorder. The awareness of such higher risk and the related harm of esport betting should be promoted among esport gamblers. Moreover, our findings provide preliminary support that intervention/prevention projects targeting at DTG may be helpful in improving regulated gambling and lowering the risk of gambling disorder among gamblers.

Keywords: esport gambling, behavioral addiction, online gambling

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5E–1

What a difference the format makes: Predicting problematic video streaming by contextual and psychological variables in a representative adolescent sample

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Introduction: Video streaming comprises the consumption of a variety of different online formats and is a common leisure activity among adolescents. This age group is especially susceptible to problematic use patterns due to neuronal and psychological developmental aspects. While a body of research exists on binge-watching TV series and its associations with mental health and addictive potentials, the rising popularity of the alternative online video formats, such as short-videos on social media platforms, leads to new concerns and the need for extended research. *Methods:* A cross-sectional study on a representative sample of 1,083 German adolescents aged 10-17 years was conducted. ICD-11 criteria for disorders due to addictive behaviours were applied to classify problematic video streaming (PVS). Logistic regression modelling was performed to predict PVS by the preferred video format (short-videos vs. TV series and shows), binge-watching frequency, as well as difficulties in emotion regulation, controlled for gender (male vs. female) and age group (children vs. youth). *Results:* All variables contributed significantly to the prediction of problematic VS and the estimated model showed substantial explanatory power. *Discussion:* The frequency of binge-watching TV series is an important variable to consid-er when investigating PVS. However, short videos seem to have higher addictive potential than TV series and shows. Moreover, in line with other forms of problematic internet use, emotion regulation difficulties need to be taken into account in etiology, prevention, and treatment of PVS. However, longitudinal studies are necessary to explore causal relation-ships and to derive strategies that promote healthy video consumption habits.

Keywords: binge-watching, short video use, video streaming

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5E–2

Differences in viewing patterns and motives in binge-watching: An analysis of a sample of French students

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Background: The advent of streaming platforms has transformed audiovisual consumption, popularizing the practice of binge-watching, which involves viewing multiple TV series episodes in one session. While often viewed as recreational, problematic binge-watching can be associated to negative consequences. Previous studies have highlighted heterogeneity among individuals who engage in binge-watching, with some exhibiting psychological vulnerabilities and others exhibiting different watching motivations. This study aimed to identify (i) different typologies of TV series watchers based on their viewing behaviors and related motives and (ii) explore the psychopathological features specifically associated with each profile. *Methods:* Data were collected via an international transcultural online survey on binge watching. This study is based on answers of 1,421 French students, assessing TV series watching related motives, engagement in binge-watching and characteristics of problematic binge-watching, and psychological variables (e.g., impulsivity, psychological distress). A latent class analysis was used to classify participants into clusters based on their viewing patterns and motivations. Clusters were then compared using sociodemographic and psychological measures. *Results:* Three distinct clusters were identified: Purposeful single-device watchers (probability of belonging: 59%), who engage in moderate, controlled viewing with minimal psychopathological impact; Balanced multi-device watchers Purposeful single-device watchers (26%), younger participants using diverse devices, with moderate emotional-oriented motivations and limited negative outcomes; and Escapist binge-watchers (15 %), characterized by high emotional enhancement and escapism motivations, and significant psychological distress. The latter group also reported greater loss of control and dependency, highlighting potential clinical risks. *Conclusion:* This study underscores the importance of differentiating binge-watching patterns to identify at-risk individuals. While most participants exhibit non-problematic behaviors, a subset demonstrates clinically relevant issues linked to psychological vulnerabilities and maladaptive coping strategies. Escapism motivations may serve as preliminary markers for intervention.

Keywords: binge-watching, short video use, video streaming

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5E–3

Binge-watching on tv series vs. TikTok: Differences in self-evaluations and well-being

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Background: Watching TikTok videos has become a prevalent leisure activity, especially among youth. This has raised concerns about the addictive nature of the platform and its algorithm. The overall negative perception of TikTok may boost negative effects of TikTok use on well-being through negative self-evaluations. With this study, we test how self-evaluations in relation to time spent watching content differ for short format (TikTok) vs. long format (TV series, films) content. *Method:* We conduct an online survey with a repeated measures design: Participants will report on two situations (watching short vs. long format content) in randomized order. For each situation, we measure their self-evaluation, recovery, and well-being as well as evaluations of the media use (perceived extensiveness, autonomy, algorithmic curation, usefulness). We will do this with two samples: University students (recruited through the Behavioral Science Lab at the University of Amsterdam) and young adults living in the Netherlands (Recruited via Prolific). Based on an a-priori power analysis, we will recruit 200 participants per sample. Results: Results will be available by the time of the conference. *Conclusion:* This study will provide insights into potential differences in self-evaluations after media use of long vs. short format video content. We assume that self-evaluations are less positive after 'binge-watching' TikToks vs. TV series, and that therefore, this type of media use has a more negative impact on recovery and well-being.

Keywords: binge-watching, short video use, video streaming

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5E–4

How streaming platforms promote binge-watching behaviors? A design feature perspective: A design feature perspective

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Background: Binge-watching, defined as viewing multiple episodes of a TV series in one session, has become a dominant viewing pattern with the advent of on-demand streaming technology offering 24-hour access to extensive content libraries. However, dysregulated binge-watching has increasingly been recognized as a behavior with potential negative consequences for TV series viewers' well-being. Despite these concerns, there has been no systematic analysis of the design features within streaming platforms that might drive the onset and persistence of problematic binge-watching behaviors. *Method:* To address this gap, we conducted an in-depth examination of seven widely-used streaming platforms (i.e., Netflix, Amazon Prime Video, Disney+, Apple TV+, Acorn TV, Crunchyroll, and Peacock) by applying a descriptive and systematic auditing method to identify relevant technology design features that can promote binge-watching. Results: We identified 29 relevant design features that were then classified under the four phases of the Hook model framework (i.e., Trigger, Action, Variable Reward, and Investment*). Conclusion:* These findings highlight the implications of each category of design features in affecting viewers' ability to exert control in the context of on-demand streaming of TV series, which could inform potential interventions and strategies to mitigate problematic binge-watching behaviors.

Keywords: binge-watching, short video use, video streaming

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5F–1

From policy to practice: Assessing the impact of electronic gaming machines regulations on harmful gambling behaviour

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Background: Electronic gaming machines (EGMs) are among the most harmful form of gambling. The widespread availability of EGMs has been linked to increased gambling activity and a rise in harmful gambling. However, it remains unclear whether limiting the availability and accessibility of EGMs is effective in reducing gambling harms at the population level. We investigate those issues leveraging on the natural experiment of the Piedmont region in Italy, which in 2018 set limits on the location and operating hours of EGMs. *Methods:* Data from the Gambling Adult Population Survey conducted in 2018 and 2022 were combined with information regarding the implementation of the policy in Piedmont municipalities and data on EGMs from the national monopoly holder. Our analysis uses a difference-in-differences design, which is appropriate given that only some municipalities in the region implemented the policy, with each setting different operating time limits for EGMs. Sensitivity analyses were conducted to explore possible substitution effects towards bordering regions and online gambling. *Results:* Our findings reveal that policies aimed at reducing the operating hours of EGMs were effective in decreasing harmful gambling behavior in the population, but only when a minimum daily operational suspension of 11 hours was implemented. No significant effect was instead observed from setting location limits which prevent EMGs to be located close to "sensitive" places, such as schools or ATMs. Furthermore, no substitution effect was found either concerning possible movements toward bordering regions without EGM restrictions or online gambling. *Conclusion:* While restricting EGM availability can help mitigate harmful gambling, it requires coordinated efforts across different levels of government to ensure uniform policy implementation, along with individual-level policies and consideration of diverse gambling products. In this study, physical gambling emerged as the most significant driver of harmful behaviours, since the interaction with online gambling does not appear to undermine the efficacy of the policy. However, given the growing prevalence of online gambling, this type of intervention could be adapted to online platforms by limiting the allowed connection time.

Keywords: harmful gambling behaviour, EGMs, gambling policies, cross-sectional 29 survey, difference-in-difference model, sensitivity analysis

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5F–2

What are the most important themes for gambling harms: Topic modeling on posts from peer-support forums

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Background: As gambling-related harm gains increasing attention in public health, regulation, and public policy, there is a growing need to conceptualize, measure, and quantify these harms. So far, much of this work has been done within general population studies. However, the experiences and perspectives of gamblers at the high-risk and severe end of this spectrum remain underexplored. Existing research has studied this using statistical models of text data (i.e. forums). However, this has often modeled data less sophisticatedly, yielding topics that are sometimes unrelated to gambling harms or lacking in thematic granularity. *Method:* To address these gaps, this study adopts a novel bottom-up approach to identify and analyze the key themes of gambling harms as reflected in peer-support forum posts using machine learning. We applied text classification to extract posts specifically related to gambling harms. Subsequently, we used context-aware word embeddings to extract nuanced themes for topic modeling. To assess the robustness and generalizability of these findings, we validated the themes using an independent dataset from another peer-support forum. *Results:* The results mirrored the topics identified in existing research, such as financial loss, emotional distress, and relationship tension. However, additional harm-related themes were uncovered. *Conclusions:* These findings expand the conceptual framework of gambling-related harms for higher-risk populations, providing valuable insights to inform the development of targeted intervention programs and shaping policies aimed at enhancing the well-being of individuals affected by gambling-related harm.

Keywords: gambling harms, topic modelling, text classification

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5F–3

Transforming online gambling through deep tech: Insights from experts

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Deep technologies utilize scientific knowledge and engineering innovations to address complex challenges and issues, providing unique advantages to the online gambling industry. While gambling is mainly a recreational activity, harmful patterns can lead to adverse consequences, which may be exacerbated in the online environment. As problem gambling becomes an increasingly prevalent and global social issue, concerted efforts are needed to mitigate its associated risk factors. Prompted by this urgent need, both researchers and stakeholders have emphasised the importance of technological innovations for detecting, preventing, and intervening in gambling-related problems. This study aimed to explore the potential applications of deep technologies in mitigating gambling-related issues by conducting semi-structured interviews with professionals from various sectors, including social sciences and technological fields. Preliminary analysis highlights the opportunities and challenges of implementing these tools in the scope of gambling, with particular attention to contextual factors and the role of existing support systems. The findings underscore the need for cohesive and well-informed guidelines, developed collaboratively by policymakers and specialists, that address advertising regulations, design standards, and the integration of responsible gambling tools. Limitations and future directions are also discussed.

Keywords: gambling disorder, behavioural addiction, deep technology, ppevention, harm reduction

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5F–4

Problem gambling and comorbid stressors: Examining the moderating role of responsible gambling messages

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Background: One potential approach to preventing problem gambling (PG) and its comorbid stressors would be responsible gambling (RG) messages such as "keep the fun in the game" or "gamble responsibly". However, empirical support for the effectiveness of the RG messages appears to be scarce, and observably lacking in Nigeria. This study examines the effectiveness of RG messages in preventing gamblers from sliding into PG and its associated comorbid stressors such as anxiety and depression *Method:* Participants (N = 1303, 76.1% males, Mage = 22.2, SD = 4.3) recruited through a survey of land-based gambling shops and a student population in south-south Nigeria. They responded to the Problem Gambling Severity Index (PGSI), RG messages, and the depression, anxiety and stress scale (DASS). *Results:* Our key finding was that increase in RG messages score was associated with reduced PGSI, anxiety and depression scores, and weakened the PGSI-anxiety-depression link (positive moderation). *Conclusion:* We conclude that the responsible gambling framework has potential to prevent and/or minimize PG if gamblers would adhere to it. Implications, limitations as well as directions for future research were outlined.

Keywords: responsible gambling messages, problem gambling, anxiety, depression, comorbid stressors

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5G–1

Neurocognitive markers and circuits of hipersexual behaviour

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The cognitive downsides experienced in hipersexual behaviours involve cognitive control processes, including response inhibition, decision-making and enhanced reward search. The weight of each cognitive sub-domain in hypersexual behaviour and how their combination distorts adaptive decisions remains unknown. The present talk will provide current views of cognitive markers and neural circuits that may participate in the pathological expression of maladaptive behaviours when faced with sex cues. We utilized a battery of cognitive control tasks to assess reactive (stop signal task) or proactive inhibition (delay discounting task) with erotic cues. Also, risk behaviour was analyzed without erotic cues using the Balloon analogue risk task (BART). A series of studies included patients with hypersexual behaviors (n=40) and Parkinson's disease (PD) with compulsive sexual behaviour (n=18) together with healthy controls (n=26). The interest of assessing a PD group was to assess the neural circuitry in reactive inhibition with and without their dopaminergic drug that induces sex addiction, as a human model of behavioural addiction. Cognitive function was assessed with the MOCA and impulsivity with the UPPS-P. Presence of motivational erotic cues induced worse reactive inhibition in hypersexual patients compared to controls. This was not the case for proactive inhibition as decisions that engaged a delay cost where not accepted largely by patients. Both patients and controls accepted more trials when they had a low delay cost, and had a longer reaction time upon accepting or rejecting trials with a high delay cost. Regarding risky decisions (without erotic cues) in the BART, reward search abilities (total points) and number of risky decisions (exploded trials) was similar between the hipersexual and control groups. However, the behavioural adaptation to risky (explosion) vs less risky trials (explosion avoided) showed larger conflict in speed processing in hypersexual patients. Similarly, the patients had significantly longer RT in trials with explosions as outcome, which could indicate worse behavioral adjustment towards risky decisions. At the neural level, the talk will summarize current knowledge of the neural substrates in hypersexual behaviours and add novel evidence from top-down regulation during an erotic stop signal task. Our findings reveal the hypersexual PD group recruited caudate, pre-supplementary motor area, ventral tegmental area, and anterior cingulate cortex while on medication. Importantly, reduced connectivity was found between pre-supplementary motor area and caudate nucleus in hypersexual compared with non-hypersexual PD patients (while medicated), indicative of a missing top-down system when faced with erotic cues and inhibitory control. Sex addiction appear to impact upon specific reactive inhibitory contexts and risk-associated decisions, without significant effects on proactive inhibition. These behavioral outcomes could be considered as neurocognitive markers of the disease. Further studies shall be conducted to decipher the neural circuitry in hypersexual patients as to better characterize the biological changes when faced with sexual cues.

Keywords: cognitive control, decision making, fMRI

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5G–2

The relation between religiosity and out-of-control sexual behavior in different religious groups

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Religion contributes to sexual behavior and attitudes, often prescribing restrictive norms (Reid et al., 2016). While religious individuals generally report less frequent engagement in sexual behaviors, they are more likely to perceive their behaviors as "out-of-control" even when within normative ranges. Compulsive Sexual Behavior Disorder (CSBD), introduced in the ICD-11, highlights persistent difficulties in controlling intense sexual urges. Research suggests that moral disapproval, shaped by religiosity, may exacerbate the perception of being out-of-control, especially in religious groups with stricter sexual norms. This study addresses the gap in literature by exploring how religiosity moderates the relationship between sexual behaviors and perceived "out-of-control" behavior across religious groups. The study aims to: (I) investigate how religiosity predicts CSBD across religious and non-religious groups; (II) examine whether religiosity moderates the relationship between specific sexual behaviors (e.g., masturbation, pornography use) and CSBD, with differences expected between religious affiliations. Data will be used from the International Sex Study (ISS; Bőthe et al., 2021), a cross-sectional, multi-country study. Participants (N=82,243) represent diverse cultural and religious backgrounds. Based on a-priory sample size calculation, religious groups with more than 425 participants will be compared. Religiosity will be assessed with a widely used scale (Grubbs et al., 2019), and CSBD will be measured via the CSBD-19 Scale. Multigroup Structural Equation Modeling will be conducted. Understanding the interplay between religiosity and self-reported CSBD is crucial for culturally sensitive applications of ICD-11. The findings will provide insights into how religiosity and sexual behaviors shape perceptions of sexual health across diverse religious groups.

Keywords: religiosity, CSBD, sexual activities

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5G–3

Exploring suicide risk in compulsive sexual behavior: A scoping review

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Compulsive sexual behavior (CSB) leads to significant impairments in individuals' daily functioning and well-being. CSB has been associated with feelings of guilt and shame, anxiety, depression, substance use, and suicide risk. However, the association between CSB and suicide risk remains poorly understood and underexplored. The aim of the present research was to conduct a scoping review to map existing studies on the potential link between CSB and suicidality, focusing on its prevalence and clinical correlates, as well as identifying gaps in the literature. *Methods:* We searched three electronic databases and retrieved studies that met our inclusion criteria. Results: Although few studies were identified, suicide risk appears as a frequent comorbid clinical condition in individuals with CSB. Most of the studies focused on subjects with problematic pornography use, with fewer addressing other forms of CSB. Clinical correlates, such as adverse childhood experiences, impulsivity, emotion dysregulation, anxiety, depression, and low self-esteem, were found to be associated with suicide risk. *Conclusions:* Suicide risk is not uncommon among individuals with CSB. Therefore, a

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systematic assessment of suicide risk should be incorporated into clinical settings. Further research is needed to better understand the association between CSB and suicide risk, including efforts to define the clinical profile of those at higher risk. Additionally, longitudinal studies are required to establish causality.

Keywords: compulsive sexual behavior, suicidality, risk factors, sexual addiction, problematic pornography use

5G–4

French chemsex project: Global and territorial approach

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Chemsex is the poly-use of psychoactive substances during sexual sessions and concerns almost exclusively Men who have Sex with Men (MSM), who are looking to increase pleasure and performance. Since Covid-19, there has been an upsurge of at-risk sexual practices, substance-related complications and mental health issues among chemsexers. There's thus needs to provide them with a transdisciplinary and holistic care and to improve their access to this offer. In that context, Aides and the Federation Addiction (national network gathering addictions professional) conducted a project financed by the French public authorities (2022-2024). It aimed to implement or improve, at the local level, the articulation and networking between community services for gay men, harm reduction structures and other services (mental health services, infectious services, etc.) targeting chemsexers. To this end, a group of experts and professionals drew up some guidelines. Then, six pilot sites (community and harm reduction services) from Paris, Bordeaux, Marseille, Lyon, Lille, Montpellier had to implement innovative and multidisciplinary actions according to those guidelines. They were provided with support and tools from the project coordinators. By the end of 2024, the transferability of the articulation and networking between the services will be evaluated by an external independent body. A national guidebook “Going Towards chemsexers, available online in English, containing recommendations for professionals and policy makers has been published. Thanks to that project, innovative actions have been experienced: drop-in sessions and discussion groups, self-assessment test for chemsexers, occupational activities, training sessions, harm reduction tools (drug checking, harm reduction boxes for GPs)... The transferability has been evaluated by an external independent body. The articulation between professionals has been improved even though it requires time and financial support. The French ministry of Health has already acknowledged the project as very innovative and helpful to design adapted health policies for chemsexers.

Keywords: chemsex, addiction, sexualité, LGBTI, MSM

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5H–1

A pilot program using Tabletop Role-Playing Games (TTRPGs) to reduce gaming disorder and social anxiety symptoms: A multiple single-case trial

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Background: Gamers with poor self-concept, high social anxiety, and high loneliness are at risk of problematic involvement in online video games. There is a paucity of treatment approaches for this specific type of problematic gamers. This pilot clinical study will capitalize on a structured protocol in which a group of patients with gaming disorder will be exposed to real-life social interactions testing offline social skills while playing a Tabletop Role-Playing Game (akin to Dungeons and Dragons). *Methods:* A group of five patients with gaming disorder recruited at the Lausanne University Hospital will participate in a 10-week experiment involving 10 sessions organized into three modules (for a comprehensive program description, see: https://osf.io/3pgt7/). Participants will be patients from a waiting list in a treatment facility for behavioral addictions. Each module will deploy one role-playing scenario designed to challenge the players in terms of gameplay, to involve them in a story based on maturing relationships with other characters, and to solve challenges through social means, collaboration and investigation. Our study will follow a multiple single-case quasi-experimental design with a 5-week baseline, a 10-week intervention, and a 3-month follow-up. Outcomes assessed will include gaming disorder and social anxiety symptoms, offline and online self-esteem, and perceived loneliness. Single-case analyses will explore the impact of the program on different symptom presentations or psychiatric comorbidities. Results. Recruitment of the participants will start in March 2025. The program will take place between April and June 2025. Preliminary data will be presented at the ICBA 2025. *Conclusion:* This pilot clinical study aims to pave the way for TTRPG-mediated psychological interventions for patients with gaming disorder.

Keywords: Tabletop Role-Playing Games, escape game, psychological intervention, gaming disorder, screen

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5H–2

Table-Top Role-Playing Games (TTRPG) mediated psychological intervention: A scoping review protocol

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Background and Aims: Tabletop Role-Playing Games (TTRPGs) have gained attention as promising therapeutic tools within psychological interventions, with potential benefits for emotional regulation, social skills, cognitive flexibility, and overall mental health. This scoping review aims to map the current landscape of TTRPG-mediated psychological interventions, focusing on therapeutic applications, mechanisms, and outcomes. A key contribution of this review lies in its inclusion of recent peer-reviewed studies to address gaps in existing literature. *Methods:* Following the JBI methodology for scoping reviews and the PRISMA-ScR checklist, a comprehensive search of electronic databases (PubMed, PsycINFO, Scopus) will be conducted in 2025. Eligible studies must involve structured TTRPG interventions facilitated by licensed mental health professionals in clinical settings (online or in-person; individual or collective sessions) and include participants with clinical or subclinical psychological conditions. Peer-reviewed articles in English and French will be rigorously screened for relevance and methodological quality. *Results:* This presentation will detail the methodological framework of the scoping review, including the search strategy, inclusion and exclusion criteria, and data analysis plan. It will also address key methodological challenges inherent to studying TTRPG-based psychological interventions and propose recommendations for standardizing research protocols in this emerging field. *Discussion and Conclusion:* By elucidating the review's methodology, this presentation aims to foster dialogue on best practices for evaluating the therapeutic potential of TTRPGs. The findings are expected to contribute to the development of a more structured research framework, identify critical gaps, and guide future investigations into the clinical utility of TTRPGs.

Keywords: role-playing games, tabletop role-playing games, psychological interventions, scoping review, research protocol

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6A–1

Which underlying major depression symptom dimensions are most closely related to problematic smartphone use and problematic social media use severity?

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Depression symptoms are moderately associated with severity of problematic smartphone use (PSU) and problematic social media use (PSMU). Yet, prior work has not investigated which underlying depression dimensions are most associated. We analyzed survey data from 456 Midwestern US college students, collected in 2024. Participants completed the Patient Health Questionnaire-9 (PHQ-9) for depression, Smartphone Addiction Scale-Short Version for PSU, and Bergen Social Media Addiction Scale for PSMU. We used Mplus 8 to estimate confirmatory factor analyses, treating items as ordinal, using weighted least squares estimation. A single-factor PSU model fit well overall, robust X2(34)=223.40, p<.001, CFI=.95, TLI=.94, RMSEA=.11, SRMR=.04. A single-factor PSMU model also fit well, robust X2(9)=98.20, p<.001, CFI=.96, TLI=.94, RMSEA=.15, SRMR=.04. A two-factor intercorrelated depression model of (three) somatic and (six) cognitive-affective symptoms fit well, X2(26)=111.14, p<.001, CFI=.98, TLI=.97, RMSEA=.09, SRMR=.05. A combined, intercorrelated model of PSU and depression's two factors fit well, X2(148)=409.68, p<.001, CFI=.96, TLI=.96, RMSEA=.06, SRMR=.05. A similar PSMU-depression combined model also fit well, X2(87)=302.20, p<.001, CFI=.96, TLI=.95, RMSEA=.07, SRMR=.05. PSU was significantly associated with both depression's cognitive-affective factor (r=.39) and somatic factor (r=.45), with no significant difference between correlations, X2(1)=.74, p=.39. PSMU was significantly associated (equivalently) with both depression's cognitive-affective factor (r=.42) and somatic factor (r=.42), with no significant difference between correlations, X2(1)=.35, p=.55. Results move beyond prior research only examining depression as a whole in relation to PSU/PSMU severity. Both cognitive-affective and somatic depression symptom dimensions appear fairly robustly related to PSU and PSMU severity. Neither dimension appeared more important in determining PSU or PSMU symptoms.

Keywords: problematic smartphone use, problematic social media use, internet addiction, depression

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6A–2

Longitudinal associations between emotion dysregulation and problematic media use in early adolescence: Results from the ABCD Study

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Introduction: Excessive screen time that interferes with a child's functioning, or problematic media use (PMU), has been a growing concern in recent years. Formative work on PMU has led to advances in the theoretical conceptualization of, and proposed antecedents to, the emergence of PMU in childhood (e.g., Coyne et al., 2024; Domoff et al., 2020; Emond et al., 2024). To advance our understanding of the etiology and sequelae of PMU, research requires representative samples and longitudinal designs to investigate risk factors and clarify developmental courses. As such, the purpose of this study is to examine one such risk factor, emotion dysregulation, in a representative sample of pre-adolescents from the ABCD study. We hypothesized that emotion dysregulation would associate with greater PMU cross-sectionally and over one year. *Study population.* This study consisted of a sample of 4,689 participants (52% male) with 3 year and 4 year follow-up data from the ABCD study. The majority of participants identified as white (57%) and approximately 21% reported Hispanic/Latino ethnicity. *Methods:* We investigated associations between emotion dysregulation (measured by the Difficulties in Emotion Regulation Scale, DERS; Gratz & Roemer, 2004) and scores on the Problematic Media Use Measure (PMUM; Domoff et al., 2019). We used the clinical cut-off scoring for the PMUM, which delineates typical, at-risk, and clinical levels of PMU. First, we examined differences in emotion dysregulation by PMUM category using Kruskal-Wallis Chi-square analysis for non-parametric data. Then, we conducted cross-lagged panel analysis, controlling for gender, to test our hypothesis that emotion dysregulation would predict PMU cross-sectionally and over time. *Results:* Most youth had typical (20%) or at-risk (52%) levels of PMU, with over a quarter in the clinical range of PMU (28%) at ages 12-13 years. These rates remained relatively consistent one year later. DERS scores significantly differed across PMU categories $H(2, n = 4{,}689) = 467$, $p < .001$) with greater emotion dysregulation among youth in the clinical range of PMU, compared to the at-risk ($p < .001$) and typical ($p < .001$) categories. Cross-lagged panel analysis indicated that DERS scores were associated with PMU scores cross-sectionally. Longitudinally, there was a bidirectional relationship between PMU and DERS scores. Greater PMU at the first time point predicted greater emotion dysregulation a year later, and greater emotion dysregulation at the first time also predicted greater PMU scores one year later. *Conclusion:* PMU may exacerbate emotion dysregulation over time and emotion dysregulation may also contribute to increases in PMU. Future research should investigate these associations and modifiers of risk to inform strategies to best support healthy digital media use during childhood and adolescence.

Keywords: emotion regulation, problematic media use, longitudinal, adolescents

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6A–3

Social Media Motives Scale: A new questionnaire for measuring the motives of social media use

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Background and aim: Although there are some questionnaires for measuring the motives of social media use, most of them were developed for specific platform usage, and some were created in a theory-driven way. Our aim is to design a new questionnaire on motivation of social media use by generating items from social media users (inductive method) to create a comprehensive scale for motives of social media use (not specified to any platform). *Methods:* Based on 480 responses from 147 people to the question 'Why do you use social media', we created a 90-item pool as an initial scale, which was included in an online survey. A total of 1,501 individuals (70.02% women, mean age = 39.92, SD = 17.32) completed the questionnaire package, which also included the Internet Motives Questionnaire (Bischof-Kastner et al., 2014). The sample was randomly divided into two halves. Exploratory factor analysis was first performed on the first subset, followed by confirmatory factor analysis. *Results:* As a result of the stepwise exclusion of items, the final EFA model contained 38 items. Both parallel analysis and scree plot supported retaining 7 factors. The 7-factor EFA and CFA models demonstrated adequate and optimal levels of model fit. The factors were named as follows: 'Social Updates' (e.g. "because it's easy to find out what happened to whom"), 'Search for Information' (e.g. "because it keeps me informed about what is happening in the world"), 'Communication' (e.g. "because it is a quick and easy way to communicate"), 'Recreation' (e.g. "because it helps me relax"), 'Popularity' (e.g. "to increase my popularity"), 'Escapism' (e.g. "because it helps distract me when I need it") and 'New Connections' (e.g. "to meet new people"). *Conclusions*: The seven-factor structure of the Social Media Motives Scale was considered acceptable.

Keywords: the motives of social media use, developing a new scale, factor structure

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6A–4

An adaptive elastic net regression analysis of problematic smartphone use severity, investigating associations with measures of depression, fear of missing out, worry, life-threatening experience, and ruminative response

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This study explored problematic smartphone use (PSU) using an adaptive elastic net analysis to examine the relationship PSU has with subscales of the measures that assess fear of missing out (FoMO), major depressive disorder (MDD) symptoms, positive and negative affect, worry, life-threatening experiences, and ruminative thinking. Using PsychData, we conducted a web-based survey of undergraduate students of a large American university's introduction to psychology courses (N = 461; 289, 62.69% female; ages 18 – 25 years). Using R 4.4.0, we conducted an adaptive elastic net regression (a machine learning algorithm) on the short version 10-item Smartphone Addiction Scale (SAS) as the dependent variable to assess the predictive validity of the subscales of Patient Health Questionnaire-9 (PHQ-9), Positive and Negative Affect Schedule (PANAS), the Penn State Worry Questionnaire (PSWQ), Life-Threatening Experience Scale, FOMO Scale, and the Ruminative Responses Scale (RRS), along with demographics. The analysis demonstrated that neither sex nor age predicted PSU. However, four of the ten total predictors, fear of missing out ($\beta = 0.414$), the somatic subscale of the PHQ-9 ($\beta = 0.530$), worry ($\beta = 0.036$), and the brooding subscale of the RRS ($\beta = 0.084$) were found to be important variables in the model with the strongest variable importance values (similar to regression coefficients). While this study is not generalizable to the public at large, all of the constructs represented by these scales have previously been associated with PSU severity in other studies examining similar samples. These findings demonstrate the need to investigate further how/if the components of these scales and others are related to PSU and to continue to examine this phenomenon as a complex and nuanced construct.

Keywords: problematic smartphone use, depression, fear of missing out, worry, machine learning

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6A–5

The psychophysiological impact of using and stopping to use Instagram

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The question whether social media, and specifically Social Networking Sites (SNSs), are addictive continues to shape the scientific and public discourse surrounding new technologies. In this talk I will summarise evidence that SNSs indeed contain powerful social rewards that elicit similar behaviours as seen when individuals seek/consume drug rewards or discontinue their use (Ihssen & Wadsley, 2021; Wadsley & Ihssen, 2022, 2023). I will specifically draw on our recent study in which we assessed the psychophysiological impact of brief bouts of Instagram use and subsequent periods of use cessation, which were designed to simulate natural usage behaviours (Wadsley & Ihssen, under revision). We found that Instagram exposure led to a large deceleration of heart rate and a simultaneous increase of the galvanic skin response (GSR), relative to a baseline condition in which participants read a neutral news article on their phone. This suggested that SNS content induced appetitive arousal and a state of deep attentional engagement. Notably, Instagram cessation resulted in a further increase of the GSR but also accelerated heart rate, relative to exposure, indicating the presence of increased aversive (stress-related) arousal. These physiological changes were mirrored by augmented subjective ratings of stress, anxiety and SNS cravings during the cessation period. However, I will also show that physiological changes and subjective experiences were comparable in healthy and problematic SNS users, implying that they are not necessarily an indicator of maladaptive behaviours. I will conclude that while SNSs constitute highly seductive platforms promising to fulfil social motives, we should be careful with drawing parallels between the overuse of SNSs and the physiological changes, functional impairment and treatment resistance seen in substance use disorders.

Keywords: Social Networking Sites (SNSs), social media, social reward, reward, psychophysiology

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6B–1

Identifying and characterizing plausible chemsex users from non-specific items across sexual behaviors and substance use scales

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*International Sex Study Consortium includes contributors from multiple institutions.

Context: Chemsex – the intentional use of substances in sexualized settings among men who have sex with men (MSM) – is considered an escalating public health concern with an estimated prevalence among MSM ranging from 3% to 70%. Chemsex has been associated with increased risk of most sexually transmitted infections, addictive disorders, cardiovascular conditions, psychiatric symptoms and cognitive impairment. Despite these concerns, the research base remains scarce on (1) the variables associated with chemsex behavior and (2) risk factors for problematic vs. non-problematic chemsex. *Objective:* To identify and characterize problematic chemsex behaviors. *Method:* To achieve this goal, we analyzed data from a large multicultural sample (N =82,243), the International Sex Survey (ISS; Bőthe et al., 2021). For the current study, participants had to report ever having had sex with someone and not report asexuality as their main sexual orientation. We collected sociodemographic data, substance use, sexual behaviors, sexual function and satisfaction, mental health and history of sexual violence, using validated scales. We will identify plausible chemsex among MSM, who endorse high levels/frequency from the following criteria: casual partners, substance

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use during sexual activity and psychostimulants use in the past three months. Then we will characterize sexual and psychosocial problems associated with chemsex using bivariate and regression analyses. Analyses will be repeated by gender (man, woman, non-binary) separately. *Results:* Participants (57% women, 3% gender-diverse individuals) were 32 years old (SD= 12.5) and 68% were heterosexual. After excluding participants describing themselves as asexual (N =1,064) or never having sexual relationship (N =8,133), the study sample was N =72,994. Analyses will begin after an embargo related to another ISS publication is over. *Perspectives:* This study may increase the ability of researchers and clinicians to better identify and characterize chemsex users in clinical and epidemiological settings across diverse populations, especially those requiring specific care.

Keywords: chemsex, psychotherapy, risk and protective factors, mental health, sexual health

6B–2

Psychological treatments for problematic chemsex practices: A systematic review

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Background: Chemsex is the intentional use of psychoactive substances in sexualized settings among men who have sex with men (MSM). Its prevalence is estimated between 3% to 29% in MSM. Chemsex is associated to higher exposure to HIV and other STIs, risk for addiction, cardiovascular problems, and growing evidence supports an association with poorer mental health. This question the existence of evidence-based psychotherapeutic interventions for chemsexers. Against this background, this systematic review aims to analyse the effect of psychotherapy on the mental health, quality of life and risky behaviours of chemsexers. *Method:* The systematic search was conducted across six databases (i.e., PubMed, Web of Science, PsycArticle and Embase), following PRISMA guidelines and the PICO framework. It was registered on PROSPERO. Inclusion criteria were as follows: quantitative studies, written in either English, German or French, including chemsexers, focusing on psychological treatment, and targeting mental health, quality of life or risky behaviour (i.e., drug use or risky sexual behaviour). After data extraction, the articles were sorted in two stages by two independent blind coders using Rayyan software. Cohen's Kappa coefficients will be calculated at each stage of the screening process. The short version of the Appraisal tool for Cross-Sectional Studies (AXIS) will be used to assess the methodological quality of the included studies. *Preliminary results:* A total of 4430 articles were extracted from the databases, 3291

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remained after the duplicates were removed. The first screening on metrics (title, abstract, key words) is underway. *Discussion:* This systematic review will contribute to provide a comprehensive synthesis of available evidence based psychological treatments.

Keywords: chemsex, psychotherapy, risk and protective factors, mental health, sexual health

6B–3

Characterizing sexual substance use and its impact on mental, sexual, and cognitive health outcomes in HIV-negative MSM

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Background: A unifying characterization of sexualized substance use (SSU), such as "chemsex", is still lacking despite growing public health concerns, specifically regarding sexual minorities. Moreover, the impact of SSU on key clinical outcomes, such as mental, sexual, and cognitive health outcomes, remains poorly understood. *Methods:* Data were sourced from the Real Risks of the Online World study (ClinicalTrials.gov identifier: NCT04714034), which enrolled 229 HIV-negative Men-having-Sex-with-Men (MSM) counseling for HIV pre-exposure prophylaxis (PrEP) use (median age: 41, IQR: 32–50, 100% male). SSU patterns were assessed using self-reporting (12-month and 3-month substance use prevalence rate) and hair testing (substance concentrations in 3-cm hair samples, providing a three-month retrospective view). Advanced classification algorithms were employed to identify distinct SSU patterns, including chemsex. Longitudinal analyses tracked changes in SSU patterns over a six-month follow-up period (n=165), using change scores derived from both self-report and hair testing. Mixed-effects models were applied to evaluate the longitudinal effects of SSU groups on clinical health outcomes, including mental health (symptoms of depression, anxiety, trauma, suicidality, impulsivity), sexual health (prevalence of sexually transmitted infections, sexual partner count, sexual satisfaction, PrEP adherence), and cognitive impulse control (via a computerized performance task). *Results:* Data analyses are ongoing. *Conclusion:* This study addresses critical gaps in understanding the health implications of SSU among HIV-negative MSM. By characterizing SSU patterns and their longitudinal effects, the findings will inform evidence-based clinical practices and interventions to enhance mental, sexual, and cognitive health in sexual minorities.

Keywords: chemsex, psychotherapy, risk and protective factors, mental health, sexual health

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6C–1

Women's healing journeys: Integrating contemplative embodied approaches and yoga therapy to support women who are impacted by a partner's Compulsive Sexual Behavior/Problematic Pornography Use (CSB/PPU)

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Background: There are significant, challenging, and traumatic experiences a woman may endure in the context of being partnered with a person with CSB/PPU. Deeper understanding is revealed from a growing body of qualitative data informed by women's lived experiences, which identify detrimental impacts to a woman's sense of emotional safety, trust in herself, self-esteem, and her relationship with her sexual self among other consequences. Concurrent with adverse effects from her partner's CSB/PPU, women may also experience harm through generalized sociocultural factors such as sexual objectification. Common coping mechanisms for trauma and sexual objectification include disconnection or dissociation. *Method:* A review of research will be presented that identifies components of embodied contemplative practices and treatments, such as yoga therapy, and will be evaluated for their efficacy for facilitating reconnection and healing from trauma. Case studies will be presented that integrate Tibetan yoga self-healing practices, which have been shown to facilitate growing the capacities to recognize and shift states toward embodied safety, eudemonia and wellbeing. *Results:* Women have empowered themselves through engaging in self-healing embodied contemplative yoga practices in reconnecting with themselves through accessing neural platforms of safety, healing, and wellbeing. Integrating these methods contributed to positive embodiment, being aware of experiencing inner states of sensations, sense perceptions, emotional attunement and regulation, a self-compassionate view of the body and feeling competent with self- care and protection, as well as feeling the freedom of expression through their body, which are all integral to embodied sexuality. *Conclusions:* Women who have been impacted by a partner's CSB/PPU may experience disembodiment, or feelings of separation or psychological disconnection from the body. As part of the healing and liberation process towards sexual wellbeing, women could empower themselves by engaging in embodiment practices such as yoga as part of an inner journey of reconnection, releasing conditioning and recovering from interpersonal trauma.

Keywords: women, behavioural addictions, violence, treatment, prevention

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6C–2

Emotional dependence in women: Exploring gambling, psychological symptoms, substance addictions, and postpartum depression

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Emotional dependence, anxious-depressive symptoms, and substance use have been associated with gambling disorder (GD). Although anxiety and depression have been predominantly related to female gamblers and substance abuse to male gamblers, the role of emotional dependence in gambling disorder remains unexplored. For its part, Postpartum depression (PPD) is a Mental Illness that affects an important population of women. There are several factors that increase the index of this disease, including emotional dependence, violence and/or addictions. However, behavioural addictions and emotional dependence remain an understudied area among women, especially among postpartum mothers. In this context, the aim of this study is to establish the relevant importance on women emotional dependence informations. To this end, two sub-studies are presented. On the one hand, a study carried out through associations for the rehabilitation of gambling in Spain, which aimed to explore the predictive role of emotional dependence with regard to comorbid substance use and anxious-depressive symptomatology in women with gambling disorder. And, on the other hand, a study by Guasmo Hospital- gynecological Area, exploring substance use and emotional dependence in women with postpartum depression. In the first study, the results showed that emotional dependence predicted alcohol and drug abuse in women with gambling disorder. In the second study, the results were 21% PPD with a prevalence in younger women, 7.66% alcohol abuse, younger women group, and 34% other drugs in both groups. The results showed that most of these women were not clear about their intimate partner relationship. Moreover, the study also highlights how transcultural issues such as emotional dependence can be differently interpreted in different countries. In conclusion, more studies must be done on emotional dependence related to Addictive Behaviors and post-partum depression with preventive aims, with possibly new/ different investigations hypothesis/ considerations and tools.

Keywords: gambling, emotional dependence, addiction, women, postpartum depression (PPD)

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6C–3

ADHD and comorbid Problematic Internet Use: Gender differences in clinical and cognitive profile

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Background: Subjects with ADHD are vulnerable to Internet Addiction or Problematic Use of Internet (PUI). Easiness to boredom, aversion for delayed reward and impaired inhibition control are some typical features of ADHD individuals' cognitive functioning that promote the onset of Problematic Use of Internet. In fact, the Internet provides you with many activities at once, reducing boredom and ensuring immediate reward. Gender differences in clinical and cognitive profile in subjects with ADHD and comorbid Problematic Use of Internet have been investigated in this study. *Methods:* Thirty-six (sixteen females and twenty male) consecutive adults newly diagnosed with ADHD and comorbid PUI, identified using the Compulsive Internet Use Scale (CIUS), were assessed using a comprehensive battery of clinical measures including scales for ADHD symptoms, impulsivity, mood, sleep problems and behavioral addictions (e.g., internet, shopping, food, sex, gambling), as well as a global cognitive assessment. They were compared to matched non-comorbid ADHD patients to identify gender differences in clinical correlates of PUI in ADHD patients. *Results:* Female ADHD patients with comorbid PUI showed significantly higher levels of mood and anxiety symptoms, as well as greater emotional dysregulation, compared to ADHD females without PUI. They also demonstrated higher cognitive impulsivity, as measured by the Stroop Test. In contrast, male ADHD patients with comorbid PUI exhibited significantly higher levels of mood symptoms, social anxiety symptoms, suicidal ideation, impulsivity, ADHD symptom severity, and obsessive traits compared to ADHD males without PUI. Cognitively, males with comorbid PUI displayed greater impairments in executive functioning. Linear regression analyses were conducted with CIUS scores as the outcome variable and the other clinical measures as predictors. These analyses identified distinct predictors of PUI (as score on CIUS) for females and males: depressive symptoms (SDQ total score) were the primary predictor for females with ADHD and PUI, whereas ADHD symptoms (BAARS-IV total) and sleep disturbances (PSQI) emerged as significant predictors for males with ADHD and PUI. Conclusions: PUI has a significant clinical impact both in males and females with ADHD in terms of mood symptoms and sleep quality. Females show also grater emotional dysregulation and higher cognitive impulsivity and males more suicidal ideation, social anxiety symptoms, ADHD symptoms and impairment in executive functioning. We identified different predictors of PUI for females and males: depressive symptoms for females whereas ADHD symptoms and sleep disturbances for males.

Keywords*:* women, behavioural addictions, violence, treatment, prevention

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6C–4

Female pathological gamblers vs. female pathological gamers: Profiling female players from a psychological perspective

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Background: There is limited research on profiling women engaged in gambling and gaming, even though the industry recognises their prevalence is similar to that of male players. Previous studies indicate that women make up about half of the gaming population and nearly half of the gambling population. However, only about 1% of women display problematic gambling or gaming behaviours, and the profiles for these behaviours differ, particularly from a psychological perspective. This communication aims to identify the unique characteristics of these groups and highlight their psychological commonalities and differences. *Method:* A rapid review was conducted to understand how women engage with gaming and gambling, what motivates them to play, and what factors lead to excessive or problematic behaviour in these activities. *Results:* Middle-aged and older adult women are more likely to engage in pathological gambling, while adolescent and young adult women are more prone to addictive video gaming behaviours. Their gambling and gaming behaviours and genres of games typically diverge and do not occur simultaneously. However, both groups share a phenomenon known as "telescoping"; they also exhibit similar psychological issues, such as co-occurring problems (e.g., self-stigmatization, family concerns, financial challenges) and comorbidity (e.g., depression, personality disorders, substance use disorders). *Conclusions:* Research on female players has been limited yet, likely due to their lower levels of addiction compared to males, although this gap appears to be narrowing in recent years. Furthermore, women rarely seek diagnostic and psychological interventions, with only about 10% utilising self-help groups for gambling or gaming addiction. This lack of engagement hinders the recognition of the problem and the provision of professional help to these groups, where harms can often be hidden causing serious and long-lasting impacts.

Keywords: women, behavioural addictions, violence, treatment, prevention

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6C–5

Online gambling behaviour and trajectories of women and men gamblers: A longitudinal study based on French gambling tracking data

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Background: Women represent a third of all gamblers and tend to exhibit distinct gambling patterns compared to men. However, existing longitudinal studies based on gambling tracking data have not specifically investigated these gender differences. Given that men are more prevalent among gamblers, women's behaviours may be underrepresented or diluted in broader analyses. *Aims:* We aimed to analyse the gambling trajectories of French women and men gamblers and compare these trajectories to identify gender-specific gambling behaviours. *Methods:* Gambling tracking data were collected from two sources: the French National Online Gambling Authority (ANJ), which oversees poker, horse race betting, and sports betting, and the French national lottery operator, Française des Jeux (FDJ), which manages online lotteries. The study includes two representative samples of 40,000 gamblers each from ANJ and FDJ, with tracking data spanning from January 2019 to February 2020, prior to the impact of COVID-19 on gambling activities. Latent Class Mixed Models (LCMM) were applied to identify distinct gambling trajectories for each gambling type and indicator (number of gambling days, money wagered, deposits, chasing and involvement by weeks), followed by Latent Class Analysis (LCA) to categorize gamblers with similar trajectories. *Findings:* While the results are still pending, we anticipate notable differences in gambling trajectories between women and men. The class analysis will help reveal specific gambling profiles that vary by gender. *Conclusions:* Identifying gender-based differences in gambling behaviour is crucial for tailoring regulations to better meet also female gamblers' needs. Furthermore, if significant variations in behaviour are highlighted, this could influence future research methodologies, emphasizing the importance of integrating gender as a key factor in gambling studies.

Keywords: women, behavioural addictions, violence, treatment, prevention

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6C–6

The impact of the menstrual cycle on harmful gambling behaviour

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41.7% of British women have gambled in the past four weeks (Gambling Commission, 2022). Females generally start gambling at an older age than males (Tavares et al., 2001) and prefer different types of gambling (Hraba & Lee, 1996). Despite sex differences, and strong indications that female gambling is on the rise (Gambling Commission, 2022), treatment programmes offered to female gamblers are virtually the same as those offered to male gamblers, and there is little research investigating female-specific factors affecting gambling behaviour and treatment success. Non-harmful gambling behaviour has been shown to increase during ovulation, indicative of enhanced reward sensitivity (Joyce et al., 2019). In addition, women experiencing social isolation, the need to escape from everyday stress, and co-morbidity of mood/anxiety disorders are more likely to experience harm from gambling than their peers (Holdsworth, Hing, & Breen, 2012). Mood fluctuations across the menstrual cycle relate to variations in progesterone and estrogen concentrations, and elevated negative affect is reported (pre)menstrually (Richards et al., 2006). Investigation of these fluctuations will increase understanding of female-specific factors affecting harmful gambling behaviour and assess the generalizability of male-focused interventions to the female population. This talk will investigate existing literature on harmful gambling behaviour and the menstrual cycle and outline a PhD project collaboration between the University of Birmingham and Gordon Moody which will investigate harmful gambling behaviours, cravings and attitudes towards gambling at different phases in the menstrual cycle in a cohort of women in treatment for severe gambling harm. Understanding point(s) of vulnerability to gambling behaviours during the menstrual cycle will highlight treatment adaptations, check-up times and targeted coping strategies.

Keywords: women, behavioural addictions, violence, treatment, prevention

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6D–1

Evaluating the long-term efficacy of web-based cognitive training for problem gambling: Insights from objective and self-reported data

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Background: Non-face-to-face interventions show promise in addressing problem gambling, with cognitive training demonstrating potential but yielding inconsistent efficacy. We conducted a randomized, controlled, single-blinded trial to evaluate a web-based cognitive training program designed to enhance inhibition (unrelated to addiction cues) against a control program targeting visuo-spatial functioning. Short-term self-reported outcomes revealed no significant between-group differences at 6 and 14 weeks (n=185). This study aimed to assess the long-term efficacy of the intervention using one-year follow-up objective account-based gambling data from all authorized gambling websites, extracted from the French regulator's database. Secondary objectives included comparing self-reported gambling behaviors with objective account-based data to explore the congruency between data sources and address the relevance of financial outcomes in gambling research, an area with limited prior investigation. *Method:* We analyzed account-based gambling data automatically recorded in the French regulator's database ("ANJ") at baseline (T0), 6 weeks (T1), 14 weeks (T2), and 52 weeks (T3). Data included metrics such as total deposit, total stake by game, compulsivity, number of deposits within an hour after a stake, total loss, number of gambling sessions (all games), session duration (poker only), and gambling time slots. Between-group changes were compared at each time point. Additionally, inter-rater correlations between objectively extracted total losses and self-reported losses were examined to evaluate the congruency of these measures. *Perspectives:* This study provides a critical evaluation of the long-term impact of cognitive training on gambling behaviors, using robust, objective measures. By incorporating account-based data alongside self-reported outcomes, it contributes to a nuanced understanding of data congruency and the utility of financial metrics in gambling research. These findings may inform the development of more targeted and effective interventions, as well as the methodologies used to assess intervention outcomes. Future directions include exploring personalized cognitive training approaches and leveraging objective data to refine non-face-to-face interventions for gambling-related harm reduction.
Analyses are ongoing.

Keywords: gambling disorder, outcome, cognitive training, account-based data

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6D–2

Evolution over time of the mental health of patients initiating treatment for a gambling disorder in an Addicotology department in France: Are younger pathological more concerned?

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Introduction: Over the past two decades, gambling practices, particularly online gambling, have significantly increased in France, alongside a rise in gambling-related problems. Younger individuals, who are more susceptible to developing addictive disorders, appear especially drawn to online gambling. This trend raises concerns about a rejuvenation in the population seeking help for a gambling disorder, along with potential changes in their mental health. *Method:* Data were extracted from the EVALADD (EVALuation of behavioral ADDictions) cohort (ClinicalTrials.gov NCT01248767), which consists of a prospective follow-up of outpatients initiating care for a behavioral in the Addictology Department of Nantes University Hospital in France. For the present study, we focused on patients diagnosed with a gambling disorder who were recruited between 2017 and 2024. We collected information about gambling characteristics, gambling treatment, and psychiatric and addictive comorbidities. The risk of suicide was also assessed. The analyses were conducted on a sample of 132 patients, with the comparison of a group of patients aged 24 and under with a group of patients aged 25 and over. *Results:* The proportion of 0-24 years old consulting for gambling problems, calculated by biannual periods, increased between 2017-2018 (14.3%, confidence interval CI95%: 4.8-30.3%) to 2023-2024 (33%, CI95%: 18.6-51.0%, Cochran Armitage test for trend at p=0.06). More than one-third of the sample reported a current suicide risk (37.1%, CI95%: 29.0%-46.0%). The younger group exhibited a higher prevalence of current cannabis use (25%, CI95%: 11.5-43.4% vs 9%, CI95%: 4.2-16.4% for the 25 years old and above). *Conclusion:* We confirm the rejuvenation of the studied population in recent years. The proportion of patients with a current risk of suicide seems to remain stable compared to an analysis conducted about ten years ago in our cohort. These results support the need for early detection of problematic gambling behaviors in adolescents and young adults in order to limit the development of associated harms.

Keywords: gambling disorder, treatment pathway

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6D–3

GamblingLess: For Families and Friends – An acceptability trial of an online intervention for affected others of gambling

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Background: Harms associated with problem gambling extend beyond those who gamble, significantly impacting their families, friends, and the broader community, collectively termed affected others (AOs). These harms span across domains like emotional distress, relationship disruption, financial challenges, and reduced wellbeing. Despite their severity, AOs are significantly underrepresented in face-to-face treatment settings due to stigma, lack of awareness, and preference for self-managed solutions. To address these barriers, this study developed GamblingLess: For Families and Friends — an online, self-directed intervention to support AOs. *Methods:* The intervention was developed using the six-step Intervention Mapping (IM) approach, integrating theoretical, empirical and practical insights. The program includes two streams: one aimed at enhancing the AO's capacity to support the individual who gambles by increasing their confidence in how they respond to the gambling, and the other focused on supporting AOs manage the impact of the gambling on their own functioning. A single-arm acceptability trial is currently being conducted to explore the program's acceptability and preliminary effectiveness. Key outcomes include acceptability measures, assessed using tools such as the Theoretical Framework of Acceptability Questionnaire, which evaluates aspects like comfort, effort and clarity of the program, as well as effectiveness measures, including AO psychological distress and AO self-efficacy. *Results:* To date, 33 adult AOs residing in Australia have been recruited. Preliminary findings indicate that most participants engage with the program either to support the individual who gambles or to support both, themselves and the individual. Early data suggests that participants have accessed the program at least once, demonstrating initial engagement. *Conclusion:* This intervention demonstrates the potential to fill a critical gap in support for AOs of problem gambling by offering a flexible, tailored, and accessible resource. This presentation will share findings regarding its acceptability and preliminary effectiveness, providing valuable insights for interventions for AOs of problem gambling.

Keywords: affected others, problem gambling, online intervention, acceptability

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6D–4

Kick-off: First experimentation of contingency management in Italian public services for pathological addictions

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Background: One of the main difficulties in treating gambling disorder is retaining patients in treatment. A literature review highlights that the dropout rate ranges between 14% and 50%, with an average of 31% (Melville et al., 2007). Moreover, premature dropout results in a higher likelihood of relapse (Melville et al., 2007). It is therefore necessary to implement strategies to increase chances of keeping patients on the therapeutic path. *Method:* The idea of using Contingency Management (CM) as a tool to retain patients in the Italian public addiction service during the intake period, as well as an additional treatment option for individuals with gambling disorder (Zolkwer 2023) and cocaine poly-abuse who are already in the service's care, emerged in response to the above phenomenon. CM (Sheridan Rains et al.; 2020) is based on the cognitive-behavioural model, according to which environmental factors and external contingencies influence behaviour, including drug use and gambling. CM involves identifying target behaviours (such as participation in treatment and reduction or termination of gambling behaviour or drug consumption) and providing incentives (such as vouchers or credits for various items) contingent on objective evidence of the patient's engagement in health-promoting behaviours (Dorey, L.; Christensen, D.R.; 2022). The primary goal is to facilitate engagement and therapeutic cooperation, as well as to increase motivation for treatment in patients with gambling disorder attending the Addiction Services of Riccione, through CM during the initial phase of the patient's attendance. At this stage, the beneficial behaviour to be rewarded is the patient's adherence to the evaluation process. Secondarily, the study offers CM to patients already enrolled in the service for a 12-week

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period, providing them with a controlled gambling path that is voluntarily pre-agreed with the patient as an alternative to traditional treatment based solely on abstinence. Results and conclusions will be discussed during the presentation.

Keywords: gambling, contingency management, self-commitment

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6D–5

A randomized controlled trial to evaluate the efficacy of inhibitory control training for aggressive behaviours among individuals with co-occurring substance use disorder and gambling behaviour

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Background: The dual-process model of addiction proposes that the transition from controlled to uncontrolled behaviors arises from an imbalance between an impulsive, automatic system and a reflective, controlled system. Inhibitory control, a key function of the reflective system, has been implicated in the development and maintenance of substance use, gambling, and aggressive behaviours. It has also been the focus of intervention through Inhibitory Control Training (ICT) in the context of addiction. Building on this, the present study evaluates the effectiveness of ICT, in comparison to Sham Training (ST) in reducing aggression among individuals with co-occurring substance use disorder (SUD) and gambling behaviour (GB). *Methodology:* This study uses a two-group, parallel, randomized controlled trial design, with 30 participants assigned to either the experimental group (ICT) or the control group (ST) using permuted block randomization. Both groups continued with treatment as usual alongside participation in the research study. ICT incorporated six 15-minute sessions over three days, using a Go/No-Go paradigm with 100% contingency to link aggressive cues with inhibitory responses. These sessions progressively increased in complexity in terms of reducing probability of 'no-go' stimuli and decreasing stimulus response duration.

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Sham training, matched with the ICT in terms of both stimulus exposure and response requirements, reduced the contingency agreement to 50%, thereby theoretically aimed at preventing the formation of associations between aggressive stimuli and inhibitory responses. Outcome measures include the Overt Aggression Scale – Modified (OAS-M), South Oaks Gambling Screen (SOGS), Timeline Followback Scale (TFLB), an inhibitory control task, and a stimulus evaluation task for generalization. Evaluation will occur at four time points: Pre-intervention and Post-intervention ((1-Day post intervention, 1 month post intervention (+/- 4 Days), and 3 months post intervention (+/- 7 Days)). *Results:* Prior to conducting the primary analyses, group comparisons conducted on demographic factors and baseline scores on the primary dependent variables indicated equivalence across conditions. A series of 2 (Condition: ICT vs. ST) × 4 (Time: Pre to Follow Up I-II-III) repeated measures analyses of variance (ANOVAs) were conducted to examine between-group differences which indicated significant reductions in commission errors ($d = 0.15$), aggression against others ($d = 0.26$), and gambling activities ($d = 0.22$) over time. Comparisons of change scores between the two groups were found to be significant for verbal aggression ($p < 0.001$) using Mann-Whitney U-Test. While substance consumption decreased over time, this change was similar across groups, suggesting no effect of the intervention in the change. No changes were observed in omission errors or self-directed aggression. Stimulus generalization effects were seen only for aggression against objects ($d = 0.18$). However, changes in inhibitory control did not significantly predict reductions in aggression against others ($p = 0.586$) or gambling behaviour ($p = 0.195$). *Conclusions:* The ICT intervention led to improvements in some aspects of inhibitory control, aggressive behaviours, and gambling activity as compared to sham training. However, the underlying mechanism of work of the intervention remains inconclusive, and additional data from this ongoing study is needed for more definitive conclusions.

Keywords: addiction, substance use disorder, gambling behaviour, aggression, inhibitory control training

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6E–1

The state of play: Gaming disorder in the Indonesian landscape and emerging treatment options

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Gaming disorder has become an emerging condition in Indonesia, both during and after the COVID-19 pandemic, with the widespread accessibility of online gaming applications to children, adolescents, and young adults. A 2022 national study involving 1,200 adolescents and young adults revealed a 1.9% prevalence of gaming disorder, with adolescents being 1.5 times more likely to experience it compared to young adults. Adolescents predominantly played MOBA and MMORPG games, while MOBA games were the most popular among young adults. Post-pandemic data from a study in two major cities, involving 2,676 participants indicated a 46% prevalence of gaming disorder, with an equal distribution between genders. Factors associated with gaming disorder included issues with peers ($p < 0.002$), sleep quality ($p < 0.008$), emotional problems ($p < 0.000$), self-esteem issues ($p < 0.000$), and prosocial behavior problems ($p < 0.000$). This study also found a comorbidity between gaming disorder and the use of new psychoactive substances (6.8%). To address the growing prevalence, various therapeutic modalities were developed. An RCT study was conducted to evaluate the effectiveness of cognitive training exercises over nine weeks, with sessions held three times a week. Each session involved three types of tasks, including short-term and episodic memory, working memory, reasoning and response, and visuospatial attention. The intervention significantly reduced gaming disorder symptom scores ($p = 0.0017$), impulsivity by 24%, and cravings pre- and post-intervention ($p = 0.018$). Another approach, group-based dialectical behavior therapy, was conducted in eight weekly sessions. This method effectively reduced Internet Addiction Test scores, enhanced motivation for behavioral change, and shortened gaming durations.

Keywords: internet addiction, cyberbullying, youth, dialetical behavioral therapy, stepped care

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6E–2

Information and Communication Technologies (ICTs) users' self-control strategies in online behaviors: A systematic literature review

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Background: The widespread use of Information and Communication Technologies (ICTs) has introduced significant challenges related to self-regulation in online behaviors. While increasing attention is paid to the role of online application design features in fostering dysregulated engagement, it is equally important to investigate the strategies ICTs users can adopt to regulate their use. In response to this, the current study aims to conduct the first systematic literature review of available evidence on self-control strategies adopted by ICTs users across various online activities, focusing on their effectiveness in counteracting potential harmful technological design features. *Method:* Following PRISMA guidelines and a pre-registration on PROSPERO, relevant studies published in peer-reviewed journals over the last 10 years will be identified using PsycINFO, PubMed, and Web of Science. Inclusion criteria include empirical studies published in English that investigated ICTs users' self-control strategies in the context of six online activities (i.e., video gaming, online gambling, online shopping, social networking, cybersex activities, and on-demand streaming). Data extraction will include sample characteristics, methodologies, identified self-control strategies, and their potential interaction with relevant technological design features. *Results:* By the time of the conference, results will be available. Conclusion: This review will provide a comprehensive synthesis of current evidence by highlighting the types of self-control strategies used and their potential to mitigate problematic engagement in online activities, particularly related to the influence of technological design features. Findings will inform future research and intervention development.

Keywords: internet addiction, cyberbullying, youth, dialetical behavioral therapy, stepped care

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6E–3

Stepped-care intervention for internet use disorders: A randomized controlled trial

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Background: Internet use disorders (IUDs) are common in the general population. Treatment seeking is low, and indicated prevention interventions have rarely been thoroughly evaluated. In addition, stepped care approaches that address the entire population, including early intervention and treatment of full-blown disorders, have not been studied. *Methods:* A randomized controlled trial tested a comprehensive intervention based on a stepped-care approach. The intervention consisted of a four-week app-based intervention, two brief telephone sessions based on motivational interviewing, and online cognitive behavioral therapy, all offered to participants according to the severity of the disorder. The control group was given access to information only. Recruitment was conducted through companies, universities, vocational schools, influencers, social media, and the press. A follow-up was conducted after six months. *Results:* A total of 6,692 participants were screened for IUDs, of whom 1,240 were eligible and consented to participate in the study. Of these, 486 were assigned to the intervention group and 479 to the control group. Data from 584 participants for whom follow-up data were available were used in the analyses. Overall, the stepped-care approach proved effective. The control group was 2.5 times more likely to have a higher number of DSM-5-based IUD criteria and 2.3 times more likely to have a higher number of ICD-11-based criteria at follow-up than the intervention group. The intervention group also showed reductions in impairment and screen time. *Conclusions:* Overall, the study met high quality criteria in terms of sample size and follow-up period in a proactive intervention at population level. The stepped care approach with adaptation to the severity of the problem can be considered effective for the treatment and prevention of IUDs.

Keywords: internet addiction, cyberbullying, youth, dialetical behavioral therapy, stepped care

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6F–1

Eating disorders and Food Addiction: Clinical and therapy correlates

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Background and aims: In the past 10 years, the study of Food Addiction (FA) in Eating Disorders (ED) has been increasing. Recently, the interest in stablishing a phenotypical characterization of ED with and without FA has been growing, including clinical and neurocognitive aspects. *Methods:* Crossectional and longitudinal data in ED with and without FA will be presented, considering different ED subtypes, from bulimic spectrum disorders (namely Bulimia nervosa and Binge Eating Disorders) to Anorexia nervosa. *Results:* Food addiction criteria are usually met in ED, ranging from 50-90% of the cases, depending on the ED subtype. Results point to a positive association between presence of food addiction and higher clinical severity and more general psychopathology, but also more dysfunctional personality traits, more cognitive impairment and poorer therapy response. In ED +FA subjects show higher levels of impulsivity. *Conclusions:* FA seems to be a construct related with EDs and to be an indicator of severity and more clinical complexity. The results and implications for the therapy will be discussed.

Keywords: mental disorders, obesity, eating disorders, food addiction, treatment

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6F–2

Food addiction and gambling disorder: Clinical and neurobiological correlates

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Background: Empirical evidence suggests that food addiction (FA) might play a role in the course of addictive behaviors related to gambling. Nonetheless, the prevalence and clinical correlations of FA in gambling disorder (GD) are incompletely understood. Moreover, an overlap in neurobiological pathways involved in appetite regulation and addictive disorders has been proposed, although the underlying neuroendocrine machinery remains underexplored. *Aims:* Determining the prevalence of FA in individuals with GD, assessing clinical profile compared to those without FA; generating predictive models for the presence of FA in GD; analyzing the role of sex in clinical profiles of individuals with GD and FA; and, exploring links between appetite-regulating hormones and FA in GD. *Methods*: Data correspond to different original studies that explored a sample between 297 and 867 individuals with GD attending a specialized behavioral addictions unit. Patients were assessed through a semi-structured clinical interview, self-reported psychometric assessments, and a protocolized neuropsychological battery. Plasma concentrations of neuroendocrine factors (leptin, ghrelin, adiponectin, and liver-expressed antimicrobial peptide 2 (LEAP-2)) were assessed in peripheral blood after an overnight fast. *Results:* Prevalence for FA was around 8-9%, being higher among women. Individuals with FA were characterized by a worse psychological state and a more dysfunctional personality structure, which also predicted a higher likelihood of FA. In women, FA was associated with longer GD duration, while in men with an earlier GD onset, and greater GD and problematic alcohol use severity. Individuals with FA had a higher body mass index and leptin concentrations, which positively correlated with impulsivity traits and poorer neuropsychological performance. *Conclusions:* The co-occurrence of FA in GD is related to a more severe psychopathological and metabolic state, reinforcing the heterogeneous nature of GD and the role of potential endophenotypic features. A more comprehensive characterization of GD profiles by addressing FA may help design more tailored preventive and therapeutic approaches.

Keywords: mental disorders, obesity, food addiction, gambling disorder, neurobiology

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6F–3

No addiction transfer after obesity surgery?

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Background: Severe obesity is commonly associated with mental health disorders, including binge eating disorder and addictive-like eating behaviors. Bariatric surgery is regarded as the most efficacious long-term treatment for severe obesity and associated metabolic disorders. Aims. This presentation will address the question of whether individuals with obesity and pre-operative food addiction may substitute addiction-like eating with another addictive behavior postoperatively, when they are no longer able to overeat but still experience pre-existing psychological constraints and mental comorbidity. The concept of "addiction transfer" after bariatric surgery will be critically discussed against the background of food-related addictive processes that may play a role in obesity and binge eating disorder. *Methods:* A review of existing research and clinical evidence is conducted to critically assess the concept of addiction transfer in the context of bariatric surgery. *Results:* While bariatric surgery addresses the physical aspects of overeating, underlying psychological issues may persist. However, the extent of addiction transfer varies, and more research is needed to establish consistent patterns. *Conclusions:* Identifying the psychological and behavioral factors involved can help improve post-surgical care, ensuring that both physical and mental health aspects of obesity and addiction are addressed comprehensively.

Keywords: mental disorders, obesity, food addiction, bariatric surgery

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6G–1

Gaming as escape: A systematic review of escapism and its psychological associations

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Escapism is frequently discussed in the context of addictions, both substance-related and behavioral. In the realm of video gaming, research has often identified escapism as one of the motives most strongly associated with gaming disorder. However, recent findings suggest that the nature of escapism may not be solely maladaptive for mental health. The present systematic literature review aimed to investigate the associations between escapism and factors regarding psychological functioning of gamers. The analysis encompassed three databases—Scopus, Web of Science, and PubMed—yielding an initial pool of 2,863 articles. The review focused on peer-reviewed, quantitative studies published between 2013 and 2025 that examined escapism in gaming contexts. The review revealed that escapism is associated with a wide range of psychological outcomes. These include negative outcomes such as gaming disorder, social anxiety, depression, loneliness, impulsivity, and stress. While some studies noted associations with constructs like positive affect and the satisfaction of psychological needs, these were less emphasized. Moreover, the review highlighted the critical role of measurement tools used in assessing escapism and its psychological impact. These findings underline the complex and multifaceted nature of escapism in gaming, suggesting that its outcomes may manifest differently depending on individual, contextual, and measurement factors. The present review highlights the need for a nuanced understanding of escapism in gaming to inform future research and interventions.

Keywords: video games, escapism, gaming disorder, mental health, gaming motivations

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6G–2

The interplay between gaming disorder symptoms, escapism, and depression symptoms: A longitudinal study of adolescents

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Background: Despite increasing research, the longitudinal course of gaming disorder (GD) and mental health remains unclear. As gaming becomes more widespread among adolescents, gaining a clearer understanding of its psychological effects is crucial. *Aim:* This study investigates how symptoms of GD and depression, and the motive of escapism (gaming to avoid daily difficulties), relate to one another over time during adolescence. *Method:* A three-wave longitudinal study was conducted among a nationally representative sample of Hungarian adolescents from Budapest (N = 943; 547 boys, 394 girls), spanning three academic years (T1: 2018-19; T2: 2019-20; T3: 2021-2022), and focusing on active gamers. A multi-group cross-lagged panel model was used to assess bidirectional associations between the key variables. *Results:* GD symptoms, depressive symptoms, and escapism showed moderate stability across all time points. Among boys, early GD symptoms were followed by increased escapism and depression symptoms at T2. Escapism at baseline predicted GD symptoms at T2, and depression symptoms at T2 predicted later GD symptoms and escapism motive. Among girls, depressive symptoms at earlier waves predicted GD symptoms at subsequent waves, while early GD symptoms primarily predicted an increase in escapism at T2. Depression symptoms in T2 predicted escapism motive in T3. All cross-lagged paths had weak effect sizes. *Conclusion:* The findings reveal gender-specific patterns in the interplay between GD symptoms and mental health. Overall, GD symptoms was a stronger predictor of later mental health difficulties for boys, while depression more strongly predicted later GD symptoms for girls. Escapism emerged more as an outcome than a predictor in the model. These results highlight the importance of monitoring gaming-related behaviors alongside psychological functioning to support early intervention during adolescence.

Keywords: gaming disorder, escapism, depression, adolescence, longitudinal study

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6G–3

Curbing the urge: Evaluating detached mindfulness for gaming-related urges

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Background: Individuals who struggle to regulate their gaming involvement, particularly those with gaming disorder, often report strong urges to play games. Desire thinking has been proposed to actively drive urge, and therefore disrupting desire thinking processes may reduce urges to play. This experimental study tested whether detached mindfulness, a meta-cognitive therapy technique, can reduce desire thinking. *Method:* An experimental study evaluated the effectiveness of different techniques to both increase and decrease gaming urges. The study involved a 3 (Group: mindfulness, relaxation, control) x 3 (Time: baseline, pre-task, post-task) mixed design. A total of 337 regular gamers engaged in video-based tasks that triggered gaming-related desire thinking and were then randomly assigned one of three techniques. Outcome measures included urge to game, decision to game, and impulsivity. *Results:* A thought-based exercise successfully increased gaming urge. This talk will summarise the effects of detached mindfulness and relaxation techniques to decrease urge and will examine the moderating influence of impulsivity. *Conclusions:* Research into the drivers of urges in video gaming is of growing interest due to the technology's immersive and often addictive nature. This study provides evidence that desire thinking is a cognitive precursor to gaming urge, and that urge can be manipulated using mind-based techniques. These insights may assist in the creation of more nuanced and effective treatment plans, improving outcomes and supporting long-term recovery.

Keywords: gaming, desire thinking, detached mindfulness, urge

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6G–4

The experience of loss of control among esports players: A qualitative study

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Introduction: Esport (ES) is a growing worldwide phenomenon across all ages, especially among young people for whom gaming may represent a passion (Lemay et al., 2024). Despite the scarcity of research on ES, studies have shown associations between ES and Gaming Disorder (GD) (Montag et al., 2022). ES players gaming may represent a passion or a career choice and show significant involvement in gaming (Bányai et al., 2019). Considering the central role of loss of control in GD and the engaged profile of ES players, it appears essential to better understand the subjective experience of loss of control among ES players (Bányai et al., 2019). *Method:* The purpose of this study is to better understand the experience of loss of control in gaming from the point of view of the ES players. 13 ES players (aged 15-21) in Quebec having experienced loss of control in the last year were recruited in order to conduct semi-structured interviews and thematic analysis. *Results:* The thematic analysis allowed an in-depth understanding of the experience of loss of control in ES. More specifically, a definition, causes (e.g., win/defeat, life stressors, negatives thoughts or feelings), behavioral manifestations (excessive externalisation or excessive gaming time) and consequences of loss of control are discussed. *Conclusion:* To our knowledge, this study is the first to investigate the concept of loss of control from the perspective of ES players. Having a better understanding of the reality of ES players will benefit the development of prevention initiatives and training for school staff involved ES in schools.

Keywords: esports, loss of control, gaming disorder, qualitative study

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Bányai, F., Griffiths, M. D., Demetrovics, Z. et Király, O. (2019). The mediating effect of motivations between psychiatric distress and gaming disorder among esport gamers and recreational gamers. *Comprehensive Psychiatry, 94*, 152117. https://doi.org/10.1016/j.comppsych.2019.152117

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6G–5

Longitudinal impacts of Gaming Disorder on offline and online social interactions and relationships

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In contrast to ample research that has identified risk and protective antecedents of youth Gaming Disorder (GD), fewer studies have investigated its negative consequences, and most of them focus on the mental health consequences of youth GD (Düll et al., 2024), rather than social outcomes. A dearth of longitudinal data with more than two waves also further limits understanding of how the growth trajectory of GD influences changes in social relationships and interactions over time. This study analyzed four-wave longitudinal data from 3,433 Singaporean children and adolescents aged 8 to 17 over three years to investigate whether the initial level (intercept) and rate of change (slope) in GD predict changes in family environment, peer support, cyberbullying and cyber-victimization. For each outcome of family environment, peer support, cyberbullying, and cyber-victimization, a conditional latent growth curve model was estimated, yielding acceptable fits to the data (CFI =.937-.977, TLI= .911-.972, RMSEA=.020-.048). Results revealed that the higher intercept of GD was associated with the less positive initial status of family environment (iβ=-.495), and the more rapid exacerbation of GD predicted the steeper deterioration in family environment (sβ=-.689) over time. However, the intercept of GD did not influence the rate of family environment change. Higher GD intercept and the more rapid increases in GD symptoms significantly ($p \leq .001$) reduced peer support (iβ=-.189; sβ=-.239) and predicted the increased frequencies of cyberbullying (iβ=.348; sβ=.265) and cyber-victimization (iβ=.357; sβ=.228) over time. These findings suggest that worsening GD symptoms over time can harm not only family relationships but also peer relationships of youth and elevate their risk for cyberbullying and victimization online. Early intervention is critical to preventing detrimental effects of GD on social interactions offline and online.

Keywords: consequences of gaming disorder, family relationships, peer relationships, cyberbullying, cybervictimization

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Düll, L., Müller, A., & Steins-Loeber, S. (2024). Negative consequences experienced by individuals with Gaming Disorder symptoms: A systematic review of available longitudinal studies. *Current Addiction Reports, 11*, 528-550.

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6H–1

Interoception within the context of impulsivity, risk-taking, and addiction

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Interoception, the sense of the physiological state of the body, may be a contributing factor to impulsive behaviour and, thus, addiction. Emerging evidence suggests that disruptions in interoceptive processes may contribute to impulsivity and risk-taking behaviours, which are key features of both substance use disorders and behavioural addictions. Prolonged substance use has been shown to impair the brain's capacity to process interoceptive signals, diminishing sensitivity to natural rewards while heightening the appeal of addictive substances. However, the role of interoception in behavioural addictions, such as gambling, remains less understood. In this talk, I will present recent evidence on the role of interoceptive processes in risk-taking behaviour, with implications for gambling behaviour. I will discuss how interoceptive dysfunctions may underlie maladaptive decision-making, shaping tendencies toward risky behaviours. These insights underscore the broader relevance of interoception to understanding and addressing addiction, with potential implications for developing targeted interventions to modulate interoceptive awareness and improve self-regulation in vulnerable populations. This presentation aims to bridge the gap between physiological mechanisms and behavioural outcomes, offering a nuanced perspective on how disrupted body-brain communication may drive the cycle of addiction.

Keywords: interoception, emotion regulation, impulsivity, behavioral addictions

6H–2

Prospective interoceptive phenomenology in gaming

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Background: Gaming is known to alter physiological states which may elicit bodily sensations, some of which are experienced as emotional responses. Empirical studies have demonstrated that repeated associations between specific behaviors and their rewarding bodily effects (e.g., muscle relaxation) reinforce these behaviors over time. Similarly, we hypothesize that gaming's rewarding nature partly arises from its ability to generate positive bodily sensations and alleviate negative ones. The anticipation of such effects may drive the desire to play and shape gaming involvement. This study investigates the relationship between anticipated bodily sensations (prospective interoceptive phenomenology), desire to play, and

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gaming behaviors. *Methods:* We used an innovative body-mapping tool to assess the localization, valence, intensity, and frequency of bodily sensations that 200 gamers (≥6–9 hours/week; 30% female) anticipate before, during, and after gaming sessions. Gaming involvement, problem gaming symptoms, and current desire to play are assessed. *Results:* Gamers reported diverse anticipated sensations, reflecting emotional responses and the impact of a prolonged posture. Anticipating positive sensations, such as relaxation effects after gaming, was moderately and positively associated with the desire to play. Contrary to our hypothesis, no significant association was found between anticipated sensations and general gaming involvement. *Conclusion:* These findings support the role of interoceptive processes in shaping the desire to play, consistent with theories linking interoception to craving and the maintenance of addictive behaviors. Future research should investigate whether this mechanism explains the craving experienced by problem gamers, offering new intervention perspectives targeting interoception.

Keywords: interoception, gaming disorder, bodily sensations

6H–3

Male gamers & female influencers? The interplay of gender and emotion regulation in problematic internet use

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Background: The internet offers adolescents countless opportunities for entertainment, social connection, education, and creativity. However, this age group is also particularly vulnerable to problematic internet use, with boys more likely to engage in excessive gaming and girls showing a higher tendency for problematic social media use. While prior research highlights the role of emotion regulation difficulties in the development of Internet Use Disorders (IUDs), notable gender differences in emotional dysregulation have also been identified. However, the potential mediating role of emotion regulation in explaining gender-specific patterns of Internet Gaming Disorder (IGD) and Social Networks Use Disorder (SNUD) remains unclear. *Method:* Between 2020 and 2024, data were gathered from 1,793 adolescents (aged 11–18 years) across 44 German high schools. IGD and SNUD symptoms were assessed using the Internet Gaming Disorder Scale and the Social Media Disorder Scale. Emotional dysregulation was measured using the short form of the Difficulties in Emotion Regulation Scale. Mediation analyses were conducted to investigate the relationships between gender, difficulties in emotion regulation, and symptoms of IUDs. *Results:* Boys demonstrated higher IGD symptoms, whereas girls exhibited greater problematic social media use. Additionally, girls reported more pronounced difficulties in emotion regulation than boys. Across genders, greater emotion regulation difficulties were linked to increased symptoms of both IGD and SNUD. Emotion regulation partially mediated the relationship between gender and

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symptoms of both IGD and SNUD. *Conclusion:* Gender differences in emotion regulation accounted for some of the observed gender disparities in problematic internet use. In contrast to gender, emotional dysregulation represents a modifiable risk factor that can be addressed in interventions aimed at reducing problematic internet use. Enhancing emotion regulation skills may increase the effectiveness of interventions for both male and female adolescents, particularly in preventing problematic gaming and social media use.

Keywords: interoception, impulsivity, behavioral addictions, gender differences, emotion regulation, internet gaming disorder, social networks use disorder, adolescence

6H–4

From feeling to behavior: Interoceptive beliefs and emotion regulation in behavioral addictions

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Background: Interoception, the multifaceted process of perceiving, interpreting, and modulating internal bodily signals, has gained increasing attention in the context of mental disorders over recent decades. A proposed perspective regarding the role of interoception in psychopathology suggests that alterations in interoceptive processing can influence emotional recognition and regulation. While emotional dysregulation itself is a critical contributor to addiction, research has also identified direct associations between interoceptive beliefs and substance abuse, including cannabis and alcohol, as well as relationships between altered interoceptive accuracy and craving symptoms. Despite the psychological and neurobiological parallels between substance-related and behavioral addictions, the role of interoception in the latter is yet still underexplored. *Method:* This study investigates the mental health of university students in Germany through a 32-wave longitudinal design, with assessments conducted every six weeks over four years (currently in its fourth wave as of November 26, 2024). For the present analysis, cross-sectional questionnaire data collected at baseline (N = 867) on interoceptive beliefs, emotion regulation, and symptoms of internet use disorders were utilized. Analyses exploring longitudinal relationships are ongoing. *Results:* Preliminary findings indicate that difficulties in bodily self-regulation ($r = -.18$, $p < .001$), mistrust in bodily signals ($r = -.19$, $p < .001$), and tendencies to suppress unpleasant interoceptive cues ($r = -.15$, $p < .001$) are associated with compulsive internet use. Notably, these associations were mediated by the use of maladaptive emotion regulation strategies. *Conclusions:* The present findings suggest that dysfunctional interoceptive beliefs are associated with behavioral addictions through the intermediary factor of emotion regulation. Longitudinal analyses are needed to gain insights into the temporal antecedents and thus provide useful information for preventing and treating behavioral addictions.

Keywords: interoception, emotion regulation, behavioral addictions

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7A–1

Not just a man's world: Gender differences in compulsive sexual behaviour

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Background: Compulsive sexual behaviour (CSB) is a relatively prevalent phenomenon and the overwhelming majority of research has focused predominantly on men. Less is understood about how CSB manifests in women and the associated characteristics. Therefore, the goal of the present study was to examine gender differences in the demographic and clinical characteristics of individuals with CSB. *Method:* Participants were 5990 Canadian adults (73.5% women; mean age = 22.76, SD = 7.72) who completed a larger online survey on addictions and mental health. Univariate analyses were conducted to compare sociodemographic and psychological characteristics between men and women who met the cut-off for CSB on the Compulsive Sexual Behavior Inventory (CSBI). Variables significant ($p < .05$) at the univariate level were included in binary logistic regression analyses to determine predictors of CSB across four domains: demographic factors (e.g., age), addictive behaviours (e.g., substance use), mental distress (e.g., anxiety), and impulsive traits (e.g., urgency). *Results:* Of the participants that met the cutoff for CSB (n = 368; 6% of the total sample), 48.9% were men and 51.1% were women. Women who met the cutoff for CSB were younger (OR = .95) than men with CSB and less likely to be straight (OR = .41). The regression models revealed that women with CSB were more likely than men to endorse problematic cannabis use (OR = 1.49), compulsive buying (OR = 2.79), and food addiction (OR = 1.82). Women were also more likely to have higher scores on measures of posttraumatic stress (OR = 1.05), emotion dysregulation (OR = 1.05), negative urgency (OR = 2.34), premeditation (OR = 1.68), and anxiety sensitivity (OR = 1.16). *Conclusions:* These findings provide important insight into the profile of women with CSB and highlight the potential need to consider co-occurring clinical factors in the treatment of CSB for women.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gender, emotion dysregulation, treatment

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7A–2

Symptoms of CSBD over time: A two-year longitudinal study

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Background: Research related to Compulsive Sexual Behavior Disorder (CSBD) continues to flourish globally. However, there is still relatively little longitudinal research examining the natural trajectory of CSBD symptoms in the general population. The present work seeks to address this gap in the literature by examining such symptoms in the American population over the course of two years. *Method:* In a large (N = 4,363) baseline sample of American adults, CSBD symptoms were assessed using the CSBD-Diagnostic Inventory. Follow-up surveys were administered every six months for two years. Latent growth curve analyses were used to test trends in CSBD symptoms over time. *Results:* CSBD symptoms generally decreased (significant, negative slope) in the population over the course of two years. Higher symptoms of CSBD at baseline were associated with steeper decreases in CSBD symptoms over time. Gender was not related to trajectories of CSBD symptoms, but age was, so that older participants showed less steep decreases in CSBD symptoms. *Conclusions:* CSBD symptoms in the general population trend downward over time, supplying some evidence for a trend toward natural remission over time. However, age predicts these trajectories in such a way that younger people show faster declines in symptoms.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gender, emotion dysregulation, treatment

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7A–3

Problematic pornography use and psychological distress: A longitudinal study in a large US sample

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Background: Problematic pornography use (PPU) has been positively associated with psychological distress (i.e., anxiety and depression) in numerous cross-sectional studies. In the present study, we examined the trajectory of PPU and its association with psychological distress over time. *Method:* We conducted a three-wave longitudinal study among US adults (n=4363, 46.4% women, $M_{(Age)}$=50, $SD_{(Age)}$=16.15). We examined changes in PPU and psychological distress scores over a one-year period. Specifically, we assessed bivariate correlations and a random-intercept autoregressive cross-lagged panel model. PPU was assessed by the Brief Pornography Screen (BPS), and psychological distress was assessed by the Generalized Anxiety Disorder–2 (GAD-2), and the Patient Health Questionnaire-9 (PHQ-9). *Results:* Between each six-month period, we found that BPS bivariate intercorrelations were strong (ρ=.712, .726) and BPS autoregressive paths remained moderate (β=.370, .408). Surprisingly, the positive associations between BPS and psychological distress scores from descriptive correlations were determined by a strong random-intercept correlation (r=.962), while cross-lagged paths remained small and negative (β=-.189, -.211, -.214, -.230, respectively). This suggested a robust trait-like between-person association between BPS and psychological distress with negligibly small time-dependent within-person inhibitory effects occurring. *Conclusions:* PPU as measured by the BPS appears time-consistent and robustly associated with psychological distress over time. We speculate that inhibitory within-person effects may possibly reflect short-time coping behavior and depressive drive inhibition, while in the long-term further manifesting PPU.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gender, emotion dysregulation, treatment

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7A–4

Psychological mechanisms underlying the association between emotion dysregulation and PPU: The role of negative urgency

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Background: Multiple studies show that dysphoric mood states (particularly, depression) are strongly associated with Problematic Pornography Use (PPU) (Testa et al., 2024). This association may be explained by the fact that using pornography as a form of emotional regulation constitutes one of the most common motives linked to PPU (Castro-Calvo et al., 2018). However, the underlying psychological mechanisms and processes that could explain the connection between dysphoric mood and PPU remain unclear. One potential process could be negative urgency (Wéry et al., 2018). This study aimed to analyze whether negative urgency mediated or moderated the association between depression and PPU. *Method:* 348 men (Xage=31.89; SD=12.48) completed an online survey assessing their frequency of pornography consumption (ad hoc question, 7-point likert scale), depression (subscale from the DASS-21), negative urgency (subscale from the UPPS), and PPU (total score from the PPCS). *Results:* Depression and negative urgency were positively correlated with PPU (r=.46*** and r=.29***, respectively). Mediation analysis revealed that negative urgency partially mediated the association between depression and PPU, accounting for 21.19% of the total variance. Specifically, depression was a significant predictor of both negative urgency (β=.440; p<.001) and PPU (β=.413; p<.001). Additionally, negative urgency was significantly associated with PPU, albeit to a lesser extent (β=.104; p=.048). The direct effects of depression on PPU explained 89.9% of the total effects (β=.460; p<.001), while the indirect effects of depression on PPU through negative urgency accounted for the remaining 10.1% (β=.046; 95%CI [.005-.096]). Moderation analysis indicated that negative urgency did not significantly moderate the relationship between depression and PPU (β=.020; p=.689). *Conclusions:* Depression constitutes a robust predictor of PPU. Negative urgency partially mediated the association between depression and PPU. Addressing this intermediary mechanism may be important when designing effective interventions targeting PPU in populations prone to depression.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gender, emotion dysregulation, treatment

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7A–5

A randomized controlled trial of Fluoxetine versus Naltrexone in Compulsive Sexual Behavior Disorder: Preliminary demographic results

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Background: Compulsive Sexual Behavior Disorder (CSBD) is associated with impairment and negative consequences across various life domains. Altough the World Federation of Societies of Biological Psychiatry recomend psychoeducation and psychotherapy as first-line treatments, guidelines also include selective serotonin reuptake inhibitors (SSRIs) or Naltrexone if satisfactory results are not achieved, depending on the severity of CSBD and comorbid conditions. However, evidence for the pharmacological treatment of CSBD remains underexplored. *Method:* Eighty adults with CSBD seeking treatment at a specialized outpatient sexual medicine unit at Karolinska University Hospital, Stockholm, Sweden, were randomized to receive either Naltrexone or the SSRI Fluoxetine for eight weeks, followed by a six-week treatment-free period. *Results:* Recruitment took 3.5 years, slightly longer than anticipated, possibly due to the COVID-19 pandemic. Preliminary sociodemographic data of the recruited individuals will be presented. *Conclusions:* The significance of this trial, along with feasibility challenges and validity, will be discussed to assist researchers planning future clinical trials. The study is preregistered at clinicaltrialsregister.eu, EudraCT: 2019-004255-36.

Keywords: compulsive sexual behavior disorder, problematic pornography use, gender, emotion dysregulation, treatment

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7B–1

Advantages of a non total abstinence therapeutic strategy for adolescents with internet gaming disorder

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The inclusion of "internet gaming disorder" as a diagnosis in the ICD-11 is imminent. The diagnosis was controversially discussed in the context of other behavioral addictions. At the same time, the dependent use of the so-called new media is on everyone's lips, but has so far received little attention even in specialist circles. Dr. med. Daniel Illy, senior physician, double specialist in adult and child and adolescent psychiatry, himself a video gamer and founder of three outpatient consultations, author of many german books (including two manuals) on this topic, has been trying for years to bring video game and internet addiction into the spotlight. Video game and Internet addiction often leads to school abstinence and breaks in life for children, adolescents and (young) adults. It is usually accompanied by other mental illnesses. The disorder is often met with false ideas. Illy wants to change that. His concept: therapy at eye level, aware of the fascination of the media. In this symposium he presents an insight into the therapeutic approach based on the therapy manual he wrote, "Treatment Manual for Video Game and Internet Dependence: Behavioral Therapy-Oriented Group Treatment for partial Abstinence in adolescents – The "Git Gud in Real-Life" Program" in a practical and comprehensive manner. The second part focuses on a sub-area that is no less important but is even less in the public eye: dependence on social networks, which particularly affects (young) women.

Keywords: non total abstinence, therapeutic strategy, adolescents, manual, git gud

7B–2

Intrapersonal and interpersonal ambivalence in conjoint sessions: Insights from collective motivational interviewing with adolescents and parents addressing gaming problems

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Background: Collective Motivational Interviewing (CMI) is an innovative adaptation of Motivational Interviewing (MI) that involves significant others, such as parents, in the motivational process. Unlike traditional MI approaches that rely on eliciting individuals' intrinsic motivation, CMI emphasizes constructive social support to adolescents struggling with gam-

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ing problems. While MI extensively explores the concept of ambivalence and provides strategies to it grounded in the cognitive dissonance theory (CDT), CMI builds on this foundation by integrating CDT's dual-process model. It addresses both intrapersonal ambivalence (conflicting feelings within the individual) and interpersonal ambivalence (discrepancies in goals and expectations between multiple parties). These dynamics often involve complex tensions, power imbalances, and divergent goals between adolescents and their parents. Method: This study examined 30 conjoint cases where CMI was applied to adolescents with gaming problems and their parents. Interaction processes were evaluated how CMI techniques facilitated mutual understanding, reduced tensions, and bridged discrepancies in expectations and goals. Real-life case scenarios were used to illustrate these dynamics. *Findings:* CMI showed to be a feasible approach for addressing both intrapersonal and interpersonal ambivalence. Key outcomes included fostering open and constructive dialogue, nurturing mutual understanding and empathy, and managing power imbalances during interactions. By exploring the positive intentions and core values of all parties, CMI facilitated collaborative problem-solving and the achievement of shared goals. *Conclusion:* CMI has demonstrated to be a practical tool for promoting consensus and joint goal-setting in families experiencing gaming-related challenges, with promising implications for addressing gaming problems through a social network paradigm.

Keywords: collective motivational interviewing, gaming addiction, ambivalence, family intervention, behavioral addiction

7B–3

Short-falls of psychological interventions for Internet Gaming Disorder & path ahead

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Background: The emergence of Internet Gaming Disorder (IGD) is influenced by multiple-comorbid psychological difficulties such as anxiety, depression, maladaptive coping, strained family relationships, academic difficulties, and peer influences. However, cognitive behavior therapy (CBT), the most evidence-based intervention for IGD, addresses only cognitive distortions and associated behaviors contributing to IGD. Further, CBT is effective only in minimizing symptoms of IGD and depression at post–intervention phase, and the psychotherapy gains appear to be sustained for shorter durations ranging from 8 weeks to 6 months only. Research indicates that integrative psychotherapy programs have produced larger effect sizes in comparison to CBT. At present, there is urgent need for integrative, novel, and virtual intervention programs to be developed and utilized alongside and integrated with established interventions like CBT and more so with upcoming multimodal psychotherapy interventions, as multimodal interventions offer an integrative approach that addresses multiple risk factors

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associated with development of IGD. *Objective:* To explore short falls of existing psychological interventions for internet gaming disorder. *Method:* A search conducted on databases of PubMed and Scopus using keywords 'Internet Gaming Disorder', 'Online Gaming', 'Psychotherapy', 'Treatments', 'Intervention' yielded around 70 studies. Randomized controlled trials, integrative psychotherapy approaches were selected and emergent data underwent narrative analysis. Results: CBT continues to be most evidenced psychological intervention followed with upcoming interventions such as mindfulness based cognitive behaviour therapy, digital detoxification programs and family therapy. *Conclusions:* CBT remains most researched intervention. Multimodal interventions show promising findings, however, large sized, meticulously planned RCTs remain to be conducted to establish efficacy. A majority of these programs offer minimal focus on relapse prevention interventions, sustenance of treatment gains, booster sessions, and integration of technology for enhancing psychotherapy gains. Novel, and virtual psychotherapy programs for IGD that address multiple risk factors remain to be developed and assessed for effectiveness and efficacy.

Keywords: Internet Gaming Disorder, psychotherapy, integrative psychotherapy

7B–4

Patients' descriptions of why it is difficult to gain control over their gaming behavior: A qualitative interview study

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Introduction: Knowledge about factors that maintain problematic gaming is of value when developing effective treatments for gaming disorder. Although research about gaming disorder has made advancements during the last decades, most studies have used quantitative approaches. Consequently, knowledge is lacking about how patients themselves experience reasons for not being able to control their gaming. *Method:* Patients seeking treatment for gaming disorder (n=12) were interviewed about factors that influence the extent of their gaming. Data were analyzed with thematic analysis. *Results:* Four themes emerged; Identifying as a competent gamer, The eternity ladder, Filling the void, Being controlled by the game. The participants described having invested both time and money to become competent gamers.

Keywords: gaming disorder, treatment-seekers, interview study

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7B–5

Effectiveness of two app-based CBT interventions in mitigating gaming addiction risk among college students

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Background and Aims: College students are at high risk for gaming addiction (GA). This study evaluated the effectiveness of two app-based cognitive-behavioral therapy (CBT) interventions—"Goal Regulation" and "Coping with Craving"—in reducing gaming addiction risk. *Methods:* Seventy-six college students identified as high-risk for GA were randomly assigned to either the "Goal Regulation" or "Coping with Craving" app intervention. Participants underwent pre-testing, an 8-week intervention, and follow-up assessments at 4 months. Outcome measures included gaming time, gaming refusal self-efficacy, GA severity, and social anxiety. *Results and Discussion:* Generalized estimating equation (GEE) analyses revealed that both interventions significantly reduced non-academic gaming time, with the "Goal Regulation" app showing greater effectiveness. Both groups demonstrated improvements in GA severity, social anxiety, and gaming refusal self-efficacy, with no significant differences between the two strategies on these measures. Findings suggest that both app-based self-regulation strategies effectively enhance self-control and reduce GA risk, with "Goal Regulation" particularly effective in reducing gaming time.

Keywords: gaming addiction, App-based intervention, cognitive-behavioral therapy, goal regulation, coping with craving

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7C–1

Gambling and suicide: A psychological autopsy and qualitative inquiry initial findings

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There are many harms associated with gambling, the most serious of which can be suicide or attempted suicide. Although an estimated 650 gambling-related suicides occur each year in the UK, measuring risk factors is notoriously difficult, and therefore the associated contextual factors are less well understood. Therefore, this study sought to better understand factors that increase the risk of gambling-related suicide through a Psychological Autopsy Study. Working with individuals and significant others with lived experience of gambling related harm, our project is conducting the first full Psychological Autopsy Study in Europe. A Psychological Autopsy Study investigates suicide through a comprehensive review of a deceased person's history leading up to the suicide by interviewing people who knew them, and fully assessing contextual information such as coroners' reports, medical history, email and social media data, and gambling records. Work includes a comprehensive exploration of significant risk factors such as stressors and triggers, environmental factors, and behaviours to provide a more complete understanding of the socioecological nature of gambling-related suicide. The work will provide insights into the warning signs, common themes and underlying causes of gambling-related suicide, to inform evidence-based prevention and intervention strategies. The core study subjects (n=20) are 10 individuals who have died by gambling-related suicide as well as 10 who have had a serious gambling-related suicide attempt. For each of the cases, between three and five relatives, friends, co-workers, healthcare providers and other people who knew the individual will be interviewed (n=100). This presentation will discuss the instigation and early findings of the qualitative element pf the project. Early themes include: The person/ Loved one; gambling; industry Practices; help, support and treatment, the suicide attempt; societal responsibility, financial; and mental and physical health.

Keywords: gambling harm, suicide, autopsy, coroners, lived experience

7C–2

Gambling and suicide: A psychological autopsy quantitative data

RICHARD JAMES

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Psychological autopsy (PA) studies intensively collate information concerning the subjects of investigation and the events leading up to suicide or a serious suicide attempt. Alongside interviews with close contacts, PA studies frequently examine administrative and personal

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records to understand context surrounding a case, the lived experience of the person being studied, and to triangulate across different sources of information. However, PA studies vary in their utilization of record data, and multiple systematic reviews have noted the absence of online activity data in the PA methodology. Use of online trace data is especially important for understanding gambling-related suicide because most gambling activity is recorded and stored electronically, and there are multiple public sources of support for gambling harms. This talk presents findings from quantitative analysis of record data collected from 20 cases: 10 of whom died by gambling-related suicide, 10 who have had a serious gambling-related suicide attempt. As part of the PA process, we collected gambling activity data (e.g. from Subject Access Requests), financial/medical/police records, online activity (e.g. emails, social media activity) and other relevant information. Because of the variety and volume of data, each case was analysed individually using time series models and multilevel regression analysis. The talk will also explore some of the challenges encountered with working with this data. Although each source of data is often extremely detailed, the availability of such data varies considerably from participant to participant. Gambling activity data is especially varied, with the volume and ease of processing the data varying by provider, the number of providers the subject has an account with, and the type of gambling activities that there is account history data for.

Keywords: gambling harm, suicide, autopsy, coroners, lived experience

7C–3

Gambling and suicide: The role of individuals with lived experience

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We are conducting a project to fully examine the events and circumstances leading to gambling-related suicide including an in-depth exploration of common themes, significant risk factors, environmental factors and behaviours to provide a more complete understanding of the socioecological nature of gambling-related suicide. Having accurate information on gambling-related suicide is vitally important for public health approaches which are aimed at preventing suicide. The project has been codeveloped with, and fully involves experts with lived experience (LE) of gambling-related harm. This presentation will discuss how important it is that LE experts influence the direction and shape of a research project from start to finish. The talk will then document LE input into this specific project. Two individuals with LE are Co-Investigators and are working on all elements of the project including protocol development, acting as liaison with the wider LE community and potential participants, conducting interviews, and reviewing all documentation and data. Three more LE experts sit on the wider Research Advisory Group, who meet every three months to discuss progress. In addition, we have also conducted focus groups/ meetings with groups of LE Experts to determine the final selection of questions to be used in the qualitative interviews, helping with

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their interpretation and helping to build relationships with individuals and families who will be interviewed. It is imperative that those with LE of gambling-related harm are involved throughout the project in the acquisition, analysis and interpretation of data, writing of the final report and revising it critically, and wider dissemination. Such individuals are fully costed into the project. The final part of this presentation will discuss the key components and best practice of good LE involvement and what we have learned over the last 18 months.

Keywords: gambling harm, suicide, autopsy, coroners, lived experience

7C–4

Coroners' attitudes towards gambling related suicide

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University of Lincoln

Elevated instances of suicidality in disordered gamblers have been reported in many studies throughout the world. However, there has been little progress on arranging data collection and actions to address gambling-related suicide by government agencies. Accordingly, Coroners' reports are a sensible avenue to explore but there have been no steps to include gambling in the coronial codes or to mandate training on gambling-related suicides amongst coroners. Coroners routinely enquire into suicide deaths as they hold an inquest to determine the cause of death. However, it is also likely that gambling-behaviours are underreported at inquests due to a lack of awareness of any associations by coroners. The objective of this study was to investigate how much coroners know about gambling-related suicide and how likely coroners' services are to identify gambling in reports. A questionnaire was sent to coroners to determine knowledge of gambling related suicide. Qualitative interviews also gathered a range of perspectives on recording gambling related suicides within coroners' courts. Evidence from families working with the charity Gambling with Lives has shown that some coroners have refused to even consider the role of gambling in suicides. The study will increase knowledge of the area and is likely to improve recording in inquests and will increase the evidence base/ data. Once we have data on the links between gambling and completed suicide, we can begin to understand the risk factors and trajectories to suicide of people who have gambling disorder. This will aid clinicians in the NHS who carry out risk assessments, and treatment to help prevent future suicides. The work will ultimately help embed the risk of suicide associated with gambling in national suicide prevention strategies and national reporting systems in the UK.

Keywords: gambling harm, suicide, autopsy, coroners, lived experience

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7D–1

Cue-reactivity in specific Internet-use disorders

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University of Duisburg-Essen, Germany

Background: Cue-reactivity is a central mechanism involved in the development of addictive disorders. It arises from associative and instrumental learning processes leading to subjective, psycho-physiological, and behavioral responses towards cues related to addictive behaviors. The responses are thought to be generalized to distal cues such as devices displaying starting pages without directly presenting rewarding content; yet the effects of distal cues have not been systematically investigated in diagnostically validated samples. *Method:* This preregistered study, conducted within the framework of FOR2974, examined cue-reactivity responses in individuals with non-problematic (n=268), risky (n=135), and pathological (n=133) online engagement including gaming, buying-shopping, pornography use, and social networks. Participants were exposed to distal cues, and their cue-reactivity responses were measured through ratings and viewing times. *Results:* Individuals with risky and pathological internet use exhibited significantly heightened cue-reactivity compared to individuals with non-problematic use. Individuals with pathological use demonstrated persistent responses across multiple task blocks and generalized reactivity to device-related cues that displayed starting pages unrelated to their specific behavior of concern. These effects were consistent across all types of internet-use disorders. Notably, cue-reactivity was correlated with both the temptation to use and actual engagement in natural environments. *Conclusions:* The results underscore cue-reactivity as pivotal elements of internet-use disorders, especially in environments saturated with unavoidable digital triggers. The findings highlight the need for preventive and therapeutic approaches that address the pervasive influence of such cues on maladaptive internet use.

Keywords: neurocognitive mechanisms, gaming, buying-shopping, pornography use, social media

7D–2

Interplay of positive and negative reinforcement mechanisms in specific Internet-use disorders

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Background: Theoretical considerations and empirical research outline positive and negative reinforcement mechanisms such as experienced gratification and compensation as key processes in addictive behaviors. Moreover, researchers also argue that compulsive and habitual tendencies are additional factors leading to the manifestation of addictions. The following study examines the interplay of gratification, compensation, trait compulsivity, and habitual

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tendencies in specific Internet-use disorders (i.e., gaming, pornography, buying-shopping, social-networks). *Method:* We used data of an aggregated sample (N=1081) of individuals with non-problematic, risky, and pathological online behavior from a multi-center study (FOR2974) focusing on affective and cognitive mechanisms in specific Internet-use disorders. Besides self-report scales, we considered further variables (temptation to use and daily usage time) measured by a subsequent 14-day ambulatory assessment. *Results:* Results illustrated significant correlations between symptom severity, gratification, compensation, trait compulsivity, and habit. We found significant interaction effects between habit and gratification as well as between trait compulsivity and compensation predicting symptom intensity in the overall sample. In addition, application-specific differences emerged in the interaction with gratification, compensation, compulsivity, and habit. Further analyses outlined the relevance of all these constructs as well as the interaction of habit and symptom severity explaining variance of daily usage time measured within the natural environment. *Conclusions:* Gratification, compensation, trait compulsivity, and habit tendencies are relevant mechanisms in the development of specific Internet-use disorders. It is illustrated that trait compulsivity and additional experienced gratification as well as habitual tendencies and experienced compensation are associated with higher symptom severity of specific Internet-use disorders. However, results indicate that the interaction varies depending on the type of online usage behavior, which can serve as an initial indication of divergent validities.

Keywords: neurocognitive mechanisms, gaming, buying-shopping, pornography use, social media

7D–3

Self-control in specific Internet-use disorders: Results from self-report measures and objective neurocognitive tasks

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Background: Individuals with addictive behaviors show deficits in self-control as indicated by self-report scales and weaker performance in cognitive tasks. The same is assumed in the context of (potential) specific Internet-use disorders (IUDs). Especially the interplay between different self-control-related variables on symptom severity is yet unclear. This study analyzed interactions between different measures of self-control and cue-induced craving on the symptom severity of specific IUDs.
Method: Participants (N = 1013) were part of a laboratory multi-center study (FOR2974) and were invited for one of four types of (potentially) addictive online behaviors: gaming, online shopping, online pornography use, and social network use. The extensive test battery consisted of a diagnostic interview for the specific IUD (based on DSM-5 criteria for gaming disorder), self-report scales (assessing e.g., impulsivity and self-directedness), a cue-reactivity paradigm followed by craving ratings, and different neurocognitive tasks including standardized measures of general executive functions (e.g., Stroop test, Modified Card Sorting Test). *Results:* As hypothesized, individuals with specific IUDs show reduced self-control abilities

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(in behavioral and self-report measures) compared to users without IUD. Results of moderated regression analyses across all IUDs reveal that self-control abilities (behavioral and self-report measures) and cue-induced craving jointly contribute to the explanation of variance in symptom severity. However, there were no significant interaction effects. *Conclusions:* Individuals with IUDs show slight deficits in self-control abilities. Higher cue-induced cravings and lower levels of self-control both contribute to symptom severity, but, they do not interact. This points to a rather cumulative than interactive effect of general executive functions and cue-reactivity/craving which may be specified further in future theoretical work (e.g. I-PACE specifications). The results raise the need for a more differentiated view on the role of different self-control functions (general vs. situation-specific) in the development and maintenance of (online) behavioral addictions.

Keywords: neurocognitive mechanisms, gaming, buying-shopping, pornography use, social media

7D–4

Interactions between affective and cognitive mechanisms that explain the symptom severity of specific Internet-use disorders

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Background: Current etiological models of behavioral addictions, such as the I-PACE model, include the interaction of affective and cognitive processes in the development and maintenance of addictive behaviors. The DFG-funded research group FOR2974 is testing the central assumptions of the I-PACE model for multiple internet use disorders (gaming disorder, buying-shopping disorder, pornography use disorder, and social network use disorder). We here present the first findings on the interaction of affective and cognitive mechanisms to explain the symptom severity of Internet use disorders. *Method:* The data from the FOR2974 cohort (current N=783) were analyzed using a theory-driven structural equation model (largely modelled at latent level): ten predictor variables for modelling five latent dimensions (self-reported self-control, coping style, general executive functions, psychopathology, impulsivity), ten variables for modelling four mediators (reinforcement experiences, use expectancies, cue-reactivity/craving, stimulus-specific inhibitory control) and three variables (clinical interview and two screening procedures) for modelling symptom severity as the dependent variable. *Results:* The theoretical predictions are confirmed by the empirical data. The effects of psychopathology, self-control, and coping style on symptom severity are mediated by use expectancies, reinforcement experiences, and cue-reactivity/craving (serial mediation). The effect of general executive functions on symptom severity is mediated by stimulus-specific inhibitory control. *Conclusions:* The empirical model confirms the central assumptions of the I-PACE model regarding the interactions of predisposing variables with affective and cognitive mechanisms to explain the symptom severity of specific internet use disorders. The directions of the effects also point to the theoretically assumed significance of an increasing imbalance between stronger affective processes and reductions in cognitive

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control, whereby the corresponding causal effects can only be tested in longitudinal studies. First clinical implications can be derived: In the therapeutic context, the mediating variables (i.e. cue-reactivity/craving, use expectancies, reinforcement experiences, and stimulus-specific inhibitory control) should be addressed through targeted interventions.

Keywords: neurocognitive mechanisms, gaming, buying-shopping, pornography use, social media

7D–5

Prediction of symptom severity of specific Internet-use disorders in a 6-month follow-up

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Background: The present study aimed to investigate whether changes in symptoms of potential IUDs over a period of six months are associated with changes in 1) non-specific psychological variables such as general psychopathology and perceived stress, 2) addiction-specific variables such as internet use expectancies, experienced gratification/compensation, habit formation and daily usage time, and 3) therapy utilisation. *Method:* Longitudinal data (baseline t1, 6-month follow-up t2) from 574 individuals with pathological (26%), risky (30%) or non-problematic (44%) internet use from the FOR2974 cohort were analysed. The modified 10-item Internet Gaming Disorder Test (IGDT-10) was used to assess symptoms of potential IUDs. Participants provided information on daily usage time and therapy utilization. They further answered standardized questionnaires for general psychopathology, perceived chronic stress and addiction-specific psychological variables. *Results:* The symptom severity of specific IUDs at follow-up was lower than at baseline (Cohen's d=0.39). There was also a reduction from t1 to t2 in daily usage time, habit formation, use expectancies, the experience of gratification and compensation and perceived chronic stress. Compulsiveness and depressiveness were higher at t2 than at t1, whereas there was no significant change in anxiety symptoms. Therapy utilisation was reported by 67 participants (11%). The hierarchical regression analyses indicate that therapy utilisation and the reduction in depressiveness, habit formation, avoidant use expectancies and daily usage time were significantly associated with the reduction in IUD symptom severity. *Conclusions:* The results indicate a link between the short-term course of potential IUD symptoms and the course of key psychological variables, including depressiveness, habit formation and avoidant use expectancies. The causality of the association may be bi-directional. The utilisation of therapeutic help appears to be a relevant factor that requires further investigation with regard to the disorder specificity, frequency and duration, as well as therapeutic approaches.

Keywords: neurocognitive mechanisms, gaming, buying-shopping, pornography use, social media

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7E–1

Prevalence of gaming disorder in representative samples of German children and youth: From pre- to post-pandemic developments

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Background: Gaming disorder (GD) has been included in the ICD-11 and received increased attention in the past years. By focusing on resulting impairments in significant areas of life, it provides a clinically highly relevant framework. Young individuals are particularly vulnerable to developing pathological gaming behaviors. However, there is a lack of representative data focusing on the prevalence of GD based on ICD-11 criteria. This study aims to examine the prevalence of GD among German youth, spanning six years. *Methods:* Representative samples of German children and youth aged 10 to 17 years collected by an established market research and opinion polling company via online survey were examined annually from 2019 to 2024 with approximately 1,100 observations per year. GD was assessed by the Gaming Disorder Scale for Adolescents (GADIS-A; Paschke et al. 2020) and weekly gaming times were calculated. Descriptive statistics and multilevel modeling to examine GD gaming time development over time and potential differences concerning gender and age were explored using R software. *Results:* An initial increase in GD prevalence could be seen with the COVID-19 pandemic. The latest data collection was just finalized. Date sets are currently prepared to run the analyses described. Results will be presented at the conference. *Discussion:* Given the continuing popularity of gaming, valid estimates of GD based on the ICD-11 are urgently needed. Moreover, the impacts of the COVID-19 pandemic need to be better understood. The findings will be related to the clinical relevance of GD and its implications for personalized prevention and treatment.

Keywords: children and youths, young adults, internet use disorders, COVID-19, intervention

7E–2

From pre- to post-COVID-19 pandemic: Development of Social Media Use Disorder prevalence in children and youth in Germany

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Social media (SM) use has significantly increased since the COVID-19 pandemic. Adolescents are especially vulnerable to develop a Social Media Use Disorder (SMUD) with severe sequelae in important areas of life. This study is the first to com-prehensively examine age- and sex-specific long-term trends of SMUD prevalence based on ICD-11 criteria of behavioral addictions and SM usage times in German adolescents from pre- to post-pandemic. Additionally, it investigates age-specific differences in predictors of SMUD. *Methods:*Data were collected annually at five measurement points (2019-2023) via online survey conducted

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by a German opinion polling company. Each wave included a representative sample of 10- to 17-year-olds (N > 1.000) and one respective parent. Measures included sociodemographic factors, SM usage times and ICD-11 based SMUD. Analyses of SMUD prevalence and usage times were stratified by age group (children vs. youth) and sex. Mixed-effect regression models were calculated to examine time trends and age-specific associations between SMUD and usage time, sex, education and residence, controlling for subjectively perceived stress. *Results:* SM usage times and SMUD prevalence significantly increased during the pandemic, followed by a post-pandemic decrease. Age- and sex-specific variations in the time trends were observed. Moreover, variable association of SMUD with SM usage time and sociodemographic factors in children compared to youth could be shown. *Conclusions:* The findings unravel the immediate and prolonged impact of the pandemic on SM usage patterns. They highlight the urgent need for interventions to prevent and treat SMUD in adolescence that account for age-specific needs.

Keywords: children and youths, young adults, internet use disorders, COVID-19, intervention

7E–3

Update on the prevalence of online behavioral addiction symptoms in adolescents and their development over time

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Background: Prevalence estimates serve as crucial indicators for assessing the need for prevention and treatment strategies. Adolescents are often underrepresented in research on specific behavioral such as gambling, pornography use, and compulsive buying due to limited legal access to these types of behaviour. This study seeks to update findings from the previous year using the complete dataset from the PROTECT study. It aims to analyze the progression of high-risk behaviors over time among adolescents aged 11 to 18 years. *Methods:* Data were collected between 2020 and 2024 from a large sample of 1,757 high school students in Germany. The study took place in 44 high schools in 90 classes. The analysis focused on symptoms of Internet Gaming Disorder (IGD), Social Network Disorder (SND), as well as other behavioral addictions, including gambling, online pornography use, and compulsive online shopping. Additionally, symptoms of substance-related risk behaviors, specifically cannabis and alcohol consumption, were examined. *Results:* Symptoms of most forms of addictive behaviors were observed in adolescents as young as 11 years old, with the exceptions of pornography use and risky alcohol consumption, which were absent in this age group. The study confirmed gender differences in some specific types of addiction. *Discussion:* These findings underscore the critical need to target young adolescents in the design and implementation of prevention and intervention programs addressing behavioral and substance-related addictions.

Keywords: children and youths, young adults, internet use disorders, COVID-19, intervention

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7E–4

Efficacy of an Approach-Avoidance-Based App Training (PROTECTapp) to reduce problematic internet use in emerging adults: A randomized controlled trial

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Heidelberg University

Background: Excessive internet use can lead to significant impairments in quality of life on social, psychological, and physical levels, and is commonly observed among young adults. Approach-avoidance trainings have shown promising results in reducing substance-related addiction symptoms as well as other psychopathological phenomena. Such trainings can also be effectively delivered via smartphone apps. This study investigates the efficacy of an approach-avoidance-based app training in reducing problematic internet use in emerging adults. *Methods:* University students with problematic internet use were randomly assigned to either a three-week smartphone-based intervention (PROTECTapp) or a waitlist control group. PROTECTapp promotes engagement in functional behaviors and avoidance of dysfunctional, media-related behaviors through the systematic application of techniques derived from cognitive bias modification approaches. The primary outcome was the problematic internet use at the end of the intervention, measured using the Compulsive Internet Use Scale. Secondary outcomes included symptoms of specific online behavioral addictions and internalizing psychopathology. *Results:* Preliminary findings from 58 out of 92 planned participants (mean age = 22.4 [SD = 2.4], 67.2% female; as of October 2024) indicate a significantly greater reduction in problematic internet use within the intervention group (pre-intervention mean = 33.3 [SD = 7.2], post-intervention mean = 26.2 [SD = 6.9]) compared to the waitlist control group (pre-intervention mean = 34.0 [SD = 6.4], post-intervention mean = 32.7 [SD = 7.4]; $F(1,55) = 15.4$, $p < .001$), with a large effect size ($d = -0.84$, 95% CI [-1.26, -0.41]). Analysis of secondary outcomes and mid-term effects during 3- and 12-week follow-ups is planned. *Conclusion:* Findings suggest that an approach-avoidance-based app training can effectively reduce symptoms of problematic internet use in emerging adults. Results are discussed in the context of existing evidence and study limitations.

Keywords: children and youths, young adults, internet use disorders, COVID-19, intervention

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7F–1

Connectome-based prediction of problematic gaming in adolescents

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Background: Despite the rapid growth in gaming consumption and associated harm in adolescents, data-driven research to identify neural networks predictive of problematic gaming remains limited. The aim of this study was to identify neural networks predictive of problematic gaming using connectome-based predictive modelling (CPM), a machine-learning approach that employs whole-brain functional connectivity data. *Methods:* The study included 1036 participants from the Adolescent Brain Cognitive Development study at the two-year follow-up, when problematic-gaming measures were introduced. CPM was applied to problematic-gaming scores and functional magnetic resonance imaging (fMRI) data collected during the performance of a reward-processing task. Additional CPM analyses were performed using other task-based (e.g., those relevant to response inhibition, emotion regulation, and working memory) and resting-state fMRI data. *Results:* CPM successfully predicted problematic gaming scores. Highly predictive connections were observed within and between neural networks implicated in cognitive control and executive function (frontoparietal and medial frontal networks), visual processing (visual area 2 and visual association networks), and salience processing and motor response (salience and sensorimotor networks). Furthermore, CPM predicted problematic gaming scores across all analyzed brain states, indicating generalizability. Conclusions: This study identified in adolescents large-scale networks predictive of problematic gaming that may be targeted in novel and personalized interventions, which may inform treatment development for problematic gaming. Future CPM research should incorporate an external replication sample to evaluate the generalizability of the identified predictive network. Additionally, shared and distinct predictive neural networks across a range of internet-enabled addictive behaviors should be investigated.

Keywords: connectome-based predictive modelling, problematic gaming, adolescents

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7F–2

Habitual and goal-directed processes in gaming: Cognitive insights from non-gamers, gamers, and gaming disorder risk groups

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Background: While video gaming is an enjoyable activity, excessive engagement can lead to addiction. Addiction is often associated with a shift from goal-directed to habitual behavior, which may overshadow the potential developmental effects of gaming on goal-directed functioning. Although it is important to distinguish regular gaming from Gaming Disorder (GD), it is often unclear which changes in cognitive functioning result from gaming itself versus those induced by addiction. To address this, our study examined cognitive functioning in non-gamers, active gamers, and individuals at risk for GD. *Methods:* The study included 135 participants divided into three groups based on the Internet Gaming Disorder Test (IGDT-10) scores and gaming habits. The GD risk group (n=31; Mage=28.55) met at least five IGDT-10 addiction criteria. The active gamer group (n=43; Mage=33.95) played for more than two hours daily but did not meet the addiction threshold. The control group (n=41; Mage=42.15) were non-gamers. Participants completed tasks measuring inhibitory control (Go/No-Go), cognitive flexibility (Card Sorting Task; CST), working memory (Digit Span, Counting Span, N-Back), and habitual processes (Alternating Serial Reaction Time Task). *Results:* The GD group showed poorer simple working memory than controls and weaker complex working memory than both controls and active gamers. Active gamers outperformed controls on inhibitory control. Both GD and active gamers showed signs of weaker habitual processes compared to controls. No significant group differences were found on the CST. *Discussion:* We found weaker goal-directed and habitual processes in GD risk, and better goal-directed but weaker habitual functioning in active gamers. This suggests that active gamers may compensate for poorer habitual processes by relying on stronger goal-directed mechanisms, while the lack of such compensation in GD could contribute to the addiction itself. The GD group's poorer performance on complex working memory, where active gamers outperformed them, may also play a significant role. *Funding:* This research was supported by the ANR grant awarded within the framework of the Inserm CPJ; the National Brain Research Program by Hungarian Academy of Sciences (project NAP2022-I-1/2022); and the Hungarian National Research, Development and Innovation Office (Grant numbers: K128016 and FK134807) and the EKÖP-24 University Excellence Scholarship Program of the Ministry for Culture

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and Innovation from the source of the National Research, Development and Innovation Fund. The study was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences.

Keywords: gaming disorder, cognitive functions, active gamers

7F–3

Shared and unique treatment responses on resting-state functional connectivity in internet gaming disorder: A comparison between two different intervention programs

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Background: With the increasing prevalence of Internet gaming disorder (IGD), non-pharmacological treatments such as cognitive behavioral therapy, group therapy, and computer-assisted automated interventions have demonstrated promising efficacy. Recent studies utilizing functional magnetic resonance imaging(fMRI) have explored the underlying neural mechanisms of different intervention methods. However, the shared and unique components across various interventions remain unclear, which is crucial for further optimizing intervention strategies. This study aimed to investigate the shared and unique changes in resting-state functional connectivity (RSFC) induced by craving behavior intervention (CBI) or emotional association bias modification (EABM) in IGD. *Methods:* Participants from two treatment programs were aggregated, who both completed resting-state fMRI scans before and after the interventions. A total of 98 regions of interest, which from dual process models, were selected from the Brainnetome atlas and mapped onto the Yeo 7-network parcellation. Linear mixed-effects models with 1,000 times permutation tests were used to examine the effects of different interventions on resting-state functional connectivity. Subsequent network-level analyses further compared the shared and unique components. *Results:* Linear mixed-effects modeling revealed statistically significant time-by-intervention interaction effects on 210 RSFCs in the CBI intervention and 160 RSFCs in the EABM intervention, with p-values < 0.05 after permutation testing. When summarized into the Yeo 7-network, the default mode network (DMN) and subcortical network (SCN) exhibited relatively high degree in both interventions, which may suggest the shared components and treatment targets. Meanwhile, from the perspective of network functional connections, RSFCs between the ventral attention network (VAN) and frontoparietal network (FPN) were consistently prominent across CBI and EABM. While focusing on the CBI intervention, the SCN showed the highest degree, which was the most involved network in the significant functional connections. In contrast, for the EABM intervention, the VAN showed the highest degree. Specifically, for CBI, SCN and DMN showed the strongest between-network strength that included the most of significant RSFCs. However, EABM showed that the VAN and DMN demonstrated the strongest between-network strength. *Conclusion:* Our findings suggest that the DMN, SCN

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and functional connections between VAN and FPN are significantly involved in both two interventions, which may function as the shared treatment targets for IGD. Regarding the unique effects, CBI may primarily focus on enhancing self-reflection and improving craving inhibition parallelly through SCN and DMN. While EABM may perform its treatment effect by re-shaping the functional activities in VAN and DMN that are involved in reducing excessive attention and emotional reactivity toward gaming-related stimuli. This study provides insights into both the shared and unique components of two different intervention methods, offering valuable guidance for designing more effective treatment protocols for IGD.

Keywords: Internet gaming disorder, treatment response, resting-state functional connectivity

7F–4

REWARD – rTMS effects in adolescent behavioural addictions and depression

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Introduction: Both behavioral addictions (BAs) and depression involve dysfunctions within the brain's reward system. Although effective therapeutic methods, such as cognitive-behavioral therapy (CBT), are available, additional research into innovative, non-invasive treatment modalities is needed to better address the needs of affected individuals. Recent evidence suggests that neurophysiological approaches, such as repetitive transcranial magnetic stimulation (rTMS), may hold promise. However, existing knowledge primarily stems from studies involving adults, highlighting the need for further investigation within adolescent populations. *Methods:* This study employs a randomized controlled experimental design applying TMS-EEG and rTMS with underaged treatment-seeking participants diagnosed with any behavioral addiction and/or depression. *Results:* Preliminary data will be presented. These results will provide insights into the role of the reward system in adolescents with BAs and/or depression. Additionally, they will contribute to expanding the understanding of the effects of rTMS as a potential therapeutic approach. *Discussion:* The study protocol will be discussed in the context of neurobiological mechanisms related to the reward system in BAs and depression. Previous literature on the topic will also be reviewed, and the potential of rTMS as an effective treatment for BAs will be explored.

Keywords: rTMS, neurobiology, behavioural addictions

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7G–1

Extended computational models of sequential reinforcement learning for application in gambling disorder

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Computational psychiatry has vastly aided our understanding of mental disorders by shedding light on underlying neurocomputational dynamics which ultimately result in observable symptomatology. These advances are largely based on thorough investigations utilizing cognitive computational models depicting these latent constituent processes (Montague et al., 2012). Reinforcement learning (RL) theory has been especially informative, providing formalisations for processes characteristic of gambling disorder (GD) and behavioural addictions more broadly. Imbalances in the trade-off between goal-directed (MB) vs. habitual (MF) action control as well as between exploration & exploitation play prominent roles in the explanation of dysregulated action control (Addicot et al., 2017; Voon et al., 2017). Despite their shared relevance these have thus far mostly been studied in isolation.

In the current study we apply an extensive computational modelling approach which incorporates insights from the exploration-exploitation research into more traditional accounts of sequential RL. To this end, we collected previously-published data sets from a prominent sequential RL-task (Daw et al., 2011) comprised of individuals with GD symptomatology (total N=189) and matched controls (N=147). After initial results from all data sets were used to identify and evaluate the superior model variant alongside traditional model-agnostic analysis techniques, we now take a closer look at the interplay of model-parameters and clinical variables related to GD. To this end, we are currently analysing pooled subsets of the data, which allow for more complex modelling approaches which incorporate gambling related cognitions, gambling behaviours as well as overall symptom severity. This way we are be able to draw nuanced relations between common clinical indices related to GD and more elusive, abstract model-components.

Keywords: computational modeling, reinforcement learning, model-based control, gambling disorder

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7G–2

Gambling disorder, beyond reward sensitization: Insensitivity to frustration

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Gambling Disorder has been associated with greater sensitivity to reward, but that does not explain why gamblers keep betting even when accruing debts and psychosocial hardship largely surpass any gain. Decision making paradigms usually use stimuli involving cards and/or financial gratification, precluding the investigation of other mechanisms beyond reward. Response-outcome analytical tests (ROAT) have shown potential to reveal other processes beyond reward sensitivity in gambling behavior. In this presentation, we will show the main results of a series of three studies comparing the performance of DG to non-gambling controls. In all studies, individuals were exposed to an annoying buzz that stopped at regular intervals and then returned. The participants were told that a combination of any two digits among numbers 1, 2 or 3 could help control the noise. Study 1 applied a short ROAT with a limited number of trials and failure feedback (a red light flash); study 2 applied a longer ROAT still with failure feedback, and study 3 applied a short ROAT without failure feedback. Compared to controls, DG used less combinatory strategy, recurring to random typing (study 1). Given time, DG typing strategy leveled up with controls, however they kept typing with higher frequency, even when confronted with explicit failure feedback and despite feeling uncomfortable (study 2). Finally, when failure feedback was suppressed, DG shortly developed illusion of control, despite reporting greater discomfort than controls while taking the test (study 3). Thus, DG exhibited poor cognitive control and behavioral responses decoupled from their emotions, in the absence of any rewarding dynamics. This impaired integration of frustration could be the underlying source of unrestrained betting and other maladaptive behaviors resistant to behavioral extinction. Possible involvement of a non-reward brain circuitry and therapeutic implications are discussed.

Keywords: gambling disorder, reward, frustration, response outcome analytical test

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7G–3

The characteristic divergence in neural responses to risk-win and risk-lose rewards in Gambling Disorder

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The reward deficiency has been associated with the etiology of Gambling Disorder (GD). Dysfunctional neural responses have been reported in brain regions related to reward processing. However, previous studies have described a complex and inconsistent pattern of activation in reward processing, and the specific characteristics of these neural responses in GD remain unclear. To address this gap, participants diagnosed with GD and closely matched healthy controls (HC) were recruited for a task-related functional magnetic resonance imaging (fMRI) experiment. A novel decision-reward task was used to elicit neural responses related to risky decision-making and unpredictable rewards. The results revealed an increased divergence in neural responses between risk-win and risk-lose rewards in the GD group, compared to the HC group, particularly in the right inferior frontal gyrus (IFG), bilateral ventral striatum (VS), bilateral anterior insula (aInsula), right dorsolateral prefrontal cortex (dlPFC), right temporoparietal junction (TPJ). These findings support the notion that reward deficiency is a critical aspect of GD, while also specifying the characteristic neural responses in GD related to the divergence in neural responses to risk-win and risk-lose rewards.

Keywords: Gambling Disorder, neural responses, reward, fMRI

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7G–4

Gambling-related stimuli for attentional bias (GASAB) research: A new database for gambling studies

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Background: The development and maintenance of problem gambling are associated with several cognitive-emotional factors, including decision-making, emotional dysregulation, and attentional bias (AB). In light of these associated factors, recent literature highlights the necessity for a multi-method approach to consider problematic gambling. However, in the context of this approach, it became evident the need to use ad-hoc validated stimuli. Therefore, we aimed to validate a new set of stimuli, specifically created to examine the AB related to problematic gambling. This database of images allows the consideration of important factors such as the type of gambling activities, the complexity of the stimuli (simple vs complex), the arousal (low vs high) and the emotional valence (neutral, positive or negative) related to each stimulus. *Method:* The stimuli were created by selecting images from free online sources and, if necessary, modifying them using dedicated software (e.g., for size, color, and included elements). In most cases, the images had to be created ex novo using photographs and specific graphic software. For the validation, a sample of 200 participants (aged 18-61 years) was recruited via an online survey to provide information on their sociodemographic characteristics, gambling habits and to complete the Desire Thinking Questionnaire and the Problem Gambling Severity Index. Then, they were administered the rating of the stimuli, allowing us to obtain a total of 124 images evaluated for arousal and emotional valence. *Result:*. The preliminary results indicated a good distribution of the rated images along the parameters of arousal and emotional valence. Additionally, it emerged that individuals' rating responses were influenced by the levels of gambling severity. *Conclusion*: The present database represents a useful resource for research on gambling behavior, as it provides the opportunity to employ more specific, controlled and validated stimuli in the behavioral and physiological measures used to study problematic gambling.

Keywords: gambling, dataset, stimuli

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7G–5

The protective role of emotional intelligence on gambling disorders among Chinese gamblers

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Background: Gambling disorder (GD) is associated with a wide repertoire of negative consequences and is also frequently comorbid with mood disorders (e.g., depression). Converging evidence shows the relevance of cognitive ability (e.g., emotional intelligence, EI) with GD. Considering the high comorbidity of GD and depression as well as the critical role of EI in depression, the present study aims to test whether two major components of EI (i.e., emotion regulation and emotion appraisal) stay serving as significant protective factors against GD after controlling not only demographics but also depression in gamblers. *Method:* A random and representative sample of about 800 Chinese past-year gamblers (48.5% males; Mage =41.1 years, SDage = 14.3 years) was surveyed using a telephone poll. In addition to their demographic information (e.g., gender, age, and education), the respondents' GD tendency, depression and emotional intelligence were assessed with validated measures (e.g., two subscales of the Wong and Law Emotional Intelligence Scale for emotion appraisal and emotion regulation). Data were analyzed using correlation analysis and hierarchical multiple regression in R (Version 4.5.0). *Results:* After controlling the demographics and depression, the results of hierarchical multiple regression showed that only emotion appraisal significantly explained the variances in GD ($B = -0.22$, $p < 0.001$), while the significant interaction effect was not observed between emotion appraisal and emotion regulation on GD ($B = -0.05$, $p > 0.05$). *Conclusions:* This study provided empirical evidence on the protective effect of EI (especially emotion appraisal) against GD, independently of depression. By advancing the understanding of emotion appraisal's role in preventing GD, the findings offer valuable practical insights into developing more cost-effective, appraisal-focused interventions.

Keywords: gambling disorder, emotional intelligence, depression

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7H–1

Subtyping people with gambling problems to understand recovery and substitution trajectories across addictive behaviours

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Background & Aim: Addiction substitution and natural recovery are complex phenomena that remain understudied in the field (Kim et al., 2023). This study investigates these processes in individuals with gambling problems through a comprehensive longitudinal design involving four waves of data collection every six months. *Methods:* In March 2024, approximately 6,000 Canadian adults who actively gambled were recruited from an online panel and followed longitudinally. Participants scoring 3 or higher on the Problem Gambling Severity Index were classified into three subtypes using the Gambling Pathways Questionnaire (Nower & Blaszczynski, 2017), which accounts for psychosocial characteristics and motivations. Data were collected at two subsequent waves (September 2024 and March 2025). Addiction substitution was assessed using the Screener for Substance and Behavioural Addictions (Schluter et al., 2020), which screens for problematic internet use, binge eating, sexual behaviours, and seven additional addictive behaviours. Natural recovery was evaluated by asking participants whether they had sought help from a provided list of ten options. *Results:* Findings from waves 2 and 3 will be presented, offering initial insights into gambling substitution patterns and natural recovery. Results suggest profile-specific variations in substitution, with certain substances and behaviours identified as more common substitutes. Early evidence highlights factors that may predict successful self-directed recovery. *Conclusions:* Depending on their pathway leading up to gambling problems, a subgroup of people are more likely to substitute from gambling to another addictive behaviour, whereas another subgroup is more likely to naturally recover from problem gambling.

Keywords: addiction substitution; natural recovery; pathways model; longitudinal design

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7H–2

Exploring the importance of craving in Swedish gamblers

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Background: Craving (strong urgent desire to gamble) plays a pivotal role in the inability to inhibit harmful gambling behaviors. Despite extensive research, its significance remains poorly understood in gamblers, especially when considering other risk factors such as mental health symptoms, affect and personality traits. The objective of present study was to examine: 1) the relationship between craving, gambling severity, mental health symptoms, affect and personality traits and 2) if craving can predict problematic gambling when controlling for age, gender and the above-mentioned risk factors. *Method:s* The sample included 1053 Swedish adult gamblers, 55% male, age M = 48.4 years, SD = 17.3, recruited from a citizen panel. Participants completed a web-survey including the Gambling Craving Scale (with subscales desire, relief, and anticipation), Diagnostic Screen for Gambling Problems (NODS) and other validated scales. According to NODS, 81% were considered non-problematic gamblers and 19% problematic gamblers. A Spearman correlation analysis was conducted to examine the relationship between craving, gambling severity and other risk factors, and a logistic regression to explore the impact of craving in problematic gamblers while controlling for risk factors. *Results:* The three craving subscales were strongly associated with gambling severity and small to moderately associated with mental health symptoms, negative affect, and personality traits impulsivity, negative affectivity, antagonism, alexithymia. Conversely, craving subscales showed small to moderately negative associations with positive affect and personality trait hedonic capacity. When exploring the impact of craving on problematic gambling while controlling for mental health symptoms, affect, personality traits, age and gender, craving subscales desire OR [CI. 0.95] 2.21 [1.66-2.94] and anticipation OR [CI. 0.95] 1.58 [1.32-1.89], still increased the odds of problematic gambling. *Conclusions:* These findings implies that craving is a uniquely important factor in understanding problematic gambling, independent of other risk factors. Adjustments in prevention and treatment approaches may therefore benefit addressing such relevant targets.

Keywords: craving, gambling problems, risk factors

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7H–3

Which motives mediate the links between depression and anxiety with problematic sports betting?

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Background: Sports betting has become increasingly popular in recent years, particularly due to legislative changes in the USA and Canada. Researchers have begun exploring the psychological mechanisms that may lead to problems with sports betting. Given previous studies have found that depression and anxiety can be pathways to problematic gambling, we investigated whether the same is true for sports betting. Furthermore, we tested whether motives for sports betting (enhancement, coping, social, financial) would mediate this pathway to sports betting problems. *Methods:* A total of 920 Canadian sports bettors (mean age = 47.65, 77.1% male) were recruited from an online panel. Participants completed a cross-sectional survey containing self-report measures of depression, anxiety, types of betting (i.e., traditional, in-play, single-event), sports betting motives, days spent sports betting in the last 3 months, number of bets, money spent on sports betting, and gambling problems (Problem Gambling Severity Index). *Results:* Enhancement and social motives (but not financial and coping motives) were associated with number of days spent sports betting. Enhancement and coping motives (but not social and financial motives) were associated with total number of bets. Mediation analyses revealed several significant indirect paths. Social motives mediated the association between anxiety with gambling problems and days spent sports betting. Coping motives mediated the association between anxiety with gambling problems and number of sports bets. Indirect paths involving depression and money spent sports betting were not significant. We also found that these results were invariant to sex and type of sports betting. *Discussion:* We found that individuals with higher levels of anxiety also had greater gambling problems and sports betting frequency, particularly if they were more motivated to bet on sports for social and coping motives. Results suggest that these individuals may be particularly vulnerable to problematic sports betting—these findings should be replicated longitudinally.

Keywords: sports betting, problem gambling, depression, anxiety, mediation

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7H–4

Dark Triad traits and financial risk-taking: Examining patterns in gambling behavior and personality

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Background: The Dark Triad consists of three personality traits: psychopathy, narcissism, and Machiavellianism, all characterized by patterns of exploitation, emotional callousness, cruelty, and selfishness. Narcissism has been linked to health, social, and financial risk-taking, including investing in volatile stocks or gambling large amounts of money. Psychopathy has been more extensively studied in relation to risky sexual behavior, substance abuse, and irresponsible or antisocial behavior. Previous research on the relationship between these traits and gambling behavior has focused on gambling tasks in non-gambling populations or described these traits among occasional gamblers. This study investigates the relationship between psychopathy and narcissism, and the willingness to take financial risks among problem gamblers. *Methods:* In a field study, 203 gamblers were recruited outside gambling venues. They completed self-report questionnaires including the Short Dark Triad, PGSI, and willingness to risk and lose money through investments. *Results:* The findings revealed that higher gambling severity was associated with higher psychopathy scores. Willingness to engage in financial risk-taking was positively correlated with psychopathy but negatively correlated with narcissism. A significant interaction between psychopathy and narcissism was observed: gamblers with high psychopathy displayed greater willingness to take financial risks only when narcissism levels were low, whereas gamblers with low psychopathy exhibited a consistently low tendency for risk-taking, regardless of narcissism levels. Among gamblers with low gambling severity, financial risk-taking was not associated with narcissism but was linked to psychopathy. In contrast, among gamblers with high gambling severity (indicative of gambling disorder), financial risk-taking was not associated with psychopathy but was positively linked to narcissism—higher narcissism corresponded with greater financial risk-taking. *Conclusions:* This study highlights the complex contribution of the Dark Triad traits to financial risk-taking behavior among gamblers with different severity levels. Potential mechanisms underlying this complexity, along with recommendations for prevention, treatment, and regulation, will be discussed.

Keywords: gambling, financial risk taking, psychopathy, narcissism, Dark Triad

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7H–5

Comparative qualitative analysis of recovery process dynamics in gambling disorder: Stages and influencing factors

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Background and aims: In recent decades, mental health and addiction research has shifted towards a recovery-oriented approach, emphasizing recovery as a holistic, dynamic, and subjective process. Gambling disorder (GD), a chronic condition with multidimensional impacts, highlights the challenges of defining recovery, with perspectives ranging from abstinence to improved well-being. Despite the limitations of quantitative and tool validation studies, qualitative research on recovery from GD, particularly in France, remains limited. This study aims to explore gamblers' subjective recovery experiences, identifying key recovery components and differences between those "recovered" and "in recovery." *Methods:* A qualitative study was conducted following COREQ guidelines. Participants, self-identified as "recovered" or "seeking recovery," were recruited from the addiction service at Nantes University Hospital and a mutual support group. Twenty individual semi-structured interviews were conducted, complemented by a pre-interview self-administered questionnaire. Data were analyzed using Interpretative Phenomenological Analysis (IPA) and NVivo 14 software. *Results:* Five main themes emerged: (1) Resistance to change – obstacles and barriers to recovery, (2) The importance of others in the recovery process, (3) Public health policies and support systems – areas for improvement, (4) Self-reconstruction – existential investment and rebirth, and (5) Recovery trajectories – dynamics, challenges, and transformations. Participants also rated their life satisfaction and provided their own definitions of "recovery." *Discussion and conclusions:* Both recovered and recovering gamblers shared common themes and subthemes, indicating that their recovery experiences overlap significantly. However, individuals who were further along in their recovery process tended to offer more detailed insights. This can be attributed to the longer duration of their recovery, which allowed for deeper reflection and a more nuanced understanding of their journey. The findings highlight a critical need for additional support during the early stages of recovery to help individuals understand the factors that facilitate or hinder recovery. Further qualitative studies are needed to explore these subjective experiences in greater depth and inform the development of more tailored public health policies and medical practices.

Keywords: gambling disorder, recovery, qualitative study

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8A–1

A systematic review of longitudinal studies on the temporal stability of behavioral addictions: The effects of methodology, analytical approach and recommendations for future research

PIOTR MATEUSZ LUSZUK, OLIWIA KOSECKA, STANISŁAW KONRAD CZERWIŃSKI, PIOTR BEREZNOWSKI, BARTOSZ ATROSZKO, PAWEŁ ANDRZEJ ATROSZKO

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Background: Longitudinal studies frequently suggest that behavioral addictions (BAs) exhibit low temporal stability, with many cases initially diagnosed as potential addictions showing remission in subsequent measurements. On the other hand, addictions are defined as chronic and, in some cases, progressive disorders. This systematic review aims to evaluate the literature on the natural course of BAs, examine the methodological and analytical factors influencing findings related to their temporal stability, and compare temporal stability across different addictive behaviors. *Methods:* A systematic review methodology was employed, adhering to PRISMA guidelines. The review focused on longitudinal studies examining the temporal stability of the most prevalent BAs conceptualized within the addiction framework: shopping, social network use, video gaming, pornography, work, and eating. Comprehensive searches were conducted in major databases, including MEDLINE, Scopus, and ISI Web of Science, using predefined search terms related to BAs and their temporal dynamics. Eligibility criteria included peer-reviewed longitudinal studies with multiple measurement points and explicit operationalization of BAs. Data extraction encompassed study designs, sample characteristics, measurement instruments, statistical methods, and reported rates of stability or remission. Particular attention was given to methodological issues, such as low-reliability measurements, dichotomous classification of addiction, and sampling strategies. *Results:* At present, the analyses are still conducted. The results will present the number of identified studies meeting the inclusion criteria. The preliminary findings indicated substantial variability in the reported temporal stability of BAs across studies, with varying remission rates. Common methodological issues were identified, including: (i) use of low-reliability instruments, leading to excessive measurement error; (ii) dichotomous classification of addiction, which oversimplifies the continuum of addictive behaviors; (iii) extreme group sampling, resulting in exaggerated changes over time. *Conclusions:* This systematic review highlights critical methodological limitations in longitudinal studies of BAs. These limitations can lead to biased results and imprecise conclusions about the stability of BAs, influencing research and clinical practice. The findings underscore the need for reliable measurements, continuous rather than dichotomous classifications, and appropriate statistical controls in future research. Addressing these methodological challenges will improve the accuracy of conclusions regarding BAs' temporal stability and inform more effective strategies for diagnosis, prevention, and treatment. By implementing the recommendations outlined in this review, researchers can avoid methodological artifacts and contribute to a more nuanced understanding of the natural course of behavioral addictions.

Keywords: longitudinal research, prevalence rates, regression to the mean, temporal stability

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8A–2

Towards a consensual definition of craving from a transdiagnostic perspective: A research protocol

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Craving is a complex, multidimensional construct central to addictive behaviors. Despite its recognized importance, there is no consensus on its definition, modelization, or assessment, leading to varied conceptualizations. This hinders the development of effective interventions and depletes the credibility of craving, as illustrated by its absence as a diagnostic criterion for gambling disorder in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders. This research project aims to establish a consensual definition of craving across various disorders. We will utilize a comprehensive literature review, qualitative data collection, and a Delphi study to achieve this goal. Our literature review will include an umbrella review to synthesize existing definitions and models of craving across disorders. To ensure recent relevance, we will also conduct a qualitative systematic review focusing on the past decade. Qualitative data collection will explore the conceptualization of craving from the perspectives of researchers, clinicians, and patients, in line with evidence-based practice principles. Participants will discuss craving's definition, characteristics, triggers, components, temporality, and associated pathologies. We will recruit a heterogeneous sample to ensure a broad range of insights until data saturation is reached. Based on the literature review and qualitative data, we will compile a list of elements potentially constitutive of craving. These elements will be evaluated by a new sample of stakeholders through multiple Delphi rounds to reach a consensus on their inclusion or exclusion. Ambiguous elements will be highlighted for future research rather than forcing consensus. The resulting definition will provide a unified framework for craving research across disorders, facilitating the development of transdiagnostic, theory-based tools and ultimately improving interventions and treatments.

Keywords: craving, consensus, Delphi, qualitative, conceptualization

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8A–3

Open scientific practice in problematic smartphone use research: An empirical study

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Background: Open Science is a term used to describe an ethos and set of behaviours that promote transparency and rigour in scientific endeavour. Examples of open scientific practices include making research materials publicly available such as manuscripts, data, code and materials. Adoption of open science in behavioural addiction research has been limited although there is encouraging evidence of enthusiasm. However, most of the evidence on adoption comes from gambling. It is not known whether engagement in open scientific practices is similar in other behavioural addictions, such as smartphone use. *Method:* This talk reports the findings of a quantitative assessment of open scientific practice in the research literature on smartphone addiction and problematic smartphone use. A structured literature search, building on a previous scoping review, was used to identify relevant empirical papers, systematic reviews, and meta-analyses from four sources (Web of Science, Scopus, PubMed, PsycArticles) (n = 3,386 papers). Five different open science domains were assessed: open data, open code, open methods/materials, open peer review, and open access. *Results:* Engagement with open scientific practices was mixed. Open access to manuscripts is prevalent (~60%). Availability of materials was relatively common, driven by a large number of questionnaire development and validation studies. Availability of materials for smartphone use questions was less common than validated instruments. Open data and/or code was present in approximately 10% of papers. Open peer review was less common and journal specific. Pre-registration was the least prevalent practice, especially in primary empirical research. *Discussion/Conclusions:* The findings of this study suggest that engagement with open scientific practices is similar in smartphone use research to gambling. There are areas where promoting specific open scientific practices would be beneficial to address methodological and conceptual issues in areas of smartphone use research.

Keywords: smartphone addiction, problematic smartphone use, open science, pre-registration

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8A–4

A novel model relevant to behavioural addiction: Using light to establish a persistent habit in mice

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Background: Several recent studies have reported that artificial light via LED screens may partly contribute to smartphone use, as applying a greyscale filter can reduce screen time by about 20 min per day in young adults (Holte & Ferraro, 2020; Holte et al., 2023). Although the mechanisms of these effects are unclear, they suggest that light may possess some incentive values and hedonic properties. As such, light may contribute to maladaptive habit formation underlying compulsive or addictive smartphone usage. Here we utilized a comparative approach to test this hypothesis, by conducting an experimental study using instrumental conditioning with light as a sensory reinforcer to establish a persistent habit in mice. *Method:* Twelve male mice (10–14 weeks old, equivalent to 13–18 years old in humans) were trained in a two-lever discrimination task. Responding on the active (but not inactive) lever led to 4 seconds of green light. *Results:* Mice readily self-administered green light, indicating its reinforcing effectiveness. In probe sessions in which green light was replaced with dim red light that activated the mouse's retinal photoreceptors to a lesser extent, responding did not drop immediately but gradually declined from 100% to 50–70% over a 1-week period, indicating the persistence of this light-induced habit. *Conclusions:* Our results demonstrate the reinforcing effectiveness of LED lights in mice, and the level of responding depends on the salience of the light reinforcer. The reduction in responding with dimmer light partly resembles the behavioural change observed in human studies where greyscale filters are applied to reduce smartphone screen time (Holte & Ferraro, 2020; Holte et al., 2023). This novel comparative approach may provide a simplified experimental model to examine the general mechanisms of excessive responding on digital devices.

Keywords: smartphone use, behavioral addiction, laboratory rodent, instrumental conditioning, light reinforcer

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8A–5

Unintended positive effects observed in the self-reported data collection process via smartphone for developing addictive behavior prediction algorithms: Methodological implication in digital intervention research

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Background: The use of mobile devices is increasingly recognized as a valuable tool for interventions targeting mental health issues. This study aims to share insights on the unexpected positive changes observed during the data collection process for predicting addictive behaviors using mobile technology, highlighting considerations for evaluating the impact of mobile addiction interventions. *Methods:* In a study aimed at developing an algorithm for predicting addictive behaviors, 206 adults in their 20s completed 1) a smartphone self-report survey of alcohol and digital media use behaviors and 2) automated step/heart rate data collection using a Fitbit. In this brief report, we analyze self-report data at baseline and 4-week follow-up. *Results:* Despite the absence of any therapeutic interventions beyond the data collection process, positive changes were observed, including a reduction in high-risk digital media use score ($P < 0.001$), time spent on digital media ($P = 0.031$), and depressive symptom score ($P=0.004$).*Conclusions:* When utilizing mobile devices to collect data and evaluate therapeutic interventions for young adults' addictive behaviors, it is essential to differentiate the effects of the interventions from those of the data collection process itself. Therefore, trials should be designed with at least three arms, including a standard control group, a group participating only in mobile self-report surveys without receiving any interventions, and an intervention group.

Keywords: addictive behavior, mobile applications, wearable electronic devices

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8B–1

Predictive models for gambling disorder: A neural network approach

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Aims: Empirical identification of risk profiles in gambling behaviour in community and clinical samples, according to sociodemographic variables such as age, sex, socioeconomic level and education, as well as gambling behaviour variables such as the type of gambling, the number of bets or the money invested. *Methods:* A total sample of n = 1742 was defined in order to obtain the predictive model of the presence of GD and the list of independent variables (predictors) included sociodemographic features, social position index, age and incomes, gambling preferences, bets on gambling episodes, substances use (tobacco and alcohol), and psychopathology state. Other neural network was defined to obtain the predictive model of the gambling severity, among the clinical subsample of GD patients (n = 378). The dependent variable was GD severity level (measured as the DSM-5 total criteria), and a list of independent variables (predictors) was also included. *Results:* The predictive models were performed with neural network approach, a supervised learning technique implemented with the Multilayer Perceptron procedure, as one of the most widely used and powerful in predicting and modeling mental health data. The global predictive capacity of the model was excellent, with AUC=.997 (95% confidence interval [CI]: .995 to .998). The kappa coefficient measuring the agreement between the predicted values of the model and the observed disorder was also excellent (k=.921, 95%CI: 0.90 to 0.94). *Conclusions:* Neural network suggested different profiles predicting the presence of GD and different profiles predicting more severe GD.

Keywords: gambling disorder, risk profiles, treatment, severity, predictive models, neural network analysis

8B–2

Understanding and preventing gambling harm among young Dutch adults

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Aims and background: In the Netherlands, the legalization of online gambling, accompanied by a surge in targeted advertisements, has resulted in a dramatic increase in gambling consumption among young adults aged 16 to 34. This growing prevalence highlights the urgent need to understand how gambling behaviours develop in young people to mitigate harm both to individuals and to society. Despite the urgency, research on the psychological, game-related, and social factors influencing gambling consumption and harm remains limited, especially in the Netherlands. Additionally, valuable insights from stakeholders, such

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as those with lived experience, are often overlooked. These gaps hinder the development of effective prevention and intervention strategies to address gambling harm. *Methods:* Our multidisciplinary project addresses these gaps by investigating the interplay of individual characteristics, game features, and sociological factors that drive gambling behaviours and harms in young Dutch adults aged 16 to 30. *Results:* We will present preliminary results from our longitudinal online study, assessing young adults with and without gambling experience at baseline and after six months, which will indicate differences between these groups and the factors contributing to gambling behaviours over time. We will also present data from qualitative interviews with young people who have undergone treatment for gambling, parents and teachers about their lived experiences and potential prevention strategies. *Conclusions:* By integrating diverse perspectives, our research aims to develop targeted, evidence-based interventions to reduce gambling harm and foster healthier outcomes for young adults and society.

Keywords: gambling disorder, risk profiles, treatment, prevention, gambling, young adults

8B–3

A serious game approach for reducing arousal and improving emotional in patients with gambling disorder

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Background and aims: In recent years, there has been an increase in the use of serious games (SG) as coadjutant tools in the treatment of mental health conditions with positive results. The aim of this study was to analyse the efficacy of the intervention with a new SG (e-Estesia), as an adjunct to a CBT intervention for Gambling disorder (GD). Methods: The sample comprised two groups (experimental group (n = 40) and control group (n = 64)) of patients with GD diagnosis. Both groups received 16 weekly CBT sessions and, concurrently, only the experimental group received 15 additional sessions with e-Estesia. Several clinical variables were assessed, as well as compliance of treatment. Results: No statistically significant differences in the general psychopathological state, emotion regulation or impulsivity were found when comparing the groups. However, patients enrolled in the e-Estesia intervention had significantly less relapses and better indicators of treatment compliance than the control group. Conclusions: Considering these results, the use of complementary tools such as SG could be a useful resource for addressing GD. These results were the base for the improving of the SG design.

Keywords: gambling disorder, risk profiles, treatment, serious games, treatment outcomes, emotion regulation

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8C–1

Exploring the relationships between responsible and problematic sports gambling behaviors across time

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Background: In 2018, the United States legalized sports wagering which has resulted in a dramatic increase of sports gambling. As such, there is an increased need to investigate both responsible and problem sports gambling. Much of the recent research has related to Positive Play, which is a term used to refer to harm reduction approaches to gambling, measured via the Positive Play Scale (PPS). While the PPS has been used to distinguish between disordered gamblers and those without problems, as well as the relationship between responsible gambling and various sports wagering behaviors, there is limited research on how positive play scores move overtime or how they may longitudinally correspond to problem gambling symptoms. *Method:* The present study explores how problem and responsible gambling behaviors covary across time. This study utilizes a sample of U.S. adults who have recently bet on sports (N = 1,551) as well as representative sample of the U.S. population (N = 2,806). Participants were recruited by YouGov Opinion Polling as part of a larger study and completed baseline measures in Spring 2022, with follow-up measures in Fall 2022, Spring 2023, Fall 2023 and Spring 2024. At each time point, we assessed the PPS, the Problem Gambling Severity Index (PGSI) and sports gambling frequency. *Results:* Latent growth curve analyses reveal that responsible gambling practices (PPS scores) trend upwards, problem gambling symptoms (PGSI scores) tend to trend slightly downward, and that these trajectories are linked to each other in a negative fashion, suggesting that increases in positive play are associated with decreases in problem gambling symptoms. *Conclusions:* These findings suggest that engagement in responsible gambling practices may be a protective factor for problem gambling symptoms overtime.

Keywords: sports betting, problem gambling, impulsivity, sports betting legalization, responsible gambling

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8C–2

Are gambling motives all the same? The psychometric properties of the GMQ-F amongst sports bettors

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Background: The Gambling Motives Questionnaire – Financial (GMQ-F) is the most widely used scale to assess common gambling motives (social, enhancement, coping, financial). Although previous research has supported the reliability and validity of the GMQ-F with other forms of gambling (e.g., electronic gaming machines, lottery, charity raffles), no study has validated its applicability on sports betting populations who present with distinct demographic (e.g., younger, male) and clinical characteristics (e.g., substance use) compared to other forms of gambling. *Method:* To this end, the present study evaluated the psychometric properties and measurement invariance (e.g., gender, age, type of sports betting) of the GMQ-F amongst a sample of 920 current sports bettors. We hypothesized that the GMQ-F would exhibit a four-factor structure and conducted confirmatory factor analysis and exploratory structural equation modeling (ESEM) to test model fit. Participants completed measures assessing demographic characteristics, sports betting behaviours (e.g., frequency, time spent, games played) and problem gambling. *Results:* Results indicated that the ESEM model provided an excellent fit, outperforming the CFA model, with a clear four-factor structure (social, enhancement, coping, financial) that better captured the relationship between gambling motives while allowing for minimal cross-loadings. Measurement invariance testing revealed the GMQ-F was consistent across different types of sports bettors (in-play, single event, and traditional), gender (male vs female) and ethnicity (White vs BIPOC). Regression analyses showed that social, coping, and financial motives were positively associated with problem gambling severity, while enhancement motives were negatively related to problem gambling severity. *Conclusions:* These findings suggest that the GMQ-F is a valid and reliable scale for assessing gambling motives in sports bettors and can be administered to participants from different demographic groups and across various modalities of sports bettors.

Keywords*:* sports betting, problem gambling, impulsivity, sports betting legalization, responsible gambling

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8C–3

Examining the interactive role of emotion regulation and impulsivity in in-play sports betting

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Background: In-play sports betting is a high-risk, fast-paced gambling activity that involves rapid decision-making and repeated opportunities for reward. Individuals may be motivated to place in-play bets to enhance positive emotions (e.g., excitement) and/or downregulate negative emotions. Those who endorse greater levels of trait affective impulsivity (i.e., negative and/or positive urgency) may be particularly drawn to these effects of in-play betting, as the activity can rapidly alleviate distress and enhance positive emotional states. The present research examined whether individuals report increased excitement after placing an in-play bet, and whether trait negative and positive urgency moderate the effect of emotion regulation motives on in-play betting frequency. *Method:* Three cross-sectional studies were conducted, each following a major sporting event: Superbowl LVI (Study 1), March Madness Final (Study 2), and UEFA Champions League Final (Study 3). Participants were United States (NStudy 1 = 111; NStudy 2 = 121) and United Kingdom (NStudy 3 = 239) residents who placed at least one in-play bet during one of the sporting events. Participants completed self-report measures of excitement, emotion regulation motives, in-play betting frequency, problem gambling, and trait affective impulsivity. Data from the three studies were pooled to conduct an integrative data analysis (IDA). *Results:* Participants reported increased excitement after placing an in-play bet. Greater emotion regulation motives were associated with greater in-play betting frequency. Moderation analyses revealed that emotion regulation motives interacted with both trait negative and positive urgency to predict in-play betting frequency, such that these relationships were stronger among those higher (relative to lower) in trait affective impulsivity. *Conclusions:* In-play sports betting increases excitement and is an activity that some individuals who gamble, particularly those high in trait affective impulsivity, may use to regulate their emotions. Responsible gambling tools (e.g., mandatory play breaks) may be beneficial for discouraging the continuation of impulsive betting episodes.

Keywords: sports betting, problem gambling, impulsivity, sports betting legalization, responsible gambling

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8C–4

Impacts of sports knowledge and responsible gambling in sports gamblers treatment seeking behavior

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Only 20% of individuals engaging in problematic gambling seek treatment, which is particularly concerning for sports bettors who are at higher risk for gambling problems (Bijker et al., 2022; Grubbs & Kraus, 2023). Efforts, such as responsible gambling/positive play campaigns, have focused on combatting these risks and barriers to seeking treatment (Gainsbury et al., 2014; 2020). However, it is unclear if responsible gambling (using the Positive Play Scale subscales) and perceived sports knowledge increases the likelihood of seeking or feeling the need to seek treatment when experiencing gambling harm. We selected sports bettors who indicated that they experienced problems with gambling at waves 1 or 3 (Problem Gambling Severity Index [PGSI] score >=1; *N*=438; M_{age}=47 (SD=14), 68% Men, 63% White, MIncome=$70k-80k, 41% high risk problem gamblers, 20% treatment seeking) from a larger study including a U.S. national census matched sample and an oversampling of sports bettors. In addition to higher PGSI score, binary logistic regression analyses showed lower belief in their personal gambling responsibility (OR=0.681) and less self-reported sports knowledge (OR=0.749) was associated with treatment seeking. However, engaging in less pre-commitment to gambling only was associated with feeling the need to seek treatment (OR=0.647). Other subscales were not significantly associated with either outcome. Contrary to current trends, policy makers and clinicians should be aware of how aspects of responsible gambling (e.g., personal responsibility) may be a barrier to seeking treatment. Similarly, perceived sports knowledge may be a unique barrier to treatment seeking in sports bettors, for which messaging should account.

Keywords: sports betting, problem gambling, impulsivity, sports betting legalization, responsible gambling

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8C–5

Beyond sports betting legalization: Comparing problem gambling risk patterns in legal and illegal states

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Background: The 2018 Supreme Court decision permitting state-level sports betting legalization has transformed the United States gambling landscape, with 39 states having legalized this activity. Despite this rapid expansion, evidence regarding legalization's impact on problem gambling risk remains limited. This study examined whether legal status predicts problem gambling severity scores after adjusting for demographic characteristics. *Method:* This study analyzed American sports bettors (n = 1,281) identified from a larger addiction research project in 2022, comparing those from legal (n = 974) and illegal (n = 307) betting states. Multinomial logistic regression examined legal status and demographic predictors of problem gambling risk levels. *Results:* Legal status did not predict problem gambling risk (OR = 1.11, 95% CI [0.78, 1.60], $p > .05$). Younger age and lower education consistently predicted higher risk across legal and illegal states, while employment status was not associated with problem gambling risk in either context. Gender effects varied by legal status: males showed significantly lower risk in illegal states (OR = 0.38, 95% CI [0.19, 0.74], $p < .01$) while no gender differences appeared in legal states. Single status predicted elevated risk only in legal states (OR = 1.53, 95% CI [1.11, 2.12], $p < .05$). *Conclusions:* Demographic factors, not legal status, significantly predicted problem gambling risk levels. Sports betting policy considerations should extend beyond legalization decisions to address context-specific interventions based on demographic vulnerabilities.

Keywords: sports betting, problem gambling, impulsivity, sports betting legalization, responsible gambling

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8D–1

Gaming, social media, and cyberbullying: The digital acceleration in adolescent behavior during the COVID-19 era (ESPAD 2019–2024)

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Introduction: The COVID-19 pandemic significantly altered adolescent digital behaviors, accelerating trends in gaming, social media use, and online interactions. Lockdowns, social restrictions, and increased screen time reshaped how young people engaged with digital entertainment, fostering both opportunities and risks. The European School Survey Project on Alcohol and Other Drugs (ESPAD) 2024 provides an opportunity to examine these trends over time, comparing data from 2019 and 2024. This study aims to explore how gaming habits among 16-year-olds in Europe have evolved, with a specific focus on the role of social media influence and cyberbullying in shaping gaming-related behaviors and risks. *Methods:* Data were drawn from the ESPAD 2019 and 2024 surveys, involving students aged 15–16 from over 30 European countries. The study assesses gaming frequency, social gaming interactions, and experiences with cyberbullying. Logistic regression models were employed to analyze changes over time and to examine associations between gaming, social media exposure, and cyberbullying prevalence, adjusting for demographic and regulatory factors. *Results*: Preliminary findings suggest an increase in gaming participation among European adolescents from 2019 to 2024. The data indicate that social media platforms play an increasing role in promoting gaming behaviors, fostering peer influence, and contributing to gaming-related stress. Additionally, cyberbullying incidents linked to gaming communities appear to have risen, particularly among highly engaged gamers. The COVID-19 pandemic acted as a catalyst for digital acceleration, intensifying both engagement with online gaming and exposure to associated risks, including social media-driven gaming trends and cyberbullying incidents. *Conclusion:* This study highlights the evolving digital landscape for adolescents, emphasizing the impact of the COVID-19 pandemic in accelerating gaming behaviors, social media influences, and associated risks such as cyberbullying. The results call for enhanced monitoring, targeted educational initiatives, and policy interventions to mitigate gaming-related harms while fostering positive digital engagement among youth.

Keywords: gaming, social media, cyberbullying, adolescents

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8D–2

Association between problematic digital technology use and psychological distress of affected others: A systematic review and meta-analysis

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Addictive behaviours can affect not only those suffering from the condition but also close family members, known as affected others. In the context of substance abuse, one review reported that affected others experience moderate stress and 38-100% of them report current or lifetime relational and emotional problems (Sarno et al. Drug Alcohol Depend, 2021). While growing evidence suggests a similar association on the topic of problematic digital technology use (PDTU), this evidence has not yet been synthesised. This study involved a systematic review and meta-analysis examining the relationship between parent's psychological distress and child's PDTU. Eligibility criteria include primary studies reporting effect sizes of parent's psychological distress or relevant constructs and child's PDTU, including problematic internet use, gaming disorder, or problematic online behaviours. After searching on Ovid Medline, Ovide PsycINFO, Scopus, and Web of Science using titles, abstracts, keywords and subject headings, two investigators independently screened 1350 reports, and 29 of them met the eligibility. Semipartial correlations from the reported findings are calculated to adjust possible confounders. Reported outcomes are synthesised using random-effects regression analysis. A pooled effect size and prediction interval are estimated to determine the synthesised relationship. Findings provide insight into current evidence regarding the impact of PDTU on the psychological strain of parents, who often play important roles in preventing and recovering

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their children from such problematic conditions. However, their mental health has been paid less attention than those with PDTU. The mental health status and burdens on affected others should be examined more closely to better understand the social impacts of PDTU.

Keywords: gaming disorder, meta-analysis, parent's distress, problematic digital-technology use, systematic review

8D–3

The association between parents' emotions and adolescents' gaming duration and risk for gaming disorder: An ecological momentary assessment study

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Background: Previous research has shown that negative emotions are important predictors of gaming disorder (GD) in adolescents. However, less is known regarding the potential impacts of parents' emotions on adolescents' gaming time and GD. To address this knowledge gap, this study adopted an ecological momentary assessment (EMA) approach to examine such influences. *Method:* Using convenience sampling, 70 Chinese adolescent gamers and one of their parents/caregivers were recruited in Hong Kong. The dyads participated in a pre-EMA survey, a two-week EMA, and a post-EMA survey. During the 14 days, participants responded to a self-administered survey via a smartphone app at four periods each day to measure their positive and negative affect (both parents and adolescents) and daily game time (adolescents only). At the pre-EMA and post-EMA surveys, parent participants reported their difficulties in emotion regulation using the Difficulties in Emotion Regulation Scale (DERS) and adolescents reported their severity of GD using the Chinese version of the Internet Gaming Disorder Scale – Short Form (IGDS9-SF). Sixty-three parent-child pairs of momentary dyadic data were successfully matched for analysis. *Results:* A multivariable mixed-effects regression using the pre- and post-EMA data was conducted to examine the association between parents' emotion regulation and their respective child participant's IGDS9-SF scores. Parent's DERS score was found to be significantly associated with child's IGDS9-SF score ($\beta = 0.378$, 95% CI = 0.160−0.596). Results from multivariable mixed-effects models revealed that both intensity ($\beta = 2.163$, 95% CI = 0.354−3.972) and fluctuation ($\beta = 1.571$, 95% CI = 0.248−2.894) of parent's negative affect were significantly associated with child's daily gaming duration at the within-person level. *Conclusions:* The findings suggest that addressing parents' negative emotions and difficulties in emotion regulation might reduce adolescents' gaming duration and risk for GD.

Keywords: gaming disorder, emotion regulation, parent-child dyads, ecological momentary assessment

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8D–4

From enjoyment to problematic online gaming: A cluster analysis of relationships with basic psychological needs and sociotropy

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Problematic online gaming (Internet Gaming Disorder or IGD) has garnered significant research interest since its introduction in the DSM-5 (APA, 2013) and the International Classification of Diseases (11th edition, WHO, 2018). This inclusion sparked considerable debate among researchers about the existence and etiology of IGD. The aim of this study is to shed light on this debate through a cluster analysis of online gamers based on several variables rooted in well-established theories such as PENS model in the Self-Determination theory framwork (Przybylski et al., 2010). These variables include sociotropy, satisfaction of basic psychological needs in life and in gaming, and immersion viewed through the lens of cognitive absorption (Brand et al., 2016; King & Delfabbro, 2018). A total of 153 online gamers completed all the questionnaires. The results reveal a significant role of high sociotropy and frustration of needs in life in explaining IGD, but a more moderate involvement of immersion. These findings enabled a hierarchical cluster analysis that identified three gamer profiles: casual, passionate, and at-risk, based on their gaming engagement and the quality of their psychosocial environment. This highlights the challenge of defining IGD, as this disorder lies at the intersection of an activity pursued for pleasure and individual characteristics. The implications of these findings are discussed with respect to the importance of considering multiple theoretical approaches to conceptualize IGD, potential therapeutic treatments, and the development of prevention strategies. Brand, M., Young, K. S., Laier, C., Wölfling, K., & Potenza, M. N. (2016). Integrating psychological and neurobiological considerations regarding the development and maintenance of specific Internet-use disorders: An Interaction of Person-Affect-Cognition-Execution (I-PACE) model. Neuroscience & Biobehavioral Reviews, 71, 252-266.

Keywords: Internet Gaming Disorder, self-determination theory, basic psychological needs satisfaction, sociotrop, immersion

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8E–1

Risk factors, epidemiology and public health implications of cyberchondria

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Background: Cyberchondria refers to excessive or repeated online health information seeking (OHIS), which persists despite negative consequences and is associated with increased health anxiety. This presentation addresses the risk factors for developing cyberchondria and reviews what is known about the epidemiology and public health implications of cyberchondria. *Method:* This is a scoping review of the relevant literature with a summary of key findings. *Results:* Several risk factors for cyberchondria have been identified. They include misconceptions about the *Results:* of OHIS, unrealistic expectations of the Internet's capability and reliability, difficulties managing the abundance of online health information and evaluating credibility of the sources of online health information, sense of health information insufficiency, intolerance of uncertainty and perfectionist tendencies. Negative metacognitive beliefs can create a cycle of increased anxiety and repeated searching. Although there are no consistent epidemiological data about cyberchondria, it is likely to be on the rise. Previous studies indicate an overall point prevalence of around 4.6%, with higher rates in males and younger people. There are two major public health implications of cyberchondria. First, it has been associated with an increased healthcare utilization, largely as a consequence of seeking unnecessary medical attention. Secondly, cyberchondria has been found to have a negative impact on the rapport with physicians and other healthcare providers and lead to problematic health behaviors such as attempts at self-diagnosis and self-treatment and noncompliance with prescribed treatment. *Conclusions:* While OHIS typically benefits users, some develop cyberchondria, a condition driven by uncertainty and health information gaps. Cyberchondria is characterized by over-reliance on online sources of health information instead of medical professionals, often resulting in excessive healthcare utilization and impairment in other domains of functioning. Cyberchondria is a growing public health concern and addressing it requires better digital health literacy and effective strategies to manage health anxiety.

Keywords: cyberchondria, health anxiety, problematic Internet use, COVID-19 pandemic, public health

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8E–2

Relationships between cyberchondria and psychopathological constructs

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Background: The pervasive accessibility of online health information empowers individuals to make informed decisions about their health, but it has also contributed to the emergence of cyberchondria, which is marked by excessive or repetitive online health information seeking (OHIS) that heightens health anxiety. This presentation will address the relationships between cyberchondria and pertinent psychopathological constructs. *Method:* A review of the relevant literature and knowledge accumulated thus far. *Results:* Evidence from a meta-analysis and one network analysis suggests particularly strong relationships between cyberchondria, health anxiety and problematic Internet use. Health anxiety is both a trigger for and a consequence of cyberchondria, creating a feedback loop that exacerbates OHIS as a maladaptive coping mechanism. Features of cyberchondria overlap with those of behavioral addictions (i.e., problematic Internet use) in terms of the excessive and time-consuming nature of OHIS, preoccupation with it and priority given to it, difficulty reducing time spent on OHIS with a diminished control over it and various negative consequences (e.g., interpersonal conflicts, neglect of commitments, impaired functioning). Cyberchondria also has an important relationship with obsessive-compulsive symptoms and compulsivity. Thus, OHIS persists despite distress, heightened health anxiety and other negative effects that it causes, whereby the purpose of repetitive OHIS is both seeking reassurance and prevention of perceived negative consequences such as a surge in health anxiety and intolerable health-related uncertainty if OHIS is to stop. Research has demonstrated comparatively weak links between cyberchondria, general anxiety and depression. *Conclusions:* Cyberchondria is a relatively distinct construct, with important relationships with health anxiety, problematic Internet use and compulsivity. Although cyberchondria is closely related to health anxiety, it is not just a modern counterpart to hypochondriasis. Cyberchondria illustrates a convergence of addiction-like behaviors with other psychopathological manifestations, where repetitive, compulsive OHIS not only fails to alleviate concerns but intensifies anxiety and distress.

Keywords: cyberchondria, health anxiety, problematic Internet use, COVID-19 pandemic, public health

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8E–3

Dr. Google goes viral: A narrative review of cyberchondria research during COVID-19 pandemic

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Background: Searching for health-related information online can serve educational purposes and satisfy curiosity. However, in case of cyberchondria, these searches become excessive and compulsive, leading to heightened health anxiety and emotional distress. The COVID-19 pandemic created a particularly fertile environment for this behavior, exposing people to an overwhelming influx of health information, often contradictory or unreliable, and leaving many struggling to discern accurate information. These unique circumstances spurred numerous studies exploring the development of cyberchondria during the pandemic. *Method:* This narrative review synthesizes key findings from these studies, highlighting the valuable insights they provide. *Results:* Research during the COVID-19 pandemic found evidence of an increase in both the frequency and severity of cyberchondria. On the individual level, studies identified a strong relationship between cyberchondria and COVID-19-related fears, as well as a strong link between cyberchondria and intolerance of uncertainty. Moreover, individuals who primarily relied on social media for updates were more likely to experience information overload and exhibit cyberchondria. Additionally, greater trust in online information was associated with the severity of cyberchondria. On the societal level, the infodemic (i.e., the rapid spread of excessive information, both accurate and inaccurate) was identified as a strong predictor of cyberchondria. Furthermore, a direct and positive relationship has been found between exposure to online COVID-19 vaccine information and the development of cyberchondria. Regarding the impact on public health, the severity of cyberchondria was found to be a negative predictor of vaccine uptake. Moreover, a conspiracy mentality was found to mediate the effect of cyberchondria on engagement with pseudoscientific practices. *Conclusions:* The COVID-19 pandemic created an ideal breeding ground for the manifestation and intensification of cyberchondria. A combination of heightened fears, infodemic, intolerance of uncertainty, and eroded trust in health authorities amplified health-related anxiety, undermined confidence in medical guidance, and exacerbated cyberchondria.

Keywords: cyberchondria, health anxiety, problematic Internet use, COVID-19 pandemic, public health

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8E–4

Prevention and management of cyberchondria

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Background: Cyberchondria is a growing problem worldwide and developing ways of preventing and managing it is becoming a priority. *Method:* Review of the literature and conceptual synthesis.
Results: Several measures can be used to prevent cyberchondria. These include ranking of the *Results:* of online health information seeking (OHIS) based on true probability of the links between the specific symptoms and diagnoses, provision of unambiguous, precise, evidence-based and user-friendly health information online, construction of evidence-based diagnostic algorithms that take into account all the relevant factors, improving online health information (e-health) literacy (i.e., conducting OHIS optimally and being able to critically appraise its results), discouraging self-diagnosis via OHIS and addressing risk factors for cyberchondria. Only two treatment studies of cyberchondria have been identified: in one, a modified Internet-delivered cognitive-behavior therapy (CBT) for hypochondriasis/health anxiety that also addressed cyberchondria was successfully used; in another, CBT (consisting of cognitive restructuring, response prevention and behavioral experiments) was more effective than psychoeducation in reducing the severity of cyberchondria. Treatment targets in cyberchondria include associated psychopathology (e.g., health anxiety), personality traits (e.g., perfectionism, trust/mistrust imbalance, intolerance of uncertainty), maladaptive behavioral responses to anxiety-provoking or distressing stimuli (e.g., reassurance seeking, avoidance), online information management issues (e.g., poor coping with abundant or conflicting online health information) and specific aspects of the interactions with the Internet (e.g., unrealistic expectations of the Internet). *Conclusions:* Prevention of cyberchondria entails changes in the way online health information is presented and addressing risk factors for cyberchondria. However, the key strategy seems to involve improving online health information (e-health) literacy and associated education about safe and productive OHIS. The main goal in the management of cyberchondria is feeling confident whilst performing OHIS so that it does not escalate health anxiety. Case formulation and modification of the existing CBT techniques appear promising.

Keywords: cyberchondria, health anxiety, problematic Internet use, COVID-19 pandemic, public health

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8F–1

Problematic pornography use in individuals with or without paraphilic preferences: Insights from a large representative sample of Czech adults

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Background: Problematic pornography use (PPU) is an important subset of compulsive sexual behaviour disorder (CSBD) as defined in the ICD-11. While paraphilic disorders are an exclusion criterion for the CSBD diagnosis, several studies suggest their relationship. However, very little is known about the sexuality of individuals with or without paraphilic preferences who are at risk of PPU. *Method:* This study analysed data from the Czech national CZECHSEX survey, conducted at the turn of 2023 and 2024. The sample consisted of 6,669 adults aged 18–75 years (mean age = 46.97, SD = 15.81; 50.6% women). The study assessed the frequency of sexual activity and masturbation over the past 12 months, the degree of preference for masturbation compared to partnered sexual activities, and PPU using the 6-item Problematic Pornography Consumption Scale. Additionally, respondents were asked about their level of arousal and stress related to six paraphilic behaviours (e.g., stalking, immobilizing, and raping an unsuspecting woman or man). *Results:* A Mann–Whitney U test indicated that the paraphilic group (PG) scored significantly higher on the PPU compared to the non-paraphilic group (NPG) (medianPG = 14, medianNPG = 9). Based on the cut-off score for identifying PPU, the prevalence in the PG group was 2.5 times higher compared to the NPG group. However, regression analysis revealed a similar structure and strength of predictors in both groups. Higher PPU scores were associated with male gender, younger age, religious affiliation, and a preference for masturbation over partnered sexual activities. Other sexual behaviours had negligible effects. *Conclusions:* The findings of the representative survey suggest that in PG, there may be a comorbidity between paraphilic preferences and PPU. Future research should explore whether a preference for masturbation over partnered sexual activity in NPG constitutes a risk factor for PPU or represents a negative side effect of it.

Keywords: Problematic pornography use, paraphilic preference, CZECHSEX survey

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8F–2

Longitudinal relationships between pornography-related tolerance and problematic pornography use: A multi-sample, twelve-month examination with cross-lagged panel networks

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Conceptualisation of problematic pornography use (PPU) as a behavioural addiction is intensely contested. Tolerance—defined as diminished reward responsiveness to a given stimulus over time—is a key feature distinguishing addiction models from alternative frameworks, such as compulsivity or impulse-control disorders, and its presence or absence in PPU could be a central arbiter of the debate. Despite this, PPU-related tolerance remains understudied, especially longitudinally. Accordingly, this study modeled the longitudinal relationships between PPU-related tolerance and broader dimensions of PPU using cross-lagged panel networks over one year. Among two samples of male pornography users (Sample 1: N[baseline] = 1,356, N[follow-up]= 551; Sample 2: N[baseline]= 944 , N[follow-up=] 636), quantitative tolerance (increased volume of pornography required for satisfaction) and qualitative tolerance (escalation to new pornography genres for satisfaction) had differential predictive relationships with individual aspects of PPU. Replicating across the two samples, quantitative tolerance longitudinally predicted PPU-related dissatisfaction and relapse, whereas qualitative tolerance predicted impaired control and negative consequences. These findings offer the first longitudinal evidence supporting the role of tolerance in PPU, demonstrating its nuanced relationships with specific aspects of PPU. Addressing the specific manifestations of PPU-related tolerance appears important for refining theoretical models and developing targeted interventions for PPU.

Keywords: longitudinal, pornography addiction, behavioral addiction, tolerance/escalation, cross-lagged panel networks

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8F–3

Variables associated with parenting and pornography use in adolescents and young adults: A narrative review

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Introduction: pornography use is an increasingly common practice among adolescents and young adults. Different factors have been studied that may predispose to increased pornography use. Factors related to parenthood have been highlighted as variables of interest in relation to pornography use. However, no literature review has been conducted to date that explains the different mechanisms of influence studied in this regard. A narrative review is conducted with the objective of understanding the parenting-related factors that are associated with higher pornography use among adolescents and young adults. *Method:* A narrative review of the literature was carried out in two databases (Pubmed and Psycinfo). We included articles that relate different factors associated with parenting (parenting style, family functioning, family values, norms related to technology, among others) and pornography consumption in adolescents and young adults. *Results:* First, 373 articles were found, and 44 articles were finally selected. Pornography use is related in different ways with aspects related to parenting: 1) Parental psychological control is related to greater consumption of pornography; 2) Family functioning, in dysfunctional families the consumption of pornography is greater; 3) Norms related to technology (blocking, filtering and monitoring) have an influence in reducing accidental access to pornography. Family values have an influence, with religiosity being a factor that can act as a protector, but also influencing a more conservative view of sexuality. In addition, other factors within parenting associated with pornography use are observed, such as parental psychopathology, perceived family support, gender roles between parents and children or parental harshness. *Conclusions:* a diverse interrelationship is observed with respect to parenting and pornography use in adolescents and young adults. It is recommended that these factors be considered for the prevention of possible early and unwanted access to pornography in children.

Keywords: pornography, family, adolescents, internet, parenting styles

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8F–4

A nuanced examination of the impact of problematic pornography use on sexual health

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Pornography use has been associated with diverse effects on users' sexual lives. Although research increasingly links problematic pornography use (PPU) with poorer sex life among males, the underlying risk and protective factors are not well established. Accordingly, this self-report study sought to characterise these factors and explore the psychological, behavioural, and sexual factors related to pornography use, PPU, and reported impact on sex life. Male pornography users across two independent samples (N_1 = 1,356; N_2 = 944), were categorised by self-reported effects of pornography use on their sex life (positive, neutral, negative). Individuals endorsing negative effects reported elevated scores on PPU-related dimensions (PPU severity, frequency of use, pornography-related tolerance/escalation), psychological/psychosexual dimensions (greater preference for pornography over partnered sex, elevated psychological distress), as well as differences in natural history of sexual behaviours (earlier exposure to pornography use and later initiation of partnered sex). Notably, some behavioural aspects of pornography use (pornographic binges, tab-jumping tendencies, and intentionally delaying climax with pornography) were elevated among the groups reporting both positive and negative effects. Finally, individuals reporting positive effects reported more frequent partnered sex but relatively lower sexual responsiveness to pornography. These findings highlight a complex relationship between pornography consumption and perceived consequences. Further research with partnered ratings and objective measurement might further unravel the mechanisms driving the varied impacts of pornography on sexual health and functioning with direct implications for policy and treatment of PPU.

Keywords: problematic pornography use, sexual health, tolerance/escalation, pornography addiction, sexual dysfunction

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8G–1

What types of screens are used and for which activities? Potential influence of a "screen use disorder"

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Background: Screens are used in everyday life for a wide range of activities, and complaints about "screen addiction" are frequently reported. However few studies have investigated this issue using DSM-5 use disorder diagnosis criteria adapted to a potential screen use disorder (ScUD). The validity of such diagnosis remains debated (Boudard et al. 2022). We are currently carrying out a general population survey. Our main objectives are to describe screen use, by type of screen and by activities, according to DSM-5 substance use disorder criteria adapted to screens. *Method:* Since Spring 2024, we conduct a cross-sectional study in Pau and the surrounding aera, France (80.000 inhabitants). A digital questionnaire is distributed to the general population. Data collected includes socio-demographic data, screen use (frequency, time, screen types and activities) and screen-related problems. DSM-5 criteria for substance use disorders, adapted for screens, are also sought. *Results:* To date, 1039 questionnaires were returned and 1012 were exploitable. Most subjects (97.2%) were adolescents (12-18, n=68) or adults (n=916) and were selected for analysis. When comparing subjects with no ScUD criteria (n=209) to those with 4 or more criteria (potentially "moderate or severe" ScUD; n=252), both groups favored the same main screen for the same activity (except for purchases). However, subjects with ScUD criteria reported a wider range of activities for each screen taken individually (television, computer, smartphone or tablet). For example, regarding smartphone use, subjects with ScUD criteria more often reported the activities homework, social networks, communication, entertainment videos, video games, shopping and adult sites ($p<0.05$) compared to subjects with no ScUD criteria ($p<0.05$). *Conclusions:* This study will help to better characterize screen use in general population and the potential relevance of adapting DSM-5 criteria to screen use. First analyses suggested differences in type of screen-related activities according to severity.

Keywords: screen use disorder, DSM-5 criteria

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8G–2

A survey of screen use and screen activities with DSM-5 use disorder criteria adapted to screen in a French urban aera

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Background: In Boudard et al. 2022, our team conducted a cross-sectional study on screen use in a medium-sized (8.000 inhabitants) city in France, by type of screens and activities. This work showed promising results but had some limitations. We are currently carrying out an improved survey in the general population on a larger urban area, Pau city (80.000 inhabitants). Our objective is to present this collaborative project. *Method:* A steering committee combining University of Bordeaux, Pau city Town Hall, Pau General and Psychiatry hospital was set up. Through ongoing communication campaigns about screen use, the local partners distributed a QR code linking to the study's website, where the target population could complete an online questionnaire. Data collected includes socio-demographic data, screen use (frequency, time, screen types and activities) and screen-related problems. Severity of screen use was assessed with an adaptation of the DSM-5 criteria for substance use disorder. Adults and teenagers completed the questionnaire themselves, while children under 12 y.o. were invited to have their parents or guardians complete it. *Results:* Data collection began in May 2024 and is still in the process. By December, 2024, the screen project website recorded 2,256 visitors and 1,466 agreed to fill up the questionnaire (64.9%). We plan to continue the study in 2025 and to intensify communication campaign. *Conclusion:* In addition to collect data to better characterize screen use in general population, and severity of use according to the types of screens and screen-related activities, this collaboration contributed to a better communication between public health issues and general city management.

Keywords: Screen use disorder, DSM-5 criteria

Reference:

Boudard, M., Alexandre, J. M., Kervran, C., Jakubiec, L., Shmulewitz, D., Hasin, D., Fournet, L., Rassis, C., Claverie, P., Serre, F., & Auriacombe, M. (2022). Item response theory analyses of Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria adapted to screen use disorder: Exploratory survey. *Journal of Medical Internet Research, 24*(7), e31803. https://doi.org/10.2196/31803

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8G–3

Which variables predict untreated remission of Internet use disorders? Insights from a sample of adolescents and young adults

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Background: Data from several longitudinal studies suggests that spontaneous untreated remissions are a common phenomenon in Internet use disorders (IUD). However, little is known about the predictors that favor or impede these remissions. *Methods:* The present study is based on retrospective findings from an intervention study on IUD (iPIN study). The sample consists of vocational school students aged 16 to 30 (n = 417) who had suffered from an IUD in the course of their lives. Participants who were diagnosed with an IUD in the past year based on modified DSM-5 clinical criteria during a diagnostic interview were assigned to a persistence group, while those without a current diagnosis were considered remitted. Established questionnaires were used to measure personality traits, emotion regulation strategies, sense of coherence, comorbid ADHD and coping. The explanatory value of these variables for predicting remission was determined based on a logistic regression analysis. *Results:* Symptom severity and rumination as a maladaptive emotion regulation strategy were significant negative predictors of remission. A strong sense of coherence increased the probability of remission in a statistically significant way. The relevance of personality traits for the remission of IUD was observed for the first time, with conscientiousness and extraversion proving to be negative predictors. *Discussion:* Although conscientiousness is considered a protective factor for the onset of IUD, a negative correlation was found for their remission. Our findings further suggest that early training in emotional, behavioral, and cognitive strategies might be a promising interventional approach for individuals with IUD. More longitudinal studies are needed to uncover other influential predictors and to understand the full picture of IUD remission.

Keywords: internet use disorders, internet addiction, untreated remission, spontaneous remission

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8G–4

Transdiagnostic compulsivity traits in problematic use of the internet symptoms: A network analytic approach

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Background: The societal and public health costs of Problematic Use of the Internet (PUI) are increasingly recognised as a concern across all age groups, presenting a growing challenge for mental health research. International scientific initiatives emphasise the need to explore the potential roles of intrapersonal factors in PUI. Compulsivity is an important intrapersonal factor of PUI. However, there is a lack of knowledge regarding relationships between specific dimensions of compulsivity and PUI symptoms, hindering understanding of mechanisms underpinning these phenomena. *Methods:* The current study employed a symptom-based network approach to elucidate the distinct relations between dimensions of compulsivity (i.e., perfectionism, reward drive, and cognitive rigidity) and PUI symptoms. A regularised partial-correlation networks were fitted using a large-scale sample from United Kingdom (n = 122,345). Bridge centrality analysis was conducted to identify bridge nodes within the network. *Results:* Several strong mechanistic relationships were identified, including the link between cognitive rigidity and coping-motivated internet use. Additionally, reward drive and cognitive rigidity emerged as key bridge nodes, positively linked to PUI symptoms, while perfectionism was negatively associated with PUI symptoms. *Conclusions:* The findings highlight distinct relations between facets of compulsivity and PUI symptoms, supporting the need of tailoring interventions to specific symptom profiles. Further, the identified bridge nodes (i.e., reward drive and cognitive rigidity) may be promising prevention and intervention targets for PUI.

Keywords: compulsivity, problematic use of the internet, network analysis

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8G–5

Adverse childhood experiences and problematic internet use among child and adolescent psychiatric patients

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Background: Internet use, and specifically problematic internet use (PIU), needs to be considered in child and adolescent psychiatric (CAP) settings. Besides psychopathology, childhood trauma (intrafamilial abuse and neglect) has been associated with PIU. The impact of a wider range of adverse childhood experiences (ACEs) on PIU, particularly in CAP populations, is understudied. *Objective:* This study aimed to investigate the associations between PIU and various ACEs in a CAP population, considering gender differences and psychopathological characteristics. Methods and Materials: 104 adolescents (69 girls) were included, aged 14-17 years, undergoing inpatient treatment a CAP clinic, between August 2018 and March 2020. Participants completed the Interview for the Assessment of Internet and Computer Game Addiction (AICA), the Youth Self-Report (YSR), and the Multidimensional Clinical Screening Inventory (MCSI). Statistical analyses examined associations between PIU and ACEs, controlling for age, gender, and psychopathological characteristics. Results: Extrafamilial emotional abuse was significantly associated with higher AICA scores, irrespective of age, gender and psychopathological characteristics. Extrafamilial separation and loss was inversely proportional related to internet use and to the likelihood of PIU. Suicide of a mother significantly increased the odds of moderate to severe PIU. School absenteeism and illegal activities were associated with higher PIU, though these associations diminished when controlling for psychopathological characteristics. *Conclusions:* Extrafamilial emotional abuse and loss of peers are critical factors in developing PIU among adolescents undergoing CAP treatment. CAP interventions should address the underlying psychosocial factors contributing to PIU, including a balanced approach to reducing Internet use and building social relationships.

Keywords: problematic internet use, adverse childhood experiences, psychopathology, gender differences, psychiatric treatment, child and adolescence psychiatry

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8G–6

Using Lasso and ElasticNet as machine learning techniques for defining the impact of differents biological, socio-epidemiological, life habits and specific Internet use factors, on the development of Problematic Internet Use in nationally representative sample of adolescents

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Monitoring the development of Problematic Internet Use (PIU) through the analysis of the impact of various online activities of adolescents, the content they follow, as well as their habits in everyday life and the possible influence of temperament truly represents a challenge. Forming a nationally representative sample of adolescents was one way to address this challenge. The other way was to select analytical methods through which this kind of extensive database could be analyzed. By using Lasso and ElasticNet as machine learning techniques, the aim of this research was to determine the impact of the following factors on the development of PIU: sociodemographic factors, the intensity of using the Internet, different contents accessed on the Internet by adolescents, adolescents' online activities, life habits and different affective temperament types. Methods: The study sample included 2113 adolescents (56% female; mean age was 16.73) who filled in the questionnaire about. socio-demographic characteristics, intensity of the Internet use, content categories and online activities on the Internet; Facebook (FB) usage and life habits; The Internet Use Disorder Scale (IUDS). Based on their scores on the scale, subjects were divided into two groups - with or without PIU; Temperament Evaluation of Memphis, Pisa, Paris, and San Diego scale for adolescents (A-TEMPS-A) (which examined cyclothymic, depressive, irritable, hyperthymic, and anxious temperament). Results: The three most important variables for the development of PIU with both techniques were: cyclothymic temperament, the longer use of the Internet and the desire to use the Internet more than at present time. Group of variables having a protective effect (regarding the prevention of the development of PIU) was found with both techniques. The three most important were: achievement, search for contents related to art and culture and hyperthymic temperament. Conclusion: Both models indicate the same variables (for the development of PIU and for prevention of the development of PIU). The next step is to repeat this research in a clinical study, which would include a psychiatric interview.

Keywords: machine learning, problematic internet use, A-TEMPS-A, adolescents, internet use

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8H–1

The dynamic relation between Fear of Missing Out and Social Networking Sites addiction: An experience sampling study

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Fear of missing out (FOMO) is considered one of the most robust correlates of Social Networking Sites (SNS) addiction. Nevertheless, the direction of their interrelation remains unclear. Furthermore, FOMO can be understood as a trait (individual predisposition to experience FOMO) and as a state (FOMO can be evoked by concerns arising from situational triggers). To advance the understanding of the FOMO-SNS addiction link, in the current study, we used the experience sampling method (ESM) to capture time-sensitive monitoring of the dynamic relation between those two. We analyzed intensive longitudinal data containing 35 momentary assessments of FOMO and SNS addiction symptoms from seven days among 268 young SNS users. Our results reveal that FOMO and each symptom of SNS addiction are closely related to each other, both on the trait and the state level. Regarding the casualty of the FOMO-SNS addiction relation, our results show that experiencing SNS addiction symptoms evokes state FOMO rather than state FOMO influencing SNS addiction symptoms. Based on the study's results, we conclude that the affective FOMO experience is a mixture of both trait and state components and that it is rather an outcome of addictive SNS use than its driving factor. Further, we argue that FOMO should be viewed as a sort of withdrawal symptom of SNS addiction, requiring SNS use to appear but having the capability to maintain the addiction.

Keywords: FOMO, SNS addiction, ESM study, intensive longitudinal data, dynamic relations, withdrawal symptoms

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8H–2

Narcissism, FOMO, and emotion regulation: What do they tell us about problematic social media use?

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There is increasing interest in understanding the pathways to problematic social media use that incorporate psychological constructs, especially relevant in relation to recent discussions of the ability of individuals to control or moderate social media use. While the relationship between Fear of Missing Out and PSMU has been established, less is known about the contribution of narcissism, and emotion regulation, in relation to the 'fear' in FOMO. In particular, recent research has explored the construct of narcissism with respect to its grandiose and vulnerable elements (i.e., self-importance, and sensitivity to criticism); similarly, emotion regulation (the ability to understand, interpret, and manage emotional states or experiences) has been considered in relation to its intra- and inter-personal elements. The present study explores the contributions of narcissism, FOMO, and emotion regulation in relation to PSMU, using a community sample. Analyses reveal complex interrelationships between narcissism and PSMU that incorporate distinct roles for emotion regulation and FOMO. Findings suggest a need to more closely consider how personality and emotion regulation, in addition to FOMO, can explain the processes through which individuals may be at risk of engaging in PSMU.

Keywords: social media, narcissism, emotion regulation, problematic social media use

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8H–3

Loneliness and problematic social media use: Unpacking the bidirectional links and the role of active social media use among adolescents

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Background: Problematic social media use (PSMU) in association with loneliness represents a major concern in adolescent research (e.g., Zhao et al., 2024). Although this relationship has been widely documented, and recent literature suggests a dynamic association between these two constructs (e.g., Zhang et al., 2023), inconsistent findings result from mostly cross-sectional and adult-centered studies. Furthermore, still little research focused on what adolescents do on social media and how this contributes to both PSMU and loneliness. *Method:* A path analysis was employed to examine the associations between PSMU and loneliness, focusing on the mediating role of users' active social media use (i.e., self vs other-oriented use). A total of 1185 adolescents (59.3% F, Mage = 15.97 years, SD = 1.43) completed self-report measures at two timepoints, 6 months apart. Gender differences were also explored. *Results:* Bidirectional associations were found from T1 loneliness to T2 PSMU, and from T1 PSMU to T2 loneliness, while controlling for autoregressive effects. At T1, PSMU and loneliness were associated with both other-oriented and self-oriented use. Furthermore, T2 PSMU was predicted only by higher other-oriented use, while T2 loneliness was predicted solely by higher self-oriented use. Two significant positive indirect effects emerged in the associations between T1 PSMU and T2 Loneliness via self-oriented use, and between T1 PSMU and T2 PSMU via other-oriented use. Differences across gender groups also emerged. *Conclusion:* Contrary to what expected (Kardefelt-Winther, 2014; McKenna et al., 2002), these findings suggest that lonely adolescents avoid engaging in active social media use, thus failing to compensate for their social difficulties online. Therefore, other mechanisms, but not active use, would contribute to a higher risk of PSMU. On the other side, problematic users who engage more in active use would be at greater risk of increased PSMU and loneliness six months later. Practical implications are discussed.

Keywords: problematic social media use, active social media use, loneliness

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MINI TALKS

MINI–1A1

A scoping review of the Journal of Behavioral Addictions

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Background: Since its establishment in 2012, the Journal of Behavioral Addictions (JBA) has experienced an outstanding academic reputation, substantial growth in its journal impact factor (JIF) within the Journal Citation Reports (JCR), showing prolific research focusing s on various non-substance-related addictive behaviours as observed in a few bibliometric studies. The journal's interdisciplinary framework has enabled a comprehensive examination of behavioural addictions, underscoring their complexity and the multifaceted nature of their aetiology, progression, maintenance, and potential recovery. The commitment to open access and accessible rates has ensured the content availability to academics, clinicians, professionals, and the public. *Method:* To rapidly analyse the evolution of the JBA from 2012 to 2024 in terms of journal impact factors, prevalent topics, new domains, and methodological approaches, a scoping review was conducted. *Results:* In 2013, the JCR JIF was 0.397, which increased to 1.9 in 2014, 2.5 in 2015, 4.1 in 2016, 3.6 in 2017, 4.9 in 2018, 5.1 in 2019, 6.8 in 2020, and 7.7 in 2021. However, there was a steady pattern to 7.8 in 2022, followed by a slight decrease to 6.6 in 2023. Several papers have attained over 400 citations and are key contributions to the field. In its early years, it focused on foundational behavioural addictions (Internet addiction, gambling and gaming disorders), with an emphasis on prevalence rates, diagnostic criteria, and psychological underlying problems. As the field advanced, there was a discernible shift towards investigating the interplay between these addictions and mental health (comorbidities). Recently, an expansion into emerging domains has been raised, such as smartphone and social media addiction, as well as biological correlates. In terms of methodologies employed, in addition to epidemiological and survey studies (e.g., transcultural research), the journal has witnessed an increase in the use of experiments, neuroimaging techniques, and artificial intelligence methods. *Conclusions*: Clinical psychology and psychiatry arenas remain central domains for developing and assessing intervention strategies (therapeutic and preventive actions) to address individual and public health concerns. This evolution reflects the journal's ongoing commitment to adapting its scope in response to the shifting landscape of behavioural addiction research.

Keywords: journal of behavioral addictions, scoping review, mental health, non-substance addictive behaviours

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MINI–1A2

Use of psilocybin in the treatment of addictive disorders: A systematic review

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Background: Addictive disorders (AD) are characterized by loss of control over the behavior or the use and its continuation despite negative consequences, leading to marked suffering and impaired functioning in various domains. Despite a heavy individual and collective burden, AD are sorely lacking in effective therapeutic options. Psychedelics are experiencing a resurgence of interest and are currently regarded as one of the most promising approaches in contemporary psychiatric research. The therapeutic use of psychedelics, in particular psilocybin, has been tested in AD with promising results. We aimed to synthesize the available published evidence through a systematic literature review on the therapeutic use of psychedelics in the treatment of AD. *Method:* A systematic review of the available literature was conducted to identify all relevant publications using PubMed, PsycINFO, and the Cochrane Library. We limited the search to studies published between January 2013 and January 2024. *Results and perspectives:* Our search identified 799 publications, of which 26 were included in the final data synthesis. Regarding the type of AD, 10 articles concerned alcohol use disorders, 5 articles tobacco use disorders, 3 articles opioid use disorders, 2 cocaine use disorders and 6 several substance use disorders at the same time. No article concerned behavioral addictions. There has been a gradual increase in the number of randomized controlled trials over the years, with increasingly larger patient samples and more rigorous methodology. In addition, the results supported an improvement in AD when a psychedelic substance is used, particularly psilocybin which is well-tolerated. These efficacy results are encouraging, and suggest that psilocybin can be considered for the treatment of behavioral addictions. This is why we have decided to set up the PASSENGER project, which aims to conduct a pilot feasibility study for the implementation of psilocybin-assisted psychotherapy for the treatment of gambling disorder.

Keywords: psychedelics, psilocybin, gambling

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MINI–1A3

Childhood trauma, early maladaptive schemas and behavioral addictions: Data from a specialized in-patient treatment facility for dual diagnosis

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Childhood trauma is known to play a role in personality disorders, particularly in borderline personality disorder (BPD), as are early maladaptive schemas (EMSs). The purpose of the research was to determine the presence of childhood trauma and EMSs in a clinical population with personality disorders and comorbid substance use disorders (SUDs) with or without behavioral addictions (BA). Data of 180 patients were analyzed through data obtained from a psychiatric hospital, and included data from the Childhood Trauma Questionnaire (Short Form) (CTQ-SF) and the Young Schema Questionnaire Short Form 3 (YSQ-S3) in addition to data concerning addictions. The impact of trauma and EMSs in relation to personality disorder diagnosis, BA and SUD was analysed to gain a better understanding of the role childhood trauma plays in a population with personality disorders and comorbid addictions. The results revealed several significant findings, such as the role various traumas play in certain personality disorders, which schema domains were more relevant to certain personality disorders, the impact of trauma on SUDs and BAs, differences in scores across the CTQ-SF and YSQ-S3 between BPD versus other personality disorders, and differences in EMS dimension scores in a dual diagnosis population with SUD vs SUD and BA combined. The most significant dimension of the CTQ-SF was emotional abuse which had strong predictive validity for several EMS dimensions. Limitations worth noting are a lack of a control group and the clinical sample size, particularly the uneven distribution of personality disorders within the sample. In conclusion, trauma and EMSs were found to play a role in personality disorders and SUDs, while a similar but even stronger associaton was revealed in patients with additional BAs. These findings, in addition to existing literature, provide insights that are meaningful in clinical settings.

Keywords: childhood trauma, early maladaptive schemas, personality disorders, substance use disorder, behavioral addictions

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MINI–1A4

A Systematic review on Artificial Intelligence in the intervention of addictions

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The global rise in psychoactive substance use disorders and behavioral addictions presents a significant public health challenge, driven by a complex interplay of social, cultural, economic, and environmental factors. Artificial Intelligence (AI) has emerged as a promising tool for improving diagnostic accuracy, personalizing treatment approaches, and enhancing accessibility to mental health care. This paper provides a synthesis of key findings from a systematic literature review examining the potential applications and effectiveness of AI in addiction treatment. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, a total of 43 studies were identified that explore the role of AI in addiction interventions. Notably, AI-driven chatbots have demonstrated efficacy across various mental health and substance use treatment contexts. Further research is needed to assess the long-term effectiveness and ethical implications of AI-based interventions. Researchers and practitioners should consider integrating AI-driven tools into addiction care, particularly for early risk screening and supporting recovery efforts among individuals seeking treatment.

Keywords: AI, addiction, artificial intelligence, behavioral addiction, systematic review

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MINI–1A5

An exploration of metacognition within adolescent health and risk-taking behaviour

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Background: Adolescents are at a critical period of development, facing biological, psychological, and social transitions. Metacognition, which refers to the cognitive processes related to the appraisal, control and monitoring of our thinking, develop substantially during later adolescence into adulthood. Known to be impacted by social environment, the role of family environment upon healthy metacognitive development is less clear. Maladaptive metacognitive patterns are closely linked to impulsivity, addictions, and co-morbid psychological disorders in adults. This study explored adolescent screen-based risk behaviours and how these are associated with maladaptive metacognition and family environment. *Methods:* A school survey was administered in Gibraltar among adolescents aged 14-20 years, examining problematic screen-related behaviours, as well as several emotional health factors, including metacognitive beliefs. Questions regarding family life were also included. A total of 907 students participated. Measures included Metacognitions Questionnaire for Children, Internet Gaming Disorder Test, Bergen Social Media Addiction Test, Problematic Mobile Phone Use Questionnaire, and Lie/bet scale. *Results:* For both boys and girls, maladaptive metacognition was positively correlated with problematic gaming, social media use, and mobile phone use. Among boys, it was also associated with problem gambling. Family emotional support negatively correlated with metacognitive variables, with stronger effects observed in girls. Higher frequency of family meals was linked to lower maladaptive metacognition. *Conclusions:* Maladaptive metacognition is closely associated with multiple screen-based risk behaviours in adolescents, with certain gender-specific patterns. These findings highlight the potential role of family support.

Keywords: metacognition, adolescent risk behaviour, adolescent mental health

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MINI– 1B1

Increasingly younger age profile of gaming disorder patients and its clinical implications

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Background: The rate of young children in Japan using the internet has constantly risen. It is assumed that the number of young children with gaming disorder (GD) and internet addiction has risen in parallel. In this study, we investigated a recent change in the age demographic of outpatients with GD and the clinical characteristics of young children with GD. *Methods:* Between 2016 and 2022, the age profile of 860 new outpatients with gaming related issues were examined. These patients were divided into two groups; those who were 12 years old or younger (younger group) and those who were more than 12 years old (older group). Problems related to excessive gaming and comorbid psychiatric disorders were compared between the two groups. The study was approved by our center's ethics committee. *Results:* The rate of the younger group increased at a constant and significant rate from 0% in 2016 to 18% in 2022. In contrast, the rate for those aged 21 years old or older significantly decreased during the same period. The following characteristics were observed in the younger group, contrasting with the older group: rate of online game use was significantly higher; time spent on gaming was significantly longer; the rate of SNS users was significantly lower and the time spent on SNS was shorter; the occurrence of verbal and physical violence was significantly higher; and while the comorbidity rate of ADHD was similar the rate of depression and anxiety was actually lower. *Conclusions:* This study suggested the phenomenon of an increasingly younger age profile of GD patients with corresponding clinical and social implications. Younger patients are often severely affected by various problems early in life, while their treatment for GD is often challenging. Prevention is most important and measures, especially for young children, should be carefully planned and implemented.

Keywords: gaming disorder, lowering age, young children

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MINI–1B2

Gaming engagement dimensions and self-control deficits are factors in risky loot boxe use

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Background. Loot boxes are random virtual items in video games that can be purchased with real or in-game money. They may offer small or significant advantages, such as cosmetic changes or enhanced abilities. These items often come with special animations or sound effects. Research has linked loot boxes to gaming disorder and gambling disorder. There is ongoing debate about whether compulsive loot box use should be classified under gambling or gaming disorder, with potential psychological and financial consequences for gamers. Consequently, the study aimed to analyse the relationship between gaming disorder, game craving, flow, immersion, self-control and risky loot box use. Method. The survey involved 433 active gamers (216 female gamers; M = 26.95 years; SD = 4.80; age range: 18-35) who have used loot boxes during the last year. The instruments used in the studies included the Gaming Disorder Test, Craving for Internet Gaming Scale, Self-Knowledge New Sheet, Flow Short Scale, Immersive Experience Questionnaire and Risky Loot Box Index. *Results:* The results showed a positive relationship between game craving, flow-absorption, immersion, gaming disorder and risky loot box use. Additionally, risky loot box use was negatively associated with self-control dimensions such as goal maintenance, which is characterised as an individual's ability to retain information about their intentions and long-term plans. *Conclusions*. The study's findings may indicate that various determinants related to gaming engagement and self-control deficits may be important factors in understanding compulsive loot box use development.

Keywords: risky loot box, gaming engagement, gaming disorder

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MINI–1B3

Introjected regulation as a stronger indicator of gaming disorder than escapism: A Polish population-based studies

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Background: Introjected regulation is a type of motivation that occurs when individuals internalize external pressures or expectations but do not fully accept them as their own. Instead of being purely external or fully self-determined, introjected regulation involves behaving in certain ways to avoid guilt, anxiety, or to gain approval and self-esteem (Ryan & Deci, 2000). Existing research is scarce, but suggests that introjected regulation and gaming disorder may be correlated. We used the new approach to gaming motivation which integrates both introjected regulation and escapism in one model to further test this association, both motivations are part of the higher-level motivation Immersion/Escapism (Kiraly et al., 2022). *Method:* Sample of 1060 adults (682 females, mean age 41.47 ± 6.71 years, 839 of whom play games), completed the Internet Gaming Disorder Scale (IGD9-SF), the Gaming Disorder Test (GDT), and the subscales of Gaming Motivation Inventory dedicated to Immersion/Escapism motivation (GMI), namely Autonomy, Coping, Escape, Fantasy, Identity, and Introjected Regulation. Results: All of the motivations were positively correlated with gaming disorder symptoms, the correlations varied between weak and strong. Regression analyses showed that Introjected Regulation is the strongest predictor of gaming disorder, both in case of WHO (GDT) and APA (IGD9-SF) approach. Interestingly, Escape predicted the result of IGD9-SF but no GDT. *Conclusions:* Introjected regulation emerged as the strongest indicator of gaming disorder, regardless of the conceptual framework used to define it. This suggests that researchers exploring the relationship between gaming motivation and gaming disorder should place greater focus on this specific type of motivation.

Keywords: gaming disorder, motivation, escapism

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MINI–1B4

Escapism and Gaming Disorder: Introducing the Return Questionnaire as a key to understanding the link between escapist motivation and symptoms of problematic gaming

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According to existing research, an important factor in the development of problematic gaming gaming disorder, GD) is escapist motivation—the desire to escape from problems and immerse oneself in a different, more satisfying world. This assertion raises several significant questions among researchers, starting with the very definition of the phenomenon. Some scholars argue that a temporary escape from difficulties can be viewed as a coping style rather than a separate, independent construct. This perspective aligns with the model of healthy escapism, which is associated with emotional regulation, mood improvement, or energy recovery, and helps to explain the inconsistent findings regarding the relationship between escapism and GD. The purpose of this presentation is to introduce the Return Questionnaire, a proposed operationalization of the escapism model developed by Gierdin and colleagues. In addition to the tool itself, the presentation will explore its relationships with well-being, stress, and the fulfillment of players' needs both in-game and outside of the game, as well as the connections of these variables with GD. The presented findings were obtained from three studies conducted on a total sample of approximately 1,300 players.

Keywords: escapism, Gaming Disorder, well-being, stress

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MINI–1B5

Parental stress and children's video gaming: A social control theory perspective

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Background: While screen media being increasingly used as "modern pacifiers", previous research found links between parental stress and children's video gaming. Drawing on Social Control Theory, this study investigated how parental media mediation strategies (active and restrictive) interact with children's gaming time to influence family conflict and parental stress. *Methods:*A total of 1,111 Chinese parents (M = 36.90 years; children aged 5-17) completed an anonymous online questionnaire assessing parental stress, child gaming time, perceived excessiveness of gaming time, media parenting practices, gaming-related family conflict, and demographic variables.*Results:*Parental stress was significantly correlated with both child gaming time and parent's perceived excessiveness of it, as well as gaming-related family conflict ($r = .19$ to $.57$, $p < .001$). Both active and restrictive mediation strategies were negatively associated with parental stress and family conflict ($r = -.09$ to $-.18$, $p < .01$). Bootstrapping approach was used to test the hypothesized moderated mediation model. Gaming-related family conflict fully mediated the relationship between child gaming time and parental stress. While both active and restrictive mediation strategies showed direct protective effects against family conflict, neither moderated the effect of gaming time on conflict. *Conclusions:*These findings underscore the protective role of parental media mediation in reducing parental stress and family conflict. Interventions that promote parental media mediation may help parents manage the challenges related to children's gaming. Longitudinal research is needed to explore the sustained impact of early mediation practices.

Keywords: media parenting, parental stress, Chinese, videogaming

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MINI–1B6

A-social space, a digital relational space: New perspectives for intervention in the treatment of adolescents within Pathological Addiction Services

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Background: Services for pathological addictions are increasingly called upon to assist adolescents with both old and new dependencies, in an "Onlife" dimension where the boundary between the virtual and the real is becoming more blurred. This scenario requires the need to imagine intervention settings and proposals that are increasingly personalized, innovative, and aligned with new complexities in order to intercept emerging needs early and offer creative, yet clinically effective, responses. *Method:* In line with these premises, the therapeutic team of the Pathological Addictions Service of Ausl Romagna Riccione (Italy) has implemented innovative interventions that deconstruct the traditional operational setting to reach adolescent users and their reference caregivers in a destigmatizing and deinstitutionalizing context called "A-social space". The space, located in a different place from the clinical outpatient service, is attractively furnished and equipped with various digital devices (PlayStation, gaming PCs, web radio, graphic tablets, etc.). The multidisciplinary team evaluates addictive behavior using the Addictive Behavior Questionnaire test (ABQ) and, for personal autonomy and social skills, the Vineland II – Adaptive Behavior Scales. The individual project is then defined, with outcome indicators concerning the achievement of shared goals, changes in addictive behavior, improvement in social-relational skills, and administration of tests at the end of treatment. The innovative treatment involves the use of digital worlds (social networks, video games, music) in therapeutic interventions with young people to discuss youth consumption behaviors, address the associated risks, and at the same time highlight existing resources beneficial to the adolescent's developmental path. *Results and Conclusion:* Preliminary results show that this setup facilitates adolescent adherence to treatment, reduces service drop-out, modifies addictive behavior, and improves relational and social skills

Keywords: gaming, digital, treatment, setting, addiction

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MINI–1C1

Exploring perceptions and experiences of gambling-related stigma: Perspectives of people who gamble

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Background and aims: While stigma related to mental illness and substance use disorders has been extensively studied, research on gambling-related stigma remains limited. Problem gambling is often associated with negative stereotypes such as irresponsibility and greed, contributing to public stigma and internalized feelings of shame, anxiety, and guilt among affected individuals. This stigma acts as a significant barrier to help-seeking and treatment, exacerbating the harms experienced. To address this gap, the present study seeks to deepen understanding of gambling-related stigma by examining the lived experiences and perceptions of individuals who gamble. Methods: 1,189 people who gamble, aged 18-82 (M=39.3, SD=12.1) were recruited through Gordon Moody and Prolific to complete an online survey. The survey assessed gambling behaviour, problem gambling severity, experiences related to stigma and discrimination, and socio-demographic factors. Results: Among participants who gambled in the past year, 16.2% reported discrimination related to their gambling, often from family or friends. Discrimination was associated with increased anxiety, depression, stress, insomnia, and higher alcohol consumption. Overall, 36.9% of participants felt the need to hide their gambling from friends and/or family, and 19% expressed regret about their gambling behaviour. Among those who experienced stigma in the past 12 months (n = 192), these feelings were notably higher, with 68.7% hiding their gambling and 52.7% expressing regret. The correlation between the in-the-moment (state) feelings of shame and guilt and experienced discrimination or stigma related to gambling was r= 0.5, p<.001. *Conclusion:* This research highlights the need for enhanced public education and awareness campaigns to reframe gambling-related problems and harms, reduce stigma, and promote understanding of the risks and protective factors.

Keywords: gambling problem; self-stigma, guilt, shame, harms, discrimination

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MINI–1C2

A comparative study of depression, anxiety, hopelessness and burnout in families of patients with schizophrenia and families of patients with gambling disorder

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Background: The chronic course of both schizophrenia and gambling disorder (GD) and their periodic exacerbations or relapses can cause the relatives of these patients to have difficulties and experience psychiatric problems during the process. The aim of this study is to compare the relatives of patients diagnosed with Schizophrenia and the relatives of patients diagnosed with GD in terms of depression, anxiety, hopelessness and burnout. *Method:* First-degree relatives of patients diagnosed with schizophrenia who applied to the psychiatry outpatient clinic formed Group 1, while first-degree relatives of patients diagnosed with GD formed Group 2. Individuals aged between 18 and 65 years, with at least a primary school education, and who provided informed consent were included in the study. Those with an active psychotic disorder, mental retardation, or a neurological disease were excluded. Participants in the study were administered a sociodemographic data form, Beck Anxiety Inventory, Beck Depression Inventory, Beck Hopelessness Scale, and Burnout Inventory. *Results:* The relatives of patients with schizophrenia had significantly higher total scores on the Beck Depression Inventory compared to the relatives of patients with GD. However, there was no significant difference between the two groups in terms of Beck Anxiety Inventory scores. Similarly, no significant difference was found between the groups in total hopelessness scores and burnout scores. *Conclusion:* GD, which initially remains well-hidden and is often only recognized by the family after negative consequences emerge, can impact the family to a similar extent as schizophrenia—a condition that is well-known in society and acknowledged for its significant effects on the family. In the treatment of GD, in addition to the active involvement of family members in the patient's treatment process, it should not be overlooked that these family members will need psychological support. The application of family-based psychotherapies seems necessary and important.

Keywords: gambling disorder, schizophrenia, family members

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MINI–1C3

Comorbid psychopathology and gambling preferences among women veterans: A gender-based analysis

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Background: Women are a rapidly growing subset of the veteran population, now comprising approximately 25% of the U.S. military. Research consistently demonstrates that women veterans face greater challenges post-discharge than their male counterparts, including higher rates of psychiatric comorbidities. However, little is known about how gambling disorder presents uniquely in this population. This study examines gender-based clustering of comorbid psychopathology and gambling preferences among veterans to better understand distinct clinical profiles, particularly among women. *Method:* This study analyzed a sample of 680 veterans (560 men, 120 women) who endorsed gambling behaviors. Cluster analyses were conducted separately for men and women based on comorbid psychiatric diagnoses and gambling preferences. Given the complexity of these presentations, latent profile analysis was deemed too granular; instead, we used cluster analysis to identify meaningful subgroupings within each gender. *Results:* Women veterans formed a distinct cluster characterized by non-strategic gambling preferences (e.g., slot machines, lotteries), a higher odds ratio for PTSD, and greater likelihood of mood disorder diagnoses. In contrast, male veterans exhibited more heterogeneity in gambling preferences and psychopathology. These findings suggest that gambling disorder among women veterans may be more closely linked to trauma-related and affective symptoms, whereas men may present with a broader range of clinical profiles. *Conclusions:* Women veterans with gambling disorder appear to have a distinct clinical presentation, with higher rates of PTSD and mood disorders influencing gambling behaviors. These findings underscore the importance of tailored interventions addressing trauma-related factors in gambling treatment for women veterans. Future research should further explore these clusters using longitudinal methods and integrate trauma history to refine treatment approaches.

Keywords: veterans, gambling disorder, psychopathology

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MINI–1C4

Effects of the source of campaigns targeting gambling-related risks and harm

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Scientific Background: The rise in gambling and its potential for problematic behaviors (often termed gambling addiction) is a growing concern. Despite a general decline in leisure spending, gambling expenditures in France increased from around 10 billion euros in 2020 to nearly 10.7 billion in 2021. This growth is driven partly by the introduction of new gambling games, legalization of slot machines in the early 1990s, expansion of gambling venues, and since 2010, the regulation of legal online gambling. Increased gambling participation and the influence of advertising emphasize the need for better consumer protection. National and international regulators are focusing on prevention campaigns to raise awareness of gambling-related health and social risks (e.g., mental health and financial issues) and to prevent problem gambling. *Aims and Hypotheses:* This study aims to examine the impact of the source of campaigns targeting gambling-related risks and harm on three areas: 1) perceived credibility of the source, 2) interpretation of the message by gamblers, and 3) intention and desire to gamble. We hypothesize that campaigns from regulatory and public health agencies, National Gambling Authority (ANJ) and Public Health France (SPF), will be seen as more credible than those from gambling operators. Campaigns from ANJ and SPF are expected to be interpreted as promoting non-harmful gambling behaviors, while campaigns from gambling operators may appear ambiguous in intent. Furthermore, prevention messages from gambling operators may increase the desire to gamble due to perceived intentions to promote gambling, unlike messages from public health or regulatory agencies. *Methods:* The study will quantitatively assess gamblers' knowledge about gambling risk prevention campaigns, their perceptions of the source's credibility (expertise and trust), and the perceived intent of these campaigns among occasional and regular gamblers, as well as problem gamblers. Three types of agencies will be evaluated: a gambling operator, ANJ, and SPF. We will examine how the source (gambing operator, ANJ, or SPF) affects gamblers' desire to gamble, perceived credibility of the agency, and interpretation of the message's intent. Additionally,

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semi-structured interviews will provide qualitative insights on these matters. *Expected Results*: We anticipate that the source of the prevention campaign will significantly influence its credibility, perceived intent, and impact on gambling desire. Regardless of gambling frequency, campaigns from SPF and ANJ are expected to be viewed as more credible, clear in their protective intent, and associated with a reduced desire to gamble, compared with campaigns from gambling operators. *Research Prospects:* In the current regulatory environment, authorities aim to base decisions on scientifically-backed data. This study's findings will assist regulators in identifying the most effective agency for leading gambling risk and harm prevention efforts.

Keywords: gambling, risk and harm reduction, prevention campaigns

MINI–1C5

Exploring the link between gambling and non-suicidal self-injury: A descriptive study

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Background and aims: Both non-suicidal self-injury (NSSI) and gambling are considered major public health concerns and have been associated with an array of psychological, behavioral, and demographic factors. NSSI has been linked to gambling through shared characteristics, such as emotion dysregulation and impulsivity, highlighting the potential interplay between these behaviors. The goal of the study was to examine the psychological, behavioral, and demographic correlates and predictors of NSSI among individuals with gambling behaviors. *Methods:* Participants (n = 1174; online convenience sample; 51,4% males; mean age = 39.3 years, SD = 12.18) completed a variety of measures, including the PGSI, ISAS,

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questions regarding suicidality, DASS-9, and Athens Insomnia Scale. *Results:* 65,9% of the participants engaged in at least one NSSI behavior, with no significant difference between genders, and the most commonly reported function of NSSI being affect regulation. Individuals with moderate-risk and problem gambling are significantly more likely to engage in NSSI behavior compared to low-risk and non-problem gamblers ($\chi^2(df=3) = 54.0$, $p < 0.001$). Furthermore, NSSI engagement is significantly associated with increased severity of insomnia, depression, anxiety, stress, and suicidal thoughts. A significant positive association was found between suicidal thoughts and the total number of NSSI behaviors, frequency of NSSI, and suicide attempts. *Conclusions:* Problematic gambling and NSSI frequently co-occur, potentially due to shared underlying factors such as emotion dysregulation. Targeted interventions addressing these vulnerabilities may reduce gambling-related harms and self-injurious behaviors. This underscores the importance and need for interventions that target interconnected issues.

Keywords: non-suicidal self-injury, gambling, gambling population, psychological distress, suicidal thoughts

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MINI–1D1

Assessing the prevalence of social media addiction in the Slovenian population

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Background: The rapid increase of social media platforms and advancements in digital communication technologies have fundamentally transformed how individuals interact, share information, and engage with their communities. However, this surge in social media use has raised concerns about its potential for problematic engagement, including the emergence of social media addiction, which is gaining recognition as a form of behavioral addiction. Our study aims to evaluate the prevalence of social media addiction within specific demographic groups in Slovenia and explore the implications of this phenomenon as a public health issue. *Methods:* The 2023 National Survey on the Use of Tobacco, Alcohol and Other Drugs was conducted as a mixed-mode survey (CAWI, CAPI) on a nationally representative sample of 16,000 individuals aged 15–74, with a 61% response rate (final sample: 8,937). Analysis focused on 6,068 respondents who reported using social media in the past 12 months. Problematic social media use was assessed using the Bergen Social Media Addiction Scale (BSMAS), with a cut-off score of 24 points based on clinical diagnostic standards.*Results:* The results show that 0.6% of Slovenian social media users met the criteria for social media addiction. Higher rates were observed among women (1%) compared to men (0.2%). A more detailed breakdown indicates that social media addiction was predominantly found among younger individuals, with a marked decline as age increases. In the 15–19 age group, 2.2% of individuals met the criteria for addiction, while this proportion significantly decreased to 0.7% in the 20–24 age group. Addiction was also evident in the 25–29 age group (1.2%), but it continued to decline in older age groups, becoming virtually nonexistent after the age of 50. In age categories over 55, no cases of addiction were detected. *Conclusions:* The findings indicate that while social media addiction is relatively uncommon, a measurable proportion of individuals meet the criteria for clinical diagnosis, with a slight predominance among females compared to males. Younger individuals, particularly those aged 15 to 29, are identified as the most at-risk group, with this demographic showing the highest prevalence rates. These results underscore the vulnerability of younger populations and the need for targeted research and interventions to address this behavioral health issue.

Keywords: social media addiction, addictive behavior, non-substance addiction, Slovenia

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MINI–1D2

Behavioral patterns in sharenting: Social media addiction and impacts on digital well-being

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Background: Sharenting, the act of parents sharing their children's personal information on social media, raises significant concerns about digital privacy, autonomy, and well-being. This study examines the relationship between sharenting motivations, social media addiction, and privacy awareness, with a focus on the behavioral dimensions influencing children's digital experiences. *Method:* The study included 258 parents aged 18 and above, who actively use social media and have children. Data collection involved the Sharenting Scale, Social Media Addiction Scale (Adult Form), and Online Privacy Awareness Form. Additionally, semi-structured interviews with 25 parents offered qualitative insights into sharenting behaviors. Quantitative data were analyzed using regression models and correlation analyses, while qualitative data underwent thematic analysis.*Results:* Regression analysis indicated that social media addiction ($\beta = 0.48$, $p < 0.01$) and lower privacy awareness ($\beta = -0.34$, $p < 0.05$) significantly predicted sharenting behaviors. Cultural norms influenced sharing patterns, with Turkish parents favoring family-centric content. Qualitative findings revealed that adolescents were increasingly sensitive to sharenting behaviors, often questioning their autonomy and digital identity. A positive correlation emerged between privacy awareness and sharenting motivations ($r = 0.20$, $p < 0.05$).*Conclusions:* Sharenting illustrates the interplay between parental motivations and behavioral patterns influenced by social media addiction. Interventions to enhance privacy literacy and promote responsible sharing are essential to safeguard children's digital well-being and autonomy.

Keywords: sharenting, social media addiction, digital privacy, parental behavior, online privacy awareness

MINI–1D3

The impact of social media on adolescents' mental health

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Social media is an integral part of adolescents' lives. However, the mechanisms through which social networks impact mental health remain inadequately understood. To advance our understanding of this issue, there is a need for more longitudinal and causal studies.

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This research seeks to contribute to bridging this gap in the existing literature through a longitudinal study. The aim of this study is to measure the relationship between loneliness, depressive symptoms, anxiety, fear of missing out (FoMO), and problematic social media use (measured by time), in adolescents aged 11–14 (N = 760). Data collection took place in two phases – January and June 2024. The results showed that more time spent on social media has an impact on social media addiction levels. At the same time, respondents who reported spending more time on social media had significantly higher levels of loneliness, depressive symptoms, and anxiety. However, our study found no association between the time spent on social media and FoMO values. In terms of gender, women exhibited higher levels of addiction symptoms and also reported significantly higher levels in the variables of loneliness, depressive symptoms, anxiety, and FoMO. In conclusion, we find it crucial to raise awareness about safe social media use and promote healthy digital habits, not only among at-risk adolescents but also among educators and parents. *Funding:* The funding for the present presentation was provided by the Czech Ministry of Education, Youth and Sports for specific research (Social media and their role in adolescent mental health from a longitudinal research perspective IGA_FF_2025_045).

Keywords: social media, mental health, adolescence, addiction

MINI–1D4

Digital engagement in early childhood: Screen time and behavioral responses in preschoolers

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Background: Early exposure to smartphones and tablets raises concerns about their effects on preschoolers' development (Sari et al., 2022). This study investigates screen time, usage patterns, and associated behaviors in children aged 1-5 years from diverse cultural contexts. *Method:* Data was collected through a self-administered online survey completed by parents/guardians (N = 636) across 31 countries. Screen time and behavioral responses were analyzed using independent t-tests, ANOVA, and chi-square tests. Relationships between screen time, age, household composition and device deprivation responses were assessed using correlation analysis. *Results:* The average screen time was 1.78 hours/day, increasing significantly with age ($p < 0.001$). Boys exhibited slightly higher screen time than girls, but the difference was not significant ($p = 0.060$). However, effect sizes (Cohen's $d = 1.859$, Glass's delta = 1.609) indicated substantial differences. Children aged 5 years spent the most time on devices. Emotional responses to device deprivation, such as frustration or irritation, were positively correlated with screen time ($r = 0.458$, $p < 0.001$). Older children were more likely to have recently increased their screen time, indicating an upward trend as children grow. Household composition also influenced screen time, with larger households (both in terms of adults and children) being associated with greater device usage. Younger children

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used devices for creative play, whereas older children favored video content and games. Socio-economic status and parental gender showed no significant impact on device use frequency. *Conclusions:* Age and household composition are key factors influencing screen time and related behaviors among preschoolers, while demographic factors like gender and socioeconomic status play a limited role. These findings emphasize the need for age-specific guidelines to encourage healthy device use in this high-risk age group (Csibi et al., 2021).

Keywords: preschoolers, smartphone use, screen time, behavioral responses, digital engagement

MINI–1D5

Smartphone distraction and academic anxiety: The mediating role of academic procrastination and the moderating role of time management disposition

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Background: Smartphones are now prominent in society, but little is known about how smartphone distraction could affect procrastination and anxiety in academic situations, and potential links to problematic smartphone use. The present study investigated the relationship between smartphone distraction, academic procrastination, academic anxiety, and time management disposition. *Methods:* A total of 474 college students were recruited to complete a survey comprising measures of smartphone distraction, academic procrastination, academic anxiety, and time management disposition. *Results:* smartphone distraction was positively and significantly correlated with academic anxiety ($r = 0.40$, $p < 0.001$) and academic procrastination ($r = 0.42$, $p < 0.001$). Academic procrastination mediated the relationship between smartphone distraction and academic anxiety. Time management disposition moderated the paths from academic procrastination and smartphone distraction to academic anxiety. *Conclusions:* The present study suggests that smartphone distraction could predict increased levels of academic procrastination, which could then lead to higher academic anxiety. However, the predicting effects in this mediation model could fluctuate across individuals with different time management dispositions. Implications for problematic smartphone use are discussed.

Keywords: smartphone distraction, social media, anxiety, procrastination

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MINI–1D6

Time distortion, psychological distress, and short video addiction: A structural equation modeling and network analysis study

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Short videos have gained increasing popularity worldwide due to their rich content and highly immersive experiences. This surge in popularity has also raised concerns about associated mental health issues, addictive behaviors and time distortion. Based on the Interaction of Person-Affect-Cognition-Execution (I-PACE) model and flow theory, this study used Structural Equation Modeling (SEM) and network analysis to explore the relationships between depression, anxiety, boredom proneness, short video addiction (SVA), flow, and time distortion. A questionnaire survey was conducted among Chinese short video users, and data from 525 user samples were analyzed. The results of SEM indicated that anxiety and boredom proneness had significant positive effects on SVA. Depression negatively predicted flow. SVA positively predicted flow, which in turn positively predicted time distortion. Time distortion had a significant positive effect on the perception of time passage (TP). Depression and SVA had significant indirect effects on time distortion through flow. Network analysis shows that anxiety and SVA were the most central nodes in the network, while SVA and flow served as important connecting variables. This study further investigated the associations of SVA and time distortion, providing insights and implications for the prevention of SVA and psychological distress.

Keywords: psychological distress, short video addiction, flow, time distortion

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MINI–1E

Women round table: Gender differences from a female perspective: Where to go?

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It seems to be evidence based by now that a gendered approach to research, prevention and treatment is highly relevant in female health issues; nevertheless, this is often neglected in mental health, preventing us from gaining a better understanding and being more responsive to female-specific aspects of behavioural addictions. Worldwide, studies and literature on Women and Behavioural Addictions are still scarce, even if improving , and the existing data are often not specific to women but inferred from mostly male samples, also because of paucity of women reached by the treatment clinics; nevertheless, more and more women are affected by pathological gambling and other non-substance related addictions, due to stronger and pervasive marketing offer and improvement in technologies, especially after covid pandemic. In any culture, women have a central role both in families and society, and their underestimated behavioral addictive behaviours, often related with past violence, may have a deep impact on their personal and family life as much as on society. One key issue linked with female invisibility in health, beyond violence and shame, is the great difficulty in finding appropriate treatment services who very rarely offer female-specific approaches, revisited diagnostic criteria. This brings to the great importance of new dedicated prevention programs. It is essential to have a dedicated transcultural network to gather data from all over the world to enrich our shared understanding of these issues from a female point of view, to compare, discuss and improve research and treatment for the women on whose behalf we are working.

Keywords: women, behavioral addictions, stigma, prevention

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MINI–2A1

Profiles of pornography use based on addictive mechanisms and psychopathological features

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Despite the diversity of studies on Problematic Pornography Use (PPU), few have used person-centered approaches to further explore the profiles of pornography users as well as their psychiatric features. *Aims:* This study aimed to explore the different user profiles based on the addictive dimensions of PPU and to characterize these profiles according to psychopathological variables such as depression, anxiety, attention deficit hyperactivity disorder (ADHD) and obsessive–compulsive disorder (OCD). *Method:* A sample of 1001 French adults (Mage = 25.56) were recruited via an online survey containing scales concerning psychopathological variables, cybersexual addiction and PPU. PPU was assessed with the French Version of Problematic Pornography Scale (Fr-PPCS-18). An Agglomerative Hierarchical Classification was performed on the bases of FR-PPCS-18. A student's t-test was used to observe PPU and psychopathological differences between profiles. *Results:* Findings showed three profiles of users, to know, Non-problema

Keywords: profile analysis, problematic pornography use, ADHD, OCD, addictive mechanisms

MINI–2A2

The role of emotion regulation and moral incongruence in psychological well-being: Insights from mixed-method research on problematic pornography use

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Background: This study explores the psychological well-being of individuals experiencing problematic pornography use (PPU), focusing on the roles of emotion regulation and moral incongruence. The Pornography Problems Due to Moral Incongruence Model was used as a guiding framework. *Method:* An exploratory sequential mixed-methods design was employed. The qualitative phase involved in-depth interviews with three participants, analyzed using Giorgi's descriptive phenomenological method, resulting in six key components of PPU experience. In the quantitative phase, a 13-item Problematic Porn Use Scale (PPUS) and a 4-item Moral Disapproval of Pornography Scale (MDPS) were developed. Structural equation modeling (SEM) was conducted on survey data from 398 adults (143 women, 249

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men, 3 non-binary, 3 undisclosed). *Results:* SEM results revealed that emotion regulation self-efficacy influenced porn use, PPU, and psychological well-being when analyzing duration of use but not frequency. Moral disapproval significantly predicted PPU, which in turn affected psychological well-being. Gender, age, education, and relationship status were significant predictors of PPU, with higher distress observed in younger, single males with lower education levels. *Conclusions:* The findings provide partial validation for the Pornography Problems Due to Moral Incongruence Model and underscore the interplay between emotion regulation, moral disapproval, and psychological well-being in PPU. These insights may inform targeted interventions for individuals struggling with PPU

Keywords: problematic pornography use, moral incongruence, psychological well-being, mixed-methods research

MINI–2A3

Development and initial validation of a scale to assess the desire to engage in unconventional sexual practices as a result of pornography consumption: The «Desire for Unconventional Sexual Practices Scale (DUSPS)»

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Background and aims: In recent years, an increasing number of studies have suggested that pornography consumption may contribute to the development of sexual desire for practices that are uncommon offline, yet overrepresented in mainstream online sexual content (e.g., anal sex, face ejaculations, orgies, bondage, sexual violence, etc.). To empirically verify the potential association between pornography use and the desire to engage in these unconventional sexual practices, it is essential to have psychometrically sound instruments able to cover the wide range of uncommon sexual practices often depicted in pornography. However, there is a dearth of published literature on psychometric tools designed specifically for this purpose, and the few available are often limited (e.g., failing to encompass the diversity of behaviors commonly portrayed in pornographic content). To address this gap, we developed the «Desire for Unconventional Sexual Practices Scale (DUSPS)», a scale measuring the desire to engage in a broad range of unusual sexual practices. The present study reports its preliminary factorial structure and psychometric properties. *Method:* A total of 2,805 participants (1,118 males) completed the DUSPS, along with other ad hoc scales and instruments designed to assess pornography use (e.g., frequency of consumption) and problematic pornography use (PPU). *Results:* Exploratory factor analysis (EFA) yielded a five-factor structure (including factors assessing rough sexual practices, practices involving domination and submission, or sexual coercion, among others), explaining 58.58% of the variance in the DUSPS. This factorial structure was then confirmed through confirmatory factor analysis ($\chi^2(208) = 4{,}364.93$; $\chi^2/df = 20.99$; RMSEA = 0.084; CFI = 0.915; IFI = 0.915). Measurement invariance (config-

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ural, metric, and scalar) was supported across age, sex, and sexual orientation. The total score demonstrated high reliability, with a Cronbach's alpha value of .91. Finally, criterion-related validity was assessed by examining the correlation between the DUSPS and pornography consumption frequency, revealing a positive and significant association ($r = 0.21$, $p < .001$). *Conclusions:* These results, along with the lack of existing questionnaires to assess this construct, support the use of the DUSPS for evaluating the desire to engage in sexual practices commonly depicted in pornography. This tool may be useful in studies exploring the psychological, behavioral, and sexual correlates of pornography exposure.

Keywords: pornography consumption, unconventional sexual practices, psychometric validation

MINI–2A4

Treatment of stalking perpetrators following police recommendation

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Despite the enactment of the Anti-Stalking Act in 2000 in Japan, there have been numerous cases of stalking, some of them resulting in murder of the victims. As a further preventive measure, since 2015 the police have been connecting stalkers with counselors or psychiatric institutions and encouraging them to receive treatment. Our mental clinic has been accepting stalking cases since 2015 at the request of the Hokkaido Prefectural Police. From June 2015 to December 2024, 104 stalking perpetrators were recommended by the Hokkaido Police to receive psychological treatment and connected with our mental clinic. In some cases, the risk of continued stalking has already disappeared due to the intervention by the police, but some perpetrators still feel obsessively attached to the victim or have alcohol problems, delusions, paraphilia or other psychiatric symptoms. The treatment consists mainly of counseling by doctors or clinical psychologists. If their obsession with the victim persists and the stalkers themselves have problems with paraphilia or addiction such as alcohol, then CRCT (Conditioned Reflex Control Technique) therapy is given administered.

Keywords: stalking, recidivism prevention measure, paraphilia, conditioned reflex control technique

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MINI–2A5

Impulsivity and compulsivity in gaming disorder and compulsive sexual behavior disorder in a Polish adult sample

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Background: Previous research have investigated the roles of impulsivity and compulsivity for behavioral addictions, including gaming disorder and compulsive sexual behavior disorder (along with problematic pornograhy use). We assess both impulsivity and compulsivity and show their relations with both gaming disorder and compulsive sexual behavior disorder symptoms. *Method:* The presented work is based on self-report research on Polish adult participants, assessing both impulsivity and compulsivity, as well as gaming disorder and compulsive sexual behavior disorder. Other factors, including those related to sociodemographic profile of the participants, are also analyzed. The presented research includes proportional sample for Polish adult citizens (n=2041). *Results:* The presented results include multivariable statistical models describing the relations of impulsivity and compulsivity to gaming disorder and compulsive sexual behavior disorder. Additionally, gaming disorder and compuslive sexual behavior disorder symptom severities and prevalence are discussed. *Conclusions:* The results show a pattern of significant relations between – on one side – impulsivity and compulsivity, and – on the other side – gaming disorder as well as compulsive sexual behavior disorder, which has implications for further research, as well as therapy and diagnosis of the analyzed symptom groups.

Keywords: gaming disorder, compulsive sexual behavior disorder, problematic pornography use, impulsivity, compulsivity

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MINI–2B1

Problem gambling in Brazil: Prevalence, patterns, and emerging challenges

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Background: The purpose of this study was to investigate the prevalence of gambling and gambling problems in Brazil, providing insights into demographic, regional, and behavioral patterns. *Method:* Data were collected through a nationally representative household survey assessing gambling behavior and its consequences among the Brazilian population. The analysis included adults and adolescents from all regions of the country, focusing on lifetime gambling participation, activity in the past year, and prevalence of gambling problems. *Results:* A total of 25.9% of Brazilians reported having gambled at some point in their lives, with 68.0% of them engaging in gambling in the past year (17.6% of the total population, approximately 28 million people). Among those who gambled in the past year, the most common activities included lottery (71.3%), betting platforms (32.1%), and "animal game" (28.9%). Regarding gambling problems, 0.8% of the general population were classified as problem gamblers, and an additional 6.5% as at-risk gamblers. Problem gambling was more prevalent among men (1.2%) compared to women (0.4%). Among those who gambled in the past year, 38.6% were classified as at-risk or problem gamblers, with significant variations by gambling type – 66.8% of betting platform users compared to 31.8% for other forms of gambling. Regional differences were observed, with the highest prevalence of at-risk/problem gambling in the Northeast (52.3% of gamblers) and the lowest in the South (28.0% of gamblers). *Conclusions:* Gambling participation is now widespread in Brazil, with a notable proportion of the population experiencing gambling-related problems. These findings highlight the need for targeted prevention and intervention strategies, particularly among vulnerable groups such as betting platform users and residents of regions with higher prevalence rates.

Keywords: problem gambling, sport betting, Brazil

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MINI–2B2

Problem sports betting among French young people: A methodology to better understand their trajectories, incentives and motivations

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Background: French legislation bans the sale of gambling services to minors, whether at retail outlets or online. However, in 2022, one in ten 17-year-olds (11.6%) had made at least one sports bet in the previous 12 months (Eroukmanoff, 2023). Sports bettors with problem gambling are significantly more likely to be motivated by the excitement generated by gambling, the desire for escape, the rewarding and socialising aspects of gambling, and the prospect of financial gain (Spurrier and Blaszczynski, 2014; Russell et al., 2019). However, the motivations and incentives for sports betting among French minors and young people are still poorly understood, as are the pathways leading to problem gambling. *Method*: The study 'Problem Sports Betting among Young People: Trajectories, Incentives and Motivations' (PProJeTIM) aims at gaining a better understanding of the intrinsic factors and motivations and environmental incentives involved in sports betting among minors and young adults (aged 15 to 25) in France. Based on social science methods, PProJeTIM is built on two complementary analytical approaches: – fifty individual semi-directive interviews, on the trajectories and motivations linked to problematic sports betting as well as commitment strategies in gambling; – three focus groups on environmental betting incentives, including marketing techniques. *Results:* The OFDT will present the methodological choices made for the implementation of this ongoing qualitative study. *Conclusion*: PProJeTIM will help to draw up recommendations for preventing risks associated with gambling among adolescents and to refine the questioning in general population surveys.

Keywords: problem sport betting, youth, psychosocial motivations, incentives, marketing

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MINI–2B3

From casual to pathological: Characterizing sports betting in Germany

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Background: With advertising expenses reaching hundreds of millions of euros and the legalization of online sports betting under the "State Treaty on Gambling 2021", sports betting has become omnipresent in Germany, rapidly gaining popularity (Schütze et al., 2023). Despite this regulatory framework, 48.7% of sports bettors are considered risky or pathological gamblers, according to the DSM-5, and illegal sports betting continues to grow (Buth et al., 2024). Current research lacks comprehensive data on protective and risk factors differentiating casual from problematic bettors (Valenciano-Mendoza et al., 2023). *Method:* An online survey targeting a diverse German adult sample, including both sports bettors and non-bettors, will be distributed via various media channels until May 2025. Data will be collected on general psychometric properties, comorbidities, sport-specific betting behavior, and personal opinions on advertisement and state regulations. Multivariate statistical methods will be used to identify risk factors and behavioral patterns distinguishing problematic bettors from casual- and non-bettors. *Results:* Due to cultural preferences in Germany, we hypothesize that football will be the primary sport with betting characteristics differing across sports. Demographic factors, comorbidities, and specific betting patterns (e.g., use of illegal platforms, variety of sports bet on) are expected to correlate with pathological gambling behavior. Furthermore, the perception and assessment of state regulations and advertisement are expected to differ significantly between bettors and non-bettors. *Conclusions:* To address questions about preventive measurements and specific treatment needs, it is crucial to understand risk and protective factors specific to sports betting. Limited data is available internationally, with even less focusing on Germany. This study aims to characterize German sports bettors to enable targeted interventions, inform evidence-based policy decisions and lay the groundwork for future studies, ultimately contributing to harm reduction in sports betting.

Keywords: sports betting, gambling disorder, risk factors

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MINI–2B4

Associations between gambling game types and craving in a Swedish sample of gamblers

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Background: The gambling landscape has undergone substantial changes in recent years witnessing an unprecedented surge in gambling opportunities with highly accessible immediate rewards which increase their addictive potential and may evoke stronger gambling-related cravings. Craving has been identified as a central component of addiction disorders, including behavioral addictions such as gambling. However, the extent to which specific types of gambling games influence craving remains unclear. This study aims to examine the relationship between different types of gambling games and craving, with a particular focus on identifying the games associated with higher levels of craving.
*Methods:*The sample (n = 1053) was recruited from a Swedish web-panel (54.9% male, aged 18–84 years, mean age = 48.42, SD = 17.29). The inclusion criterion for participation was having gambled for money within the past 12 months. The participants were asked to describe whether they played online or offline, the types of games they preferred, and how frequently they played these games. They completed the Gambling Craving Scale and Diagnostic Screen for Gambling Problems. A multiple regression analysis was conducted to examine which type of game was most associated with craving while controlling for gambling problem severity, whether they gambled online or offline, gender, and age. *Results:* When controlling for gambling severity, age, gambling mode (offline or online), and gender, the games most strongly associated with craving were sports betting (βstd = .095, p <.001) poker (βstd =.094, p <.001) and lotteries (βstd = .048, p = .042). *Conclusions:*These findings highlight that certain games, such as sports betting, poker, and lotteries, elicit higher levels of craving compared to other games. These results offer valuable insights for public health agencies to design targeted interventions and prevention strategies tailored to specific gambling activities.

Keywords: craving, gamblers, gambling game types

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MINI–2B5

Online gambling behaviour and trajectories of women and men gamblers: A longitudinal study based on French gambling tracking data

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Background: Women represent a third of all gamblers and tend to exhibit distinct gambling patterns compared to men. However, existing longitudinal studies based on gambling tracking data have not specifically investigated these gender differences. Given that men are more prevalent among gamblers, women's behaviours may be underrepresented or diluted in broader analyses. *Aims:* We aimed to analyse the gambling trajectories of French women and men gamblers and compare these trajectories to identify gender-specific gambling behaviours. *Methods:* Gambling tracking data were collected from two sources: the French National Online Gambling Authority (ANJ), which oversees poker, horse race betting, and sports betting, and the French national lottery operator, Française des Jeux (FDJ), which manages online lotteries. The study includes two representative samples of 40,000 gamblers each from ANJ and FDJ, with tracking data spanning from January 2019 to February 2020, prior to the impact of COVID-19 on gambling activities. Latent Class Mixed Models (LCMM) were applied to identify distinct gambling trajectories for each gambling type and indicator (number of gambling days, money wagered, deposits, chasing and involvement by weeks), followed by Latent Class Analysis (LCA) to categorize gamblers with similar trajectories. *Findings:* While the results are still pending, we anticipate notable differences in gambling trajectories

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between women and men. The class analysis will help reveal specific gambling profiles that vary by gender. *Conclusions*: Identifying gender-based differences in gambling behaviour is crucial for tailoring regulations to better meet gamblers' needs. Furthermore, if significant variations in behaviour are highlighted, this could influence future research methodologies, emphasizing the importance of integrating gender as a key factor in gambling studies.

Keywords: biostatistiques, online gambling tracking data, gender, trajectories

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MINI–2C1

Attentional bias in problematic facebook use: Insights from Steady-State Visual Evoked Potentials (SSVEPs)

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The present study investigates the modulation of steady-state visual evoked potentials (SSVEPs) elicited by Facebook-related and neutral oddball stimuli as a function of problematic Facebook use. To examine how excessive engagement with Facebook impacts attentional allocation and neural processing, participants completed the Bergen Facebook Addiction Scale (BFAS) to assess problematic Facebook use. Participants were exposed to a visual oddball paradigm consisting of rapidly flickering stimuli with two categories: neutral images (e.g., geometric patterns) and Facebook-related images (e.g., logos and interface elements). Both types of stimuli were presented at distinct temporal frequencies, enabling frequency-specific isolation of SSVEP responses. Neural activity was recorded using EEG, and SSVEP amplitudes were analyzed to determine attentional bias toward Facebook-related stimuli. Results and methodological advantages of SSVEPs over traditional EEG measures in addiction research will be discussed.

Keywords: Steady-State Visual Evoked Potentials; attentional bias, problematic Facebook use, incentive sensitization theory

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MINI–2C2

Identifying problematic media use and online victimization in adolescents undergoing intensive psychiatric care

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Background: With increasing phone and device use in youth, social media has become a regular part of adolescent's lives and shapes both their social interactions and development. Previous research with nonclinical adolescent samples has identified positive and negative mental health outcomes of social media use. Few studies have examined social media use characteristics in adolescents who are receiving mental health services.*Method*: This descriptive study was conducted online with a sample of 97 adolescents (ages 13-18, 53.6% female) receiving partial hospitalization care at a large psychiatric hospital in the Midwest US and examined self-reported problematic media use patterns, experiences of cybervictimization and sextortion, and correlates with their physical activity and loneliness. *Results*: 25.8% of the participants reported experiencing cybervictimization at least once over the past month. 17.5% reported ever experiencing sextortion. Greater problematic use and addictive phone use were correlated with lower physical activity and higher feelings of loneliness. Participants that reported more frequent cybervictimization also reported higher amounts of addictive phone use, problematic media use, cyberbullying others, and loneliness. A subsample of 51 participants were asked additional questions if they endorsed experiencing cybervictimization or sextortion including who they had gone to for support. Most of the youth who indicated having had a cybervictimization experience identified that they went to a friend for support, but few endorsed telling a mental health clinician or adult about it. Even fewer participants disclosed their experience of sextortion. In the same subsample, participants were also asked about potential barriers to talking about cybervictimization in the future and many identified fears of making the problem worse (68.6%), getting phone or media taken away (62.7%), feeling embarrassed (60.8%), and concern that they would get in trouble (56.9%). *Conclusion*: Adolescents in this study identified high rates of harmful online experiences. For the subsample that identified having these, few participants endorsed disclosing these events to adults and those who did disclose were more likely to do so with peers. Screening protocols and interventions are recommended and needed to identify online victimization, address barriers to disclosing these events, and to treat adolescents who have had these harmful experiences.

Keywords: problematic media use, online victimization, mental health

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MINI–2C3

Shedding light on the role of the read-receipt function in problematic WhatsApp use

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The messenger app WhatsApp is one of the most popular and widely used applications worldwide, connecting millions of users daily across different regions. Used by a significant portion of the global population, it has profoundly revolutionized and transformed the way interpersonal communication is conducted and experienced over the past 15 years. A critical design element of WhatsApp represents the read-receipt function said to cause social pressure (and via this more engagement with WhatsApp). Against this background, the aim of this study is to investigate associations between (not) using the read-receipt function, experienced stress, well-being and tendencies towards problematic WhatsApp use (using an addiction framework). Finally, associations with personality will be presented. Of note, data from more than N = 3000 study participants from an online study will be investigated. The insights derived from the present study will provide an empirical basis for a better understanding of a critical design element of the WhatsApp messenger in the context of digital well-being research.

Keywords: WhatsApp, messenger services, personality

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MINI–2C4

Managing youth social media use: Initial impacts of an online training as reported by mental health clinicians

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Background: There are identified gaps in clinical knowledge of social media risks and benefits, assessment tools, and available resources to support youth using social media (Domoff et al., under review). To address these gaps, training was developed to provide education on how social media may impact youth mental health, strategies that adult supports can use to screen for problematic or risky media use, and identification of resources to help promote healthy media use.*Method:* 97 participants attended a free, one-hour synchronous virtual training. Participants included social workers (72%, n=67), nurses (9%, n=8), psychologists (7%, n=6), and counselors (7%, n=6). Upon completion of the webinar, 93 participants (95.9%) completed a survey on their confidence levels prior to and after receiving training on items such as how social media can be harmful; ability to identify times when adolescents shouldn't be using social media; ability to identify how youth can benefit from social media use. Additionally, respondents rated their likelihood of using the skills and strategies identified in the training.*Results:* Participants reported increased confidence in: (1) knowing how social media can be harmful (increased from 52% to 83%); (2) ability to identify when adolescents should not use social media (increased from 60% to 90%); (3) identification of benefits of social media for youth (increased from 56% to 90%); (4) identification of cyberbullying increased from (74% to 91%); (5) helping youth develop healthy social media use strategies (increased from 44% to 91%). At least 80% of all respondents indicated that they would use the skills and strategies learned. *Conclusion:* A brief training may increase clinicians' knowledge, confidence, and skill utilization when promoting healthy social media use in youth. Future research should 1) examine if training impacts clinical practice and 2) measure clinicians' attitudes, knowledge, and competency to implement skills and strategies into clinical practice.

Keywords: social media, mental health, training

References:

Domoff, S. E., Armstrong, S. B., Rollings, H., Mancuso, A., & Janney, C. A. (under review). Social Media and Adolescent Mental Health: Perspectives of Clinicians on the Potential Impact of Social Media on Social and Emotional Wellbeing, Training Needs, and Screening Recommendations. *Frontiers in Psychiatry Adolescent and Young Adult Psychiatry.*

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MINI–2C5

The development of AI health advisor for practitioners

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The rapid rise of digital technologies has brought not only opportunities but also new challenges in the realm of mental health, including problematic and addictive behaviors linked to internet use, social networking sites, digital gaming and other forms of digital engagement. In response, we are developing an innovative AI-powered health advisor designed to support practitioners in the diagnosis and intervention of online behavioral addictions. This AI assistant, or "Avatar", will integrate artificial intelligence methods with expert knowledge from addictology, psychology, and related clinical or advisory disciplines. A key feature of the presumed AI advisor is its ability to adapt to dynamically changing trends in non-substance dependencies, providing practitioners with real-time updates on prevalence data and best practices. Additionally, the tool is intended to support preventive strategies by identifying at-risk populations and offering tailored approaches to intervention. Although still under development, the Avatar is anticipated to bridge the gap between AI technology and clinical practice, representing a significant advancement in combating digital addiction and improving mental health outcomes. This presentation will outline the conceptual framework, anticipated functionalities, and the broader potential of this AI-driven solution to enhance evidence-based care in a rapidly changing field. *Funding:* This contribution was created as part of the project "Beneficent Multi-Agent AI Avatar in a Small Democratic Society", supported by the Technology Agency of the Czech Republic (TAČR), registration no. TQ12000040.

Keywords: AI health advisor, healthcare, support, diagnostics, prevention, intervention, digital addictions, problematic internet use, Artificial Intelligence

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MINI–2C6

The effectiveness of positive psychology-based psychoeducation in reducing digital technology addiction among university students

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This study examines the effects of a psychoeducational program titled Positive Psychology and University Life Preparation, which is designed to assist first-year university students in adjusting to academic life and addressing the challenges posed by digital technology addiction. The program, which is based on the principles of positive psychology, is intended to enhance psychological well-being, resilience, and adaptability by encouraging healthier habits and a balanced use of digital technology. There will be two significant points at which the data will be collected: at the beginning and the end of the academic year. To measure key factors such as psychological well-being, social connectedness, resilience, and patterns of digital technology use, standard instruments will be utilized, including UCLA Loneliness Scale, Life Satisfaction Scale, Adult Resilience Scale, and Digital Addictions Scale. In this study, a strong focus is placed on understanding the relationship between digital technology addiction and students' academic adjustment. With the integration of evidence-based interventions, the psychoeducation program seeks to mitigate the adverse effects of excessive digital engagement while enhancing students' capabilities to thrive in an increasingly digital educational environment. The anticipated findings are expected to inform the development of innovative psychoeducational strategies that effectively address both psychological well-being and digital technology addiction. This research underscores the value of positive psychology frameworks in fostering healthier and more adaptive academic environments in the digital age.

Keywords: digital addiction, personality, loneliness, life satisfaction, resilience

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MINI–2D1

Testing the associations of social axioms with addiction-like eating and drinking

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*Background: S*ocial axioms, which refers to the generalized beliefs about oneself, one's environment, and one's spirituality, have been shown to influence individuals' attitudes towards life and social behaviors. Social cynicism, one of the major five factors of social axioms, was also demonstrated as a risk factor of Internet gaming disorder and gambling disorder. The current study aims to test whether the risk effect of social cynicism can be replicated in other addictive behaviors, i.e., addiction-like eating as well as drinking. The potential protective effects of gratitude against addictive behaviors were also explored.*Method:* Using a convenience sampling method, an online questionnaire survey was conducted in January 2024. A total of 1448 valid responses from a sample of Chinese adults (Mage = 32.46 years, SD = 7.72; 50% females) were collected.*Results:* Social cynicism was positively correlated to both addiction-like eating and alcohol consumption. Moreover, gratitude was negatively correlated with addiction-like eating. Significant interaction effects of social cynicism and gratitude on both addiction-like eating and alcohol consumption were also revealed. *Conclusions:* The social cynicism factor of social axioms was found as a consistent risk factor of addictive behaviors, including addiction-like eating and alcohol consumption, while the effects of gratitude, a well-known positive psychological construct, are relatively complex. Further cross-cultural and experimental investigations aiming to unveil underlying mechanisms are called for.

Keywords: addiction-like eating, social beliefs, gratitude

MINI–2D2

From snacks to screens: The links between food addiction, social media addiction, and gaming disorder in Czech youth

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The presented research examines the relationships between food addiction, social media addiction, and gaming disorder in Czech adolescents aged 15–19 years. Food addiction, social media addiction, and gaming disorder are recognized as behavioural issues that concern our society and that may negatively impact well-being of digital technology users. Extensive

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research concerning these topics has been conducted in recent years, but research on relationships between them remains limited. This study aims to examine the co-occurrence of these behavioural addictions in Czech adolescents. Data were collected through self-reported questionnaires administered in secondary schools (ISCED 3 - grammar schools, vocational secondary schools with graduation examinations). The total sample consisted of 609 respondents, including 292 girls and 317 boys, with a mean age of 16.43 years (SD = ±0,96). Exploring relationships between these three behavioural addictions can contribute to a better understanding of their similarities and differences, especially in the adolescent population. Given the increasing interest and concern in technology use and eating behaviours, these findings can offer insights for not only researchers but also professionals working with adolescents. Funding: The funding for the present presentation was provided by the Czech Ministry of Education, Youth and Sports for specific research (The Impact of Internet Content and Personality Traits on Eating Habits and Eating Disorders among Czech Adolescents and Young Adults, IGA_FF_2024_009). The authors declare that they have no conflict of interest.

Keywords: food addiction, social media addiction, gaming disorder, adolescents

MINI–2D3

Neurocognitive alterations and emotional reactivity among patients with food addiction

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Background: Food addiction (FA) is defined as compulsive eating that provides a sense of pleasure and alleviates internal discomfort. It is characterized by loss of control over the behavior and persistence despite negative consequences. FA is not consensually recognized as an addictive disorder, partly due to the lack of evidence for common underlying processes in the scientific literature. Therefore, it is necessary to conduct studies on the mechanisms involved in FA, especially regarding the neurocognitive alterations often observed in addictions. *Aims:* This study aimed to characterize neurocognitive alterations in executive functioning and emotional reactivity in patients with FA, in comparison with matched healthy controls. Methods: Sociodemographic and addiction-related data were collected from 60 participants (30 patients with FA and 30 healthy controls). FA was assessed using the Yale Food Addiction Scale (YFAS 2.0). A neuropsychological battery of tests was administered to evaluate executive functions such as cognitive flexibility, inhibition, and attention. Emotional reactivity to food-related and emotional valenced images was measured using facial EMG (corrugator supercilii and zygomaticus major muscles), heart interbeat intervals, and skin conductance. ANOVA models and chi-square tests were used to compare patients with FA to

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healthy controls. *Results:* Although the results are not yet available, we anticipate specific neurocognitive profiles in patients with FA compared to controls. More specifically, we expect impairments in executive functions and heightened emotional reactivity to food-related images in the FA group.*Conclusions:* Characterizing the neurocognitive profiles in patients with FA could support its recognition as an addictive disorder and improve its diagnosis, prevention and treatment. In particular, this findings could inform the development of targeted therapies addressing the neurocognitive alterations observed in FA.

Keywords: food addiction, neurocognition, alteration

MINI–2D4

Untangling the web: How childhood maltreatment, mental distress and personality functioning contribute to eating disorder symptoms

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Background. Childhood maltreatment is a well-established risk factor for eating disorder symptoms; however, the other processes underlying this relationship remain poorly understood. Research suggests that mental distress (e.g., anxiety and depression) and personality functioning may play key roles in explaining this association. However, their independent contributions have not been thoroughly examined. This study aimed to explore the incremental contributions of mental distress and personality functioning to eating disorder symptoms, while controlling for gender and levels of childhood maltreatment. *Methods*. A total of 800 participants aged 18–30 years (M = 24.46, SD = 3.77; 48.75% female) from a demographically representative sample in Lithuania completed questionnaires assessing childhood maltreatment (Adverse Childhood Experiences Questionnaire), eating disorder symptoms (EDE-Q 6.0), mental distress (PHQ-4), and personality functioning (LPFS-BF 2.0). Hierarchical regression analysis was performed to evaluate the independent effects of mental distress and personality functioning. *Results.* Hierarchical regression analyses demonstrated that both mental distress and personality functioning independently predicted eating disorder symptoms beyond the effects of childhood maltreatment and gender. In Model 1, adding Personality functioning, when controlling for distress additionally, significantly improved the prediction ($\Delta R^2 = 0.022$, $p < 0.001$). In Model 2, adding mental distress similarly enhanced the model ($\Delta R^2 = 0.042$, $p < 0.001$) beyond and above maltreatment, gender, and personality functioning. Both models explained 21.9%. of variance in eating disorder symptoms. *Conclusion.* Both mental distress and personality functioning independently contribute to the relationship between childhood maltreatment and eating disorder symptoms, with mental distress showing a slightly stronger effect. These findings emphasize the importance of targeted interventions that address both emotional and personality-related factors in individuals with a history of childhood maltreatment.

Keywords: eating disorders, personality functioning, mental distress

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MINI–2E1

Relationship between social skills and addiction in children

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The increasing negative impact of screen usage on social skills necessitates a more detailed investigation. In this context, this study aims to examine the relationship between screen addiction levels and social skills in children aged 4 to 11 years. The study sample consists of 408 children selected using a convenience sampling method. Data collection tools were the Personal Information Form, Problematic Media Use Scale, and Social Skills Assessment Scale. Various statistical methods were employed for data analysis. A t-test was used to examine the differences between the two groups, while ANOVA was applied to analyze differences across multiple groups. The relationships between the scales were evaluated using the Pearson Correlation test, and a multiple linear regression analysis was conducted to measure the effect of independent variables on the dependent variable. The level of statistical significance was set at $p<0.05$. The analysis revealed that boys had higher screen addiction levels compared to girls. On the other hand, in terms of social skills, girls demonstrated significantly higher social skill levels than boys. Additionally, a significant negative correlation was observed between screen addiction and social skills. This finding indicates that increased screen usage negatively affects children's social skills. The results of the study emphasize the need for awareness regarding screen usage and the importance of implementing practices to support the development of social skills. Interventions aimed at reducing screen addiction among children could make a significant contribution to improving their social skills.

Keywords: screen addiction, social skills, children

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MINI–2E2

How do job characteristics influence gambling practice and gambling disorder among adults ? A systematic review

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Background: Gambling disorder has been linked to various individual, psychological, and occupational factors. Emerging evidence suggests potential associations between job characteristics and gambling disorder. Socioeconomic precarity, boredom and impulsivity may further modulate these relationships, exacerbating vulnerabilities. *Objective:* This systematic review aims to evaluate the association between job characteristics (e.g., downtimes, long working hours, shift work) and gambling practice and/or gambling disorder. *Methods:* Following PRISMA guidelines, we will conduct a comprehensive search of peer-reviewed articles across databases such as PubMed and PsycINFO. Studies inclusion criteria were: English-written qualitative and quantitative peer-reviewed original research studies (i.e. randomized controlled trials (RCTs), pilot studies, observational studies and case reports) investigating the association between job characteristics and gambling practice and/or gambling disorder . Quality assessment tools will be applied to evaluate study validity, and findings will be synthesized to map the potential pathways linking these variables. Additionally, the review explores the role of socioeconomic precarity, boredom and impulsivity in the relation between gambling and job characteristics. *Hypothesis:* We hypothesize that irregular work rhythm, variable workload and frequent downtimes are positively associated with gambling behavior and gambling disorder, with socioeconomic precarity, boredom and impulsivity playing a part in this relation. *Results*: Analysis is still ongoing and will be presented in a future article. *Expected Outcomes*: This review will identify occupational key factors and interactions underlying gambling practice and gambling disorder, providing insights to inform targeted interventions and workplace policies to mitigate risks.

Keywords: gambling, gambling disorder, job characteristics, systematic review

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MINI–2E3

Hyper-pareto consumption in online gambling products: Stability over time and links to self-exclusion

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Background: Past research has shown that online gambling is highly 'concentrated' among a small number of high-intensity gamblers. This concentration can be operationalized as a Pareto estimate, i.e. the percentage of gambling activity attributable to the top 20% of consumers. In our previous work examining a 1-year dataset from British Columbia, Canada, we found that the top 20% of gamblers accounted for 92% of bets and 90% of losses (Deng et al., 2021). The current study had three objectives: 1) to calculate Pareto estimates for different gambling product categories; 2) to analyze their stability over several years; 3) to examine rates of Voluntary Self-Exclusion (VSE) in the top 20% subset, as an indicator of likely gambling problems. *Methods:* This project reports the first analyses from a 7-year dataset (2013 to 2019) from PlayNow.com, the provincial gambling website for BC, Canada. The dataset includes nearly 5 billion bets from over 100,000 customers. Pareto estimates were calculated to indicate concentration for 4 product categories (slots, table games, video poker, and probability games). The percentage of individuals with a VSE record was calculated for the top 20% and remaining 80%, in each product category. *Results:* The findings indicate that, across all products and years, Pareto estimates exceeded the conventional 20/80 ratio ('hyper-Pareto' estimates). Estimates varied by product category, and remained relatively stable; online slots consistently showed the lowest concentrations, whereas video poker was consistently highest. By contrast, the top 20% of slots gamblers showed considerably higher rates of VSE (2-3 times the rate in the remaining 80%), whereas the top 20% of video poker gamblers showed only 1-1.5 times higher VSE rates. *Conclusion*: These results are interpreted in relation to a hypothesis that hyper-Pareto estimates may indicate the 'addictiveness' of a gambling product. Our data present some important challenges to this hypothesis.

Keywords: online gambling, self-exclusion, big data, concentrated consumption

References:

Deng, X., Lesch, T., & Clark, L. (2021). Pareto distributions in online casino gambling: Sensitivity to timeframe and associations with self exclusion. *Addictive Behaviors, 120,* 106968. https://doi.org/10.1016/j.addbeh.2021.106968

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MINI–2F1

Validating the Bergen Shopping Addiction Scale in a sample diagnosed with compulsive buying-shopping disorder

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Background: The Bergen Shopping Addiction Scale (BSAS; Andreassen et al., 2015) is a unidimensional self-report tool that assesses shopping addiction in line with the components model of addiction (Griffiths, 2005). The current study aimed to validate this screening tool in a sample diagnosed with compulsive buying-shopping disorder (CBSD) and find clinical thresholds to screen for individuals with clinical levels of compulsive shopping. *Methods:* Our sample included 174 participants recruited from the community, with 71 diagnosed with CBSD (70% also had comorbid hoarding disorder), 58 healthy controls without any significant mental health conditions, and 45 diagnosed with hoarding disorder (most with excessive acquiring, but did not meet criteria for CBSD). All participants completed the BSAS. *Results:* An ANOVA showed that there were significant differences between the three groups such that the CBSD group had the highest BSAS scores, followed by the hoarding disorder group, and then followed by healthy controls. We conducted an ROC analysis using the CBSD group and the healthy controls combined with the hoarding disorder group. AUC was 0.937, indicating excellent discrimination between CBSD and non-CBSD groups using the BSAS. Youden's index (0.745) suggested a clinical threshold of 12 (sensitivity = 93.0%, specificity = 81.6%). *Discussion:* Our finding contrasts with the proposed clinical threshold of 24 (Zarate et al., 2022), which requires respondents to endorse all components to meet criteria for shopping addiction. We found that BSAS scores of 12 or above indicate that the respondent's shopping behaviour is likely associated with distress and functional impairment. This may be important for future research using the BSAS as a screening tool for CBSD.

Keywords: compulsive buying, hoarding, scale validation, outcome measurement, self-report questionnaire

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MINI–2F2

Compulsive buying behaviors and executive function among young adults: A network analysis

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This study aimed to explore the relationship between executive function and compulsive buying behaviors from a network perspective. A total of 550 participants (51.66% were male) completed the Richmond Compulsive Buying Scale (RCBS) and the Adult Executive Function Self-Rating Scale (ADEXI). Network analysis was conducted using R to identify the central and bridging nodes in the network of executive function and compulsive buying behaviors, and to compare the networks between men and women. The results showed that "others' perceived compulsive buying" (RCBS2) had the highest strength in the network (strength = 1.33), which was the most central node. "More lively than peers" (ADEXI14) of the inhibition subscale in the ADEXI had the highest bridge strength (bridge strength = 0.44), which was most strongly connected to "self perceived compulsive buying" (RCBS4) (part r = 0.15). "Disorganized buying" (RCBS1) had the second highest bridge strength (bridge strength = 0.31), which was most strongly connected to "language comprehension execution" (ADEXI11) (part r = 0.09). Network comparison test indicated that there was no significant difference in the network structures across different genders ($p > 0.05$). The evaluations of others on compulsive buying and behavioral inhibition compared with peers appeared to be important in the network. The present study enhances the understanding of the relationship between executive function and compulsive buying behaviors at the item level.

Keywords: compulsive buying behaviors, executive function, network analysis

MINI–2F3

Understanding the experience of the love addict: Text analysis of clinical transcripts

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Background: Since the inclusion of Love Addiction (LA) in psychological literature, several studies have focused on understanding LA. In an attempt to investigate the constructs associated with love addiction and develop appropriate instruments for its measurement, a gap remains in capturing the subjective experience of the love addict. The aim of the present study was to investigate the topic as reported by individuals with love addiction. *Method:* A thematic analysis was conducted on 33 patients who were administered a semi-structured

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interview, the Love Addiction Interview (LAI), to elicit their experiences with their own romantic relationships. *Results*: We identified four thematic clusters that represent the experiences of love addicts: "Emotional Change," "Relationship History," "Problematic," and "Expectations." These were categorized into three factors: "Path," "Relationship Building," and "Work on the Relational Self." *Conclusion:* This study represents a preliminary first step in the validation of the semi-structured LAI. It also provides a more nuanced understanding of the phenomenon under investigation. Future research could examine the qualitative data that emerged alongside quantitative data obtained from the administration of ad hoc self-reports.

Keywords: love addiction, texual analysis, clinical interview

MINI–2F4

Love Addiction in the attachment view: A systematic review and meta-analysis

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Background: The field of Love Addiction (LA) is still far from achieving a clear conceptualization. However, the scientific community agrees on recognizing LA as a behavioral addiction. The nature of the relationship with the beloved person may not yet be fully understood within this framework. The aim of the current study was to integrate the behavioral addiction model with attachment theory to address various conceptual issues. *Method:* We systematically searched five databases to identify studies examining the relationship between LA and attachment dimensions, published until September 23, 2024. *Results:* We identified 27 studies that investigated LA and attachment dimensions, of which 15 were included in the meta-analysis. Analyses of heterogeneity, effect dispersion, and moderators were conducted. A significant and positive association was found between LA and anxious attachment ($r = 0.39$, $p < 0.05$), and a significant and negative relationship was found between LA and avoidant attachment ($r = -0.09$, $p < 0.05$). *Conclusion:* The systematic review and meta-analysis provide an important starting point for the understanding and operationalization of the construct of Love Addiction.

Keywords: Love Addiction, attachment, meta-analysis

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MINI–2F5

Differentiating emotional and sexual jealousy: Psychiatric comorbidities, love styles and aggressiveness

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Background: Romantic jealousy serves to protect relationships from potential rivals. In contrast, pathological jealousy involves exaggerated reactions and persistent concerns about infidelity, regardless of whether the threat is real or imagined. This phenomenon, whether normal or pathological, can be classified as either sexual or emotional. From an evolutionary perspective, sexual jealousy arises when a partner is sexually involved with someone else, even if the involvement exists only in the mind of the jealous individual. Emotional jealousy occurs when there are suspicions or signs of an emotional bond forming between a partner and another person. *Objective:* This study aimed to explore the differences and correlations between emotional and sexual jealousy in individuals experiencing pathological jealousy. Specifically, it examined the influence of sociodemographic factors, psychiatric comorbidities, aggressiveness, and love styles. *Methodology:* A cross-sectional quantitative study was conducted with 90 participants, divided into two groups: those exhibiting sexual jealousy and those with emotional jealousy. Participants provided data through questionnaires assessing sociodemographic characteristics, psychiatric comorbidities, aggressiveness, and love styles. Statistical analysis involved two steps: a univariate analysis and the construction of a linear regression model. *Results:* The emotional jealousy model identified sex, mania love style, and no history of previous treatment as significant predictors. Females, individuals with a higher mania love style, and those without previous treatment reported higher emotional jealousy levels. In the sexual jealousy model, Eros love style and indirect hostility were significant predictors, both showing a positive influence on sexual jealousy. *Conclusion:* The study supports the hypothesis that gender influences different types of jealousy, consistent with evolutionary theory. Additionally, love styles play a key role in the type of jealousy experienced. Understanding these subtypes can guide the development of more targeted interventions and strategies for managing jealousy, fostering healthier relationships.

Keywords: pathological jealousy, love styles, sexual vs. emotional jealousy

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POSTER PRESENTATIONS

P–1

Exploring the placement of gambling problems within the Hierarchical Taxonomy of Psychopathology

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The placement of gambling problems within the Hierarchical Taxonomy of Psychopathology (HiTOP) framework, which organizes psychopathology alongside broad overarching symptom spectra, is unclear. With the objective to identify associations between gambling problems and the internalizing, externalizing, and thought disorder spectra of the HiTOP, we distributed an online survey to a sample of 1005 Swedish gamblers (52.4% men, aged 18 to 60 and older). Gambling problems were measured using the Problem Gambling Severity Index, and the main HiTOP spectra were assessed with brief versions of the Inventory of Depression and Anxiety Symptoms II, the Externalizing Spectrum Inventory, and the Thought Disorder Scale. Exploratory and confirmatory factor analysis showed that the brief HiTOP scales adequately captured the internalizing, externalizing, and thought disorder spectra. Within this structure, gambling problems emerged as a distinct factor significantly correlated with all three spectra and with unique associations with each: externalizing ($\beta = 0.33$, $p < .001$), thought disorder ($\beta = 0.30$, $p = .001$) and internalizing ($\beta = 0.22$, $p = .022$). In men, gambling problems were significantly associated with the thought disorder ($\beta = 0.54$, $p < .001$) and externalizing ($\beta = 0.31$, $p < .001$) spectra. In women, gambling problems were significantly associated with the externalizing ($\beta = 0.39$, $p < .001$) and internalizing ($\beta = 0.35$, $p = .013$) spectra. Our study is a first attempt to link gambling problems to the three main spectra of HiTOP. Our findings show that gambling problems are associated with all three spectra and that there may be potential gender differences in the associations between gambling problems and co-occurring psychopathology.

Keywords: problem gambling, psychopathology, externalizing, internalizing, thought disorder

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P–2

Psychometric validation of the Gambling Harm Measure

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Gambling-related harm (GRH) has become an increasingly popular topic in gambling research. However, existing instruments fail to comprehensively assess both the type and the severity of harm individuals experience. The Gambling Harm Measure (GHM) was developed to address these limitations. The GHM is a 16-item instrument that assessing harm across its six principal domains. It captures severity by asking three, dichotomously scored questions within each domain (excluding illegal acts), structured in ascending order of severity. We conducted two secondary analyses of data from three independent samples (n = 9,913) to investigated the psychometric properties of the GHM. In the first study, we took a classical test theory approach to determine the factor structure and validity of the GHM. Results provided strong support for a unidimensional factor structure underlying the GHM, indicating that it assesses harm along a single dimension. Regarding validity, we found that total score on the GHM correlated more strongly with other measures of GRH (Kendall's tau = 0.60–0.61) than measures of other addictive or mental health disorders (Kendall's tau = -0.30–0.31), lending support to its validity as a measure of GRH. In the second study, Rasch analysis, an item-response theory method, was used to evaluate the GHM's ability to assess harm across a gradient of severity. Item thresholds varied in the expected direction across the three items within each domain of harm, indicating that the GHM can capture varying levels of harm severity. These studies provide support for the GHM as a valid measure of GRH that offers unique benefits over existing instruments.

Keywords: gambling-related harm, psychometrics, factor analysis, validity, Rasch analysis

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P–3

Gambling and aging: The role of illusion of control

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Gambling disorder has significant health consequences, as well as substantial social and economic costs at both the societal and individual levels. People aged 55 to 64 are the largest group of gamblers, and the last Health Barometer study (2019) highlights a significant increase in the number of gamblers over 65 between 2014 and 2019. This age group also shows a high prevalence rate of gambling behavior. To develop effective prevention and treatment programs, gaining a better understanding of gambling habits and their evolution is crucial. One key factor in the persistence of gambling behaviors is the illusion of control, which is widely recognized in the field. Although it is a complex concept, its theoretical definition is still debated. Three research actions are presented: first, a conceptual clarification of the illusion of control and its measurement in the context of gambling; second, the development of a multidimensional French scale to assess the illusion of control; and third, the evaluation of gambling prevention messages that may inadvertently reinforce the illusion of control. These research areas are part of a program funded by the Agence Nationale de la Recherche (ANR) called JeuVieilli. This initiative involves two French research teams and one Canadian team, with the main goal of studying the recreational, risky, and excessive gambling practices of older individuals (aged 40 and over). The main results will be presented.

Keywords: gambling, illusion of control, conceptualization, measurement scale, prevention

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P–4

Translation and cross-cultural adaptation to Portuguese of the Problematic Gambling Severity Index (PGSI)

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Gambling Disorder, recently reclassified as a behavioral addiction in the DSM-5 and ICD-11, is considered a public health issue due to its increasing prevalence globally and in Brazil. The PGSI, widely used internationally, lacked a Portuguese version, motivating this study. The study aimed to culturally adapt the Problem Gambling Severity Index (PGSI) for Brazilian Portuguese. The adaptation followed a rigorous eight-step methodology. The original PGSI was translated into Portuguese by experts, synthesized, and then back-translated into English. The back-translations were evaluated for conceptual and semantic equivalence, with input from the original instrument's authors. A preliminary version was refined through feedback from a panel of specialists in mental health, ensuring content validity, clarity, and comprehensibility. Finally, a pilot test involving 33 participants evaluated the instrument's clarity and relevance. Results demonstrated high content validity indices (CVI) for individual items and the overall scale, indicating strong agreement among specialists on the relevance, clarity, and essentiality of the instrument. The mean clarity index (CI) was 2.777, reflecting excellent comprehensibility. Additionally, the cultural adaptation preserved some psychometric properties of the original PGSI, confirmed by the pilot study, where most participants rated the instrument as clear and understandable. Furthermore, responses indicated the instrument's effectiveness in identifying problematic gambling behaviors in the population. In conclusion, the Portuguese version of the PGSI is a properly adapted tool for assessing gambling severity in Brazilian populations. It is ready for use in future research and clinical applications, contributing to the understanding and management of gambling-related public health challenges in Brazil.

Keywords: problem gambling severity index, gambling disorder, cultural adaptation, Brazilian Portuguese

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P–5

Poker and women: The role of gambling motivations in problem gamblers

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Background: In the context of gambling, poker appears to be a game with structural and situational characteristics influencing the development and expression of gambling addiction (GA) (Bjerg, 2010; Barrault et al., 2014). It is now known that gambling motivations play an essential role in the installation of problem gambling in the practice of poker (Mathieu et al., 2017). They determine the intensity of play, the time spent playing and the amount of money wagered. A few studies have looked at the motivations of poker players in a predominantly or even exclusively male population. They indicate that motivation to play is mainly extrinsic in origin, with a low level or even absence of self-determination, such as playing to win money, to escape worries or to avoid boredom (Wood & al., 2007). The main aim of this study was to assess the different gambling motivations involved in playing poker in a population of female poker players. *Method:* 108 participants (n=62 non-problem, n=46 problem) were recruited online. They completed several self-administered questionnaires to assess gambling-related characteristics, including the Canadian Problem Gambling Index (CPGI) and the Gambling Motivation Scale (GMS), which assess 3 types of intrinsic (to know, to accomplish, to experience stimulation) and 3 extrinsic motivations (external regulation, introjected regulation, identified regulation), as well as amotivation. *Results:* Results show that female problem gamblers score significantly higher on the intrinsic (to know, to accomplish, to experience), extrinsic (introjected, external regulation) and Amotivation motivations to gamble. However, only intrinsic motivation to experience stimulation, extrinsic motivation External regulation and amotivation were significant predictors of belonging to the group of female problem poker players. *Conclusions:* These results offer new avenues of research into the specificity of GA in women and suggest ways of adapting care protocols to this specific population.

Keywords: gambling addiction, poker, women

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P–6

The relationships between Noriuchi participation, gambling behavior, and gambling disorder severity among Japanese gamblers

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Background: In Japanese gambling culture, there exists a practice known as "Noriuchi," which involves gambling collaboratively with friends / others and subsequently sharing the difference in winnings and losses. This study aims to investigate the relationship between Noriuchi and the severity of gambling disorder, as well as to identify the characteristics of individuals who play gambling through Noriuchi.*Method:* An online survey was conducted between January and February 2021, with the cooperation of Rakuten Insight, Inc. The participant, consisted of 2,000 individuals aged 18 or older, excluding high school students. Among them, 498 individuals with prior experience in Noriuchi were analyzed to explore the relationship between gambling Noriuchi participant and the variables related to gambling disorder. These variables included the number of days spent gambling in a month, the amount of money spent on gambling in a month, and gambling symptoms measured by the Problem Gambling Severity Index (PGSI). *Results:* The finding revealed that individuals who participated in Noriuchi on a weekly basis had the highest number of gambling days per month. However, neither the PGSI scores nor the amount of money spent on gambling in a month consistently increased with the frequency of Noriuchi participation. *Conclusion:* These findings suggest that while Noriuchi participation may increase the frequency of gambling activities, its impact on gambling symptoms, as measured by PGSI scores and monetary expenditures, appears to be limited. Noriuchi's involvement may lead to an increase in participation in gambling activities with friends.

Keywords: Noriuchi, gambling, Japan

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P–7

Relationship between treatment with aripiprazole, gambling addiction, and other behaviors related to impulse control disorders

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Treatment with dopaminergic agonists is associated with a higher risk of Impulse Control Disorder (ICD) or Gambling Disorder (GD) in patients with Parkinson's disease. This association has also been observed in psychiatric patients treated with Aripiprazole; a drug that, at low doses, acts as a dopaminergic agonist stimulating receptors, and at high doses, acts as a dopaminergic antagonist blocking receptors. Some studies highlight an increase of 5.23 points in the risk of GD and 7.71 points in the risk of ICD with Aripiprazole, although most have used small samples, retrospective designs, or orally administered drugs.The aim of the study is to analyze the effect of three dopaminergic drugs on GD and ICD (including hypersexuality, loss of control in shopping, eating, and toxic substance consumption) in psychiatric patients aged 18 and older.This observational study compares patients initiating intramuscular treatment with Aripiprazole to those receiving Paliperidone or Risperidone over a 6-month period. Of the 25 patients enrolled so far, 16 patients (64%) are on injectable Aripiprazole, 6 (24%) on Paliperidone, and 2 (8%) on Risperidone. Key demographic data reveal that 18 (72%) are men, 22 (88%) are single and 20 (80%) have completed primary or secondary education. Regarding the employment situation, 10 (40%) are unemployed, 5 (20%) employed, 3 (12%) are studying, and 6 (24%) are on sick leave or receiving a pension. Regarding primary psychiatric diagnoses, 7 patients (28%) have bipolar disorder tipe I, 5 (20%) paranoid schizophrenia, 5 (20%) psychotic disorder, 4 (16%) schizoaffective disorder, 2 (8%) Autism Spectrum Disorder (ASD), and 1 (4%) Major Depressive Disorder (MDD) with psychotic symptoms. The study is currently in the sample collection phase, with only 3 patients completing the 6-month follow-up. Data analysis is expected in the coming months, providing insights into the relationship between dopaminergic treatments and the development or modulation of GD and ICD in this population.The research aims to address limitations of previous studies by using an intramuscular approach and comparing various drugs. Delving into the role of dopaminergic drugs and exploring their side effects can contribute to understanding the risks associated with commonly used drugs in psychiatric disorders, thus facilitating early detection and intervention in high-risk patients, with the goal of minimizing potential socio-economic impacts on patients and their families.

Keywords: Gambling Disorder, Impulse Control Disorder, dopaminergic drug

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P–8

Stress, depression, and problematic gambling and gaming behaviors among students: An observational study

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The issue of problematic gambling and video gaming behaviours is becoming increasingly prevalent among students, with a growing body of evidence indicating a correlation between such behaviours and a range of mental health challenges, including stress and depression. Additionally, social and demographic factors appear to play a role in the development of these behaviours. The objective of our observational study was to investigate the relationships between these variables with a view to identifying predictors of problematic gambling and gaming behaviours. To assess the impact of psychological, stress-related, and demographic factors on these behaviours, we employed a range of analytical techniques, including multinomial logistic regression, linear regression, and descriptive analyses. The study population comprised 1,414 students, with 18.84% identified as problematic gamers (IGD9) and 17.27% categorised as problematic gamblers (IGD9). Anxiety was assessed using the Generalized Anxiety Disorder Scale (GAD7), depression using the Patient Health Questionnaire (PHQ9), and perceived stress reactivity using the Perceived Stress Reactivity Scale (PSRS). The evaluation of gambling behaviours was conducted using the Canadian Problem Gambling Index (CPGI), while the assessment of gaming behaviours was carried out using the Internet Gaming Disorder Scale (IGD9). It was found that 39.94% of participants reported severe depression, while 14.86% reported severe anxiety. The Lying About Gambling Scale identified instances of problematic gambling in 13.45% of participants. The results of the multinomial logistic regression analysis demonstrated that problematic gaming was a significant predictor of being in the at-risk or problematic gambling categories ($p < .001$), thereby underscoring the co-occurrence of these behaviours. Depression was identified as a significant predictor, with individuals experiencing moderate to severe depression demonstrating markedly elevated odds of engaging in problematic gambling behaviours ($p < .001$). The results of the linear regression analysis indicated that younger age, female gender, and greater perceived stress reactivity (PSRS subscales) were associated with higher gambling behaviour scores ($p < .05$). Nevertheless, the overall anxiety levels (GAD7) did not exert a direct influence on gambling behaviours, although they demonstrated a tenuous correlation with problematic gaming scores ($r = 0.16$, $p < .05$). The role of perceived stress reactivity was found to be complex, with subscales reflecting heightened emotional and social reactivity being linked to increased gambling behaviour. These findings indicate that individuals who perceive themselves as more reactive to stress may engage in gambling as a maladaptive coping mechanism. Furthermore, a strong correlation was observed between depression and problematic gambling, while stress (GAD7) demonstrated a limited role in this relationship. Our findings revealed intricate interrelationships between gambling and gaming behaviours

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among students, with depression and perceived stress reactivity emerging as pivotal contributors to gambling issues. The data indicated that younger individuals and females were more susceptible to gambling-related risks, suggesting that there are demographic differences in susceptibility. These findings underscore the necessity for targeted interventions that address co-occurring gaming and gambling behaviours, with a particular emphasis on the management of depression and stress reactivity.

Keywords: gambling, stress reactivity, students, co-occurring disorders

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P–9

Facts on online media use and its association with problematic behaviors of young population in South Korea

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Background: Adolescents have extensive use of screens and, they have common complaints related to mental health. This original study set the following three objectives for the '2022 Youth Media Use and Harmful Environment Survey' and conducted research to successfully achieve the objectives. First, to establish high-quality nationally approved statistical data that can be compared over time in the field of youth protection policy. Second, to identify the current status and reality of youth media use and harmful environment exposure in 2022. Third, to identify the current status of the policy implementation and policy intervention points based on the analyzed results. The 2022 survey will be important data for the establishment of the 5th National Policy for Youth (2025-2027) to be established in the future, in addition to diagnosing the current status of past policies and identifying the policy intervention points or new policy demands that have not been revealed so far. This research data has been made public and used for re-analysis. *Method:* The "Survey on Youth Media Use and Harmful Environment" (National Approved Statistics, No. 167001) conducted in accordance with Article 33, Paragraph 4 of the "Youth Protection Act" is conducted every two years, and the 2022 survey was conducted with nation-wide students in grades 4 to 6 of elementary schools, grades 1 to 3 of middle schools, and grades 1 to 3 of high schools. The total number of participants in the 2022 survey was 17,140 (5,249 elementary school students, 5,490 middle school students, and 6,401 high school students), and there were differences in the survey subjects by the survey category. The survey period was from September 14, 2022 to November 14, 2022. A specialized research institute (Korea Research Co., Ltd.) selected researchers nationwide, conducted group training for researchers by region, and conducted the survey by visiting schools selected as samples and conducting group interviews. This study reanalyzed publicly available survey data to identify the relationship between adolescents' online media use and problematic behaviors and to suggest policy alternatives. *Results:* 96.7% of adolescents used 'Internet personal broadcasting and video sites' in the past year, 95.3% of adolescents used 'Internet/mobile messengers', and the usage rate of online video provision services (OTT) was 74.9% and the usage rate of metaverse was 41.4%. The media frequently used by adolescents were 'Internet personal broadcasting and video sites' and 'Internet/mobile messengers', and the percentage of adolescents who used these almost every day was 85.7% and 84.1%, respectively. Looking at the usage rate of online gambling games by middle and high school students, 'online card games' were the highest at 4.6%, and the usage rate of online gambling games was higher for male students than for female students, and for high school students than for middle school students. After re-analyzing the original data, it was

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found that online gambling use decreased as autonomous control ability increased ($P<0.05$), but it was not confirmed that the effect was moderated by educational experience for prevention from addictive behavior. *Conclusion:* The fact that more than 95% of adolescents use Internet personal broadcasting and video sites and Internet/mobile messengers 'almost every day' means that many adolescents access video content mainly through online media, and simultaneously contact and build relationships with many people by online methods also. In this digital environment, adolescents face increased risks and opportunities in terms of Content, Contact, and Conduct by OECD mentioned before in 2019. Adolescents' online activities are biased toward watching videos, while offline reading activities are decreasing. This phenomenon can be the cause of low digital literacy levels and digital divides. Therefore, the characteristics of adolescents' media use and the relevance of problematic behaviors should be periodically identified and alternatives should be presented.

Keywords: online media use, adolescents, online gambling

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P–10

Problematic alcohol use and problem gambling in a nationally representative population sample: The moderating role of age and sex

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Previous research has shown a high prevalence of problematic gambling among individuals with problematic alcohol use, as well as alcohol addicts (Bodor et al., 2018; Potenza et al. 2019), However, research among nationally representative samples is rare. This study aimed to explore the moderating effects of age and sex in the relationship between problematic alcohol use and problem gambling in a nationally representative population sample. Data were collected in a household survey on a nationally representative sample of Croatian citizens aged 15 to 64 years (N=4988). In this study, we focused on those respondents who had used alcohol and participated in games of chance in the last 12 months (N=1408; 63.7% males; Mage=39.95; SD=13.55). Problematic alcohol use was assessed using Severity of Dependance Scale (Gossop et al., 1995) while problematic gambling was assessed using Problematic Gambling Severity Index (Ferris & Wynne, 2021). Results indicate that age, sex, and problematic alcohol use made significant independent contributions to the explanation of problem gambling, together explaining 14% of variance. Sex, but not age, moderated the relationship between problematic alcohol use and problem gambling (β=-0.19, $p<0.05$). Higher levels of problematic alcohol use were related to more severe gambling problems. The effect of problematic alcohol use on problem gambling was stronger for men. These findings underscore the need for targeted prevention that focuses on addressing both alcohol (ab)use and gambling behaviors, while taking sex differences into account.

Keywords: problem gambling, problematic alcohol use, age, sex, general population, Croatia

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P–12

Validation of the Online Gambling Symptom Assessment Scale (OGSAS) in the Portuguese population

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The rapid expansion of digital accessibility has driven a global increase in online gambling, with research highlighting a higher prevalence of problem gambling among online gamblers compared to offline gamblers (Gainsbury, 2015). Addressing the need to evaluate the symptoms and impacts of online gambling disorder, the Online Gambling Symptom Assessment Scale (OGSAS) was developed (Kalkan & Griffiths, 2021).This study aimed to translate and validate the OGSAS for use in the Portuguese population. The scale was translated into European Portuguese and administered to 405 participants aged between 18 and 78 along with the Emotion Regulation Questionnaire (Gross & John, 2003) and the Difficulties in Emotion Regulation Scale (Moreira et al., 2022). Its psychometric properties were assessed through reliability analysis and exploratory (EFA) and confirmatory (CFA) factor analyses. The Portuguese version of OGSAS demonstrated strong psychometric properties, with high internal consistency (Cronbach's alpha = 0.873; McDonald's Omega = 0.910). EFA conducted on a subset of the sample (N = 202) showed good sampling adequacy (KMO = 0.866) and significant Bartlett's test of sphericity ($\chi^2 = 1751$, $p < 0.001$) confirming the suitability of the data for factor analysis. This analysis identified a three-component structure which accounted for 66.4% of the total variance. Item loadings ranged from 0.56 to 0.92, supporting the scale's construct validity. CFA conducted on the remaining sample revealed significant Chi-square statistics ($\chi^2 = 190$, d.f. = 50, $p < 0.001$). However, while the CFI indicated an acceptable fit (0.911), the TLI was below the recommended threshold (0.882), and the RMSEA remained above 0.05, with a minimum value of 0.117. These findings support the Portuguese version of the OGSAS as a reliable and valid instrument for assessing symptoms of online gambling disorder. Additionally, with this exploratory study, we were able to gain deeper insights into the structure of the OGSAS and explore its correlations with difficulties in emotion regulation.

Keywords: online gambling, gambling disorder, problematic online gambling

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P–13

The impact of digital media on gambling disorder in Brazil

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Background: The digital revolution has transformed gambling and betting, creating new global challenges. In Brazil, the proliferation of online platforms and easy access to gambling through smartphones have significantly increased the prevalence of problematic and pathological gambling, particularly among young people. Digital media plays a key role in this trend, as advertising campaigns featuring celebrities and influencers promote misinformation by omitting the real risks associated with gambling. These advertisements often portray gambling as a harmless activity, a form of entertainment, or an easy way to achieve financial success. However, this normalization contributes to serious financial and psychological consequences, such as anxiety, depression, suicidal tendencies, and growing levels of debt. *Method:* A narrative review was conducted to explore the impact of digital media on pathological gambling in Brazil. The review included studies published in Portuguese and English between 2010 and 2025, sourced from PubMed, SciELO, and PsycINFO databases. *Results:* Digital media has increased the number of gamblers in Brazil, particularly among young people. These individuals are often drawn to gambling through advertising campaigns that minimize the associated risks, presenting gambling as a safe and enjoyable pastime, ignoring the risks. Adolescents are particularly in a critical phase of identity formation and are highly susceptible to the influence of role models and social media trends. The normalization of gambling behaviors and the sense of belonging created by these campaigns exacerbate vulnerability to addiction. *Conclusions:* Digital media plays a central role in the growing prevalence of online gambling disorder in Brazil. Campaigns featuring celebrities and influencers reduce risk perception and normalize gambling behavior, worsening individuals financial and psychological harm. Strict regulations and targeted public policies are essential to mitigate damages and protect public health and well-being.

Keywords: Digital Media, Gambling Disorder, Youth

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P–14

Development of a recovery scale for families of people with gambling problems (Report 1: Examination of the content validity of a draft scale)

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Objective: This study examined the content validity of a draft scale for the development of a recovery scale for families of people with gambling problems. *Methods:* First, a conceptual model was established using four references. The draft of the item pool was based on items related to the recovery of self-help group family members from two references in the conceptual model. The questionnaire items were reviewed for relevance, comprehensiveness, and clarity—based on the conceptual model—by three university nursing professors and the author. Finally, for the examination of content and surface validity, items meeting the criteria by more than 80% of the item-content validity index (I-CVI) were adopted by seven experts and seven self-help group family members. *Results:* Of the 39 items, 31 were agreed upon by all participants involved in the review. Participants disagreed on eight items. Four experts said that the family's recovery interacted with the gambler's recovery, while the other experts and family members insisted that the family's recovery should not be included in interactions with the gambler's recovery, as the family's recovery is aimed at economic and psychological independence. A draft scale was completed after the final review. *Discussion:* According to the COSMIN RISK of Bias checklist, experts and users of a scale must participate in its development. In the process of creating this draft,all items were reflected fourteen opinions of specialist and families of people with gamblers. Additionally, four opinions of nursing researchers were obtained regarding the relevance, comprehensiveness, and clarity of this conceptual model. Consequently, quality assurance of the appropriateness and representativeness of the items was confirmed.

Keywords: gambling, family, recovery

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P–15

Gender-based differences in Gambling Disorder in Türkiye: A Comparative study at Green Crescent Counselling Center (YEDAM)

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Background: Gambling Disorder (GD) has been increasing worldwide in recent years and is defined as a significant public health problem. This situation has also increased the need for treatment activities. One of the factors affecting the success of the treatment process is gender differences. It is thought that treatment programs prepared according to gender provide more effective results. In this study, we aim to investigate gender differences in demographic, psychological, and addiction characteristics in individuals with GD. *Method:* The data of 13194 gamblers who sought to the YEDAM for GD treatment between 2020 and 2024 were retrospectively analyzed. The Gambling Risk Screening Scale, Addiction Profile Index Clinical Form, Kocaeli Psychological Trauma Brief Screening Scale were administered at the assessment session. *Results:* The age at the onset of gambling and the age at treatment admission were younger in male participants than in female participants ($p<0.01$). Also, the duration of gambling of male participants was longer than that of female participants ($p<0.01$). It was determined that male participants generally played online sports betting, while female participants tended to play casino games over the internet ($p<0.05$). The risk of anxiety and lack of safe behaviour was higher among male participants compared to female participants ($p<0.01$). On the other hand, the risk of non-suicidal self-harm attempt, suicidal ideation ($p<0.05$) and post-traumatic stress disorder (PTSD) was higher among female participants than male participants ($p<0.01$). *Conclusions:* To our knowledge, this is the first study to examine gender differences in GD in a large, nationwide sample from Türkiye. The results of the study reveal that different characteristics are prominent for both genders in relation to GD and emphasize the need for gender-focused research. In addition, the study provides evidence similar to the literature on the differentiation of treatment strategies according to gender.

Keywords: gambling disorder, gender-based differences, mental health

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Comparing early remission and relapse in Gambling Disorder: A retrospective cohort study from YEDAM

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Background: Early remission in gambling disorder (GD) is one of the predictors of long-term remission. Examining the characteristics of early remission and relapse in individuals receiving treatment will help treatment providers develop appropriate treatment techniques. For this purpose, the relapse and early remission status of clients receiving GD treatment in 107 counseling centers in Türkiye were compared in terms of demographic, psychological and addiction characteristics during the 3-month period. *Method:* The data of 2575 gamblers who were admitted to YEDAM between 2020-2024 and reached early remission were retrospectively analysed. The Gambling Risk Screening Scale, Addiction Profile Index Clinical Form, Kocaeli Psychological Trauma Brief Screening Scale were administered at the assessment session. Gambling Risk Assessment Follow-up Form was administered at the follow-up sessions.*Results:* Participants with a history of psychological/psychiatric treatment (non-gambling related), previous gambling treatment (inpatient/outpatient), gambling-related psychological treatment or counseling, and preferences for betting or dice games were observed to relapse into gambling behavior after early remission ($p<0.05$). It was observed that participants with younger age at the onset of gambling, earlier treatment admission, low motivation to quit, high risk of gambling disorder, difficulty in controlled anger, high sensation seeking behaviour and high impulsivity were observed to relapse into gambling behavior after early remission. The Gambling Risk Assessment Follow-up Form scores of those who entered early remission and gambled again at the assessment session and at the 3-month follow-up were statistically significantly higher ($p<0.05$). *Conclusions:* Understanding the importance of examining relapse and relapse is key to improving treatment outcomes in GD. Tailored interventions focusing on high-risk characteristics are crucial for maintenance of remission and prevention of relapse. Overall, the study highlights the risks of relapse and the possibilities for relapse prevention in treatment.

Keywords: early remission, gambling disorder, relaps

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Decoding risky decision-making – with preliminary findings of gambling disorder patients

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Background: The neural underpinning of behaviour is measured by brain activity during the execution of a cognitive task. Conversely, behaviour can be inferred from brain activity by using brain decoding. Brain decoding is a technique that predicts the content of a subject's perception and subjective experience from measured brain signals by decoding the pattern of the measured brain signals using a pattern recognition algorithm based on the premise that the brain activity contains multifarious information. Some studies have decoded visual information from fMRI images, but few have decoded more complex processes such as decision-making. In this study, we aimed to decode the choices of subjects in risky decision-making, which characterize gambling disorder (GD), from neural activity. *Method:* Seventeen healthy participants (HP) and eight patients with GD underwent a risk-taking task modified from our previous study in an MRI scanner. We created an individual decoder that estimates whether the subject chose a high-risk, high-return or low-risk, low-return option from the neural activity. Subsequently, we used this decoder to discriminate the choice from individual neural activity. We employed a linear support vector machine as the classifier and performed a leave-one-run-out cross-validation. *Results:* Patients with GD chose risky options more. Decoding analysis revealed that the frontal and cingulate cortices showed fair decoding accuracy, regardless of the population. On the other hand, the decoding accuracy of the globus pallidus was the highest in GD patients. *Conclusions:* We succeeded in decoding risky decision-making using fMRI data. The between-group difference in the brain regions responsible for decoding suggests the neural basis of risk-taking behaviour in GD patients, as well as the reliability of the methodology.

Keywords: decision-making, decoding, fMRI

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Gambling disorder and problem gambling in Brazil: The development of a brief screening scale

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Background: Gambling disorder is a recognized mental health condition associated with severe personal, social, and financial consequences. Despite its growing prevalence, Brazil lacks an efficient, validated screening tool to identify individuals at risk. This study aimed to develop and validate a brief screening scale for problem gambling in Brazil, addressing gaps in early detection and intervention. *Method:* A cross-sectional study was conducted with a sample of Brazilian lottery gamblers. Participants completed the NODS, NODS-CLiP, and a newly designed brief screening scale. Psychometric analyses, including internal consistency, sensitivity, specificity, and factor structure evaluations, were performed to determine the validity and reliability of the new tool. *Results:* The brief screening scale demonstrated high internal consistency (Cronbach's alpha = 0.87) and strong psychometric properties. Factor analysis supported a unidimensional structure, confirming theoretical assumptions of problem gambling. The scale showed strong agreement with established screening instruments while offering a more concise and user-friendly format for clinical and epidemiological applications. *Conclusions:* This newly developed brief screening scale is a valid and efficient tool for identifying gambling-related problems in Brazil. Its reliability and ease of administration make it a promising instrument for large-scale epidemiological studies and clinical settings, facilitating early detection and intervention strategies.

Keywords: gambling disorder, problem gambling, screening tool

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From father to son: a gambling problem – A case study

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Introduction: Gambling addiction is a complex and multifaceted issue influenced by genetic, psychological, and environmental factors. This case study examines the role of family influence in gambling behavior and the recovery process of a 24-year-old high school student. The client reported that his father and grandfather had also struggled with gambling, indicating a potential intergenerational transmission. Research suggests that parental gambling behaviors increase the likelihood of gambling problems in children (Jacobs et al., 1989). *Methods:* The client was assessed using the Gambling Screening Scale (GSS) and DSM-5 criteria for gambling disorder. Cognitive Behavioral Therapy (CBT) was applied as the primary intervention, incorporating psychoeducation, cognitive restructuring, and relapse prevention strategies. Additionally, Motivational Interviewing (MI) techniques were used to enhance the client's commitment to change. Family involvement was encouraged throughout the process to increase awareness and support. The treatment process was monitored over a 12-month follow-up period. *Results:* Initially, the client exhibited high gambling motivation, often triggered by exposure to his father's gambling behavior. Relapses occurred during the early phase of treatment; however, after six months, significant improvements were observed. Increased family awareness, the father's engagement in the therapeutic process, and the client's active participation in recovery contributed to reduced gambling urges. MI techniques helped resolve ambivalence, and the client demonstrated increased self-control and abstinence from gambling. *Conclusion:* This case highlights the impact of familial and genetic factors on gambling addiction and emphasizes the necessity of integrating family-based interventions in treatment. With gambling becoming increasingly widespread, further research is needed to assess the effectiveness of family involvement in recovery programs.

Keywords: gambling addiction, family influence, intergenerational transmission

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The triangle of work, money, and trust: A case study of gambling-induced job loss

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Introduction: Gambling addiction can significantly impact an individual's economic stability and professional life, leading to job loss, financial struggles, and trust issues. This case study examines the therapeutic process of a 41-year-old university graduate who was successful in his career until gambling disrupted his life. Introduced to gambling by a colleague, he gradually shifted his focus from work and career to financial losses and recovery attempts. Over time, his motivation and performance declined, leading to absenteeism and financial distress, ultimately affecting his workplace relationships and overall well-being. *Methods:* The client was assessed using the Gambling Screening Scale (GSS) to evaluate gambling motivations and severity. The therapeutic process included Motivational Interviewing (MI) to enhance commitment to change and Cognitive Behavioral Therapy (CBT) to address cognitive distortions, financial mismanagement, and coping mechanisms. The client was monitored for seven months, during which he changed jobs and temporarily discontinued therapy before resuming treatment in his new workplace. *Results:* Initially, the client experienced severe sleep disturbances, tardiness, workplace inefficiency, and family conflicts. Over time, he improved his sleep routine, adhered to financial commitments, and re-established trust with colleagues. By recognizing cognitive traps and behavioral patterns, he restored financial discipline by repaying debts and temporarily delegating salary management to his family. Additionally, sharing his experiences with colleagues contributed to his recovery. *Conclusion:* This case highlights the severe occupational and financial consequences of gambling addiction. The findings emphasize the need for workplace-based interventions focusing on financial literacy, debt management, and gambling prevention to mitigate the risks associated with gambling-induced job loss.

Keywords: debt, work life, gambling

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New tools to assess problem gambling: A gamified approach

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Introduction: Pathological gambling is a behavioral addiction commonly found among young people, significantly impacting their well-being. Genetic, psychological, and environmental factors contribute to its development, with impulsivity, risk-taking, and cognitive biases acting as key risk factors. Current assessments often rely on lengthy questionnaires that may introduce biases. This study aims to create a gamified evaluation to measure these variables and compare it with traditional assessment methods. *Methods:* The project consists of two phases: collecting assessment measures and implementing tasks on a web-based platform. The assessments included sociodemographic data, the PSGI diagnostic tool, and questions related to gambling habits. The variables analyzed, using both standardized tests and interactive tasks, were impulsivity (UPPS-P, Kirby's Monetary Choice Questionnaire), decision-making (DEX-Sp, Iowa Gambling Task), risk-taking (DOSPERT-30, Game of Dice Task), competitive behavior (CI-R, translated), and cognitive biases (GRCS, self-designed task). *Results:* To evaluate the proposal, a pilot study was conducted with 26 university students (55.2% female), who completed the tests and tasks before filling out a feedback questionnaire. A preliminary analysis, using Kendall's Tau-b correlations, found a significant relationship between the assessment of cognitive biases (r = .411 for the GRCS total mean score) and its subscale of Inability to Stop Gambling (r = .408). Additionally, the median score on the System Usability Scale was 67.5, indicating an "Acceptable" perception of the platform, although some participants reported that the tests were too lengthy. *Conclusions:* Despite the small sample size, participants feedback suggested a preference for the gamified tasks over traditional questionnaires due to their dynamic nature, finding them more attractive. Improvements are currently being made to upgrade the user experience.

Keywords: gambling, addiction, evaluation, gamification, mental health, young adults

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GAMBL-OUT Project: Development of an online escape room for preventing gambling-related harm in young people

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Gambling has been recognized as a significant public health issue, posing serious risks to individuals, families, communities, and society. Young people are particularly vulnerable due to their developmental and psychosocial characteristics, making targeted prevention efforts essential. While traditional educational interventions have shown promise, engaging this demographic remains a challenge. Serious games, designed to educate and influence behavior, have emerged as effective tools. In this context, the GAMBL-OUT project introduces a digital escape room as an interactive online intervention to prevent gambling behaviors. This study utilizes a cluster-randomized controlled trial involving 240 secondary school students (ages 16-18) to assess the effectiveness of GAMBL-OUT. Participants' knowledge, attitudes, and gambling intentions will be evaluated before and after the intervention, along with gambling frequency, prevalence, spending patterns, and psychological risk factors such as impulsivity and emotional distress. Additionally, the study will examine different implementation variables such as feasibility and sustainability. GAMBL-OUT is expected to enhance knowledge, reduce gambling intentions, and promote attitude shifts. Its digital escape-room format offers an innovative, cost-effective, and adaptable approach aligned with evolving gambling behaviors. By combining interactive learning with evidence-based prevention strategies, GAMBL-OUT has the potential to serve as a scalable educational tool for mitigating gambling risks among young people. In conclusion, gambling is a growing concern among youth, posing serious health risks. To address this issue, innovative and engaging prevention strategies must be developed to curb this trend, particularly among vulnerable populations.

Keywords: gwambling, prevention, online, young people

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Beyond gambling-related cognitive distortions: A factor analysis of irrational thinking in gambling

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Cognitive distortions, defined as systematic errors of reasoning, are prevalent in circumstances where the outcome is uncertain or uncontrollable. In the context of gambling, a domain inherently characterized by uncertainty, gambling-related cognitive distortions (GRCD) are pervasive. These distortions are strongly linked to gambling disorder severity (e.g., Brooks & Clark, 2022). Notably, GRCD are observed not only in individuals with gambling disorder but also in the general population, albeit to a lesser extent (Delfabbro et al., 2020). Previous research connects GRCD with other forms of irrational thinking, including paranormal, supernatural, magical, and superstitious beliefs (PSMS) as well as with delusional thinking (e.g., Brooks & Clark, 2022; Leonard & Williams, 2019). Which, in turn, are associated with conspiracy beliefs (Brotherton et al., 2013). Despite these correlations, the latent factor structure underlying these constructs remains unclear. To investigate these relationships, a large sample of individuals with gambling experience (N = 506) was recruited via Prolific. Participants completed a 20-minute online survey. Based on Problem Gambling Severity Index (PGSI) scores, gambling behavior was categorized as non-problematic gambling (45.2%), low-risk gambling (27.1%), moderate-risk gambling (20.8%), and problem gambling (7.9%). Consistent with previous findings, the association between GRCD and gambling disorder severity was replicated, yielding a strong positive correlation, $r = .56$, $p < .001$. A factor analysis using maximum likelihood estimation (MLE) will be performed to identify latent constructs underlying GRCD, PSMS, delusions, and conspiracy beliefs. Additionally, exploratory analyses will investigate the relationships between these latent factors and gambling disorder severity, as well as transdiagnostic psychiatric dimensions, including compulsive behavior and intrusive thought, anxious-depression, and social withdrawal.

Keywords: gambling disorder, cognitive distortions, compulsivity

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From Gaming Disorder to high engagement in microtransactions and NFTs: A case study and narrative review on gaming-gambling convergence

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Background: Gaming Disorder (GD), recently recognized in the ICD-11, has highlighted the addictive potential of video gaming behaviors. The convergence of gaming and gambling behaviors, particularly through in-game microtransactions and NFTs, introduces new risks, especially for individuals with GD. This study presents both a narrative review of the literature on gaming-gambling convergence and a case study of a 15-year-old male with GD whose behavior evolved from intensive gaming to financial engagement within gaming environments, simulating gambling-like patterns. *Method:* A comprehensive narrative review was conducted, synthesizing current research on gaming-gambling convergence, microtransactions, and their psychological impact on vulnerable populations. In parallel, psychiatric records from the case study were analyzed, tracking the patient's transition from GD to high engagement in microtransactions, specifically within the game FIFA, and later to NFT trading. Standardized assessments included IGDS9-SF for GD, GAD-7 for anxiety, SPIN for social anxiety and BDI for depression. *Results:* The literature review identifies mechanisms such as random reinforcement schedules and high-value reward systems in games as factors that may predispose individuals to gambling behaviors. Consistently, the case study demonstrates how the patient transitioned from gaming disorder to a sustained focus on microtransactions and NFT trading. This shift mimics gambling behaviors, driven by market fluctuations and speculative elements within the game's economy, reflecting findings from the narrative review. *Conclusions:* The narrative review and case study together emphasize the need to address the gaming-gambling convergence, particularly as microtransactions become ubiquitous in gaming. Recognizing and intervening early in these behaviors could mitigate the risk of pathological gambling in individuals with GD. This dual analysis supports targeted psychoeducation and regulatory considerations for in-game financial features.

Keywords: Gaming Disorder, gaming-gambling convergence, microtransactions, NFTs, behavioral addiction

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Are gaming and gambling a form of escape from negative emotional states in young people?

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Background: The maladaptive coping strategies arising from difficulties in emotional regulation capacity are considered a transdiagnostic risk factor for various mental health disorders, including addictive disorders. The REJUVI project aims to analyze the emotional regulation skills of gamers and gamblers and their relationship with the development of problems related to video games and gambling among young people. *Method:* The sample consisted of 1203 Spanish gamers and gamblers, aged between 18 and 24 years, who responded to various questionnaires measuring sociodemographic variables, gaming and gambling habits, problematic gaming (IGDS9-SF), problematic gambling (PGSI) and emotional regulation strategies (ERQ). *Results:* In gamers, a significant relationship was found between IGDS9-SF and emotional suppression, $r = .224$, $p < .001$, $r^2 = .050$, $n = 652$. In gambling players, a significant relationship was found between PGSI scores and emotional suppression, $r = .199$, $p < .001$, $r^2 = .040$, $n = 661$. *Conclusions:* The results highlight the need to address emotional regulation difficulties in prevention and intervention programs aimed at young populations.

Keywords: gaming, gambling, emotional regulation

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Assessing loss-chasing in large-scale online gambling data: A multifaceted analysis of between-session chasing

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Background: Excessive problematic gambling (PG) and gambling disorder (GD) is on the rise worldwide. As a result, understanding the key clinical symptoms underlying PG and GD has become crucial. A key clinical symptom facilitating the development and maintenance of PG and GD is loss-chasing. Loss-chasing refers to continuing and/or intensifying gambling following losses. Despite this centrality, our understanding of how loss-chasing is expressed in real gambling settings is limited. *Aim:* To address this gap, the current study aimed to assess the expression of loss-chasing between-sessions (a widely used operationalisation in clinical settings) in a large-scale dataset (>4300 players and >71 million rounds) from a commercially available online game Mystery Arena. Methods. In this study we assessed between-session chasing across 3 facets – 1.) Time of return to gamble, 2.) Session Duration and 3.) Session wager, as a function of prior session outcome (losses vs. wins) and outcome magnitude across high- and low-involvement players. *Results:* Overall, as the magnitude of losses increased, players returned to the gambling product faster as compared to high magnitude wins. Furthermore, they increased their wagers and session duration as the magnitude of both losses and wins increased. *Discussion and Conclusion:* These results indicate that increases in the magnitude of losses and wins evoke loss- and win-chasing between-sessions across all three facets. These results are in line with the break-even and house-money effect respectively. These findings can inform the development of interventions promoting cool-off periods which allow gamblers to engage in active deliberation to calibrate their risk taking

Keywords: gambling disorder, online gambling, loss-chasing, win-chasing, between-session chasing

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Symptoms of gaming disorder and chronotype: The role of sleep quality and distress

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Research suggests the existence of an association between excessive video gaming and evening chronotype, but there are still questions to answer to get more insight into the nature of this association. In the current study, we took into account sleep quality and stress levels, as well as the time of day typically devoted to video gaming. An online sample of gamers and non-gamers completed a questionnaire that included the Internet Gaming Disorder Scale, Composite Scale of Morningness, Pittsburgh Sleep Quality Index, Perceived Stress Scale and questions about demographics and gaming patterns. Gamers and non-gamers did not differ in chronotype, sleep quality or distress. Those who exhibited more symptoms of gaming disorder displayed more evening chronotype and more distress, but no difference in general sleep quality. Furthermore, eveningness was related to more distress and lower sleep quality. The association between eveningness and symptoms of gaming disorder decreased after controlling for distress. Gamers who were typically playing after 21:00 in the evening, compared to gamers playing earlier in the daytime, exhibited more eveningness, but similar levels of sleep quality, distress and symptoms of gaming disorder and the same pattern of results persisted if 22:00 was used as the cut-off. Based on these results we hypothesise that eveningness is a vulnerability factor fostering distress that may lead to gaming disorder. At the same time, gaming disorder may further boost the distress, especially in evening chronotypes that are vulnerable to experiencing it.

Keywords: gaming, chronotype, sleep

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Catechol-O-methyltransferase polymorphism and its association with internet gaming disorder severity and sleep quality

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Background: Dopamine functioning is one of the essential mechanisms underlying addictive behaviors. Previous studies had illustrated that catechol-O-methyltransferase (COMT) Val-158Met polymorphism Val/Val type was associated with a higher risk of Internet gaming disorder (IGD)1. On the other hand, individuals with IGD also exhibit poorer sleep quality and lower levels of daily life activity compared to healthy controls2. This study aimed to assess COMT genotype, sleep patterns, and physical activity in male adults with IGD. *Methods:* We recruited 46 male participants with IGD and 92 age-matched controls. All participants underwent diagnostic interviews for IGD and an evaluation for the COMT polymorphism. IGD severity and insomnia were measured by Chinese Internet Addiction Scale (CIAS) and Pittsburg insomnia rating scale (PIRS). Physical activity and sleep patterns were measured using an accelerometer worn 24 hours a day for one week. Independent t-tests and Pearson's $\chi 2$ tests were used for between-group comparisons. *Results:* Compared to the control group, the IGD group exhibited poorer sleep quality, less daily physical activity, and a longer time to fall asleep. The distribution of the Val/Val genotype showed no difference between the IGD and control groups. However, within the IGD group, participants with the Val/Val genotype demonstrated greater IGD severity and poorer sleep quality compared to Met carriers. *Discussion and Conclusions:* The present findings indicate that individuals with IGD tend to engage in less physical activity and experience more severe insomnia. In our study, the COMT Val/Val genotype could not distinguish between IGD and healthy controls. However, among the IGD population, the Val/Val genotype was associated with greater IGD severity, highlighting the importance of frontal lobe dopamine function in behavioral addictions. Additionally, consistent with a previous study3, we also found that the COMT Val/Val genotype is associated with poorer sleep quality compared to Met carriers. Interventions targeting insomnia and physical activity may be beneficial for the treatment of IGD, particularly in individuals with the Val/Val genotype. Our results are limited by the restricted sample size. Future studies with larger sample sizes and investigations into dopamine function are needed to confirm our findings.

Keywords: internet gaming disorder, COMT val158met, insomnia, physical activity

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Motivation over tolerance: Exploring the drivers of gaming time through qualitative analysis

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In the fifth edition of the diagnostic and statistical manual of mental disorders, the tolerance criterion associated with Internet Gaming Disorder (IGD) is described as a need to increase the amount of time devoted to video gaming to reach similar levels of enjoyment. However, this focus on the "need for gaming time" is controversial within the scientific community. The aim of this research is therefore to explore tolerance as perceived and felt by a non-clinical sample of people who play video games online. Gathering testimonies from 28 gamers via an open-ended online questionnaire, this qualitative study focuses on exploring the nature of tolerance in the context of online gaming. A thematic analysis of these testimonies first indicated that tolerance was not perceived as a reality in the setting of online gaming by multiple participants. Rather, it was reported that the increase in gaming time is not directly related to a manifestation of tolerance but is mostly a consequence of motivations. These motivations are defined by the gamers as different strategies to maintain their level of satisfaction by intensifying social interaction, seeking novelty, accumulating victories, surpassing oneself, or switching games. These strategies reveal a complex, personal dynamic for overcoming dissatisfaction and maintaining commitment to the game. This complex and nuanced mechanism challenges whether it can truly be equated with the notion of tolerance as traditionally defined. This further questions its use as a diagnostic criterion to distinguish between clinical and non-clinical populations and highlighting the need for further research to explore the factors underlying the increase in gameplay time.

Keywords: tolerance, internet gaming disorder, qualitative, symptom

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Validity and reliability of the Japanese version of the Parental Internet Gaming Disorder Scale (PIGDS)

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Background: Gaming-related issues often prompt parental concerns, especially when children do not independently seek treatment. In such cases, parental assessments are essential for screening Internet Gaming Disorder (IGD). To address this need, a parental screening tool for IGD was developed. This study assessed the validity and reliability of the Japanese version of the Parental Internet Gaming Disorder Scale (PIGDS). *Methods:* We recruited junior and high school students who play games and their parents to participate in an online survey. Factorial validity, concurrent validity, and internal consistency of the PIGDS were evaluated. Correlations were examined between PIGDS and the child-reported Internet Gaming Disorder Scale (IGDS) as well as parental psychological distress (K-6). Confirmatory factor analysis (CFA) was conducted to confirm the scale structure. Cronbach's alpha was calculated to assess internal consistency. The concordance rate between PIGDS and IGDS in identifying IGD was also analyzed. *Results:* Data from 546 parent-child pairs were analyzed. CFA supported a one-factor structure with acceptable fit indices (SRMR = 0.041, CFI = 0.94, TLI = 0.92, RMSEA = 0.09). The correlation between PIGDS and IGDS was $r = 0.53$ ($p < 0.001$). The correlation between PIGDS and K-6 was $r = 0.20$ ($p < 0.001$). Cronbach's alpha for PIGDS was 0.93, indicating high internal consistency. The concordance rate between PIGDS and IGDS was observed in 435 cases (80%). *Conclusion:* The Japanese version of PIGDS demonstrated reasonable validity and reliability, making it a promising tool for use in treatment settings to screen for IGD in children based on parental assessments.

Keywords: PIGDS, Internet Gaming Disorder, validity, reliability

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Gaming Disorder: A therapeutic proposal and narrative review of the literature using Table-top Role-Playing Games (TRPGs)

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Gaming disorder often presents comorbidities with ADHD, depression, social anxiety, generalized anxiety, and personality disorders. It is correlated with reduced cognitive flexibility, low self-esteem, inadequate coping strategies, academic underachievement, and impaired social relationships. The escapism and social connectivity promoted by gaming reinforce the disorder and complicate adherence to therapy and post-treatment interventions. This study proposes the use of Table-top Role-Playing Games (TRPGs) as a therapeutic tool in group settings. TRPGs are narrative-driven analog games where players assume roles and engage in scenarios guided by a Game Master (GM). Evidence suggests the potential of group interventions to reduce social isolation, create secure environments for sharing experiences, and enhance self-esteem and resilience in response to withdrawal symptoms. The intervention, designed for validation in a future clinical trial inspired by existing models in the literature, including those by Joël Billieux, comprises 12 in-person sessions of 90 minutes each. Groups will consist of 3–5 participants diagnosed with gaming disorder. A psychologist serving as GM, alongside a co-therapist, will facilitate the sessions, aligning them with individual and group therapeutic objectives. Initial sessions will focus on character creation, with subsequent gameplay introducing progressively complex social scenarios such as negotiations, conflict resolution, and reconciliation. TRPGs train skills, like creativity, problem-solving, social competence, self-concept, and self-esteem, in controlled environments, enabling the transfer of these competencies to real-life contexts. This approach is expected to improve therapy adherence, enhance social connectivity, reduce social anxiety, and teach new coping strategies. Additionally, TRPGs may serve as an alternative hobby, providing a healthier competitor to online gaming. This proposal aims to establish a complementary intervention for gaming disorder, broadening available treatment options and supporting the adherence to other therapeutic modalities.

Keywords: Gaming Diorder, TRPG, skill training, group therapy

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Which alterations or dysfunctions in emotional regulation do problematic gamers experiment?

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Background: In behavioural addictions, difficulties with emotional regulation have become an important variable of interest. However, their study in relation to problematic video game use remains insufficient. *Method:* A systematic review was conducted following PRISMA 2020 guidelines; 322 studies were screened, resulting in a final sample of 18 studies. The methodological quality of these studies was rated as moderate according to the McMaster Critical Review Form for Quantitative studies (CRF-Q). *Results:* There is evidence of relationship between different facets of emotional regulation and the presence of problematic video game use. Particularly, video games serve as escape strategy for suppressing emotional expression. There is no consensus regarding the nature of the relationship between emotional regulation, psychopathology, and problematic video game use, with various proposals suggesting moderation and mediation. There is also no consensus regarding the mediation of gender in the relationship between emotional dysregulation and problematic video game use. The level of certainty regarding the validity of the results was moderate. Emotional dysregulation plays a role in problematic video game use, especially through strategies as emotional suppression, and lack of abilities to understand and control emotions. *Conclusions:* It is important to consider emotional regulation as a potential target for research and intervention in clinical populations. Our results highlight the importance of emotion regulation and, specially, emotional suppression, or negative escapism, on problematic video game use.

Keywords: gaming, emotional regulation, systematic review

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Study design for a neurobiological investigation of reward processing and risky decision-making in adolescents with comorbid gaming disorder and major depressive disorder

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Background: The probability of developing gaming disorder is increased in adolescents with major depressive disorder (MDD). To date, little is known about this relation from a neurobiological perspective. Both disorders have been associated with alterations in reward processing and risky decision-making. These processes might play a crucial role in understanding the relationship between gaming disorder and MDD and can be assessed via non-invasive neuroimaging. *Method:* Magnetoencephalography (MEG) is an effective tool for investigating reward processing and risky decision-making at a neurobiological level. In this study, adolescent patients with both gaming disorder and MDD perform two well-established gambling paradigms during MEG recording and the feedback-related negativity as an event-related field is analyzed. In a stepped study design, all adolescent patients with MDD seeking treatment at a university hospital in Germany are assessed for gaming disorder using a validated screening questionnaire. Diagnoses are confirmed through clinical interviews. Eligible patients are then included in the MEG study. *Results:* We will present details on the study design as well as first results regarding the clinical characterization of the sample of adolescents presenting with both MDD and gaming disorder that will be included in our MEG study. *Conclusions:* Enhanced understanding of alterations in reward processing and risky decision-making in adolescent patients with MDD and comorbid gaming disorder might explain the interrelation of these disorders at a neurobiological level and facilitate a more precise consideration of these processes in therapy.

Keywords: adolescents, gaming disorder, major depressive disorder, magnetoencephalography

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Rage out of control: The emotional pathway to gaming addiction

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Gaming disorder (GD), characterized by excessive and problematic gaming, has been linked to emotional and psychological factors. However, the pathways through which these factors influence GD remain insufficiently explored. This study tests the hypothesis that emotional dysregulation (ED) mediates the relationship between rage and gaming disorder. Emotional dysregulation is a transdiagnostic factor contributing to various psychiatric disorders, including addictive behaviors. Rage, often triggered by in-game failure, is a negative emotional response involving anger and frustration that can lead to aggressive behaviors. Despite its relevance, this phenomenon remains under-researched. Emotional dysregulation may mediate the connection between rage and gaming disorder because individuals who experience intense emotional responses, like rage, often struggle to regulate these emotions. This can lead to maladaptive coping mechanisms, such as excessive gaming, which serves as an escape or a way to numb distressing feelings. The study will be conducted online with an English-speaking sample (N = 100). Participants will complete validated measures assessing rage, emotional dysregulation, and gaming disorder symptoms. Emotional dysregulation will be measured with the DERS-SF, gaming disorder with the IGDS9-SF, and rage using an original questionnaire developed by our team to specifically measure rage in gamers. We hypothesize that individuals with higher levels of rage may be more prone to gaming disorder due to difficulties in regulating their emotional responses. This research enhances our understanding of gaming disorder and suggests that emotional regulation may play a key role in reducing the risk of gaming addiction. Additionally, it highlights the importance of addressing emotional dysregulation in the prevention and treatment of gaming disorder, indicating that further attention to this area could be beneficial for patient care.

Keywords: gaming gisorder, emotional dysregulation, rage, tilt

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Gambling risk potential and related aspects of the fantasy sports

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Background: The debate on the gambling related aspects in fantasy sports continues. The findings of the research studies on this theme have been contradictory. *Aims:* This presentation aims to present the gambling risk potential and related aspects of the fantasy sports. *Methodology:* Study was carried out among persons with opioid use disorders who engaged in gambling behavior at a tertiary level treatment center. The evaluation was carried out using the assessment tool to examine potential of gambling products developed by Meyer and colleagues. The data were analysed using SPSS. *Results:*The participants engaged in different types of gambling activities. The median score on the tool was 45.15 (range 36.85- 54.3). The scores of fantasy sports corresponded to cluster 1- 3 as indicating moderate to very high gambling risk potential. Participants continued to engage in fantasy sports despite reporting that in 68.8% of the fantasy sports the near miss was intentionally introduced by the providers and occurred frequently. Additionally, the probability of winning was perceived to be more than 49% only in 3.13% of the fantasy sports. While in 40.63% of the fantasy sports, the probability of winning was expected to be between 0-4%. *Conclusions:* The study offers valuable insights into the gambling risk potential of fantasy sports as perceived by persons with opioid use disorders who engaged in gambling.

Keywords: fantasy sports, gaming, gambling

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The serial mediation effect of anxiety and depression on the relationship between digital trauma and internet game addiction in adolescents

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The purpose of this study was to examine the serial mediation of anxiety and depression in the relationship between trauma through digital media and internet gaming addiction in adolescents. To examine the model, we used a professional online survey company to collect data from 168 adolescents (mean age 16.73 years, 39.3% males, 60.7% females) who had witnessed 'horrific scenes without mosaics' or 'experienced direct violence or victimisation' in digital media. To measure digital posttraumatic stress symptoms in adolescents, we used the Digital Posttraumatic Stress Symptom Inventory (Re-experiencing 5, Hypervigilance 5, Avoidance 5, Complex Victimisation 5) developed by Kim et al. (2024) based on the ICD-11 symptoms of PTSD and Complex PTSD (e.g., I suddenly think about the experience, I feel very distressed when I think about the experience, etc.) The GAD-7 Korean version (Seo & Park, 2015) was used for anxiety, the PHQ-9 Korean version (Je-Yong, Ahn, et al., 2013) for depression, and the I-GUESS (Sun-jin, Jo, et al., 2017) for internet game addiction. The analyses were conducted using model 6 of Hayes' (2018) Process macro. The bootstrap confidence interval was set at 95 per cent and the sample size was set at 5,000. The results showed that in the first mediator model (anxiety), digital trauma had a significant effect on anxiety (M1) (B=.2436, p<.001). In the second mediator (depression) model, digital trauma had no significant effect on depression (M2) (B=.0629, p=.0755), while anxiety (M1) had a significant effect on depression (M2) (B=.7036, p<.001). In the dependent variable model, digital trauma had a significant effect on internet gaming addiction (B=.1104, p<.01), anxiety (M1) had no significant effect on internet gaming addiction (B=.0306, p=.7825), but depression (M2) had a significant effect on internet gaming addiction (B=.2158, p<.01). The sequential mediation effect of anxiety and depression was tested using bootstrap, and the sequential mediation effect was .0370, which was significant due to the absence of zero between the lower and upper bootstrap values (.0100~.0676). In other words, anxiety and depression sequentially mediated the relationship between digital trauma and internet gaming addiction. The significance of this study is that it confirms that when adolescents experience trauma through digital media, they may experience firstly anxiety and secondly depressive moods, and these moods may influence internet gaming addiction.

Keywords: digital trauma, internet gaming addiction, anxiety, depression

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Cognitive behavioral therapy for gaming disorder for an adult population: Study protocol of a randomized controlled trial

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*Background:*Gaming is a popular activity among both children, adolescents and adults. Gaming has numerous positive effects, such as increased cognitive function and cooperative ability. Nevertheless, also negative effects have been reported. For example, the amount of time spent gaming might decrease the time for other activities like school, work or social relations. In 2018, the World Health Organisation included Gaming Disorder (GD) as a diagnose. Among patients with GD, certain comorbidities have been seen. Both depression and anxiety are common, as well as low quality of life and ADHD. *CBT is one of the most used treatments for GD. However, the evidence level is still low due to the lack of high-quality studies. To increase the knowledge, this study aims to evaluate the effect of CBT on GD in a randomized controlled trial. Method:*In this study 160 participants with GD will be recruited, from the age of 16. The participants will be randomized to an intervention group or a control group. The intervention group will receive 12 weeks of module-based cognitive behavioral therapy, that is flexible according to module selection and length of every module. The control group will be put on a wait list for 12 weeks and thereafter receive the same treatment as the intervention group. The main outcome measures are level of GD and weekly hours of gaming. Assessments will be made at five timepoints; at first visit, before start, during and at the end of treatment, and at a three-month follow-up. *Discussion:*This RCT will evaluate the effect of 12 weeks of flexible cognitive behavioral therapy according to levels of GD and weekly hours of gaming. The results will hopefully add valuable knowledge to improve future treatment of GD.

Keywords: Gaming Disorder (GD), treatment, Cognitive Behavioural Therapy (CBT), Randomized Controlled Trial (RCT), behavioral addiction

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Physical activity significantly moderates the association between screen time and body image among young adults

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Background: The transition to adulthood is a vulnerable period for the development of body image issues. Moreover, body image problems can increase the risk of behavioral disorders, such as body dysmorphic disorder (Collison, & Harrison, 2020) and eating disorders (Howard et al., 2020). Previous research has indicated that high social media use is associated with poor body image in youth (Thai et al., 2024), while studies suggest that young adults who engage in physical activity have better body image compared to those who are less active (Zhang et al., 2024). However, there is limited research that considers screen time, physical activity, and body image simultaneously in young adults. The objective is to examine the moderating role of physical activity in the relationship between screen time and body image in young adulthood. *Method:* This study uses a communitybased sample of 1,475 young adults (mean age = 18.81) recruited from 17 colleges in Canada. Participants self-reported recreational screen time (hours/day), physical activity (dichotomized to reflect meeting or not meeting physical activity guidelines), and sociodemographic characteristics (age, sex, disability or health problems, and employment status). Body image perception was assessed using five items from the Physical Self Inventory Scale. Data were collected in Fall 2021 and Winter 2022. *Results:* Our findings indicate that screen time was positively associated with body image concerns ($\beta = 0.320$; 95% CI, 0.139 to 0.501). Physical activity, however, was not significantly associated with body image concerns. The interaction between recreational screen time and physical activity was negatively associated with body image concerns ($\beta = -0.278$; 95% CI, −0.520 to −0.036), suggesting that physical activity buffers the negative impact of screen time on body image. *Conclusions:* These findings highlight the potential of physical activity as a protective factor in promoting a healthier body image in young adults, suggesting the importance of integrating physical activity promotion into interventions aimed at improving wellbeing in this group.

Keywords: screen time, body image, physical activity, young adults

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Associations between adolescents' screen time and positive mental health: A gender-based analysis

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Background: Research has found that adolescent screen time is associated with lower well-being (Twenge & Campbell, 2018). However, few studies have examined how screen use contributes to youths' positive mental health. Youth positive mental health ranges on a continuum from the experience of flourishing, a positive state of wellbeing, to languishing, a negative state of wellbeing (Keyes, 2002). Research suggests that only 51% of adolescent boys and 44% of adolescent girls experience flourishing mental health (Cent degrés, 2023). As such, the objective of this study is to examine how screen use among adolescent boys and girls is associated with the experience of positive mental health. *Methods:* This study used a community-based sample of 3,626 adolescents (mean age = 17.77, 59.5% female) recruited from 13 colleges in Canada. Participants self-reported recreational screen time (weekdays/weekends; hours/day) as well as positive mental health, using the Mental Health Continuum Short-Form. Youth also reported sociodemographic characteristics, including age, gender, ethnicity, and perceived socioeconomic status. *Results:* Multiple linear regressions were conducted separately for girls and boys, controlling for sociodemographic characteristics. For girls, each additional hour of weekday and weekend screen time were negatively associated with positive mental health ($\beta = -0.381$; 95% CI, −0.643 to −0.119) and ($\beta = -0.445$; 95% CI, −0.700 to −0.189), respectively. For boys, each additional hour of weekend screen time only was negatively associated with positive mental health ($\beta = -0.604$; 95% CI, −0.891 to −0.318). *Conclusions:* The present study suggests that higher levels of screen use by youth are associated with reduced flourishing and greater languishing in girls and boys. Given the increasing concerns over youth mental health, these findings highlight the importance of considering screen use in health promotion efforts aimed at youth.

Keywords: positive mental health, screen time, adolescents, gender differences

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Determining the degree of internet addiction in adolescents based on personality traits using psychological diagnostic methods

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Background: The internet has become an integral part of life in Kazakhstan, significantly influencing the mental health of individuals and potentially triggering certain psychological issues, particularly among children. Recent research focuses on adolescents exhibiting strong tendencies toward internet addiction or those with moderate to severe addiction levels. In our view, effective prevention should target early stages when internet addiction is still at a low level. Understanding the personality traits of adolescents with minimal internet addiction would enable early preventive interventions to curb the development of dependency. This study aims to identify the personality characteristics of adolescents with varying levels of internet addiction. *Methods:* The study involved 50 adolescents aged 13–15 from Almaty, Kazakhstan. Psychological diagnostic tools were employed to assess their internet addiction and personality traits. *Results:* Adolescents with low levels of internet addiction demonstrated pronounced extraversion and rigidity, moderate emotional stability, inflated self-esteem, normal levels of personal anxiety, and slightly elevated magical thinking-related anxiety. Those with moderate internet addiction exhibited pronounced extraversion, rigidity, and spontaneity, along with moderate emotional stability, inflated self-esteem, and normal levels of personal anxiety. Adolescents with high levels of internet addiction were characterized by pronounced introversion, significant emotional instability, adequate self-esteem, very high levels of personal anxiety, and slightly elevated school-related, self-esteem-related, and interpersonal anxiety. *Conclusions:* Adolescents prone to internet addiction are more likely to exhibit personality traits such as pronounced introversion, heightened emotional instability, adequate self-esteem, and significantly elevated personal anxiety, as well as moderate increases in school-related, self-esteem-related, and interpersonal anxiety. Importantly, internet addiction can develop in adolescents regardless of whether they have low, high, or adequate self-esteem. *Funding:* This research has funded by the Science Committee of the Ministry of Science and High Education of the Republic of Kazakhstan (Grant No. AP23488243).

Keywords: internet addiction, early prevention, interpersonal anxiety, pronounced internet addiction tendencies, developed dependency

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From admiration to obsession: Development and psychometric properties of the Problematic Celebrity Fanship Scale

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Since the early 2000s, there has been a growing research interest in the personality characteristics, cognitive ability, and psychological well-being of individuals who show excessive admiration for celebrities (Brooks et al., 2021). Celebrity worship, a multidimensional construct that includes both normative fan engagement and unhealthy emotional and behavioral identification with a media figure (McCutcheon et al., 2002), has been associated with poorer mental health and behavioral addictions (Griffiths, 2024). As celebrity worship encompasses a broad range of healthy and unhealthy fan behaviors and attitudes, the concept and operationalization of problematic levels of celebrity admiration remained unclear. This investigation introduces the concept of problematic celebrity fanship and presents a brief, psychometrically robust assessment instrument: the 8-item Problematic Celebrity Fanship Scale (PCFS). The scale was developed using a sample of 755 participants with a favorite celebrity (51.4% men, Mage = 36.4 years, SD = 13.4) drawn from a nationally representative sample of Hungarian adults (N = 2,028). The PCFS demonstrated strong psychometric properties in terms of unidimensional factor structure, gender invariance, reliability, and validity. Latent profile analysis identified a 1.4% prevalence of problematic celebrity fanship among adults aged 18–64 years and 2.3% among young adults aged 18–34 years. Severity of problematic celebrity fanship was moderately associated with psychological distress, lower self-concept clarity, problematic Internet use, and intense-pathological celebrity worship. The PCFS can assist the identification and assessment of problematic celebrity fanship in both research and practice.

Keywords: celebrity worship, mental health concerns, prevalence, problematic celebrity fanship, problematic Internet use

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Review of standardised questionnaires for diagnosing behavioural disorders associated with excessive Internet and computer use in the Republic of Kazakhstan and the Russian Federation

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Internet addiction and computer dependence have become pressing problems in modern society, especially among young people. According to Digital, as of the beginning of 2024, the number of Internet users in Russia totalled 130.4 million people. This is 90.4% of the country's total population. According to Datareportal, 18.9 million people in Kazakhstan used the Internet at the beginning of 2024. This is 92.3% of the total population of the country. To diagnose these behavioural disorders in the Republic of Kazakhstan and Russia, the following diagnostic methods were considered for use in the framework of the research funded by the Science Committee of the Ministry of Science and High Education of the Republic of Kazakhstan (Grant No. AP23488243): the methodology of L.N. Yurieva and T.Y. Bolbot, the questionnaire 'Perception of the Internet' by E.A. Shchepilina, Kimberley S. Young's Internet Addiction Test. Young (adapted by V. Loskutova) and the Chen Internet Addiction Scale (Chen CIAS). As part of the study, the Kimberley S. Young "Internet Addiction Test" was used. This questionnaire has become one of the first tools for assessing Internet-dependent behavior in Russia and Kazakhstan. Originally the test consisted of 8 questions, now the full version of the questionnaire consists of 40 items. The CIAS Chen scale, which is the most universal for diagnosing all types of addictions, is also used in this study. When analysing tests and questionnaires to assess Internet and computer addiction, it should be noted that they are insufficient for diagnosis. The use of only one questionnaire will not provide accurate data. A minimum of three diagnostic techniques should be used to obtain reliable results. The main difficulty in applying any of the existing questionnaires or tests is that it is impossible to take into account the whole range of manifestations of Internet-dependent behaviour and excessive computer use and their changes, since the variety of behavioural disorders also increases with the development of Internet services. On this basis, it is recommended that researchers in Kazakhstan and the Russian Federation take into account existing developments in the field of addiction psychodiagnosis, but adapt them to the current conditions of development of the Internet environment and computer technologies.

Keywords: Internet-dependent, computer addiction, Internet users, excessive computer use, diagnosing

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Exploring the relationship of belonging and occupational behavior addictions on health: A systematized literature review

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Occupational behavior addictions are an under-addressed area for occupational therapists and scientists. For this study, "occupational behavior addictions" refers to occupations involving overuse of activities related to technology. An occupational perspective was used to explore the relationship between occupational behavior addictions and belonging, and the impact on health and well-being. A systematized literature review was conducted utilizing a PRISMA Flow Chart. Database searches included CINAHL COMPLETE, APA Psych INFO, PubMed, Medline, and the National Library of Medicine. Results of the literature synthesis support that a sense of belonging serves as a motivating and reinforcing factor in occupational behavior addictions. The literature review revealed that occupational behavior addictions have adverse effects on physical, mental, social, academic, and occupational health and well-being. With the understanding that a sense of belonging can be both a motivating factor and a reinforcing factor for occupational behavior addictions, prevention, intervention, and treatment approaches ought to consider integrating this concept. Understanding this mechanism of onset and reinforcing factors affecting occupational behavior addictions are crucial for the development of potentially effective treatments, education, and prevention approaches. More research is needed to understand the complexities of the onset, development, and persistence of occupational behavior addictions. Early intervention and effective treatment approaches focusing on belonging warrant further investigation and research.

Keywords: belonging, addiction, health

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P–44

Neural correlates of cognitive control in problematic internet use

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Background: Problematic internet use (PIU) is characterized by excessive and uncontrolled usage behavior which can lead to functional and psychosocial impairment in daily life. The diagnostic classification of PIU as a behavioral addiction remains controversial. PIU often occurs comorbidly with internalizing symptoms (e.g. depression, anxiety) and is alternatively defined as coping. Previous studies have identified psychophysiological markers of performance monitoring and reward processing as reliable correlates across the externalizing-internalizing spectrum. Thus, we investigated error processing (error-related negativity, ERN) and feedback processing (feedback-related negativity, FRN) to contribute to the understanding of the psychopathology of PIU. *Methods:* Participants were individuals with problematic internet use (PIU; n = 26) and individuals with non-problematic internet use (NIU; n = 30). Two experiments were conducted: a) flanker task and b) doors monetary task. These were used to investigate event-related potentials effects (a) ERN and b) FRN). ANOVA with repeated measures were used for the data analysis. Results. a) We did not find significant group differences in ERN. The descriptive patterns show potentially diminished ERN in the PIU group. b) We did not find significant group differences in FRN. Descriptive analysis shows potentially enhanced FRN in the PIU group. *Discussion:* The PIU group showed comparatively subclinical forms of PIU. The results suggest that individuals with subclinical PIU may not have exhibited identifiable psychophysiological deficits in performance monitoring and reward processing. ERN effects tend to support the classification of PIU as a behavioral addiction.

Keywords: problematic internet use, performance monitoring, error-related negativity, reward processing, feedback-related negativity

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Cannabis use and problematic Internet use in Quebec (Canada): A qualitative study – preliminary results

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Background: Existing literature has indicated an association between cannabis use and problematic Internet use (PIU) (Lanthier-Labonté et al., 2020). Adolescent cannabis users have been identified as a group at increased risk for PIU (Rücker et al., 2015). However, knowledge about the adult population remains limited. While quantitative studies have established a link between these two phenomena, they have not sufficiently explored the lived experiences of individuals or the mechanisms that might underlie this association. This present study aims to understand the experience and background of cannabis users with PIU. *Methods:* This study is a descriptive qualitative study. Semi-structured interviews (n = 45) will be conducted with cannabis users with PIU. Open-ended questions will be used to explore dynamics underlying cannabis use and PIU, and to understand how cannabis use relates to their daily lives (interpersonal relationships, work, study, etc.) as well as to their overall mental health. An inductive and deductive thematic analysis will be carried out, using NVivo software, in order to draw a portrait of users' experiences. *Results:* Interviews will take place during winter 2025. Preliminary results will be presented at the ICBA conference. *Conclusions:* To our knowledge, this is the first study to specifically explore the lived experience of cannabis users with PIU in the province of Quebec, Canada. The qualitative design will help us to better understand the experience of people affected by this problem, which is fundamental to the development and adaptation of interventions for this population. We believe that this study will enable us to better understand the mechanism linking these two addictions so that we can propose harm reduction measures adapted to the adult population.

Keywords: PIU, cannabis, cyberdependance, qualitative

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Exploring digital experiences in adolescent athletes: A qualitative study through the lens of self-determination theory

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Introduction: This study analyses the digital experiences of adolescent athletes in relation to smartphone use, evaluating its benefits and challenges. Grounded in Self-Determination Theory (SDT) and Uses and Gratifications Theory (U&G), the research also examines motivational orientations toward smartphone use and the interpersonal styles of significant others that influence their digital and sports experiences. *Method:* A qualitative design was employed, using focus groups conducted with adolescent athletes (aged 14–19) engaged in competitive sports, their coaches, parents, and teachers until saturation was reached. The sessions explored smartphone usage, benefits, challenges, motivations, and interpersonal styles towards smartphone use. Data were analysed using thematic analysis with ATLAS.ti. *Results:* Adolescent athletes primarily use their smartphones for social media (Instagram, TikTok), messaging (WhatsApp), listening to music (Spotify), videogaming and accessing sports-related platforms, such as federation apps. While personal use often focuses on entertainment, in sports contexts, smartphones serve as tools for group communication, organizing activities, and accessing content for motivation and technical analysis, such as training videos and rival assessments. However, challenges like distractions, loss of focus, and the negative effects of social comparison were also noted. Motivation for smartphone use is both autonomous (using it for enjoyment or to help achieve their sports-related goals) and controlled (usage required by coaches or parents to access key information). Interpersonal styles regarding smartphone usage vary by context, but clear rules in competitive settings seem to be associated with better digital and sports experiences. *Discussion:* These findings highlight the dual role of smartphones as both facilitators and potential distractors in the sports experiences of adolescents. From an SDT perspective, future research should further explore the impact of interpersonal styles on the type of motivation adolescent athletes develop toward smartphone use.

Keywords: adolescent athletes, smartphone usage, self-determination theory, digital experiences, focus group

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The Addictive Digital media Use Screen (ADUS): A screening tool for adults

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Background: Digital media are accessible through various devices, regardless of online or offline status. Excessive use of digital media can lead to physical and mental difficulties for some individuals, potentially developing into addictive behaviours. Recently, there has been an increasing need for a comprehensive evaluation of consumption across digital media, including the internet, gaming, video streaming, and social media. This study aimed to develop and test the reliability and validity of the Addictive Digital Media Use Screen (ADUS), a screening tool for identifying addictive use of digital media, based on the ICD-11 diagnostic criteria for gaming disorder. *Methods:* Self-reported data from 377 adult participants, recruited through an online panel managed by a research firm, were used to test the internal consistency reliability of the eight items that make up the ADUS. Factor analysis was conducted, and the validity of the tool was assessed using several methods: criterion validity was tested by examining the relationship between digital media use time, subjective overuse levels, and the ADUS score; concurrent validity was assessed through associations with anxiety, depression, and perceived stress; and discriminant validity was evaluated using the HTMT method. *Results:* Confirmatory factor analysis revealed that the ADUS, consisting of two factors, demonstrated an acceptable level of fit (RMSEA=0.078, 90% CI: 0.053-0.105). Cronbach's alpha values for the factors and total scale ranged from 0.78 to 0.86, indicating excellent internal consistency. The ADUS score showed significant positive associations with depression, anxiety, and perceived stress. The HTMT values between items ranged from 0.323 to 0.593, confirming adequate convergent and discriminant validity.*Conclusions:* The ADUS demonstrated good reliability and validity in an adult sample, suggesting it could be useful for early identification of adults at risk of addictive digital media use. Future research is needed to test its applicability in different cultural contexts.

Keywords: digital media, screening, psychometrics

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Active and passive sexting among adolescents: A longitudinal study investigating the predictors of different types of sexting

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Introduction: The term 'sexting' refers to the act of exchanging sexually explicit content, such as photos, videos and messages via DTs, and these behaviours became common among adolescents. Sexting encompasses a wide range of practices, motivations, attitudes, and behaviours, and has been differentiated between active sexting (i.e., sending of sexually explicit messages, videos or photos) and passive sexting (i.e., receipt of sexually explicit messages, videos or photos). This longitudinal study aims to deeply investigate the correlates and predictive factors of active and passive sexting. *Methods:* 403 adolescents (age 13 -18 years) were recruited from Italian high schools. Participants filled out measures of active and passive sexting, emotion dysregulation, and social media use intensity. Data were examined using the latent growth profile analysis with Mplus software. *Results:* We found two different (classes) of sexting trajectories for both passive and active sexting. The first class, for both passive and active sexting, shows a low baseline level of sexting and a small initial increase and subsequent decrease, whereas the second class is characterised by a higher baseline level of sexting and an almost linear increase. The more active 'passive sexting class', is associated with heavy social media use and a lower age. The more active 'active sexting class' showed a higher average age and difficulties in emotional regulation. *Discussion:* Our findings suggest that the association between social media use and passive sexting suggests that young people who receive sexual content may be users who spend more time on online platforms. Furthermore, the association between older age and active sexting suggests that adolescence may be a time when online sexual behaviour is more likely to occur. Difficulties in emotional regulation as a predictor of active sexting may lead us to pay more attention to the relationship between emotional balance and virtual sexual behaviour.

Keywords: adolescents, sexting, social media

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Differences in smartphone addiction by content usage types among Korean adolescents: A gender-based comparison using Latent Profile Analysis

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While smartphones offer clear functional advantages, concerns are growing over the adverse effects and harms caused by excessive exposure to highly addictive content, such as games, social media, and short-form videos. This study aimed to classify the five most frequently used smartphone content types among Korean adolescents and analyze differences in smartphone addiction by gender. Data were drawn from the 2019 Korean Children and Youth Panel Survey (KCYPS) and included 2,345 second-year middle school students (1,267 males, 1,078 females). Latent Profile Analysis (LPA) and ANOVA were conducted using Mplus 8.3. Key findings are as follows: I) Male students were categorized into four latent groups: (I-a) high usage of games/videos, (I-b) high usage of device-centered activities, (I-c) moderate usage across all content types, and (I-d) high usage across all content types. II) Female students were categorized into three latent groups: (II-a) high usage of games/videos, (II-b) high usage of device-centered activities, and (II-c) high usage of social media/videos. III) ANOVA results indicated that for males, the I-a and I-d groups showed significantly higher levels of smartphone addiction, while for females, the II-c group exhibited significantly higher addiction levels.

These results suggest that while video content commonly affects both genders, games for males and social media for females are the primary drivers of negative impacts on smartphone addiction. Tailored interventions that account for gender and specific content usage patterns are necessary to address smartphone addiction among adolescents.

Keywords: smartphone addiction, content usage types, gender differences, Latent Profile Analysis (LPA)

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Smartphone addiction and suicide risk among Korean young adults by social media usage level: The sequential mediating effects of relative deprivation and depression

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Background & Objectives: Suicide among young adults in South Korea has been rising in recent years, making it a critical public health concern. With the increasing prevalence of smartphone use and social media engagement, concerns have emerged regarding their psychological impact, particularly in relation to mental health and suicidal behaviors. This study investigates the relationship between smartphone addiction and suicide risk, focusing on the sequential mediating effects of relative deprivation and depression. Additionally, it examines whether these pathways differ based on the frequency of social media (SNS) use. *Methods:* A total of 521 Korean young adults aged 19-39 (260 males, 261 females) participated in an online survey. Participants were categorized into two groups based on social media usage levels: (1) low-to-moderate users and (2) frequent users. Data were analyzed using SPSS (Version 25) and PROCESS macro 4.0 (Model 6) to test sequential mediation effects. *Results:* Low-to-moderate social media users: Smartphone addiction (X) significantly influenced relative deprivation (M1) and depression (M2), but its direct effect on suicide risk (Y) was not statistically significant. Additionally, the sequential mediation effect was not significant. Frequent social media users: Smartphone addiction (X) significantly affected relative deprivation (M1) and depression (M2), with depression (M2) subsequently increasing suicide risk (Y). The sequential mediation effect was statistically significant. *Conclusion:* These findings suggest that excessive smartphone use, particularly among frequent social media users, contributes to suicide risk through increased feelings of relative deprivation and depression. Given the rising suicide rates among Korean young adults, this study underscores the need for targeted interventions addressing the psychological consequences of smartphone addiction. Policy and clinical measures should be developed to mitigate its impact on mental health and reduce suicide risk in this population. Furthermore, beyond individual-level interventions, broader societal efforts are necessary to address the structural factors that exacerbate relative deprivation. Reducing social comparison pressures, promoting healthier digital engagement, and fostering a more inclusive and equitable society could help alleviate the negative psychological effects of smartphone addiction and social media overuse.

Keywords: smartphone addiction, social media use, relative deprivation, depression, suicide risk, young adults

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The development and psychometric properties of the new scale assessing parental compliance with 5Cs of Media Use (MEPA-5C)

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Background: With the increasing influence of digital media on family dynamics, it is essential to support family-based regulation of media use. The "5Cs of Media Use" framework (Child, Content, Calm, Crowding Out, Communication) was developed by American Academy of Pediatrics (AAP) to promote the best parenting practices concerning media use. This study evaluates the psychometric properties of a newly developed instrument designed to measure parental compliance with the 5Cs of Media Use.*Objective:*To validate and assess the reliability of the Media Parenting Compliant with 5Cs of Media Use scale (MEPA-5C) among parents. *Methods:* A total of 2405 Czech parents of children aged 0-18 participated in this study, recruited via an online panel. Participants completed the questionnaire battery, including the MEPA-5C, along with additional measures for convergent and discriminant validity assessment. *Analyses:*Internal consistency was assessed using Cronbach's alpha and McDonald's omega. Exploratory and Confirmatory Factor Analysis was conducted to assess factor structure. The scale was correlated with a previously established measurement tool for media parenting behavior (MEPA-21) to assess convergent validity. *Results:* Preliminary results indicated that the MEPA-5C demonstrated strong reliability (α =0.90, ω = 0.91) and validity. Factor analysis supports two-factor solution, explaining cumulatively 45% of the variance. Model fit indices, however, were found to suggest weaker fit to data and more nuanced analysis differentiating between parents with children of various ages is warranted. The scale showed significant correlations with all previously established subscales of Media Parenting scale (MEPA-21); namely Active mediation ($r = 0.72$, $p<.001$), Rules ($r = 0.72$, $p<.001$), Control ($r = 0.70$, $p<.001$), and Overprotection ($r = 0.60$, $p<.001$) supporting its convergent validity. *Conclusion:* The MEPA-5C reliably and validly assesses how parents regulate their children's media use in line with AAP's 5Cs of Media Use, allowing for an evidence-based evaluation of these guidelines' effectiveness. *Funding and Acknowledgments:* This research was funded by the Czech Science Foundation (grant number 24-12662S).

Keywords: psychometrics, media parenting, guidelines, 5Cs of Media Use, prevention

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Internet and social media addictive behaviors in obsessive-compulsive disorder (OCD)

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Background: The link between some psychiatric disorders, such as depression, anxiety, and ADHD, and comorbid problematic internet use (PUI) and social media addiction (SMA) has been well-established. However, little research has been done on the potential relationship between OCD and PUI and SMA. This study explores that relationship.*Methods:* In an online Prolific survey of "Personality, Mental Health, and Well-Being," 77 adult participants (ages 18-75) screened positive for probable OCD on the Obsessive Compulsive Inventory - Revised (OCI-R). Higher total scores on the OCI-R indicate more severe OCD symptoms. The Internet Severity and Activities Addiction Questionnaire (ISAAQ) assessed for problematic internet use (PUI). The Bergen Social Media Addiction Scale (BSMAS) scores measured social media addiction (SMA) symptoms. The question "Do you often feel compelled to do something on the internet when you experience an unwanted or anxiety provoking thought?" explored potential compulsive internet use. Significant main effects of OCI-R scores on these variables were tested using Pearson correlations and independent samples t-tests.*Results:* Participants with probable OCD who screened positive for PUI had higher scores on the OCI-R (M=33.69) than those who did not endorse PUI (M=28.47), t(75)=-2.356, p=.021, d=-.717. OCI-R scores were associated with higher scores on the BSMAS for these participants as well, r(70)=.287, p=.014. Those with probable OCD who endorsed compulsive internet use had higher OCI-R scores (M=30.69) than those with probable OCD who did not endorse compulsive internet use (M=26.73), t(75)=-2.245, p=.028, d=-.541. *Conclusion:* These results indicate that treatment providers should assess for PUI and SMA symptoms in patients with OCD, and future research should explore possible compulsive internet use in those with OCD. Further research is also needed to determine the directionality of these results.

Keywords: OCD, internet addiction, social media addiction

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Association between problematic TikTok use and body image among young adults: An exploratory study of body shame, self-objectification and self-sexualization

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Background: TikTok is a social media particularly used by young people. Despite its appearance-based character, few studies however investigate the influence of its use on body image's aspects and sexual objectification. The objectives of this exploratory study were to assess a problematic TikTok use among a young French adults sample, and its effect on self-objectification, self-sexualization, and body shame. *Method*: 60 participants aged between 18 and 25 years old were recruited online and by snowball effect. They completed the Bergen Social Media Addiction Scale, the Likert version of the Self-Objectification Questionnaire, the Enjoyment of Sexualization Scale, and the Body Shame Subscale of the Objectified Body Consciousness Scale. Results – Eight participants had a Problematic TikTok use. *Results*: emphasized that Problematic TikTok Use positively predicted the self-objectification's appearance component, self-sexualization, and body shame. Furthermore, self-objectification positively predicted body shame. *Conclusion:* This study highlights the potential problematic TikTok use among young adults, as well as its effect on body shame and the internalization of an objectified and sexualized gaze at oneself. Thus, this study highlights the interest of studying the impact of TikTok use on body image among young adults, involving various clinical and research implications.

Keywords: problematic TikTok use, self-objectification, body shame

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Problematic usage of the internet is associated with orthorexia nervosa tendency in adultsn

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Background: The link between problematic usage of the internet (PUI) and eating disorder symptoms is well-established. However, less is known about this association in the context of orthorexia nervosa (ON), an excessive preoccupation with healthy eating. This study aimed to investigate the relationship between PUI, including various problematic online behaviors, and ON tendency in a sample of U.S. adults. *Methods:* A total of 300 adults completed an online survey via Prolific (mean age = 37.40, 54.6% female). The survey included demographic questions, the ORTO-R to measure ON symptoms, and the Internet Severity and Activities Addiction Questionnaire (ISAAQ-10) to assess PUI and the extent of engagement in online browsing, gaming, shopping, social networking, cyberchondria, pornography, and cyberbullying perpetration. *Results:* Women had higher ORTO-R scores than men ($p<.05$). ISAAQ-10 scores predicted ORTO-R scores in a regression model ($\beta = .375$, $p<.001$) even after controlling for age, gender, and an eating disorder diagnosis. ON risk was associated with a high engagement in cyberchondria, researching healthy food choices on the internet, cyberbullying perpetration, and online shopping. *Conclusion:* Results indicate that PUI is associated with ON symptoms even after considering other predictors. Maladaptive use of nutrition and medical-related resources may play a significant role in this association. However, it remains unclear whether exposure to this content increases ON risk or if people with ON symptoms seek this information online. The directionality of this relationship is an important area for future research.

Keywords: internet addiction, internet use, orthorexia, orthorexia nervosa, eating disorder

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Problematic internet and social media use in body dysmorphic disorder (BDD)

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Background: The internet's impact on body image is a growing area of concern. While eating disorders have received significant research attention, other forms of body image distress, such as body dysmorphic disorder (BDD), remain underexplored. This study investigates the relationship between BDD, problematic internet use (PUI), and social media addiction (SMA), highlighting their potential interconnections. *Methods:* A Prolific survey was distributed to 300 adults (ages 18-75). The Body Dysmorphic Disorder Questionnaire (BDDQ) assessed body image concerns and was used to identify individuals with probable BDD. The Internet Severity and Activities Addiction Questionnaire (ISAAQ-10) assessed problematic internet use (PUI), and the Bergen Social Media Addiction Scale (BSMAS) measured social media addiction (SMA). *Results:* BDDQ scores were positively correlated with ISAAQ-10 scores, $r(287)=.405$, $p<.001$, and BSMAS scores, $r(281)=.359$, $p<.001$. Individuals with PUI and SMA were more likely to meet the criteria for probable BDD ($\chi2(1)=2.77$, $p=.002$,$\phi=0.207$; $\chi2(1)=6.463$, $p=.030$,$\phi=0.152$). Individuals with likely BDD were more likely to report losing track of time ($p = .039$), using the internet to self-soothe ($p < .001$), going online to battle loneliness/boredom ($p < .001$), neglecting responsibilities to stay online ($p < .001$), struggling to stop compulsive use ($p = .046$), losing sleep from late-night use ($p = .043$), physical/psychological problems from excessive use ($p = .01$). Among those with SMA, individuals with likely BDD used social media to forget personal problems more ($p=.030$). *Conclusion:* These findings suggest a notable relationship between BDD and both PUI and SMA. Future research should explore the bidirectional nature of this relationship, as addressing body image distress may help reduce problematic internet behaviors, and conversely, interventions targeting internet use may help to reduce BDD-related concerns.

Keywords: body dysmorphic disorder, problematic internet use, social media addiction

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Digital stress and friendship conflict in adolescence: The role of perceived norms and features of social media

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Background: Friendship quality in adolescence is a crucial area of study, with conflict being an underexplored indicator, particularly in association with adolescents' online experience. Norms and expectations about friends' reciprocal constant availability via social media (i.e., digital stress) represent new potential stressors and sources of conflicts with friends. *Method:* A structural equation model was employed to examine the longitudinal associations of perceived friends' norms about social media use and perceived social media functioning at T1 on friendship conflict at T2, with a focus on the mediating role of two aspects of digital stress (i.e., entrapment and disappointment). A total of 1185 adolescents (59.3% F, Mage = 15.97 years, SD = 1.43) completed self-report measures at two timepoints, 6 months apart. Gender differences were also explored. *Results:* Results showed that perceived friends' norms about social media use and unique social media features (i.e.,visualness) contribute to explain digital stress and, in turn, friendship conflict. Additionally, emotional responses to unmet expectations of friends' availability (i.e., disappointment) emerged as particularly relevant in explaining conflicts, compared to the perceived pressure to be responsive to them (i.e., entrapment). Further, males who perceive high availability of social media experience lower levels of entrapment, compared to females. *Conclusion:* The study contributes to the literature on social media experiences within friendships, and sheds light on social media as a context for studying the dynamics of conflict. Practical implications are discussed for supporting adolescents in navigating the complexities of digital friendships.

Keywords: friendship conflict, digital stress, perceived norms, social media features

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Sex differences in the relationship between problematic social media use, motivations for use and suicidal ideation during the last year

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Background: Problematic social media use (PSMU) and motivations for use are linked to mental health problems in young people. This study aims to identify sex differences in time spent, problematic use, motivations for social media use, and their relationship with suicidal behavior. *Methods.* A total of 1272 young people from Catalonia aged 16–29 completed an ad hoc questionnaire on socio-demographic data and suicidal behaviors, the Bergen Social Media Addiction Scale, and the Social Media Motives Questionnaire. Results. Women showed higher PSMU prevalence (Women = 6.0%, Men = 2.4%, $p = .005$). Men spent more weekly hours on YouTube (Mw = 4.81, Mm = 7.77, $p < .001$), while women spent more on TikTok (Mw = 13.39, Mm = 11.70, $p = .039$). Women scored higher in motivations for coping (Mw = 10.55, Mm = 8.49, $p < .001$) and socialization (Mw = 11.43, Mm = 10.44, $p < .001$). No differences were found in PSMU scores between men and women with suicidal ideation in the past year (Mw = 17.64, Mm = 16.46, $p = .243$). However, both women (Mwsi = 17.64, Mwnsi = 14.18, $p < .001$) and men (Mmsi = 16.46, Mmnsi = 12.74, $p < .001$) with suicidal behaviors had higher PSMU scores than those without. *Conclusions.* The higher prevalence of PSMU in women is potentially due to higher motivations for socialization and coping, both strongly associated with this behavior's development. It has been observed that individuals with suicidal ideation in the past year use social networks more problematically, regardless of sex. This increase in PMSU may serve as a coping mechanism for the distress linked to suicidal ideation. The absence of sex differences suggests PSMU linked to suicidal behavior is not influenced by sex. Future studies should examine mediating variables between suicidal behavior and PSMU.

Keywords: problematic social media use, sex differences, motives, Internet, suicidal behavior

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A bibliometric analysis of research into CSBD

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Introduction: There is no bibliometric review on Compulsive Sexual Behavior Disorder (CSBD) based on our search in Web of Science for the current review. CSBD nowadays is a diagnosable condition in the ICD-11. Many studies have examined various aspects of CSBD, ranging from diagnostic criteria to pharmacological and psychological treatment options. *Objective:* This study aims to perform a bibliometric analysis of all citations related to CSBD to see the total publication count, identify prominent authors and influential papers, and uncover research trends and gaps. *Methods:* Relevant publications were found using a specific search strategy in Web of Science, with the database searched from its start until October 24, 2024. The selection included only articles pertinent to CSBD, and analysis was conducted using Biblioshiny in R Studio. The software assisted the analysis and visualization of key data points, including dataset characteristics, annual scientific production, top journals, leading authors, most-cited countries and documents, frequently used keywords, and patterns in co-occurrence and co-citation networks. *Results:* A total of 341 publications met the criteria, contributed by 669 authors, with an average citation rate of 16.71 per document. Publication output increased notably between 2019 and the present. The most frequent outlets for CSBD research were the Journal of Behavioral Addictions (n=95), followed by the Journal of Sexual Medicine (n=29), and the Journal of Sexual Behavior (n=17). Thematic analysis revealed foundational topics such as impulse control disorders, hypersexuality, sexual addiction, substance use, and issues related to women. Emerging themes included psychopathology, naltrexone use, and attachment, while specialized areas addressed neuroimaging, religion, morality, self-control, sex offenses, and sexual deviance. *Discussion: 1.* Impulse Control Disorder and CSBD: Current research has indicated that while CSBD shares characteristics with impulse control disorders, it is distinguished by repetitive, distressing sexual behaviors that align with ICD-11's criteria*.2*. Pharmacological Options for CSBD: Naltrexone has been explored as a treatment for CSBD however, there remains an unexplored potential in SSRIs, which have shown promise in managing impulse control disorders. *3.* Neuroimaging as an Emerging Research Area: Neuroimaging studies are beginning to map brain activity patterns in CSBD that mirror those observed in other behavioral addictions, suggesting underlying neurobiological markers. *4.* Therapeutic Approaches and Research Gaps: Unlike Gaming Disorder, therapeutic interventions for CSBD, such as CBT and ACT, are under-researched, highlighting a significant need for further studies on behavioral treatments.

Keywords: CSBD, bibliometric review

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A systematic review and meta-analysis on the comorbidity of CSBD and other psychiatric disorders

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Introduction: Grounded in the "p-factor" theory, which posits a general dimension of psychopathology explaining the co-occurrence of mental disorders, this study highlights the importance of examining compulsive sexual behaviour disorder's (CSBD) comorbidities to better understand its underlying mechanisms and shared risk factors with other conditions. *Aims:* The study aims to synthesize available evidence on the associations between non-paraphilic CSBD and psychiatric comorbidities and contribute to the classification debate surrounding CSBD (Briken, 2020). *Method:* Overall association between CSBD and the comorbid disorders was analysed on three datasets based on the study design: correlations, comparisons of means and comparisons of proportions. Additionally, analyses were conducted for each comorbidity-family separately (e.g., personality disorders, behavioural addictions). Two large-scope electronic databases were searched (PubMed, Web of Science). The potential moderating roles of demographic variables (e.g.., gender, sexual orientation, age) and other, theoretically relevant constructs (e.g. clinical or community sample) were assessed. *Results:* The analysis included 65 studies before an updated search that will be done for the conference presentation. Preliminary results show that under random-effects models, the overall correlation was small but significant ($r = 0.226$, 95% CI [0.185, 0.265], $p < 0.001$); group comparisons showed a large, significant effect ($g = 0.712$, 95% CI [0.137, 0.019], $p < 0.001$); and comparison of proportions showed a small but significant risk for other disorders (OR = 1.978, 95% CI [1.493, 2.620], $p < 0.001$). When studies were grouped by the type of comorbid disorder, other behavioural addictions (e.g. compulsive buying, gambling, problematic gaming) showed the highest comorbidity, followed by depression, attention-deficit hyperactivity disorder (ADHD) and anxiety. *Conclusion:* Results show the likelihood of comorbidity

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and which disorders are more likely to manifest in the presence of CSBD thus suggesting the need of screening for other disorders, especially other excessive behavioural disorders, ADHD and mood disorders.

Keywords: comorbidities, meta-analysis, classification debate

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From concept to reality: Social, clinical, and legal consequences of conceptualizing out-of-control sexual behavior

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There is an ongoing debate on how to conceptualize out-of-control sexual behaviors that are associated with functional impairment and distress. While phenomenological and neurobiological arguments are often cited in this debate, the consequences for those affected are less often considered. This project aims to close this gap by exploring the social, clinical, and legal repercussions of different conceptualizations of out-of-control sexual behavior. Using randomly assigned case vignettes, the consequences of the most common conceptualizations (impulse control disorder vs. sex addiction vs. sexual disorder vs. no disorder) will be explored, and the impact of variables such as gender and biological underpinnings will be investigated. In three studies, we will show how concepts impact (1) stigmatization in a representative sample of the general German population, (2) affect clinical decisions and empathy with a sample of mental health professionals, and finally (3) influence sentencing and assessment of culpability in a sample of judges.

Keywords: stigma, out-of-control sexual behavior, CSBD, sex addiction, hypersexuality

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Pleasure-seeking, relief-seeking and conformity: Towards a pathway model of sexual addictions

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Background: Dysregulated sexual behavior (DSB) is a heterogeneous clinical entity in terms of its manifestations (various behaviors, online or not, normophilic or paraphilic, associated or not with the use of psychoactive substances), whose conceptual integration is still debated between the predominance of an impulsive dynamic based on the primacy of pleasure-seeking, a compulsive dynamic reflecting a search for relief, or an addictive dynamic combining the first two with a conditioning logic. Its heterogeneity invites us to explore the co-presence of several profiles, based on the addiction model. *Objective:* Our study aims to determine the existence of profiles in a sample of subjects with DSB in terms of dynamics and motivation (pleasure-seeking or relief-seeking), and to observe whether these profiles correspond to particular manifestations of DSB (online, paraphilic, or associated with psychoactive substance use). *Method:* 76 participants with various DSBs were recruited. Several variables were measured by standardized scales: anxiety and depression (HAD), impulsivity (UPPS-P), cognitive distortions (ASP) and sexual motivation (Sex-MS). Diagnostic formalization of sexual addiction was achieved via the SAST and the presence of sexual craving. Univariate and factorial analyses were performed. *Results:* Our sample showed marked impulsivity towards pleasure/sensation seeking and high anxiety. Intrinsic motivation remained the most prominent sexual motivation. Three patterns emerged, corresponding to the Pathway model of gambling: a "hedonistic" cluster essentially characterized by sensation-seeking and intrinsic sexual motivation, an "altered mental health" cluster characterized by anxiety and depression and associated with online practices, and a "conformist" cluster characterized by external sexual motivation or amotivation and associated with sexual practices associated with the use of psychoactive substances. *Discussion:* Conceptually, the results open up prospects for a Pathway model of sexual addictions that offers clinical applications through targets accessible to management and diversified prevention.

Keywords: sexual addictions, pathway model, sensation seeking, anxiety, sexual motivation

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Bidirectional positive associations between problematic pornography use and body dissatisfaction: Findings of a nationally representative one-year longitudinal study

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Previous studies have predominantly focused on examining associations between pornography use and body dissatisfaction (BD). However, as problematic pornography use (PPU) is associated with excessive use and various impairments, the associations between PPU and BD warrant further investigation with a longitudinal design and representative sample, which current literature lacks. Given these limitations, this study examined the associations between problematic pornography use and body dissatisfaction cross-sectionally and longitudinally in a representative sample of Hungarian adults. Among a sample of 2801 adults (Mage = 23 years, SD = 4.74, 48.2% men and 52.3% women), we performed an autoregressive cross-lagged analysis with a multi-group approach. According to our findings, greater levels of problematic pornography use were cross-sectionally associated with body dissatisfaction among men and women. Longitudinally, we observed bidirectional positive associations between problematic pornography use and body dissatisfaction in men and women. Findings revealed that greater baseline problematic pornography use was associated with greater body dissatisfaction one year later and vice versa. Nevertheless, these longitudinal findings should be interpreted with caution, as causal inferences cannot be drawn from the present study, and the effect sizes of the associations were small, necessitating further research. Mental health workers and researchers should take into consideration the positive link between problematic pornography use and body dissatisfaction among men and women as well.

Keywords: problematic pornography use, body dissatisfaction, longitudinal design, adults

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The prevalence of first- and second-wave digisexualities in Germany and their relation to Compulsive Sexual Behavior

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Background: Problematic use of online pornography is considered a hallmark symptom of Compulsive Sexual Behavior Disorder (CSBD), but the role of other digisexual behaviors in this disorder remains largely unknown. Digisexuality encompasses a range of sexual behaviors mediated by technology, with first-wave digisexuality involving technologies such as online pornography and sexting, and second-wave digisexuality encompassing emerging technologies like virtual reality pornography (VR porn) and highly realistic sex dolls. However, the prevalence of these evolving behaviors across different generations and the relation to CSBD is still unclear. *Method:* We conducted an online survey with a sample of N = 3,564 individuals from Germany, selected proportionally according to age, gender and regional distribution. The aim of the study was to investigate the prevalence and frequency of digisexual behaviors and their relation with CSBD. *Results:* First-wave digisexualities showed prevalences ranging from 19% for sexting erotic fantasies to 66.1% for porn consumption. Second-wave digisexualities showed lower prevalences, with 5.3% for the use of VR-porn and 3.9% for the use of highly realistic sex dolls. Emerging and technologically advanced digisexualities, including VR-porn and sex dolls, were predominantly reported by younger generations. In addition, all surveyed digisexualities showed medium (r = .308; porn use) to strong (r = .529; non-committal sex via dating apps) correlations with CSBD-19 scores. Furthermore, the use of highly realistic sex dolls is still rare in the general population, but among those who use them, the frequency of use appears higher compared to other digisexual behaviors. *Conclusions:* These findings suggest that clinical assessments and interventions for CSBD need to extend beyond online pornography and include a broader range of digisexual behaviors. As technologized sexual practices continue to evolve, new opportunities and challenges arise, underscoring the need for future research and tailored therapeutic approaches to address their potential risks.

Keywords: digisexuality, CSBD, prevalence

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Assessment of publication trends on Compulsive Sexual Behavior Disorder studies Over 20 years on PubMed

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Background: Over the past two decades, Compulsive Sexual Behavior Disorder (CSBD) has emerged as an important topic in mental health research. This study reviews publication trends on CSBD in PubMed, examining the number of publications, gender and age distributions, countries of publication, and types of research design. The analysis also explores three key areas: the establishment of reliable diagnostic criteria, insights into neurobiological mechanisms, and the development of culturally sensitive treatment approaches. *Method:* CSBD-related publications on PubMed from January 1, 2004, to October 31, 2024, were analyzed using the "Results by Year" feature. All publication types—including original research articles, reviews, short reports, letters, and case studies—were included without language restrictions. Data collected included annual publication counts, study demographics (gender, age), countries of publication, and types of research design. Additionally, trends in three primary research areas were investigated: establishing reliable diagnostic criteria, understanding neurobiological mechanisms, and advancing culturally sensitive treatment approaches. *Results:* The analysis reveals a gradual increase in CSBD-related studies, particularly after the inclusion of CSBD in the International Classification of Diseases, 11th Revision by the World Health Organization in 2018. Most studies originate from North America and Europe, focus on adult male populations, and utilize a range of research designs, including observational and experimental methods. Key research interests include the development of diagnostic criteria and the exploration of neurobiological factors, while studies on culturally sensitive treatments remain limited. *Conclusion:* Over the past 20 years, research on CSBD has progressively expanded its scope. A comprehensive understanding of these publication trends can provide valuable insights to guide future research and improve clinical practices.

Keywords: Compulsive Sexual Behavior Disorder, publication trends, PubMed

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Are behavioral addictions among patients with High IQ linked to impulsivity and sensation-seeking?

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Background: Addictive behaviors, particularly behavioral ones, have been little studied in people identified as having High Intellectual Quotient (HIQ) (IQ ≥130). Although impulsivity and sensation-seeking are known risk factors for addictive disorders in the general population, these two personality traits have never been studied specifically in HIQ subjects. In this study, we wished to compare impulsivity and sensation-seeking scores (1) between people with behavioral addiction (including gambling disorder, sexual addiction, internet addiction, buying addiction, food addiction, problematic video game playing) and HIQ versus behavioral addiction but without HIQ; (2) between people with HIQ and behavioral addiction versus HIQ but without behavioral addiction. *Method:* We recruited 206 participants (addiction care settings and general population) and assessed the following dimensions: IQ (WAIS), addictive behaviors (DSM criteria), impulsivity (UPPS-P) and sensation seeking (SSS form V). *Results:* 39.8% of participants had at least one current behavioral addiction (n=82 including 39 with HIQ and 43 without HIQ). 42% had an HIQ (n=87 including 39 with behavioral addiction and 48 without behavioral addiction). Among subjects with behavioral addiction, we found no significant difference in impulsivity and sensation-seeking scores between subjects with and without HIQ. However, among subjects with HIQ, those with behavioral addiction had significantly ($p<0.05$). higher sensation-seeking (dimensions thrill and adventure seeking, disinhibition) and impulsivity (subdimension sensation seeking) scores than those without behavioral addiction. *Discussion:* Our results suggest a link between sensation-seeking and addictive behaviors in HIQ subjects. Contrary to the data in the literature on addictive disorders, apart from the 'sensation-seeking' sub-dimension, impulsivity does not appear to be a factor discriminating between HIQ subjects with and without behavioral addiction. These data suggest specific treatment approaches for subjects with HIQ consulting for behavioral addictions.

Keywords: behavioral addictions, HIQ, impulsivity, sensation seeking

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Exploring clinical experts' representations of craving: Insights from French-speaking psychologists and psychiatrists specializing in addiction

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Recent literature acknowledges the central role of craving in both substance use disorders and behavioral addictions. However, its definition remains unclear and lacks a unified consensus, resulting in a fragmented and complex conceptualization. Clinical experts, integral to addiction care, are central to the management and understanding of these disorders. Yet, their views on craving have rarely been directly investigated. To address this ambiguity, this pilot study explores the representations of craving among French-speaking psychologists and psychiatrists specializing in addiction. By examining their perspectives, the study aims to better understand how this concept is perceived and defined in clinical practice and to identify the convergences and divergences in its interpretation. Clinical experts were invited to participate through: open-ended online questionnaire, a semi-structured interview, or a combination of both. This approach was designed to elicit detailed insights into their understanding and definition of craving. The data were analyzed using thematic inductive analysis, enabling the identification of commonalities and discrepancies in the experts' conceptualizations. The findings reveal that clinicians commonly describe craving as a high-intensity symptom triggered by internal factors (thoughts, emotions) and external stimuli (environmental cues). However, significant divergences emerged, particularly regarding its occurrence in healthy populations, the nature of its intensity, and its duration. These results underscore that, despite the recognized importance of craving in addiction disorders, its conceptualization remains imprecise and heterogeneous, reflecting the lack of a unified definition in the scientific literature. This study highlights the diversity of craving representations among clinical experts and emphasizes the need for greater conceptual clarity to enhance research and clinical practice. As a next step, a Delphi method could help refine these findings and work toward a more cohesive understanding of the concept.

Keywords: craving, clinical experts, addictions, definition, qualitative

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Inhibition of reflex chains stops behavioral addictions

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The central nervous system in humans consists of the first and second signal system. Animals, including humans, have the first signal system, which mechanically selects and drives reflexes which produce responses to stimuli. The reproducibility of the reflex increases with successful physiological behavior and decreases with unsuccessful physiological behavior. Humans also have the second signal system. In evolution, humans happened upon physiological success due to standing upright and using their forelimbs to do things. This was done in an environment with strong subject dominance. This way of life lasted for generations reinforcing the mechanism where one reflex stimulates the next reflex without stimuli from the environment. This has formed the human central nervous system which is a reflex network consisting of a myriad of reflex chains. Stimuli entered from the environment and stimuli generated in the reflex network, activate the reflex chain of the reflex network that expresses ordinary repetitive behaviors. When competition and selection in response to the environment are dominant in the reflex network, social behavior occurs. If the reflex chain overly reinforced by defense, reproduction, feeding, and Drugs is selected, deviant behavior occurs. Focused inhibition of that reinforced reflex chain at the beginning of treatment will suppress the cravings and facilitate a variety of other therapies.

Keywords: physiological success, reproducibility, reflex chain, reflex network, competition

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Prevalence of psychiatric comorbidities in patients with Compulsive Buying Disorder

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Compulsive Buying Disorder (CBD) is a chronic behavioral disorder characterized by impulsive and uncontrolled shopping, leading to significant negative consequences such as debt and impairments in personal and social functioning. CBD is often confused with Bipolar Disorder (BD), though comorbidity between the two may occur. This study aimed to compare individuals with CBD, with and without BD, in terms of clinical profiles and psychiatric comorbidities. Among 423 patients diagnosed with CBD, 115 (27.2%) also met the criteria for BD, while 308 (72.8%) did not. Of those with BD, 41 (9.7%) had current BD type I, 10 (2.4%) had BD type II, while 64 had past BD diagnoses. The typical CBD patient was a 30-year-old, Caucasian (72.6%) female (87.5%), with higher education, and without a regular partner (53.1%). Key psychiatric comorbidities were more frequent in CBD patients with BD. These included dysthymia (7.0% vs. 1.3%, OR=6.91, p=0.004), obsessive-compulsive disorder (27.8% vs. 6.2%, OR=3.29, p=0.002), alcohol use disorder (18.3% vs. 6.2%, OR=3.12, p=0.009), and agoraphobia (46.1% vs. 15.6%, OR=2.95, p<0.001). BD-CBD comorbidity was also associated with increased suicide risk (OR=1.2, p=0.009) and antisocial personality traits (OR=1.5, p<0.001). These findings emphasize the need for personalized diagnostic approaches to manage CBD, addressing specific comorbidities that impact its progression and treatment. Further research is essential to clarify whether CBD is an independent condition, a marker of BD severity, or a milder manifestation of BD.

Keywords: compulsive buying, impulse control disorder, bipolar disorder, psychiatric comorbidities

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Impact of the "healthy" label, conveyed by social networks, on the calorie estimation of food

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Introduction: Social networks are part of many people's lives and can have an impact on mental healthy and food consumption. Communities have developed around food, notably on healthy food and healthy lifestyle. Previous studies have highlighted the effect of a label on caloric evaluation. The aim of this study was to examine the effect of the healthy label, present on social networks, on caloric evaluation. We hypothesized that the presence of healthy label will induce an undervaluation of calories in food. *Method:* 176 French students answered an online questionnaire. They assessed the calories of 10 food images with healthy labels placed on different images. Sociodemographic data, digital habits, BMI, and measures like the SCOFF scale and the Diet-Related Health Consciousness Scale (DRHCS) were collected to analyze factors influencing caloric perception. Result: Results showed that there was no significant difference in calories evaluation between photos labelled healthy and those that were not. However, individuals who were more aware of the impact of food on their healthy rated the images as higher in calories. In addition, overweight people rated the food as higher in calories than non-overweight people. Our study also showed that the number of photos of food on Instagram was a predictor of eating disorders.*Discussion:* Social networks have a significant impact on behavior, particularly eating behavior. *Conclusion:* Future research should focus more on the healthy label and its impact. it could focus on the comparison between implicit and explicit calorie evaluation

Keywords: healthy, food, social networks, caloric evalualtion, halo effect

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Predictors of concern about physical appearance in preadolescents: The role of social media use and dietary habits

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Background: Concern about physical appearance (PA) is an increasingly common issue among preadolescents, with social media being one of the factors involved, potentially influencing dietary behaviors and attitudes toward body image. This study explores the main factors predicting concern about PA, highlighting the impact of social media habits and perceptions of diet. *Method:* A multiple regression analysis was conducted to examine the relationship between various predictors and PA concern. The independent variables included age, dietary behaviors (e.g., beliefs about dieting and past dieting experience), and social media usage patterns (e.g., daily usage time, posting habits, and editing photos). The dependent variable was PA concern.*Results:* The analysis identified significant relationships between social media usage patterns and PA concern, suggesting that the amount of time spent on social media and certain posting behaviors play a predictive role.*Conclusions:* The results emphasize the importance of addressing social media use and its influence on preadolescents' concerns about PA. Strategies aimed at fostering healthier social media habits and promoting positive self-image may be beneficial in mitigating these concerns.

Keywords: preadolescents, physical appearance concern, social media use, dietary behavior

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Kleptomania in a military police officer: Psychological conflicts between impulsivity and personality traits

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This case report explores the psychological aspects of a male military police officer diagnosed with kleptomania, analyzing the complex interactions between pathological impulsivity and the rigid ethical and moral standards required by his profession. Kleptomania, a disorder of impulse control, causes significant distress and internal conflict, especially in individuals whose professional identity is rooted in values of integrity and discipline. The psychiatric evaluation revealed personality traits associated with moral inflexibility. Additionally, co-morbidities such as generalized anxiety disorder and moderate depressive symptoms were identified, exacerbated by occupational stress and the constant fear of public exposure and legal repercussions. These factors further amplify the disorder's impact on the individual's global functioning, with significant impairments in personal and professional domains. The report also discusses hypotheses regarding the paradoxical coexistence of rigid personality traits and an impulsive disorder like kleptomania, suggesting that this interaction may intensify psychological distress. It is hypothesized that the patient's high standards of self-control are in direct conflict with kleptomanic impulses, resulting in a cyclical dynamic of impulsivity, guilt, and self-aversion. This case report highlights the importance of an integrated approach that considers not only the primary disorder's symptoms but also the occupational, social, and personality factors that modulate the patient's clinical presentation and prognosis. The analysis underscores the relevance of personalized interventions and the role of multidisciplinary teams in addressing psychiatric conditions in contexts of high ethical and moral demands. This study contributes to the literature by demonstrating how professional and personal characteristics can influence the course and treatment of kleptomania, emphasizing the need for therapeutic strategies tailored to individual specificities.

Keywords: kleptomania, millitary police, personality factors, social factors

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Unveiling desire dimensions: A transdiagnostic approach via ACEDA model

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Impulsive phenomena and associated syndromes were described by pioneers of modern psychiatry such as Esquirol, Kraepelin, and Bleuler. More recently, impulsivity has been identified as a component of various psychiatric disorders and as a central element in behavioral addictions and a group of diagnoses classified as Disruptive, Impulse-Control, and Conduct Disorders in the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5). This cross-sectional associative study developed a transdiagnostic desire structure based on the ACEDA clinical model, comprising Affect, Cognition, Empathy, Desire, and Aggression dimensions. We analyzed data from 1,384 patients with Impulse Control Disorders (ICDs) using the SCID-TCIm semi-structured interview. Exploratory Factor Analysis (EFA) of the PROMIS scale revealed four underlying desire factors: *Factor 1* - Interaction Seeking (24.9% variance): Subscores related to social interaction (Dominant Helping, Submissive Helping, Dominant Relationship, Submissive Relationship). *Factor 2* - Emotion Seeking (21.4%): Subscores related to seeking excitement and pleasure (Alcohol, Drugs, Exercise, Sex).
Factor 3 - Relief Seeking (17,3%): Subscores related to seeking relief and reducing stress (Food, Shopping, Prescriptions, Caffeine). *Factor 4* - Activation Seeking (20,4%): Subscores related to seeking activation and stimulation (Tobacco, Gambling, Coffee, Nicotine). These factors explain 83% of total variance. Composite reliability ranged from 0.79 to 0.97. The ACEDA model demonstrates potential for assessing and treating ICDs, offering a comprehensive framework for understanding desire structures.

Keywords: desire, impulsivity, ACEDA model, exploratory factor analysis, behavioral addiction

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Integrating narrative therapy in managing behavioral issues in ADHD: A case study

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Background: Attention Deficit Hyperactivity Disorder (ADHD) is one of the most prevalent neurodevelopmental disorders in childhood, often associated with impulsivity and behavioral dysregulation, which can overlap with behavioral addictions. Narrative therapy, a psychosocial intervention focusing on separating the individual from their problems, has shown potential in addressing complex behavioral challenges. *Method:* A 10-year-old male with ADHD and mild Specific Learning Disorder (SLD) was referred due to severe behavioral disruptions. Thirteen sessions of narrative therapy were conducted, employing externalization techniques, alternative story creation, and family involvement. *Results:* Significant reductions in disruptive behaviors were observed. The externalization technique enabled the patient to dissociate from his problematic behaviors. Incorporating positive life experiences from rural environments and involving siblings in therapy further enhanced the therapeutic process. *Conclusions:* This case highlights the value of narrative therapy as a complementary approach to managing ADHD-related behavioral problems, particularly in contexts overlapping with impulsivity and behavioral addiction traits. The integration of externalization techniques, systemic involvement, and natural elements provides promising directions for holistic treatment approaches.

Keywords: ADHD, narrative therapy, impulsivity

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Investigating the relationship between body dissatisfaction, self-objectification and narcissism in primary and secondary exercise dependence

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In a context where sports practice is highly valued, physical exercise can become excessive, and lead to exercise dependence. This dependence can exist independently of other disorders in primary exercise dependence or coexist with other disorders, mainly eating disorders (EDs)s in secondary exercise dependence. Societal beauty standards and the omnipresence of idealized body models amplify body dissatisfaction and promote self-objectification, defined as perceiving oneself through the lens of an external observer. These body ideals are reflected in the high standards of individuals with narcissistic personality traits, further exacerbating body dissatisfaction and sports practice. However, the literature lacks a clear distinction between primary and secondary exercise dependence. Furthermore, the relationships between body dissatisfaction, self-objectification, and multidimensional narcissism remain insufficiently explored in the context of exercise dependence. The objective of this study is to investigate the relationships between these variables by comparing primary and secondary exercise dependence. It also aims to measure the impact of motivation and the type of sport practiced, hypothesizing a higher prevalence of secondary exercise dependence among participants engaged in appearance-focused sports (e.g., bodybuilding, dance) as well as higher scores for body dissatisfaction and self-objectification compared to participants with primary exercise dependence. To carry this study, adults aged 18 or older who have been practicing a sport at least once a week for six months will be recruited through sports clubs, gyms, and social media chat groups. They will complete an online questionnaire (LimeSurvey) composed of seven validated tools measuring primary and secondary exercise dependence, sport motivation, body dissatisfaction, self-objectification, and narcissism. This study aims to provide a better understanding of the underlying processes of these two forms of exercise dependence and their relationship with motivational variables.

Keywords: exercise dependence, narcissism, body image

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Longitudinal change in BMI among HIV positive and HIV negative drug users in Chennai, India: Addressing missing values with multiple over-imputation

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Introduction: The nutritional status of individuals who inject drugs is a critical diagnostic and prognostic factor, particularly in the context of HIV infection. In India, approximately 3 million people are currently living with HIV/AIDS, with injection drug use significantly contributing to new infections, especially in Tamil Nadu. Drug users face heightened risks of malnutrition due to various behavioral, metabolic, and clinical factors. Addressing missing data in empirical studies is essential, particularly in longitudinal research where participants may miss appointments due to forgetfulness or high pain levels. Understanding the different types of missing data is vital for accurate analysis. This study aims to identify predictors associated with changes in Body Mass Index (BMI) among drug users in Chennai, utilizing multiple imputation methods to manage both missing data and potential measurement errors effectively. *Methods:*The current study utilized data from a collaborative research project on HIV conducted at the Indian Council of Medical Research – National Institute of Epidemiology (ICMR-NIE) in partnership with Tufts University School of Medicine, USA. This original longitudinal study carried out from 2007 to 2011, involved 300 drug users (107 HIV-positive and 193 HIV-negative) recruited from the Hopers Foundation Clinic in Chennai to investigate the causes and consequences of malnutrition among this population. Participants, aged 18 to 65 with a history of injection drug use, were followed across six time points, although many were lost to follow-up. For the current analysis, 172 participants who attended at least two assessments were selected. Multiple over imputation was applied to address missing data, incorporating measurement error variance in covariates, and Linear Mixed Models were employed to examine longitudinal changes in Body Mass Index (BMI). Analyses were conducted using R software version 4.3.2, emphasizing the need for accurate estimations in longitudinal studies where covariates may be measured with error. *Results:* The study indicates that for every unit increase in mean platelet count, Body Mass Index (BMI) increases by 0.05. Conversely, BMI decreases by 0.04 for each year of age. The prevalence of chronic alcohol use rose from 29% at baseline to 37% by the final visit. Food security improved significantly, with only 30% of participants food secure at baseline, increasing to 74% by the sixth follow-up. Participants with secondary education or higher experienced a 1.11 times increase in BMI compared to those who were illiterate. The analysis incorporated measurement errors and missing values, revealing differences in body fat mass and food insecurity. The Root Mean Square Error (RMSE) for the linear mixed model with multiple imputation was 1.003, compared to 1.125 for complete case analysis. *Conclusion:*

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The longitudinal change of BMI among drug users in Chennai,2007-2011 is associated with factors like body fat, mean platelet, age, educational status, hepatitis infection, and other clinical parameters like HIV status and food insecurity. Compared to complete case analysis multiple over imputation showed lower RMSE value and more precise estimates with more statistical power indicating a better fit of the model. These findings highlight the need for targeted interventions to improve nutritional status among drug users.

Keywords: injected drug users, HIV progression, measurement error, linear mixed model, body mass index

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Trends in cyberbullying in Hungary during the COVID-19 pandemic: A nationwide representative study

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Background: The recent COVID-19 pandemic forced individuals to rely almost exclusively on information and communication technologies for everyday activities such as learning, working, and staying in touch with friends and family. As a result of the increased time spent online, the risk of cyberbullying—a form of online aggression—also grew. This study examines trends in cyberbullying among Hungarians from 2019 to 2023, with a particular focus on the potential impact of the pandemic. *Method:* The current research focuses on the general population of Hungary aged 18 to 64 years. Participants were selected using a quota sampling method, stratified by sex, age, geographical location, and type of residency. Two samples were collected four years apart using a computer-assisted personal interviewing (CAPI) technique: one before the outbreak of the COVID-19 pandemic (2019: N=1691, 849 males, mean age = 41.44, SD = 12.89, SE = ±2.4%) and one after (2023: N=2000, 1010 males, SE = ±2.2%). *Results and Conclusion:* Our findings show a significant increase in the cyberbullying phenomenon. Cybervictimization rose from 2.3% in 2019 to 5.8% in 2023, while the proportion of cyberbullying increased, though to a lesser extent, from 1.1% to 3.4%. The female population and individuals under 30 years old appear to be more affected, both as victims and perpetrators. These results emphasize the need for targeted interventions, such as educational programs and awareness campaigns, to address cyberbullying and promote safer online environments.

Keywords: cyberbullying, COVID-19, representative survey

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Decision-making profile of pathological love and pathological jealousy: A comparative analysis

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Introduction: Pathological jealousy is characterized by emotional, cognitive, and behavioral disturbances that significantly impairs social and interpersonal relationships. Conversely, pathological love involves an overwhelming compulsion to excessively care for one's partner, often at the expense of personal well-being and needs. Objective: This study aimed to investigate the decision-making profiles associated with these two distinct forms of love-related psychopathologies, highlighting their similarities and differences. *Methodology:* A univariate analysis was conducted with 32 patients diagnosed with pathological love (PL) and 31 patients with pathological jealousy (PJ). Decision-making abilities were assessed using the Iowa Gambling Task (IGT), a well-validated neuropsychological instrument. Results: Although both groups demonstrated impaired decision-making across all five blocks of the IGT, patients with PL showed significantly worse performance, particularly in the final block. *Conclusion:* These findings suggest that PL involves more severe impairments in decision-making and impulse control, contributing to greater vulnerability to maladaptive behaviors in romantic contexts. These results underscore the need for targeted therapeutic strategies to improve impulse regulation and decision-making in individuals with PL. Further research is needed to elucidate the mechanisms underlying these differences to develop more effective treatment approaches for these psychopathologies.

Keywords: pathological love, pathological jealousy, decision-making

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The relationship between emotion regulation and binge-watching: A mediational analysis of distress and coping/escapism motivation

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Background: Binge-watching (BW) is an emerging phenomenon that is defined as the consumption of multiple episodes (at least two to six) of a television series in a single session. A substantial body of research has identified problematic BW as a behavioral addiction, in accordance with its characteristics and negative consequences on physical and mental health. A variety of factors have been identified as associated with problematic BW, including difficulties in emotion regulation, distress, coping/escapism motivation, and distress. To elucidate these associations, this study aimed to examine the serial mediating role of distress and coping/escapism motivation in the relationship between difficulties in emotion regulation and negative BW experience. *Method:* The sample consisted of 561 Italian participants (77% females), with an age range of 18-67 years (M = 31.10, SD = 9.29). The participants were administered an online survey comprising questions on sociodemographic characteristics, BW habits (e.g., number of consecutive episodes in a session), and self-report questionnaires, including the Binge-Watching Engagement and Symptoms Questionnaire (BWESQ), the Watching TV Series Motives Questionnaire (WTSMQ), the Difficulties in Emotion Regulation Scale (DERS), and the Depression Anxiety Stress Scale-21 (DASS-21). A cumulative dimension "negative binge-watching experience" (NBWE) was created by adding the problematic dimensions of the BWESQ (i.e., binge-watching, loss of control, and dependency). *Results.* Most participants had viewed at least two consecutive episodes of the TV series within the past six months, indicating BW behavior. Correlation analyses revealed significant associations between NBWE, difficulties in emotion regulation, distress, and coping-escapism motivation. Additionally, a partial serial mediation model was found, in which difficulties in emotion regulation predicted NBWE levels through distress and coping-escapism motivation. *Conclusion:* The findings contribute to the understanding of problematic BW by suggesting that this behavior may function as a maladaptive coping strategy for managing emotions and stressful events. Limitations and future directions will be discussed.

Keywords: binge-watching, difficulties in emotion regulation, distress, coping/escapism motivation

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