ICBA 2026

11th International Conference on Behavioral Addictions

Istanbul, Türkiye
24–26 August 2026

Book of Abstracts

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Contents

Plenary lectures 1

Symposia and parallel sessions 7
Session 1A: Mental health correlates of problematic internet use 7
Session 1B: Childhood, adolescence, and digital well-being: Insights from a large-scale Spanish study 11
Session 1C: Gambling, esport betting, and financial harms 15
Session 1D: ADHD & behavioral addictions 20
Session 1E: gaming: Symptoms, profiling, and typologies 26
Session 1F: Prevention of online and offline gambling-related harms 31
Session 1G: Social media use: Motives and personality factors 36
Session 2A: Pathologization of normal behaviors as behavioral addiction 42
Session 2B: Banning social media, embracing AI: Unintended harms for young people in a digitally saturated world 46
Session 2C: Gambling: Characteristics, predictors, and consequences 49
Session 2D: Brain mechanisms in behavioral addictions 55
Session 2E: Gaming disorder: Characteristics, risk factors, and negative consequences 61
Session 2F: Digital gambling advertising and behavioral addictions: From real-world exposure to neural mechanisms 67
Session 2G: Behavioral addcitions: Psychodynamics, impulsivity, self-esteem, and body image 71
Session 2H: Women session 1: A Female international perspective on behavioural addictions 78
Session 3A: Problematic social media use: Issues in conceptualization and assessment 82
Session 3B: Gambling: Self-injury, stigma, and family issues 87
Session 3C: Guidelines, regulations, and policies 93
Session 3D: Gambling: New forms, trends, and challenges 99
Session 3E: Neural mechanisms in compulsive sexual behavior and other behavioral addictions 104
Session 3F: New hints for gender-sensitive care, dedicated prevention programs and gender-responsive policy: Thinking of health equity from a transcultural female perspective 109
Session 3G: Compulsive buying-shopping: Motives, mechanisms, and clinical perspectives 111

Session 3H: When the sun never sets: The relationship between sleep disorders and addictive behaviors 115
Session 4A: Problematic Pornography Use (PPU) and Compulsive Sexual Behavior Disorder (CSBD): Sexual and psychological well-being across contexts, cultures, and development 120
Session 4B: Current updates on behavioral addictions 125
Session 4C: Gambling treatment 130
Session 4D: Mechanisms and Interventions for behavioral addictions: Evidence from China 136
Session 4E: Neurocognitive processes in behavioral addictions: Attentional bias, decision-making, and learning 139
Session 4F: The gambling loop: Who wins, who loses? 145
Session 4G: Mobile phones and social media: Mental health issues 148
Session 4H: Problematic use of the internet 152
Session 5A: Gambling regulation and related issues 157
Session 5B: Assessment of online addictive behaviors 163
Session 5C: Parenting and online activities 169
Session 5D: Responsible gambling 173
Session 5E: Interventions in social media use and other behavioral addictions 179
Session 5F: Compulsive sexual behavior disorder & pornography addiction 185
Session 5G: Work addiction 191
Session 6A: Problem gaming and GD assessment and treatment issues 197
Session 6B: Youth, gaming, gambling, and mental health: Early prevention, intervention models, and therapeutic innovations 201
Session 6C: Chemsex and Sexualized Drug Use: Epidemiology, Mental Health, and Clinical Interventions 205
Session 6D: Parents, children, families 209
Session 6E: Behavioral addictions and co-occurring problems 214
Session 6F: Loot boxes and other emerging gambling formats 220
Session 6G: Social media use and live-streaming 225
Session 7A: Affective, cognitive, and contextual factors in addictive behaviors 229
Session 7B: Gambling-related harms 232
Session 7C: Advancing research on adolescent risk behaviours in the digital age: contributions from HBSC 237
Session 7D: The multi-dimensional nature of stigma in gambling disorder: Structural, institutional, and longitudinal perspectives 240
Session 7E: Gaming, self-harm, and mental health 243
Session 7F: Eating disorders and food addiction 248
Session 7G: Preventive and therapeutic interventions in compulsive sexual behavior disorder & pornography addiction 254
Session 8A: Prevention and treatment of online addictive behaviors 260
Session 8B: From psychological mechanisms to intervention: Research on specific internet-use disorders 264
Session 8C: Gambling: Psychosocial aspects 268
Session 8D: Brain research in gambling and gaming 271

Session 8E: Problematic gaming and social media use across cultures: Findings from national and international studies 276
Session 8F: Exercise addiction and compulsive buying 280
Session 8G: Women session 2: An international female perspective on behavioural addictions 285

Mini talks 288
Mini-talks 1A: Gaming disorder 288
Mini-talks 1B: Gambling: Prevention, treatment, harm reduction 294
Mini-talks 1C: Gaming disorder: Escapism and other motivational background . . . 301
Mini-talks 1D: Smartphones and social media use 306
Mini-talks 1E: Behavioral addictions: Miscellaneous 1. 311
Mini-talks 2A: Gambling behavior 318
Mini-talks 2B: Compulsive sexual behavior disorder & pornography addiction 322
Mini-talks 2C: Gaming Disorder and problematic internet Use: Assessment and characteristics 327
Mini-talks 2D: Online activities, substance use, and health 331
Mini-talks 2E: Behavioral addictions: Miscellaneous 2. 336

Poster presentations 339

PLENARY LECTURES

PL–1

Comorbidity of substance use disorders and behavioural addictions with ADHD: An overview

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Introduction: Substance use disorders (SUD) and behavioural addictions (BA) are highly comorbid with adult ADHD. This comorbidity is responsible for more severe SUD/BA, a worse course of SUD/BA, and more negative treatment outcomes of SUD/BA.*Method:* In this presentation, I provide a selective literature review of (1) the prevalence of the comorbidity between SUD/BA with adult ADHD, (2) the genetic and neurobiological basis of this comorbidity, (3) possibilities for the prevention of SUD/BA in children/ adolescents with ADHD and (4) the treatment options for patients with SUD/BA and comorbid ADHD.*Results* About 12-25% of patients with substance use disorders (SUD) and/or behavioural addictions (BA) also have adult ADHD (Theule et al., 2019). SUD shows substantial genetic overlap with ADHD and both SUD and BA show similar neurobiological abnormalities that are different from healthy controls (Weinstein & Lejoyeux, 2020). Furthermore, early (pharmacological) treatment of ADHD can prevent the development of SUD and probably also BA, whereas some studies indicate that stimulant treatment of ADHD in patients with SUD and ADHD is effective in both the reduction of ADHD severity and the amount of alcohol and/or drug use (Ozgen et al., 2020); Brynte et al., 2026). Much less is known about the effect of stimulant treatment in patients with BA and ADHD (Park et al., 2016). *Conclusion* ADHD is indeed a common comorbid disorder in both SUD and BA and all three disorders share certain aspects of the neurobiology and (stimulant) treatment of ADHD is likely to improve both ADHD and SUD severity, whereas little is known about the effects of comorbid ADHD in patients with BA.

Keywords: ADHD, substance use disorder, behavioural addiction, gambling disorder, gaming disorder

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PL–2

Medication treatment of behavioral addictions

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Behavioral addictions are common and disabling psychiatric disorders reported throughout the world. Over the last 30 years, several categories of medications have been studied for the treatment of various behavioral addictions with varying degrees of success. This talk with present the data regarding medication treatment of behavioral addictions, discuss the differences among the various behavioral addictions in terms of treatment response, and examine how subtyping within the various behavioral addictions may result in more robust outcomes. Limitations of the research will be highlighted and future directions will be presented.

Keywords: pharmacology; clinical trials; addiction

PL–3

Defending against threats to gaming disorder science

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The topic of “gaming addiction”, a term that often refers to severe forms of problematic gaming, continues to gain public interest and research momentum. Since the formal recognition of gaming disorder (GD) in the ICD-11 in 2019, the research literature on this topic has more than quadrupled in size. A favourable view would be that this growth is indicative of a field that is maturing – that is, achieving higher levels of organisation, greater breadth and depth of knowledge, and more widely accepted standards and practices for discovery. Certainly, there have been many positive signs of advancement and examples of research translation in health and policy. However, the academic discourse has also highlighted obstacles to scientific progression, including issues affecting consensus and consistency in empirical approaches. This keynote will open further critical discussion on the internal and external pressures facing the GD field, which may be broadly classified as 'threats'. Some of these threats concern general problems affecting all scientific enterprise, including funding instability, sustainability issues, politicisation of science, and misinformation. The GD field also faces its own specific challenges related to polarized perspectives on gaming, disconnects between disciplines that study gaming, the cultural status of gaming, health classification status, industry inaction and opposition, among many other issues.

Keywords: gaming disorder

PL–4

Technology design features of online applications: Emerging empirical insights into their influence on problematic online behaviors

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Over recent years, a growing scientific interest has developed in understanding the ways in which technology design features of web-based sites and applications may amplify dysregulated and potentially addictive involvement in online activities by affecting users' capacity to control uses. Early contributions in this area primarily proposed taxonomies and conceptual accounts describing how specific design features of online applications might promote problematic online behaviors. More recently, an emerging line of empirical research has sought to investigate these propositions across a range of online activities. Based on a narrative review of this nascent empirical evidence, the current presentation will (i) provide a critical overview of how scholars have approached the study of the influence of technology design features on problematic online behaviors so far; (ii) synthesize and discuss available insights resulting from these early empirical efforts; and (iii) outline key knowledge gaps as well as priorities for future research in this emerging field. The implications of these findings for policy development, prevention, and intervention efforts will also be addressed.

Keywords: structural characteristics; technology design features; addictive online behaviors

PL–5

Thirty years (and counting) of studying behavioral addictions

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Over the past several decades, multiple changes have occurred regarding how non-substance behaviors may be considered as the basis of addictive disorders. This presentation will focus on my personal involvement in considering and studying addictive behaviors and disorders. Early work in the 1990s involved addressing whether gambling disorder (then termed pathological gambling) might be best considered impulsive, compulsive or addictive in nature. At the time of my beginning research in this area, no neuroimaging studies of gambling disorder had been conducted and the only published placebo-controlled pharmacotherapy trial involved one subject. In the early 2000s, my involvement in work relating to the transition from DSM-IV-TR to DSM-5 included synthesizing evidence, including work our group was conducting into the epidemiology, genetics, neurobiology and treatment of gambling disorder and other putative behavioral addictions. In the 2010s, participating in WHO-related

efforts prior to the generation of the ICD-11 involved international discussions and work, including regarding ongoing collaborative research into the brain biology and treatment of (internet) gaming disorder and a wider range of internet-related concerns. In the 2020s, the COVID-19 pandemic changed how people interacted with digital technologies, and ongoing rapid changes have been occurring in artificial intelligence in the post-pandemic world. The presentation will conclude with a view towards the future as societies strive to harness the power of digital technologies and prevent related harms, especially regarding vulnerable groups like developing youth and individuals with mental concerns.

Keywords: gambling disorder

PL–6

Empowering women leaders and patients: Addressing behavioral addictions through gender-sensitive approaches

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Background and Problem: Behavioral addictions—including gambling disorder, gaming disorder, problematic social media use, and Problematic Use of the Internet (PUI)—present unique challenges for women, both as patients and as leaders in the field. Women face systemic barriers, societal stigma, and a lack of gender-sensitive interventions, which exacerbate their vulnerabilities.
Key issues include:

- Higher rates of co-occurring mental health issues (e.g., depression, anxiety) alongside behavioral addictions.
- Economic hardship and social isolation, which often delay help-seeking behaviors.
- Underrepresentation in leadership roles within addiction research and healthcare, limiting their influence on policies and interventions.

Keynote 1: **Women and behavioral addictions as patients – State of the art and ways of improvement** (Speaker: Sedef Ercetin)

Current state of women as patients:

- Barriers to treatment: Societal stigma, fear of judgment, and lack of gender-sensitive treatment programs deter women from seeking help.
- Co-occurring disorders: Women with behavioral addictions often experience higher rates of depression, anxiety, and trauma, which require integrated treatment approaches.
- Cultural and economic factors: Economic hardship and cultural expectations further complicate access to care and recovery.

Gender-sensitive treatment models:
- Trauma-informed care: Addressing underlying trauma that often precedes or co-occurs with behavioral addictions in women.
- Holistic interventions: Combining psychological support, social reintegration, and economic empowerment to address the multifaceted needs of women patients.
- Family and community support: Engaging families and communities to reduce stigma and provide a supportive environment for recovery.

Ways of improvement:
- Enhancing access to care: Developing women-centered treatment programs that are accessible, affordable, and culturally sensitive.
- Reducing stigma: public awareness campaigns and education to challenge stereotypes and encourage help-seeking behaviors.
- Policy and advocacy: Advocating for policies that prioritize gender-sensitive approaches in addiction treatment and support services.

Keynote 2: **Building capacity of women leaders to address behavioral addictions** (Speaker: Sophia Achab)

Background: Behavioral addictions represent a growing public health challenge, yet gender disparities persist in research, treatment, and leadership. Women's unique vulnerabilities, such as societal stigma, underrepresentation in clinical trials, and barriers to leadership roles, necessitate targeted interventions. This keynote explores the transformative potential of women's leadership in advancing gender-sensitive approaches to behavioral addiction research, treatment, and policy. *Methods:* This presentation synthesizes evidence from leadership development programs, mentorship networks, and gender-sensitive research initiatives to outline actionable strategies for empowering women in the field.
Key components include:

1. *Leadership development and mentorship:*
    - Training programs: Structured initiatives to cultivate leadership skills among women in behavioral addiction research, with a focus on gender-specific interventions and advocacy.
    - Mentorship networks: Pairing emerging women leaders with established mentors to facilitate professional growth, knowledge exchange, and career support.
2. G*ender-sensitive research and policy advocacy:*
    - Research focus: Promoting women-led studies to investigate gender-specific patterns, vulnerabilities, and effective interventions for behavioral addictions.
    - Policy development: Advocating policies that embed gender equity in treatment frameworks and leadership structures, ensuring inclusive and equitable care.
3. *Community engagement and digital innovations:*
    - Public awareness campaigns: Leveraging media and community platforms to amplify women's experiences with behavioral addictions and showcase recovery success stories.
    - Digital support tools: Harnessing technology to deliver education, anonymous peer support, and AI-driven interventions tailored to behavioral addiction management.

Conclusion: This keynote underscores the urgency of inclusive, women-led solutions in behavioral addiction care. By integrating leadership development, gender-sensitive research, and digital innovation, we can amplify women's voices, bridge gaps in access to support, and foster resilient, equitable systems for addressing behavioral addictions globally. A call to action is issued for stakeholders to prioritize women's leadership in shaping the future of addiction medicine. Addressing behavioral addictions in women requires a dual approach: empowering women leaders to drive research and policy changes, while simultaneously improving access to gender-sensitive, trauma-informed treatment for women as patients. By combining leadership development, community engagement, and innovative treatment models, we can foster equity, resilience, and lasting change in the field of behavioral addictions.

Keywords: women's leadership, behavioral addictions, gender-sensitive research, mentorship, digital health, policy advocacy

SYMPOSIA AND PARALLEL SESSIONS

1A–1

The link between problematic social media use and cognitive failure is mediated by self-esteem

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Background: Recent work has shown links between problematic social media use (PSMU) and reduced cognitive performance. There is also longitudinal evidence that avoiding internet use on smartphones for two weeks can improve sustained attention. These observations raise the question of how problematic use and cognitive failure may be connected. *Method:* In a sample of 253 participants we examined whether self-esteem helps explain this association between PSMU and cognitive failure in everyday life. *Result:* Problematic social media use and cognitive failure were positively related, and both were negatively related to self-esteem. When self-esteem was included in the model, the direct association between problematic social media use and cognitive failure was substantially reduced, consistent with a mediating role of self-esteem. *Conclusions:* Our data are cross-sectional and do not permit causal conclusions. Still, the results suggest one possible mechanism that could align with the longitudinal findings: problematic social media use may relate to lower self-esteem, which in turn may be linked to more self-perceived cognitive failures.

Keywords: problematic internet use, mental health, social media

1A–2

The latent factors of depression and negative affect do not differ in association with problematic smartphone use and problematic social media use.

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Background: Depression and negative affect have been consistently linked to problematic smartphone use (PSU) and problematic social media use (PSMU). Yet, it remains unclear whether particular latent components of these constructs differentially relate to PSU or PSMU. The present study addressed this gap. *Method:* Participants were 329 U.S. college students who completed a web-based survey assessing depression, negative affect, PSU, and

PSMU. Data were analyzed using structural equation modeling to evaluate measurement models and test associations among latent factors.
Result: Confirmatory factor analyses supported well-fitting models for all constructs. Depression's cognitive–affective and somatic factors showed comparable associations with both PSU and PSMU. Similarly, the fear and distress factors of negative affect were nearly identical in their associations with PSU and PSMU. No significant differences emerged between any parallel pathways. *Conclusion:* The similar associations across depression and negative affect dimensions indicate that general emotional vulnerability, rather than particular symptom profiles, may play a central role in maladaptive digital behavior.

Keywords: problematic internet use, mental health, social media

1A–3

Too tired to resist scrolling?: Exploring the symptom link between chronic fatigue syndrome and problematic social media use in university students

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Background: Both physical illnesses (e.g., chronic fatigue) and technology addictions (e.g., problematic social media use [PSMU]) impede students' academic and psychosocial development, while their comorbidity is not uncommon. The current research aims to employ network analysis to explore any prominent links among the symptoms of chronic fatigue syndrome and those of PSMU in university students in order to provide insights for campus-based interventions. *Method:* Around 1,000 Chinese university students (age ≥ 18) were recruited using convenience sampling and completed an anonymous questionnaire online. Network analysis was used to identify the relationship and the most central and influential symptom among chronic fatigue syndrome and PSMU. *Results:* The symptom "less strength in muscles" (from chronic fatigue syndrome) exhibited the strongest influences and associations (i.e., strength) among symptoms of both chronic fatigue syndrome and PSMU. Bridge centrality analysis further indicates that "social impairment" (from PSMU) was the most influential symptom bridging the two symptom clusters. *Conclusion:* The current study is the first to reveal the comorbidity between chronic fatigue and PSMU in a network model. The findings also highlight that two symptoms (i.e., "less strength in muscles" and "social impairment") may serve as key targets for school-based interventions, and provide useful guidance for future research.

Keywords: problematic internet use, mental health, social media

1A–4

Underlying dimensions of FOMO are differentially related to problematic smartphone use severity

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Background: Fear of missing out (FOMO) involves two dimensions: 1) pervasive apprehension of missing rewarding experiences, and 2) constant desire for connection with others. FOMO is robustly related to problematic Internet use (PIU) across the literature. However, only recently have FOMO's two underlying dimensions been assessed for differential relationships with PIU. *Method:* 388 undergraduate students from a midwestern US university participated in a cross-sectional web survey in 2025, assessing FOMO (the FOMO Scale), problematic smartphone use (PSU; Smartphone Addiction Scale) and problematic social media use (PSMU; Bergen Social Media Addiction Scale). *Results:* We conducted confirmatory factor analyses for single factor models of PSU and PSMU, and two FOMO factors; all models fit well. A combined model of PSU and the two FOMO factors fit well. PSU severity was more highly associated with FOMO's connection desire (r=.60) than apprehension factor (r=.49); Wald chi-square (N=388, df=1)=6.82, p<.01. A combined model of PSMU and FOMO's two factors also fit well. However, PSMU was equally related to FOMO's connection desire (r=.60) and apprehension factor (r=.55), Wald chi-square(N=388, df=1)=2.39, p=.12. *Conclusions:* PSU (but not PSMU) severity seems more related to FOMO's constant connection desire than apprehension factor. Predominant use of social media in a mobile manner on smartphones, including receipt of instant messaging and social notifications (e.g., likes and comments) received on smartphones, may explain distinct results we found for PSU in contrast to PSMU. Results offer insight into cognitive/affective risk factors (i.e., FOMO) for PSU.

Keywords: problematic internet use, mental health, social media

1A–5

Problematic social media use and mental health risks among first-year Chinese undergraduates: A three-wave longitudinal study

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Introduction: The association between social media use and mental health risks has been widely investigated over the past two decades with many cross-sectional studies reporting that problematic social media use (PSMU) is associated with higher mental health risk such as anxiety and depression. The present study examined the relationship between PSMU severity and mental health risks (depression, anxiety, stress, and loneliness) using a three-wave longitudinal design. *Methods:* A total of 685 first-year Chinese undergraduate students (Mean age = 19.12 years, SD = 0.92) completed surveys at three times points with intervals of 3 to 4 months. Results revealed that PSMU was positively correlated with all the mental health risk variables of depression, anxiety, stress, and loneliness over the three time points. *Results:* The prevalence of PSMU increased over the three research waves. Cross-lagged models identified bi-directional relationships between PSMU and mental health risks, while such links were not consistent between different mental health risk variables and can change over different research intervals (e.g., stress positively and significantly predicted PSMU from T1 to T2, but not from T2 to T3). *Discussion:* This study indicates that PSMU and mental health risks could predict each other in a vicious loop, but the differences between specific mental health risks and the research context (e.g., different term times and experiences in university) should not be ignored. Further research attention should be paid to the prevalence of PSMU and mental health conditions among Chinese first-year undergraduates who appear to have difficulties in adapting to university life.

Keywords: problematic internet use, mental health, social media

1B–1

Childhood, adolescence and digital wellbeing in Spain: the research project

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Introduction: The access to Internet is recognized as an enabling right, essential for the exercise of other fundamental rights. Ensuring the well-being of children and adolescents in digital environments, however, poses complex practical challenges. Early, intensive, and unsupervised use has implications for child development that call for addressing the issue as a matter of public health. UNICEF Spain, the University of Santiago, the General Council of Computer Engineering, and the Ministry for Digital Transformation designed a comprehensive study to better understand the lives of children in digital environments, analysing potential implications for both mental health and coexistence. *Methods:* A mixed strategy was used. At the qualitative level, 8 focus groups were carried out with adolescents, parents and teachers, as well 10 in-depth interviews with international experts. At a quantitative level, a survey among Spanish children and adolescents was conducted. An analytical and cross-sectional design was used, with stratified cluster sampling. The final sample consisted of 75,329 students, aged between 10 and 20 years. Specific screening scales were employed to estimate prevalences of potential addictions or problematic uses (IGDT-10, PGSI, SMD, BPS and RLI). Finally, we carried out a survey among teachers with 4,590 participants. The project was supervised by an international scientific advisory team comprising 43 experts. *Results:* Results confirm the widespread use of digital devices among Spanish schoolchildren from a very early age, especially social media and video games. Data is provided on the prevalence of different problematic uses or possible addictions, and their correlates in quality of life and mental health, as well as family and school coexistence. *Discussion and conclusion.* This project constitutes a model of collaborative work between different institutions and researchers, committed to the rights of children and adolescents, with the single objective of contributing to design responsible and effective public policies.

Keywords: adolescence, childhood, screen, smartphone, social media, internet, cyberbullying, gaming, gambling, loot-boxes

1B–2

Use of digital technologies, well-being and gender differences in childhood and adolescence

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Introduction: Social networks, as relational spaces, are not neutral, but act as amplifiers of gender mandates, influencing identity construction, self-esteem and emotional well-being in different ways, which makes it essential to analyze them specifically from a gender perspective, especially in childhood and adolescence. This presentation aims to analyze differences in the use of social media from a gender perspective that considers mental health, coexistence and personal development. *Methods:* The sample consisted of 75,329 Spanish schoolchildren aged between 10 and 20 (mean: 13.48; SD: 2.19). Questionnaires were administered to measure quality of life, emotional distress, depression and suicidal behavior, together with questions related to social media. *Results:* The data show, among other things, that girls have worse indicators of life satisfaction, health-related quality of life and psychological well-being, as well as higher levels of anxiety, depression, somatization and suicide risk. Likewise, significant differences were observed in family and social dynamics, highlighting a worse perception of relationships with parents and peers at higher educational levels and a high prevalence of child-to-parent violence. In the digital sphere, girls show greater problematic use of social media and greater exposure to pressure and cyberbullying, while boys show more intensive consumption of video games, pornography, online gambling and behaviors associated with problem gambling, with an increasingly early onset. *Discussion and conclusion:* In summary, the results highlight the close interrelationship between psychological well-being, educational context and digital practices, underlining the need for early, coeducational and gender-sensitive preventive interventions that promote healthy, critical and responsible use of technology among the younger generations. Its fundamental purpose is to provide robust empirical evidence to enable institutions to design effective public policies, avoiding both alarmist and trivializing approaches to the digital phenomenon, and grounded in a rights-based framework of social responsibility.

Keywords: adolescence, childhood, screen, smartphone, social media, internet, cyberbullying, gaming, gambling, loot-boxes

1B–3

Problematic social media use in Spanish youth: Associations with well-being and psychosocial risks

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Background: Problematic social media use (PSMU) is frequently discussed as a potential marker of psychosocial vulnerability, but large-scale evidence comparing effect sizes across well-being and risk domains is still limited. *Methods:* Cross-sectional, stratified cluster survey in a Spanish representative sample of 75,329 students aged 10–20 years. PSMU was assessed using the Social Media Disorder Scale for Adolescents. Students screening positive for PSMU were compared with those screening negative on health-related quality of life (KIDSCREEN-10; KIDSCREEN-27) and life satisfaction (Cohen's d reported). Associations with emotional distress, suicidal risk, child-to-parent violence, school bullying/cyberbullying involvement, and online risk behaviors) were examined using χ^2 tests with Cramér's V. *Results:* The prevalence of PSMU was 5.7%, higher in girls (7.2%) than in boys (4.0%). PSMU was associated with lower overall health-related quality of life (KIDSCREEN-10: d = 0.92) and lower scores across all KIDSCREEN-27 domains, particularly in psychological well-being (d = 0.91), and school environment (d = 0.70).Life satisfaction was lower in the PSMU group (d = 0.73)and was also related to higher emotional distress and suicidal risk with (anxiety: V = 0.16; somatization: V = 0.14; depression: V = 0.19; suicidal risk: V = 0.16). PSMU was also linked to child-to-parent violence (e.g., V = 0.11–0.19 depending on severity/frequency), school victimization/aggression (V = 0.12–0.14) and cybervictimization/cyberaggression (V = 0.11–0.14). Finally, PSMU showed consistent associations with online risk behaviors, including sexting and sexual-risk experiences (V = 0.14–0.18). *Conclusions:* PSMU was linked to moderate-to-large differences in quality of life and small-to-moderate associations with mental health risk, family conflict, peer violence, and online sexual-risk behaviors. Causality cannot be inferred; however, the convergent pattern supports PSMU as a useful screening flag. Furthermore, results highlight the relevance of parental mediation and digital hygiene as protective factors, supporting the need for multi-component prevention.

Keywords: adolescence, childhood, screen, smartphone, social media, internet, cyberbullying, gaming, gambling, loot-boxes

1B–4

Associations between loot box purchasing, online gambling, and gambling-related problems in a representative sample of Spanish adolescents

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Introduction: The convergence between gaming and gambling has been described as a growing concern, and empirical evidence support a consistent association between loot boxes purchasing and gambling participation and problem gambling. However, studies focusing on underage populations are scarce and largely based on non-representative samples. To date, nationally representative data examining these associations in adolescents is lacking. *Methods:* Using data from a nationally representative sample of Spanish adolescents aged 10–17 years (N = 73.433), we examined associations between purchasing loot boxes (yes/no) and two outcomes: participation in online gambling and problem gambling defined as moderate or severe according to the Problem Gambling Severity Index (PGSI ≥ 5). Prevalence ratios (PR) and 95% confidence intervals were estimated using Poisson regression models with robust variance. Analyses were conducted for the total sample and stratified by sex. *Results:* Adolescents who reported purchasing loot boxes showed a markedly higher prevalence of gambling-related problems compared with non-purchasers (PR = 4.15; 95% CI = 3.82–4.51). Sex-stratified analyses revealed substantial differences in the magnitude of these associations. Loot box purchasing was associated with higher prevalence of online gambling among boys (PR = 3.41; 95% CI = 3.18–3.65) and girls, with a considerably stronger association among girls (PR = 11.34; 95% CI = 9.14–14.07). A similar pattern was observed for gambling-related problems, with elevated prevalence among loot box purchasers in boys (PR = 2.98; 95% CI = 2.72–3.26) and girls, again showing a substantially stronger association among girls (PR = 8.35; 95% CI = 6.49–10.73). *Conclusions:* Loot box purchasing is strongly associated with online gambling and gambling problems among adolescents, with stronger effects observed in girls, underscoring the public health relevance of loot boxes and the need to consider sex differences.

Keywords: adolescence, childhood, screen, smartphone, social media, internet, cyberbullying, gaming, gambling, loot-boxes

1C–1

End-of-session high-stakes betting and gambling disorder severity: An online survey of 2,000 Japanese gamblers

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Background: Among gamblers, various irrational behaviors such as illusion of control and loss chasing have been documented. One such behavior is end-of-session high-stakes betting, in which gamblers place a large, high-risk wager near the end of a gambling session. This study aimed to determine whether end-of-session high-stakes betting occurs among gamblers and to clarify its association with gambling disorder severity in an online survey of 2,000 gamblers. *Method:* With the cooperation of ASMARQ Inc., an online survey was conducted from 20 to 26 November 2025. Participants were 2,000 men and women aged 20 years or older with a history of gambling. They were asked to report their past experiences of end-of-session high-stakes betting by responding to 15 scenario-based items (e.g., "You initially bet about 500 yen per race on several horse races, but after a series of losses your funds decreased. In the final race, in an attempt to recoup your losses, you decided to place a single 10,000-yen win bet that exceeded your cumulative losses."). Responses to these items were used as indicators of end-of-session high-stakes betting, and their associations with scores on the Problem Gambling Severity Index (PGSI) were analyzed. *Result:* Of the 2,000 participants, 825 (41%) reported having engaged in end-of-session high-stakes betting at least once. Cross-tabulation analyses examining the association between end-of-session high-stakes betting in each gambling modality and PGSI scores showed that, across all gambling types, individuals with experience of such betting were significantly more likely to be classified as problem gamblers on the PGSI than those without this experience ($n = 127–222$, $p < .01$). In addition, approximately 78% ($n = 392$) of participants scoring 8 or higher on the PGSI (problem gamblers) reported having engaged in end-of-session high-stakes betting. *Conclusion:* The findings indicate that end-of-session high-stakes betting is exhibited by 41% ($n = 825$) of gamblers, suggesting that it is a behavior observed in a substantial subset of the gambling population rather than a rare phenomenon. Moreover, the fact that 77% of problem gamblers (PGSI ≥ 8) reported such behavior suggests that, while end-of-session high-stakes betting can be found among general gamblers, it is particularly prevalent among those with more severe gambling problems. End-of-session high-stakes betting may therefore serve as a potential behavioral indicator of gambling disorder severity.

Keywords: high-risk betting, gambling, PGSI, Japan

1C–2

Advertising, impulsivity, and mental health as predictors of gambling problems: A longitudinal study of Finnish online gamblers

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As gambling is increasingly becoming an online phenomenon, gamblers often get targeted with advertising that encourages them to use money recklessly on gambling sites. While it is established that gambling advertising can influence vulnerable gamblers, there are not many longitudinal studies investigating the direct links to gambling problems from a psychological perspective. Relying on a pathways model approach, we examined the longitudinal impact of different gambling-related advertising on gambling problems, controlling for impulsivity and general mental health. The study included 990 Finnish participants who had gambled online. Utilizing fixed-effects and random-effects negative binomial models, we analyzed the impact of three forms of weekly exposure to online advertising (gambling, instant loans, and cryptocurrencies) both separately and together. We also checked the interactions between advertising, impulsivity and mental health. The results indicate that although weekly advertising exposure does have a random-effect on gambling problems, impulsivity and especially mental health issues seem to have a more significant impact on the problems. This suggests that underlying psychological vulnerabilities have a greater impact on gambling-related harm than advertising exposure. Nevertheless, exposure to gambling advertising and the promotion of financially speculative products, such as instant loans and cryptocurrencies, may still contribute to problematic gambling behavior. These results highlight the continued need for regulatory measures to prevent gambling harm, while underscoring the importance of strategies that support mental wellbeing.

Keywords: gambling problems, impulsivity, mental health, advertising, longitudinal

1C–3

Near-misses in sports betting using virtual reality

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Background: Previous research has explored how structural characteristics of gambling products influence behaviour, with particular attention to near-misses, non-win outcomes perceived as close to a win. Near-misses have been extensively studied in electronic gambling machines (EGMs), where they evoke negative emotions while motivating persistent

gambling. Limited research has examined their behavioural effects in sports betting. This study addresses that gap by examining how near-miss outcomes influence gambling behaviour in sports betting. *Method:* 56 participants engaged in a custom VR dog racing simulation featuring six controlled outcomes across 24 races: clear wins, narrow wins, overtake wins, near-miss narrow losses, near-miss overtake losses and clear losses. Near-miss narrow and overtake losses were designed to imitate the "near-miss before" and "near-miss after" outcomes identified in EGMs. Outcome satisfaction, motivation to continue gambling, and N+1 Bet Size, were also recorded. *Results:* Preliminary analyses indicate that motivation was significantly higher following near-miss narrow losses than other loss types, aligning with EGM findings. However, near-misses overall were not perceived as more aversive than clear losses. Impulsivity did not significantly moderate the relationship between outcome type and behaviour but independently predicted lower satisfaction and motivation. No significant effects of outcome type on bet size were found. *Conclusions:* Findings highlight how structural characteristics in sports betting can reinforce gambling persistence. These insights may inform gambling policy and product design. Future studies should identify more precise imitations of near-misses across various gambling formats and investigate how these variations differentially affect gambling behaviour.

Keywords: gambling, near-miss, sports betting

1C–4

Dark patterns in video games: A systematic literature review

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Background and aims: Dark patterns refer to practices such as predatory monetization or unethical design used by different online industries to increase their revenues. Recently, dark patterns have gained interest in videogame research. The goal of this literature review was to review the currently available scientific literature and summarise the state of knowledge on dark patterns, including definitions, types, and consequences. *Method:* Following PRISMA guidelines (Page et al., 2021) three databases were systematically searched: Scopus, Web of Science, and PsycInfo. Peer-reviewed papers, books, and book chapters published in English before June 2026 investigating or discussing dark patterns, unethical design, predatory monetization, or manipulative tactics in video games were included in the review. *Results:* A total of 33 papers met the inclusion criteria: 18 empirical (seven qualitative, seven quantitative, four mixed methods), 13 theoretical, and two review papers. The definition of dark patterns

varied across papers, with a conceptual shift from intentionality to developer actions regarding the harm caused to players. Dark patterns were found to skew revenue distribution to the advantage of microtransaction service provider, but their overall effect on game revenue varied with players' perceptions of these patterns. Evidence regarding the impact of dark patterns on players' well-being and gameplay experience was mixed, varying depending on their implementation and users' perceptions. *Conclusion:* Dark patterns raise serious consumer protection and ethical concerns, particularly given their potential harms to underage gamers.

Keywords: video games, dark pattern, predatory monetization, gaming

Reference:

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1C–5

Legal, illegal and unregulated gambling participation among emerging U.S. adults: Access patterns, preferences, and problem gambling risk

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Background and aims: Although online gambling activity is restricted in most US states for those under the age of 21 years, offshore options, unregulated platforms or other illegal ways to gamble exist. This study aims to explore patterns of online gambling engagement among emerging American adults, the types of gambling in which they participate, and motives for using illegal gambling websites. *Methods:* Data regarding demographics, gambling behaviours and experiences were collected using Prolific from 651 (mean age – 19.12; 0.78) Americans aged 18-20 years who participated in online gambling in the 12 months preceding data collection. Using regulatory data from the 50 United States, participants were classified as gambling legally or illegally. Based on their beliefs about the legality of their gambling, they were then grouped as self-reported illegal gamblers or self-reported legal gamblers. These two groups were compared using t-tests and chi-square tests. *Results:* Being underage in their respective states, 100% of those with online casino gambling (n=277) and 98.4% (n=445) of those with online sports betting were gambling illegally, but only 52.4% of participants (n=341) self-reported illegal gambling. Over one-fifth (21.5%) were identi-

fied as having problem gambling. Over 60% of participants did not know the correct legal age for casino and/or online gambling in their state. Those who reported to knowingly access gambling illegally were most likely to report using websites that did not require ID or age verification or/and used a VPN to access a gambling website. They were motivated by easier deposits/withdrawals, no age verification, and better bonuses/promotions. Compared to those with self-reported legal gambling, they were more likely to have started gambling at a younger age or not recall their first instance of online gambling, be women, and not be aware or care whether a website was regulated or not. *Conclusions:* The study suggests a need for increased awareness regarding the legality of online gambling activities among emerging adults, and a more comprehensible gambling policy. Emerging adults appear at a high risk of gambling harm; thus, stronger enforcement against illegal and unregulated gambling is required to protect this population.

Keywords: illegal gambling, unregulated gambling, youth gambling, sports betting, underage gambling

1D–1

Cognitive profiles and modeling perspectives in behavioral addictions with ADHD

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Introduction: Attention Deficit Hyperactivity Disorder (ADHD) is strongly associated with Behavorial Addictions (BAs) (El Archi et al., 2023; Grassi et al., 2024; Karaca et al., 2017). However the cognitive characteristics of this dual disorder remain underexplored, and findings are contradictory. Our study aimed to identify the cognitive characteristics of the dual disorder in comparison with BA and ADHD alone, as well as with healthy controls. We hypothesize that the dual disorder is characterized by weaker inhibitory control, stronger delay discounting, and poorer decision-making, particularly during cue-related tasks. *Methods:* Participants were recruited from the BANCO (NCT03202290) and BANCO 2 (NCT03967418) studies, targeting adults seeking treatment for gambling disorder (GbD), sex addiction (SA), or food addiction (FA) at Nantes University Hospital, as well as healthy controls matched for sex, age, and education level and recruited through media publicity campaign and a volunteer research database. ADHD was screened using the ASRS v1.1 and WURS-C, and confirmed through review of patients' medical records. BAs were assessed using the NODS for GbD, a standardized interview based on Carnes' criteria for diagnosing SA, and the YFAS 2.0 for FA. Neuropsychological functioning was assessed using a battery of tests, including measures of inhibitory control (Stroop, Go/No-Go, and SST), decision-making (IGT), and delay discounting (SKIP), including both neutral and addiction-related cues. Descriptive analyses will be followed by comparisons across BA+/ADHD+, BA+/ADHD-, BA-/ADHD+, and BA-/ADHD- groups. *Results:* To date, 79 patients (24 GbD, 25 SA, 30 FA) and 77 controls have been included. Recruitment is being finalized, analyses will follow. *Discussion:* The results will be discussed in the context of existing data on the cognitive characteristics of individuals with the dual pathology. These analyses will then be interpreted in relation to the I-PACE model (Brand et al., 2019) for BAs, particularly to examine its applicability in cases of ADHD.

Keywords: ADHD, gambling disorder, sex addiction, food addiction, cognition

Abbreviations:
ASRS: Adult ADHD Self-Report Scale
HADS: Hospital Anxiety and Depression Scale
IGT: Iowa Gambling Task
NODS: National Opinion research center DSM Screen for gambling problems
SKIP: Single Key Impulsivity Paradigm
SST: Stop-Signal Test
WURS-C: Wender Utah Rating Scale-short version
YFAS: Yale Food Addiction Scale

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1D–2

The longitudinal associations between social support, problematic internet use and ADHD symptoms among adolescents

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Background: Problematic internet use (PIU) is associated with sleep problems, academic decline, and social difficulties. While its longitudinal relationship with social support (SS) remains unclear, ADHD has consistently emerged as a risk factor for PIU, which may also contribute to social isolation. Understanding the longitudinal dynamics between ADHD, PIU, and SS during adolescence is crucial for clarifying their developmental pathways. lagged effects among these constructs were largely absent. The consistent influence of ADHD on

later family SS highlights the importance of early ADHD intervention to protect family relationships. person associations suggest that these difficulties may fluctuate together in the short term, *Methods:* Data were drawn from the first three waves (school grades 5, 6, and 8) of the Budapest Longitudinal Study (N = 1191, mean age = 10.7 years, SD = 0.52 at the first wave, 48% boys). PIU, ADHD symptoms, and perceived family and peer SS were assessed by validated self-report measures. Longitudinal associations were examined with a Random Intercept Cross-Lagged Panel Model (RI-CLPM) to separate between-person differences from within-person fluctuations. Gender was included as a covariate. *Results:* Most constructs showed within-person stability across waves, indicating that temporary increases in PIU, ADHD symptoms, or family SS tend to persist over time. Only one cross-lagged effect emerged: higher ADHD symptoms predicted decrease in family SS. At the between-person level, adolescents with higher stable PIU symptoms showed higher stable ADHD symptoms and lower stable family and peer SS. Stable family and peer SS were strongly correlated at between-person level, and girls reported higher stable peer SS. Within-person concurrent correlations were identified between ADHD and PIU, between PIU and family SS, and between ADHD and family SS, suggesting short-term co-fluctuation rather than lasting temporal influence. *Discussion:* While adolescents' momentary increases in PIU, ADHD symptoms, and family SS showed persistence, cross-lagged effects among these constructs were largely absent. The consistent influence of ADHD on later family SS highlights the importance of early ADHD intervention to protect family relationships. Strong between-person links between PIU and ADHD, as well as PIU and low SS, indicate the potential influence of shared, relatively stable adolescence-specific characteristics, such as reduced response inhibition, increased reward sensitivity, and autonomy seeking. Concurrent within-person associations suggest that these factors may fluctuate together in the short term, highlighting the benefits of exploring them in a different timeframe (monthly or weekly).

Keywords: internet addiction, ADHD, social support, longitudinal, cross-lagged panel model

1D–3

Gaming, peer involvement and emotional problems in adolescents with and without neurodevelopmental impairments

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Background: Among children and adolescents in Sweden, internet use, including gaming, has increased during the last decade. At the same time, professionals who work with children worry that adolescent gamers, particularly those who to a lesser degree interact with peers offline will experience poor psychosocial adjustment, including mental health problems. *Objective:* To understand the processes between gaming and mental health, the current study will investigate the associations between adolescent gaming, peer involvement, and emotional problems over time and test whether the potential links differ between adolescents with and

without NDI. *Methods:* The sample for analysis consisted of 1515 adolescents (50.5% girls) beginning the sixth grade (n = 781) and seventh grade (n = 734), respectively. Out of those, n = 231 adolescents self-reported having a neurodevelopmental impairment, thus NDI, such as ADHD, autism, intellectual/emotional disability, speech, or language impairment/communication disorder. A two-wave, cross-lagged model was used for analysis. *Results:* Results showed that T1 adolescent gaming was linked to higher T2 emotional problems, while higher T1 peer involvement was linked to less T2 gaming at Time 2. We found no moderation by NDI in these links. *Conclusions:* Adolescents who engage in higher levels of gaming activity seem to report more emotional problems over time. The frequency of gaming activity over time is however lower when adolescents engage in peer interactions offline. More focus on peer interactions outside of the context of digital media could be an important step in preventive work with adolescents with and without NDI.

Keywords: adolescents, gaming, peer involvement, emotional problems, NDI

1D–4

Treatment outcomes of gaming disorder and factors affecting prognosis

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Background: Effective treatments for gaming disorder are being developed worldwide. However, given the high prevalence of comorbid psychiatric disorders such as ADHD and the decreasing age of onset, there is a need to clarify treatment outcomes among patients with diverse backgrounds and to identify effective combinations of treatment approaches tailored to individual patient characteristics. This study examined how treatment outcomes vary according to psychosocial backgrounds at the initial visit and selected treatment modalities among patients who met the ICD-11 criteria for gaming disorder. *Methods:* Gaming disorder symptoms, level of dependence, gaming time, and gaming-related problems were assessed using questionnaires completed by patients and their families at the initial visit and at 3 months, 6 months, and 1 year after the initial consultation. In addition to psychiatric outpatient care by attending psychiatrists, treatment modalities such as individual counseling by certified psychologists, day-care programs, treatment camps, inpatient treatment, and family participation in family support groups were tracked. Treatment outcomes were analyzed in relation to the selected treatment approaches. *Results:* Both patients receiving outpatient treatment only (n = 30) and those receiving inpatient treatment (n = 20) showed improvement in gaming disorder symptoms at 6 months. Patients who received multiple treatment options in addition to psychiatric care—such as individual counseling and family support groups—showed a significantly greater reduction in gaming time. Furthermore, treatment was suggested to require a longer duration in patients with comorbid psychiatric disorders such as ADHD.

Keywords: gaming disorder, treatment methods, treatment outcomes

1D–5

Problematic social media use in ADHD: A comparison on and off dopaminergic medication

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The popular narrative surrounding social media increasingly draws on the medical model of addiction, framing platforms as generators of dopamine-driven compulsive engagement. However, whether the phenotypic similarities observed between problematic social media use and substance addiction reflect shared underlying mechanisms remains largely unexamined. This study directly tests this assumption by leveraging methylphenidate, a dopamine reuptake inhibitor and first-line ADHD treatment, as a pharmacological tool to probe the role of dopamine in social media engagement and motivated decision-making. articipants are adults aged 18–40 with an ADHD diagnosis who have been prescribed methylphenidate for at least 12 weeks. Using a within-subjects quasi-experimental design, participants complete two in-person testing sessions – one during peak plasma concentration of their medication and one in a non-medicated state – with session order randomised. During each session, participants complete an effort-based decision-making task that captures motivated behaviour by asking participants to accept or reject offers with varying levels of effort and reward. Self-report questionnaires, including the Bergen Social Media Addiction Scale, are administered across sessions to assess problematic social media use, functional impairment due to social media engagement, and other relevant constructs. Between sessions, ecological momentary assessment surveys are used to track participants' perceived urge and control over social media use across the medication cycle. For a subset of participants, objective screen time data are collected in addition to the behavioural self-report, providing further insight into social media usage behaviours. The preregistered data collection is ongoing and will conclude well ahead of the conference. Analyses will combine model-agnostic and computational modelling approaches, including Bayesian hierarchical estimation, to characterise how dopaminergic state influences problematic social media use and effort-reward decision-making. The preregistered analyses will examine the effect of medication status on problematic social media use within subjects. Further exploratory analyses will examine how temporal fluctuations in urge and control vary across the medication cycle, and investigate individual differences and potential moderating influences to further understand the involved mechanisms. The results of this work will speak to the medical addiction framework as it is applied to social media use. If methylphenidate alters problematic social media use, this would provide evidence for the importance of dopaminergic processes in aberrant engagement with social media and suggest that problematic social media use may be more closely aligned with established addiction processes than research has been able to demonstrate. Conversely, a null finding would call into question whether the addiction framing of social media use is neurochemically justified

and would redirect future research toward alternative mechanistic accounts. This research is the first to capitalise on deliberate manipulations of dopaminergic state in the context of social media use – and positions its findings as an important contribution to both the scientific understanding of problematic engagement with social media and the clinical experiences of individuals with ADHD in digital environments.

Keywords: social media, addiction, dopamine, psychopharmacology, mental health

1E–1

Evaluating problematic video game use in adolescents implementing WHO criteria

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Background: Over the last decade, the number of video game players has increased globally, especially amongst young people. This has led to the recognition that some video game players exhibit functional impairment as a result of excessive gaming behavior. Recently, the inclusion of gaming disorder (GD) in the 11th edition of the International Classification of Diseases (ICD-11) has prompted scientists to try to develop valid screening methods capable of differentiating between problematic and non-problematic video game usage. This inclusion into the ICD-11 suggests that GD should be viewed as a major public health issue requiring screening tools, prevention, and targeted treatment programs. However, there are currently no validated screening tools based on the ICD-11 for French adolescents. Our primary aim is to examine the psychometric properties of the Gaming Disorder Scale for Adolescents (GADIS), a new ICD-11 based screening tool previously validated in German populations, therefore enabling clinical and systematic screening of GD. Our secondary aim is to study the link between impulsivity traits, motives to play and symptoms of GD. Methods: a cross sectional survey based on 200 parent-adolescent dyads (aged 10-17) around Geneva, Switzerland will fill out sociodemographic questions, various questionnaires testing motivations for gaming, impulsivity and gaming habits in a self evaluative manner (GADIS-Adolescent) and a hetero-evaluative manner for parents (GADIS-Parent). Data analysis will employ both exploratory and confirmatory factor analysis which will be used to evaluate the fit of several model structures. In addition, correlation analysis will be used to explore motives, impulsivity traits and GD symptoms. Results: The data is being collected at this time and results will be available by the end of spring 2026. *Conclusions:* Expected findings will support more structured and defined GD screening for adolescents, bridging ICD-11 criteria with validated tools to guide interventions and clinical practice.

Keywords: ICD-11, adolescents, assessment, gaming disorder, WHO standards

1E–2

Disentangling gaming disorder: A dual-pathway approach using network analysis

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Background and aims: Growing evidence suggests that the components model of addiction, when applied to behavioral addiction, can be divided into two subfactors: one reflecting problematic use, and the other reflecting high but non-problematic engagement. Previous research has also shown that, whereas problematic use is linked to negative outcomes (e.g., poorer mental health), high engagement is not. In this perspective, this study aims to explore whether a popular scale assessing gaming disorder features (the IGDS9-SF, which is designed after the DSM-5 framework and the components model of addiction) potentially conflates problematic and non-problematic use of video games. *Methods:* After data cleaning, 501 participants completed an online survey consisting of the IGDS9-SF, the DASS-21, the UCLA Loneliness Scale, the UPPS-P Impulsive Behavior Scale, and the Satisfaction With Life Scale. First, the current structure of the IGDS9 will be tested to determine whether a nine-factor, unifactorial, or other structural solution is the most fitting. Then, in the case where two or more factors are detected in this initial step, the relationship between these and both positive (e.g., life satisfaction) and negative (e.g., depression) outcomes will be explored. *Expected results and implications:* We expect that the IGDS9-SF conflates items assessing problematic gaming with items assessing high, but non-problematic, involvement in video games. This would reinforce previous claims that assessment tools based on addiction criteria listed in the DSM-5 pathologize gaming. Such results would call for a more fine-grained conceptualization and assessment of problematic gaming.

Keywords: gaming disorder, high engagement, network analysis

1E–3

Mapping the evolution of gaming disorder risk: A three-wave profile approach

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Understanding how psychological characteristics shape gaming behaviours over time is essential for advancing prevention and intervention responses to Gaming Disorder (GD). Although emotional regulation difficulties, gaming motivations, psychological distress, time spent gaming, and GD symptoms have been examined individually, it is not known to date a longitudinal research that has integrated these factors within a unified, person-centred framework. This study addresses this gap by examining how psychological profiles evolve across time and identifying predictors of transitions and stability. A longitudinal latent transition analysis (LTA) was conducted using data from an international sample of gamers (N = 5255 at baseline; N = 1926 at Wave 1; N = 2317 at Wave 2). Profiles were derived from emotional-regulation difficulties (DERS-SF) and 19 gaming motivational dimensions (GMI), replicating four previously identified profiles: Avoidant, Engaged, Relational and Dysregulated. Covariates included mental-health indicators (CORE-SFB), time spent gaming (TSG), GD (GDT), and sociodemographic factors, including gender (men, women, and non-binary players) across all game genres. Results presented moderate profile stability alongside meaningful transitions, particularly between Avoidant and Engaged profiles. Dysregulated players consistently presented higher GD symptoms and psychological distress. This study provides the first longitudinal, person-centred evidence on how emotional, motivational profiles and behavioural factors co-develop in gamers. Findings can support the development of tailored, profile-specific intervention strategies and underline the importance of inclusive research that reflects the diversity of gaming populations.

Keywords: gaming disorder, latent transition analysis, gamer profiles, emotional regulation, motivation, longitudinal study, mental health

1E–4

Gendered behavioral profiles and digital compulsivity among adolescents: Insights from seven-day trajectories

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Background: Gender differences in digital engagement are becoming increasingly important for understanding risk pathways toward problematic Internet use (PIU), yet few studies have examined daily screen-time patterns or media-specific behaviors within a gender-sensitive and cross-cultural framework. This study investigates how adolescent boys and girls differ in their weekly digital routines and how compulsive use shapes these patterns. *Methods:* A sample of 334 Moroccan adolescents reported their daily screen time over seven consecutive days (Monday–Sunday) and minutes spent on 11 digital platforms, including social media, communication tools, and gaming. Two latent class analyses (LCA) were conducted to identify weekly trajectories and multi-platform usage profiles. Non-linear growth modeling and linear mixed-effects models were used to examine predictors of overall screen-time intensity. Predictors included age, sex, compulsive use (CIUS), and contextual factors. *Results:* The weekly LCA yielded two profiles: a moderate-stable group (34.7%) and a high-use group (65.3%) characterized by a marked weekend increase. Membership in the high-use class was predicted by higher CIUS scores (OR = 2.04), older age, and male sex. A second LCA revealed a minimal-use profile (45.2%) and a diversified intensive-use profile (54.8%), with girls more involved in social and communication platforms (Instagram, TikTok, WhatsApp), despite lower total screen time than boys. Mixed-effects modeling showed that CIUS was the strongest predictor of overall screen-time intensity (+3.96 minutes per CIUS point, $p < .001$), followed by sex (boys +61 minutes/day). Media-specific minutes were not significantly predicted by demographic or contextual variables.*Conclusion:* These findings reveal two distinct vulnerability pathways: boys engage in higher overall exposure, while girls show greater compulsive tendencies even at moderate levels of use, particularly through multi-platform social engagement. The study highlights the need for gender-sensitive prevention strategies and provides rare ecological data from a low- and middle-income country context.

Keywords: problematic internet use, gender differences, digital media use, latent class analysis, adolescents

1E–5

Behavioral addictions, social exchange and loneliness

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Introduction: Evidence shows that individuals with addictive disorders, both substance-related and behavioral, face difficulties in social adaptation. For example, people with such disorders show lower empathy, indicating that their interpersonal skills are affected even at the core level social interaction. However, recent reports suggest that impaired social relationships - evidenced by lower prosocial behaviors and reduced perceived social support - are more characteristic of behavioral addictions such as gambling and gaming than of substance-related addictions. The present study aims at examining such characteristics through the social exchange framework by testing the hypothesis that the norm of reciprocity may be lower in gambling and gaming disorders compared to several substance-related disorders, and that a lower ability to reciprocate with others is associated with higher loneliness (perceived social isolation). *Method:* Participants consist of Swiss male emerging adults. Data will be collected in early 2026. We expect to collect about 3,000 completed questionnaires which include validated screenings tools for substance use, gambling and gaming disorder, as well as measures of reciprocity and loneliness. *Results:* We will present results of the analyses of differences in reciprocity and loneliness between addiction types. Furthermore, we will present the association between reciprocity and loneliness, and its variations according to the addiction type. *Conclusion:* The results will be discussed with respect to prior research. They will also be considered in terms of their significance and relevance for the rehabilitation of social capacities in individuals suffering from addiction, and for the improvement of their physical and mental health.

Keywords: behavioral addiction, reciprocity, loneliness

1F–1

Feedback of problematic gambling behavior via a pop-up: A qualitative study of its acceptability and effectiveness taking into account the source of the feedback

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Background: Preventing online Gambling disorder (GD) has become a major challenge for public health policies. While many gambling operators have an algorithm for tracking individuals with GD, the resulting prevention measures as well as the feedback from the problematic gambling tracking tool to the gambler are left to the discretion of the operators, based on non-binding recommendations from the regulator that are not strongly evidence-based. To date, the effectiveness and acceptability of such feedback have not been documented. Beyond the how, the question arises as to who should be responsible for delivering this feedback in order to improve both its impact on gambling behaviour and its acceptability by the gambler. *Objective:* The aim is to test the effectiveness and acceptability of feedback by pop-up from a problem gambling tracking tool. The sources of the feedback will be assessed: (1) pop-up feedback indicating that the message is issued by the gambling operator, (2) pop-up feedback indicating that the message is issued by the French National Gambling Authority (Autorité Nationale des Jeux), (3) pop-up feedback indicating that the message is issued by a healthcare professional. *Methods:* The gambling operator will invite users over the age of 18 to participate. The goal is to detect problematic gamblers identified as increasing their risk level according to the operator's detection tool. These gamblers will be randomly assigned to one of the three groups and will receive a personalized feedback pop-up. Participants who consent will take part in a qualitative interview one month after receiving the pop-up. This will evaluate their perception of the feedback modality (pop-up format) and its content (normative feedback and wording used). *Expected results (currently being analyzed):* The aim is to demonstrate the importance of the delivery method and the source of feedback for tracking problem gambling behaviour, its impact on gamblers' effectiveness and acceptability.

Keywords: gambling disorder, prevention messages, tracking tools, self-exclusion, prevention campaigns

1F–2

The gamblers' recommendations regarding the feedback of their identified problematic gambling behavior: A qualitative study

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Background: Since 2019, French gambling operators have been legally required to identify individuals with a problem gambling using detection tools (via detection algorithms). However, no recommendations exist regarding how this identification should be communicated to gamblers, resulting in heterogeneous feedbacks (by email, directly on the platform or even no feedback). Only one Norwegian study has explored gamblers' opinions of the feedback delivered directly on the platform and no study has investigated gamblers' views or recommendations on how this feedback should be communicated. *Objective:* This qualitative study explores the recommendations regarding the content and formulation of the feedback of gamblers identified by the detection tools as well as gamblers seeking treatment for their problem gambling. *Method:* Thirty-five participants were recruited through two French gambling operators and through addiction treatment and support centers (mean age = 42,00 years, mean PGSI = 9,35). They took part in individual semi-structured interviews, which were subjected to a codebook thematic analysis developed by King (2012). *Preliminary results:* Participants primarily express a desire for a clear explanation of the reasons underlying their identification, notably through quantitative indicators such as their losses. They also recommend offering the possibility to address this matter directly by telephone with an external party, such as a healthcare professional or a representative of the national gambling authority. This could also be accompanied by guidance toward psychological support or even a temporary self-exclusion. *Conclusions:* Gamblers recommend feedback delivered directly by a human, with clear explanation and imposed restrictions. This approach could improve the acceptability of the feedback and encourage the use of gambling-moderators that support recreational gambling. Further studies are needed to test the effectiveness of these recommendations.

Keywords: gambling disorder, prevention messages, tracking tools, self-exclusion, prevention campaigns

1F–3

Perceptions, experiences, and perspectives for improving prevention messages in the context of “responsible gaming” in casinos

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Background: In casinos, slot machines and electronic roulette, which are grouped under the term 'Electronic Gaming Machines' (EGMs), are characterized by their fast pace, visual and sound effects, and frequency of winnings. These features encourage intense involvement and can lead to a loss of control. To mitigate these risks, operators implement measures known as 'responsible gaming', such as warning messages. Despite extensive research, studies on 'responsible gaming' are limited because most are conducted online or in laboratories under conditions that differ greatly from real-life gambling. The perceptions and experiences of casino gamblers are still poorly understood, even though they are essential for improving prevention measures. *Objective:* The objective is to explore qualitatively how gamblers perceive, experience and would like to improve prevention messages displayed on screens attached to EGMs. *Method:* Participants will be adults, male or female, who frequent casinos and use EGMs. A diverse sample will be sought in terms of age, frequency of gambling, and level of risk, and recruitment will continue until data saturation is reached. Each participant will complete a brief questionnaire on their sociodemographic data (age, sex education level, professional and marital status), their gambling habits (type and frequency, average amount spent per week), and their level of risk (Canadian Index of Problem Gambling), and will then participate in a semi-structured individual interview lasting approximately 45 minutes. *Expected results (currently being analyzed):* We expect gamblers to prefer self-assessment-based prevention messages to generic ones, as the former are perceived as more credible and engaging. Messages formulated positively, emphasizing the benefits of controlled gambling rather than the risks of excessive gambling, should also be more widely accepted. The discourse will differ depending on sociodemographic characteristics and gambling styles. For instance, young adults may respond better to emotional and concrete messages, whereas older gamblers may prefer a more sober, informative approach.

Keywords: gambling disorder, prevention messages, tracking tools, self-exclusion, prevention campaigns

1F–4

Gambling harm prevention campaigns: Effects of the campaign source on credibility, message interpretation, and urge to gamble

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Background: The increase in participation rates, coupled with the influence of advertising, calls for better consumer protection to avoid the potential long-term risks and harm associated with gambling. The aim of prevention campaigns is to raise public awareness of the risks associated with gambling. These campaigns are produced and disseminated by regulatory bodies such as the Autorité Nationale des Jeux (ANJ) in France, gambling operators, and public health promotion bodies such as Santé Publique France (SPF). *Objectives:* The main objective is to investigate the effects of the source of prevention campaigns on the risks and harm associated with gambling on: (1) The credibility attributed to the source, (2) The perceived message by the gambler (the perceived intentions), and (3) The intention and desire to gamble. *Method:* We will quantitatively assess a population of gamblers with various level of gambling intensity, in terms of: 1) their knowledge of gambling risks and harm prevention campaigns; 2) the credibility they attribute to the source in terms of expertise and trust, as well as the perceived intentionality of these campaigns. The effects of the source of prevention campaigns (gambling operator, ANJ and SPF) on the desire to gamble, the credibility given to the authority that carried out the prevention campaign and the perception of the message's meaning will also be evaluated. *Expected results (currently being analyzed):* The ANJ and SPF are expected to be perceived as more credible (in terms of trust and expertise) and conveying a clear message solely focused on user protection compared to the gambling operator, whose intention is to promote gambling. Prevention campaigns from ANJ and SPF are expected to generate less desire to gamble than those from a gambling operator.

Keywords: gambling disorder, prevention messages, tracking tools, self-exclusion, prevention campaigns

1F–5

Long-term efficacy of an optimized self-exclusion process with a brief motivational and cognitive intervention: A large-scale real-world online randomized trial

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Introduction: The long-term effectiveness of self-exclusion without guidance or referral to care appears limited for some gamblers who choose short exclusion periods. *Methods:* We conducted a randomized controlled trial comparing (A) an optimized self-exclusion process with (B) the standard procedure, i.e., a neutral email confirming implementation. Condition A consisted of two emails including a motivational message, personalized normative feedback, referral to help services, and a proposal to extend self-exclusion. Gamblers, predominantly sports bettors from a French online gambling operator, who self-excluded for ≤3 months were randomized (n = 4,610). Outliers with extreme stakes (>20,000 €; n = 8) and winners (n = 45) were excluded a priori. Account-based gambling data were analyzed 6 and 12 months after the start of self-exclusion. *Results:* Participants were 86.4% male, mean age 35; 73.2% self-excluded for ≤1 month. Sports betting was exclusive for 64.2%, and 71.7% gambled live. More gamblers in group A opened the first email than in group B (62% vs 58%, p = 0.0075); 48% opened the second email, but only 3% clicked the self-rating link. Group A had fewer subsequent self-exclusions than group B (3 vs 4, $p < 6\times10^{-9}$). At 6 and 12 months, last-4-week loss, deposits, and stakes were 0 € in both groups, but changes over time favored the intervention for last-4-week loss, 12-month deposits, and 12-month stakes. Some 6-month deposit and stake outcomes favored the control group, though lottery stakes decreased significantly in group A. *Conclusion:* Self-exclusion appears effective long term for most gamblers. The optimized procedure was well accepted and more effective overall than the standard approach, despite mixed 6-month financial outcomes.

Keywords: gambling disorder, prevention messages, tracking tools, self-exclusion, prevention campaigns

1G–1

Social media use, body image and sexuality among young adults: Preliminary results from an exploratory study

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Introduction: Social media frequently exposes users to sexualized and objectified body images. While existing research has documented associations between social media use and body image, few studies have investigated their influence on the internalization of an objectifying and sexualized self-perception, as well as on the sexual health behaviors that that may result from these processes. *Objective:* This study aims to explore the potential links between social media use and sexual assertiveness through the examination of self-objectification, self-sexualization, and body shame. *Method:* This cross-sectional study, approved by an ethics committee, is being conducted among young adults aged 18–30 years. Participants completed seven online assessment tools, including a sociodemographic questionnaire, a social media usage questionnaire, four scales evaluating problematic social media use (BSMAS), self-objectification (SOBBS), self-sexualization (ESS), body shame (OBCS), and a sexual assertiveness questionnaire (HISA). Correlational, regression, and mediation analyses are planned. *Results:* A negative association between social media use and sexual assertiveness is anticipated, potentially mediated by self-objectification, self-sexualization, and body shame. Preliminary results will be presented in this communication. *Conclusion:* These findings are expected to provide a deeper understanding of the influence of social media use on body image and sexual health behaviors. Consequently, this study carries both preventive and clinical implications regarding the development and/or persistence of body image- and sexuality-related issues.

Keywords: social media use, body mage, sexuality

1G–2

Exploring the mediating role of difficulties in emotion regulation between dimensions of interoceptive awareness and problematic social networks use: A path analysis

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Background: Interoceptive Awareness (IA), whether heightened or reduced, affects psychological health, including emotional regulation. IA has been extensively investigated in substance use disorders, whereas research on its role in behavioral addictions is recent and remains limited, particularly on Problematic Social Network Use (PSNU). Therefore, this study aims to comprehensively examine the predictive role of IA in PSNU, assessing both its direct impact and its indirect effect via emotional dysregulation. *Method:* We recruited 2.456 university students (70.90% females). We administered the Multidimensional Assessment of Interoceptive Awareness (MAIA), the Difficulties in Emotion Regulation Scale (DERS-18), and the Brief Screener for Substance and Behavioral Addictions (SSBA), which was adapted to assess PSNU. We tested a path analysis with MAIA subscales as predictors, the DERS-18 total score as mediator, and PSNU scores as outcome. This research is part of the UNIST-HEALTH PROBEN 2024 project, funded with the contribution of the Italian Ministry of University and Research (MUR) pursuant to Ministerial Decree No. 1396 of September 18, 2024 – Pro-ben 2024 Notice (Project CUP: B53C24010460001). *Results:* The model showed a good fit to the data (CFI = .999; TLI= .993; RMSEA = .021 [.00; .039]; SRMR = .013) and explained 17% of the variance in PSNU. None of the direct paths between MAIA subscales and PSNU were statistically significant, whereas all the indirect effects were significant at the $p<.001$ level. Some subscales showed negative indirect effects (i.e., Attention Regulation: $\beta = -.04$; Self-Regulation: $\beta = -.04$; Body Listening: $\beta = -.04$; Trusting: $\beta = -.11$), while Noticing had a positive indirect effect (Noticing: $\beta = .08$). *Conclusions:* IA acts on PSNU through the mediation role of emotional dysregulation. The higher the extent to which one directs attention to the body, actively listens to the body for insight, regulates psychological distress through attention to body sensations, and views awareness of bodily sensations as helpful for decision-making, the lower the PSNU via lower emotion dysregulation. From a preventive perspective, it seems useful to increase the experience of the body as safe and trustworthy to reduce emotional dysregulation and, consequently, PSNU.

Keywords: emotional dysregulation, interoceptive awareness, problematic social network use

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1G–3

Examining the relationships among social media use, motivation, and depression in older adults in Taiwan: The results from a cross-sectional study

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Background: The relationship between social media use and negative emotions in the older population is inconclusive(Cotten et al., 2023; Guzman et al., 2025, Lewin et al., 2023). This study examined the motives for using media to investigate the relationship between negative emotions and social media use among the older population. *Method:* 406 participants who were older than 50 years were recruited from an online survey (Female = 280, 69%; mean age = 60.38, S.D. = 6.34). After obtaining informed consent, participants were asked to complete demographic information, the Social Media Use Scale, a measure of their motives for using media, and a measure of depressive symptoms. Descriptive analysis and hierarchical regression were conducted in this study. The significance level was set at 0.05. *Results:* The results showed that the duration of using social media was positively correlated with motives for social and entertainment; however, depressive symptoms were only related to the motives for entertainment. The results of the regression analysis found that the frequency and duration of using social media could not be related to depressive symptoms, but the motives for information seeking and entertainment could significantly affect depressive symptoms. *Conclusion:* The roles of different motives for using social media on depression and the use of social media should be examined in further study.

Keywords: social media use, motives for using social media, depression, older people

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1G–4

The mediating role of motivations between negative emotions, fear of missing out, and problematic social media use

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Background and aim: According to Wegmann and Brand (2019), problematic social media use can be developed via two different pathways: a fear-driven, compensation-seeking and a reward-driven pathway. The present study aimed to examine the role of social media use motivations within these two pathways. *Methods:* A total of 1,138 individuals (62.2% women, mean age = 32.53, SD = 14.07) completed an online questionnaire package including the Depression Anxiety Stress Scale-9 (Lovibond and Lovibond, 1995), the Difficulties in Emotion Regulation Scale-18 (Victor and Klonsky, 2016), the Bergen Social Media Addiction Scale (Andreassen et al., 2012), the Online FoMO (Wegmann et al., 2017), and the Social Media Motives Scale (Koronczai et al., 2025). Serial and simple mediation models were applied to test escapism and personal image motives as mediators. *Results:* The association between depression-anxiety-stress and problematic social media use was partially mediated by difficulties in emotion regulation (specifically, difficulties engaging in goal-directed behavior) and by escapism motive. Escapism emerged as the strongest mediator, both independently and within a sequential pathway following emotion regulation difficulties. In the second mediator model, the relationship between personal image motive and problematic social media use was partially mediated by FoMO, indicating that FoMO serves as a key psychological mechanism linking popularity seeking motives to problematic use. *Conclusions:* The motivational approach aligns well with the model proposed by Wegmann and Brand and supports escapism and personal images motives as relevant contributing factors in the development of problematic social media use, highlighting both individual and social aspects of PSMU.

Keywords: the motives of social media use, FoMO, emotion regulation, problematic social media use

1G–5

It’s not the use, it’s the motive: Coping-driven social media use predicts suicidal behaviour in youth

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Background: Problematic social media use (PSMU) has been linked to youth suicidal behaviour (SB; Nesi et al., 2021), but the association is heterogeneous, often attenuated once clinical and psychosocial factors are controlled (Macrynikola et al., 2021). Risk may lie not in addictive use but in why youth use social media (Cox & Klinger, 1988). Vulnerable individuals use them to regulate aversive emotions, a motivational function that remains unexamined (Kardefelt-Winther, 2014). Objective: To examine whether PSMU and specific motives of use independently predict SB across lifetime, past-year and past-month timeframes. *Method:* Observational, cross-sectional, multicentre study pooling two probabilistic cluster samples from the PROSIA project (Catalonia and Barcelona). The sample comprised 5,083 students aged 18–29 (M = 18.4, SD = 2.4; 57.9% female). SB (ideation and attempts combined) was assessed for three timeframes using Plutchik items plus an ad hoc temporal criterion. Blockwise hierarchical logistic regressions entered sociodemographic, clinical, psychosocial and social media variables (Block 4: Bergen Social Media Addiction Scale and Social Media Motives Questionnaire). Missing data were multiply imputed (MICE, m = 40) and pooled with Rubin's rules; standardised predictors yield odds ratios (OR) per 1 SD. *Results:* Lifetime, past-year and past-month SB prevalence was 32.8%, 11.8% and 3.7%. The social media block added significant incremental fit for lifetime ($p < .001$) and past-year ($p = .019$) SB, but not past-month ($p = .258$). PSMU was non-significant across all timeframes. By contrast, the coping motive was a significant, stable risk predictor in all three timeframes (OR = 1.26, 1.23 and 1.27). Models were well calibrated (Hosmer-Lemeshow $p > .05$) with excellent discrimination (AUC = 0.86–0.92). *Conclusions:* Using social media to regulate negative emotional states, and not addictive use, constitutes a distinct, consistent risk marker for youth suicidality. Preventive interventions should screen for digital escapism as a clinical target.

Keywords: social media use, coping motives, sucidal behavior, adolescence, young adults

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2A–1

Conceptualization of pathologization and its manifestations in the realm of behavioral addictions

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Background and aims: Pathologization is the process of transforming normal phenomena and behaviors into mental health problems or disorders that require professional, usually medical, attention and help. In the context of behavioral addictions, pathologization stems from: (1) a tendency to consider common/emerging behaviors as potential new addictions; and (2) a confirmatory approach reusing substance addiction models and assessment approaches. This presentation aims to critically analyze recent literature on the current forms of pathologization in the behavioral addiction field and discuss the related risks. *Methods:* Narrative review of recent literature (2023-2026). *Results:* Intensive engagement in emerging activities – especially those linked to technology use – is increasingly being labeled as new behavioral addiction (e.g., intensive use of AI generative chatbots). Yet, growing evidence shows that, when applied to behaviors often considered addictive (e.g., intensive use of social media and video games or high-level physical exercise), some substance use disorder characteristics (e.g., cognitive salience, tolerance, mood modification) are not necessarily indicative of problematic behavior. In contrast, other substance use disorder characteristics (e.g., loss of control, continued use despite adverse consequences, withdrawal) can be used to identify problematic or even pathological behavior. Critically, most screening and diagnostic tools assessing behavioral addictions still conflate these characteristics, compromising validity and perpetuating pathologization. *Discussion: and conclusions:* It is imperative that researchers in the field of behavioral addiction refrain from characterizing intensive behavioral patterns as reflecting addiction in the absence of convincing evidence of the negative consequences, impaired control, psychological distress, and functional impairment. Moreover, the field must stop using assessment approaches and tools that rely on items that fail to distinguish between intensive and problematic involvement. This is necessary to reduce pathologization, stigmatization, biased prevalence estimates, and inappropriate regulation.

Keywords: pathologization, behavioral addiction, confirmatory approach

2A–2

Causes of pathologization of normal behaviors as behavioral addiction

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Background: The pathologization of normal behaviors as behavioral addiction is rampant, calling for a better understanding of its causes. *Method:* Review of the literature and conceptual synthesis. *Results:* The pathologization of normal behaviors is largely a consequence of the fact that boundaries between frequently performed but normal behaviors and those that are problematic or pathological remain elusive. Pathologization also reflects a perennial human tendency to simplify complex or poorly understood phenomena by labelling them. Such labelling is influenced by the dominant explanatory frameworks of the day. In modern Western societies, human behavior is often understood as a pursuit of rewards, which has led to an assumption that "excessive" behaviors are driven by the promise of a reward, thereby constituting an addiction. Various stakeholders may promote pathologization wittingly or unwittingly. Addiction specialists and mental health professionals may do so because pathologization expands their professional turf and increases their influence and power. Clinicians may embrace pathologization because it legitimizes the conceptualization of "excessive" behaviors as diagnosable and potentially treatable conditions for which reimbursable clinical services are offered. Researchers may welcome diagnostic labelling of "excessive" behaviors because it provides a socially accepted foundation for their research, increasing opportunities for funding and publications. Some afflicted individuals may favor pathologization because a diagnosis purported to explain their "excessive" behavior provides them with benefits, such as "sick role". Families of afflicted individuals and their support networks and advocacy groups may support pathologization because a disorder narrative seems more acceptable. *Conclusions:* The pathologization of normal behaviors as behavioral addiction is closely related to the general trend of pathologizing human suffering and distress and reflects various other social tendencies. Given that pathologization can transform a socially censured "excessive" behavior into a socially approved disorder narrative, it is particularly important to understand how various stakeholders can foster pathologization.

Keywords: pathologization, behavioral addiction, stakeholders

2A–3

From intensive to problematic binge-watching: Clarifying boundaries to avoid pathologization

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Background: Binge-watching, defined as viewing multiple episodes of a TV series in one session, has become a widespread and normative practice with the advent of on-demand streaming technology offering 24-hour access to extensive content libraries. Although binge-watching can provide meaningful enjoyment and well-being benefits, research also documents cases of dysregulated engagement marked by loss of control and negative consequences. These contrasting outcomes have prompted some researchers to conceptualize binge-watching as a potentially addictive behavior – a perspective increasingly criticized for its risks of pathologization and stigmatization of a widely practiced leisure activity. *Method:* Critical analysis of the existing literature. *Results:* Key findings indicate that intensive but healthy binge-watching is primarily driven by positively reinforcing motivations, whereas problematic viewing patterns stem from negatively reinforcing motives linked to coping and emotion dysregulation. These motivational distinctions, together with differences in self-control (low self-control in problematic binge-watching) and impulsivity (greater impulsivity in problematic binge-watching), appear central to understanding as to why binge-watching can have either beneficial or harmful outcomes. *Conclusions:* The available evidence underscores the need to examine the underlying reasons driving dysregulated engagement in binge-watching before considering an addiction-based interpretation. Adopting such a motivational and process-based perspective shifts the focus away from the presumed addictive nature of the activity and toward the individual's emotional and psychological dynamics, thereby reducing risks of pathologization and supporting more appropriate conceptual and clinical responses.

Keywords: binge-watching, TV series, pathologization

2A–4

When any behavior becomes an addiction: Rethinking the concept of behavioral addiction to minimize pathologization of normal behaviors

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Background: The expansion of the term "addiction" to include a wide range of everyday behaviors (gaming, shopping, working, exercising, using social media, etc.) has created a significant conceptual instability, blurred diagnostic boundaries and amplified the risk of pathologizing normal activities. This has also led to a paradox that the more inclusive the label is, the less useful it seems to be. The aim of this presentation is to provide a critical perspective on the concepts of addiction and behavioral addiction. *Method:* A critical-conceptual analysis is being conducted to reevaluate the term "addiction", considering philosophical, psychological, cultural and linguistic perspectives. *Results:* Preliminary findings indicate that the expanding use of addictive language in relation to everyday behaviors has not been accompanied by conceptual clarification. Behavioral addiction emerges as an unstable category characterized by ambiguous boundaries and internal inconsistencies that fluctuate across clinical, moral and cultural contexts. Historical analyses show that behaviors currently framed as addictions were previously conceptualized differently, highlighting the contextual nature of diagnostic categories. Continued reliance on substance use-derived criteria produces conceptual distortions when applied to behaviors, resulting in low diagnostic specificity, stigma and heightened risk of pathologizing normal or context-dependent behaviors. This extends to assessment tools, which remain theoretically unstable despite acceptable psychometric performance, yielding divergent results (e.g., widely discrepant prevalence rates). *Conclusions:* The current instability of the concept of behavioral addiction suggests that progress may not be associated with the development of more assessment tools and theoretical models and ongoing reliance on the substance addiction paradigms. Instead, the progress may come from putting forward new proposals such as questioning whether addiction is really the appropriate conceptual framework.

Keywords: conceptualization, de-pathologization, behavioral addiction

2B–1

AI chatbot salience in a case of postpartum psychosis

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Background: Generative-AI chatbots, such as ChatGPT, and online communities can, in susceptible individuals, validate or elaborate emerging psychotic beliefs. *Introduction:* Currently ChatGPT processes approximately 2.5 billion user prompts/day, up from 1 billion in December 2024, reflecting a rapid adoption of artificial intelligence. This has been attributed to its' conversational nature proving very attractive to users. (1) There are reports of psychosis following interactions with ChatGPT, described as AI psychosis (2) People with preexisting mental illness, alcohol and drug use or under stress are at risk of developing AI psychosis (3) Chatbots have been linked to cases of suicide and homicide. (4) *Methods:* A perinatal woman in her 20s, with no past psychiatric history, developed depressive symptoms and progressive preoccupation with spiritual awakening narratives. She engaged intensively with an AI chatbot which she experienced as validating and elaborating of her emerging grandiose paranoid beliefs. She experienced escalating sleep deprivation, social isolation and delusional fears for her own and her infant's safety. Tragically, she committed infanticide and inflicted severe self-injury. *Results:* • Non-contrast CT brain: Normal. • Full blood screening: NAD. • Drug screen negative. *Conclusion:* This case highlights prolonged engagement with a chatbot interacting with vulnerabilities including sleep deprivation, the peripartum period, social isolation, affective instability and genetic vulnerability, to amplify and validate overvalued ideas and psychotic phenomena. Clinicians should consider that chatbot use may exacerbate psychopathology in vulnerable individuals and should include this in formulation, risk assessment and management planning. Clinicians should enquire about screen use, including engagement with chatbots, and provide psychoeducation on the potential harms of excessive or inappropriate screen use. Colleagues need to be upskilled in recognising and responding to digital addiction. Widely available specialised services for digital addiction are needed. Safety features of Chatbots need to be urgently enhanced.

Keywords: social media, AI, digital wellbeing

2B–2

Digital wellbeing: Comprehensive assessment and perspectives for the treatment of problematic social media use

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Background: Digital wellbeing has emerged as a key construct for understanding how individuals navigate the benefits and risks of social media use. Traditional interventions focused on screen-time reduction show limited efficacy, underscoring the need for comprehensive assessment and tailored treatment approaches for problematic use of social media. *Methods:* This synthesis integrates conceptual work on digital wellbeing, psychometric validation of the Perceived Digital Well-Being Scale (PDWS) in US and UK young adults, and cluster-analytic study on a sample of 1,854 US participants who completed measures of smartphone and social media addiction, digital stress, digital flourishing, and perceived digital wellbeing. *Results:* Findings support a multidimensional model of digital wellbeing and the strong validity of the PDWS. Two consistent clusters—balanced and dysregulated use—were identified, differing markedly in addiction symptoms, digital stress, and psychological wellbeing. *Conclusion:* Comprehensive assessment combining validated scales and user profiling offers a more precise understanding of problematic social media use and informs next-generation interventions focused on enhancing digital flourishing and self-regulation.

Keywords: social media, AI, digital wellbeing

2B–3

An update on the early unintended consequences of the Australian social media ban for under 16-year-olds

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Background: As from the 10th of December 2025 children under 16 in Australia are banned from having social media accounts. Facebook, Instagram, Snapchat, Threads, Tik Tok, X, YouTube, Reddit, Kick and Twitch are the platforms affected by the ban, with others under review. Gaming platforms and AI chatbots are not included in the ban. Concerns have been raised that the ban may have unintended harms: Children may explore other apps that are less safe or regulated, for example gaming site chat rooms. Children who rely on social media for support may become distressed and be at increased risk. For example, those from LGBTQIA+, neurodivergent or rural communities. Social media companies may undermine the ban to discourage other countries from passing similar legislation. The social media ban is being challenged in the High Court of Australia. *Methods:* Monitoring of referrals to the gaming disorder clinic (GDC) at Fiona Stanley Hospital and to local support services with presenta-

tions linked to the social media ban. *Results:* At this stage we expect a surge in presentations to our clinic and to local services of vulnerable children who have become distressed as a result of the ban. *Conclusions:* There is a need for the social media ban to be paired with measures for screening, prevention, early intervention and specialist services. Big tech companies need to be obliged to address harmful content and addictive design features. The effectiveness or not of the ban will influence other countries seeking to address similar challenges as Australia, particularly the vulnerability of under 16s and screen addiction.

Keywords: social media, AI, digital wellbeing

2C–1

Synthesizing online gambling tracking data with IRT methods to identify robust behavioral indicators

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Background : Online gambling operators can provide extensive behavioral tracking data for each gambler with an account. However, quantitative studies generally rely on a limited set of indicators to avoid issues such as multicollinearity or multiple-testing bias. To date, there is no scientific consensus on which variables should be prioritized or their significance. *Aims:* This study aimed to synthesize large online gambling tracking datasets provided by online gambling operators while preserving their informational richness. *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. Two representative samples of 40,000 gamblers each were drawn from the ANJ and FDJ datasets, covering the period from January 2019 to February 2020. Several item response theory (IRT)–based statistical methods were applied to extract latent variables, and appropriate model-selection procedures were used to identify the most relevant models and associated latent variables. *Findings:* Although analyses are still ongoing, we expect the selected latent variables to reflect key dimensions of gambling behavior, including gambling intensity, gambling continuity, risky behaviors and diversity of gambling involvement. This approach should also help identify which operator-provided variables are most relevant for future research. *Conclusions:* The latent variables identified through this methodology could serve as robust, theory-driven indicators for future studies using gambling tracking data, helping reduce bias caused by arbitrary variable selection in quantitative research.

Keywords: biostatistics, online gambling tracking data, latent variables, behaviour

2C–2

Problematic gambling, gaming, and criminal behaviour: Findings from a study among prisoners in Croatia

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Background: Problematic gambling and excessive gaming represent emerging behavioral addictions associated with impaired control, psychosocial difficulties, and links to criminal activity. International research indicates substantially higher prevalence rates in correctional settings compared to the general population, yet such data for Croatia have been lacking. *Method:* A quantitative cross-sectional study was conducted among 290 male prisoners in four Croatian penitentiaries. Standardized instruments—the Problem Gambling Severity Index (PGSI) and the Gaming Disorder Test (GDT)—were used alongside a structured questionnaire assessing sociodemographics, criminal history, online behavior, gaming habits, and gambling patterns before and during imprisonment. Descriptive and inferential statistics were used to examine associations between behavioural addictions and offence types. *Results:* Findings show heterogeneous criminal profiles, with 40% of participants reporting prior convictions. Problematic gambling (PGSI ≥ 8) was more prevalent than in the general population, particularly among individuals convicted of property-related offenses such as fraud, theft, and robbery. Problematic gaming symptoms were generally low, but more frequently observed among prisoners convicted of violent offences. Both gambling and gaming in prison were primarily motivated by boredom and stress reduction. A minority of prisoners reported negative consequences such as financial conflicts, reduced social interaction, or emotional distress. Awareness of available support was moderate, while actual utilization of assistance for gambling-related problems was very low. *Conclusions:* The study confirms elevated rates of problematic gambling compared with the general population and demonstrates its strong association with property crimes, while problematic gaming shows links to violent offending. These results underline the need for targeted screening, early identification, and tailored interventions within the prison system. Tailored interventions and structured digital behavior programs could support rehabilitation and reduce recidivism risk.

Keywords: problem gambling, gaming disorder, prisoners

2C–3

Cryptocurrency trading as a form of gambling: Global analysis across 12 countries

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Interest in cryptocurrency trading has increased rapidly over recent years. Cryptocurrencies are highly volatile and speculative, and cryptocurrency trading platforms increasingly resemble online gambling environments in their design and marketing practices. Existing evidence from Finland suggests that cryptocurrency trading may be associated with gambling-related harms. However, cross-national empirical evidence remains limited. In this study, we analyzed population-based survey data collected simultaneously in Autumn 2024 from 12 countries: Australia, Brazil, Finland, France, Germany, Ireland, Italy, Japan, Poland, Portugal, South Africa, and the United States (N = 13,796). Measures included the Problem Gambling Severity Index (PGSI), cryptocurrency ownership and trading activity, participation in different gambling types, and socio-demographic variables. Analyzes focused on associations between cryptocurrency trading and gambling severity. Cross-national clustering, socio-demographic factors, and gambling type were adjusted. Our main analyses utilized Bayesian multilevel negative binomial regression models with random intercepts for country. This allowed us a robust estimation with a limited number of second-level units while accounting for cross-national variation. Cryptocurrency trading was significantly associated with higher PGSI scores. This association remained robust after adjusting for participation in traditional gambling activities and socio-demographic factors. The strength of the association was consistent across countries. This indicated that cryptocurrency trading is linked to excessive gambling in diverse regulatory and cultural contexts. The findings suggest that cryptocurrency trading may function as a gambling-like activity for some individuals and should be considered in discussions of gambling-related harm. It is important to screen financial activities related to cryptocurrencies among people with problem gambling behaviors. Also, our findings are important in a broader context. Online gambling is currently taking on novel forms that blur the boundaries between financial speculation and gambling. These two behaviors share significant conceptual and empirical similarities. This raises important implications for prevention and regulation.

Keywords: cryptocurrency trading; problem gambling; cross-national study

2C–4

Gambling behavior profiles and their demographic and psychosocial predictors in Türkiye: A person-centered clustering and logistic regression analysis

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Background: Gambling addiction is an increasing public health concern with the expansion of online and illegal betting platforms. Variable-centered approaches relying on total risk scores may obscure heterogeneity in gambling behaviors. Person-centered approaches address this limitation by identifying distinct behavioral profiles. *Methods:* This empirical study used cross-sectional survey data from 35,292 individuals aged 15 and older across Türkiye, drawn from the Yeşilay (The Green Crescent Society) Health Behavior Survey conducted in 2025. Analyses were restricted to 1,407 participants who reported gambling behavior within the past 12 months and provided complete data. Gambling behavior profiles were identified using Gower distance–based hierarchical clustering, with solution robustness assessed via k-medoids (PAM). Cluster separation was evaluated using silhouette coefficients, and agreement between the hierarchical and K-Medoids solutions was moderate, as indicated by the Adjusted Rand Index (ARI). Binary logistic regression examined demographic and psychosocial predictors of profile membership *Results:* Two distinct gambling behavior profiles representing low-risk and high-risk patterns were identified. The two-cluster solution showed strong separation (average silhouette = 0.673) and moderate agreement across methods (ARI = 0.674). Gambling participation in the past 30 days was the most discriminative indicator. The logistic regression model was statistically significant (Omnibus $\chi^2(13) = 40.20$, $p < .001$) with an overall classification accuracy of 62.3%, showing high accuracy for low-risk individuals (83.3%) but limited sensitivity for high-risk cases (31.5). Partial loss of control over digital gaming behavior emerged as the strongest predictor of high-risk profile membership, followed by male sex and recent exposure to stressful life events. *Conclusions:* These findings support conceptualizing gambling behaviors as heterogeneous profiles rather than a unidimensional risk continuum. The association between impaired control in digital gaming and risky gambling profiles aligns with a cross-addiction framework, highlighting shared self-regulatory vulnerabilities. Person-centered approaches offer a robust basis for integrative prevention strategies while underscoring the need for broader indicators to better identify high-risk individuals.

Keywords: gambling behavior profiles, person-centered clustering, binary logistic regression

2C–5

Between categories and continuums: Interpretable machine learning for estimating gambling severity in psychiatric patients

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The classification of gambling severity is traditionally grounded in categorical diagnostic frameworks, yet empirical and clinical evidence increasingly suggests a dimensional structure. This study explores whether machine learning models can meaningfully estimate gambling severity in a clinical sample of consecutively recruited psychiatric patients, while preserving interpretability and clinical relevance. Using a dataset of 401 participants characterized by behavioral, psychological, and clinical features, five supervised algorithms Support Vector Machine (SVM), Logistic Regression (LR), XGBoost, Random Forest (RF), and Gaussian Naïve Bayes (GNB). Preprocessing was model-dependent: feature standardization was applied to distance-based and linear models (SVM and Logistic Regression), while tree-based models (XGBoost and Random Forest) were trained on unscaled data. Model evaluation was conducted using stratified five-fold cross-validation to preserve class proportions across folds. Performance was assessed using overall accuracy and macro-averaged F1-score, the latter being particularly appropriate for the highly imbalanced multi-class setting, as it assigns equal importance to all severity levels. To address the "black-box" problem, Local Interpretable Model-agnostic Explanations (LIME) were employed to identify feature patterns driving class-specific predictions. Across models, non-gamblers were identified with near-perfect accuracy, indicating a clear and stable behavioral signature for the absence of gambling involvement. In contrast, intermediate and high-risk classes showed marked overlap, with frequent misclassification between adjacent severity levels. Across all evaluated models, Support Vector Machine achieved the highest average accuracy (0.668 ± 0.027), indicating superior overall classification performance dominated by correct identification of the majority class. In contrast, Logistic Regression obtained the highest macro-F1 score (0.461 ± 0.039), suggesting greater sensitivity to minority classes and a more balanced performance across gambling severity levels. The most severe class, representing gambling disorder, was consistently underrecognized. However, interpretability analyses revealed coherent and clinically plausible mechanisms underlying model decisions. Increasing gambling severity was associated with impulsivity traits, emotion regulation difficulties, and substance use indicators. In contrast, the absence of gambling behavior was particularly driven by low levels of difficulties in emotion regulation, as LIME explanations highlighted that preserved goal-directed behavior and emotional clarity emerged as robust contributors to non-gambling

predictions, suggesting a clinically meaningful protective profile. Taken together, these findings suggest that AI-based classification captures gambling severity more effectively as a continuum than as discrete categories. Interpretable machine learning may therefore serve as a complementary tool rather than as a diagnostic substitute, for dimensional risk stratification, early identification, and theoretically informed models of behavioral addiction. Interpretable machine learning may therefore contribute a complementary perspective through which continuous gradients of risk, early manifestations of gambling severity, and the latent structure of gambling problems become more clearly discernible.

Keywords: problematic gambling, Explainable Artificial Intelligence (XAI), supervised machine learning, diagnosis, psychiatric patients

2D–1

Towards an experimental model of behavioural addiction: Dorsal striatum silencing attenuates light self-administration in mice

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Background: Recent evidence suggests that artificial light via LED screens may contribute to excessive smartphone use, such that applying greyscale filter on the smartphone can reduce screen time (Holte et al., 2023). Although the underlying mechanism is still unclear, it suggests incentive value and hedonic property of light. As such, light may contribute to maladaptive habit formation underlying compulsive smartphone usage and other digital technology-based disorders (Tam et al., 2025; Tam and Becker, submitted). Recently we have developed a light self-administration task to assess light-induced maladaptive habits in laboratory mice (Tam et al., submitted). Given the established role of the striatal circuits in compulsive drug seeking, we investigate its contribution to acquisition and performance of light self-administration. This allows us to uncover some of the overlapping mechanisms underlying multiple types of maladaptive habits (Klugah-Brown et al., 2021). *Method:* Male mice received intracranial injection of a control adeno-associated virus (AAV) expressing a fluorescent tag (6 mice) or an AAV expressing an inhibitory designer receptor (hM4Di) with a fluorescent tag into the caudate–putamen region (10 mice). Five weeks later, mice received operant training in a standard mouse operant chamber with a single response lever. Lever pressing was reinforced by 2.5-s green light under fixed-ratio (FR) reinforcement schedules (FR1, FR3, and FR5). Half an hour before the operant session, mice received intraperitoneal injection of the designer receptor agonist, clozapine N-oxide (CNO; 5 mg/kg), resulting in silencing of neuronal firing for at least 3 hours in hM4Di mice but not control mice. *Results:* In the first three days of FR1 operant training with CNO, control mice showed more responses than hM4Di mice. In control mice, CNO had a negligible effect on FR3 and FR5 responding. By contrast, in hM4Di mice FR3 and FR5 responding was attenuated by CNO. Linear mixed-effects models confirmed that light self-administration performance in both groups improved over 8 days of operant training, but CNO exerted a stronger detrimental effect on lever pressing in hM4Di mice. These results show that silencing of dorsal striatal neuronal firing attenuates light self-administration in mice. *Conclusions:* Our findings underscore that the formation of light-induced habitual behaviour is mediated by the dorsal striatum. Together with our previous study, light can serve as an effective reinforcer just like food and drugs. Light self-administration is similar to drug and food self-administration with respect to: (a) the time course of acquisition and extinction; (b) the necessity of response → reinforcer contingency in driving habit formation (Tam et al., submitted); and (c) its dependence on the dorsal striatum. This provides a valid experimental paradigm to examine the mechanisms underlying maladaptive habit formation to non-drug cues in behavioural addictions.

Keywords: mice, light reinforcer, habit, dorsal striatum, smartphone use

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2D–2

EEG-based neurocognitive differentiation of regulatory and reactive dispositional traits during short-form social media exposure: A pilot neurocultural study

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Background: Excessive utilisation of social media is increasingly considered a behavioral addiction linked to impulsivity, reward-seeking, and attentional dysregulation. Vulnerability might be modulated by individual neurocognitive control and cortical arousal. The present study employs a neurocultural framework from Indian Guna typology-self-regulated stability (Sattva) and reactive arousal (Rajas)-to examine how dispositional traits shape brain responses to social media exposure. *Methods:* Ten healthy young adults participated (5 Sattvic-like, 5 Rajasic-like), selected through the Guna-Based Social Media Consumption Questionnaire. During the experiment, EEG is recorded in three phases: a 5-minute baseline, a 10-minute social media browsing, and a 5-minute post-task rest. Within each group, a repeated-measures ANOVA was performed at p = .05 to test the absolute power of (θ)Theta (4–8 Hz), (α) Alpha (8–12 Hz), and (β) Beta (12–30 Hz) frequencies, as well as the (θ/α) Theta/Alpha ratio. *Results:* Rajasic-like individuals showed pronounced EEG modulation, α power: $F(2,8) = 9.303$, $p = .008$, $\eta^2 = .699$, with a quadratic trend: $F(1,4) = 26.240$, $p = .007$, indicating alpha suppression during use and rebound after use. θ/α ratio: [$F(2,8) = 8.898$, $p = .009$, $\eta^2 = .690$], peaking mid-task, indicating temporary attentional overload. β power: $F(2,8) = 6.796$, $p = .019$, $\eta^2 = .629$, increasing linearly across blocks, evidencing ongoing cortical excitation. Sattvic-like subjects revealed significant modulation only in the θ/α ratio, $F(2,8) = 8.481$, $p = .011$, $\eta^2 = .680$, pointing to brief mid-task attentional disruption with fast recovery. *Conclusion:* Short exposure to social media showed a differential neurophysiological effect by disposition: Rajasic-like individuals showed increased cortical reactivity and slower recovery, consistent with vulnerability to addiction. Sattvic-like individuals maintained neural balance and

resistance to the digital stimulus. The results highlight how personality type-based arousal self-regulation interacts with digital behavior and support the inclusion of cultural models of personality together with EEG biomarkers in the study of behavioral addictions.

Keywords: social media addiction, EEG spectral power analysis, neurocultural personality model, behavioral addiction vulnerability

2D–3

Altered subgenual anterior cingulate cortex and nucleus accumbens functional connectivity underlies impulsivity in internet gaming disorder

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Background: Individuals with Internet Gaming Disorder (IGD) exhibit heightened impulsivity. Emerging research indicates that the neural circuit involving the subgenual anterior cingulate cortex (sgACC) and the nucleus accumbens (NAcc) plays a critical role in both substance addiction and impulsivity (Zuo et al., 2025). However, it remains unclear whether similar dysfunction within this circuit is present in IGD. *Method:* A total of 119 participants underwent fMRI scanning during a delay-discounting task. The sample comprised individuals diagnosed with IGD (PIGD; n=31), individuals with non-disordered but heavy gaming use (NIGP; n=26), and two groups of carefully matched healthy controls (control-for-PIGD: n=36; control-for-NIGP: n=26). At the behavioral level, each participant's discounting rate was calculated. For fMRI data, the activity pattern of the sgACC and the functional connectivity between the sgACC and NAcc were evaluated. We tested whether the PIGD and NIGP groups showed significant differences in behavioral and neuroimaging measures compared to controls. *Results:* The PIGD group demonstrated significantly elevated behavioral impulsivity ($p=0.045$), reduced sgACC decoding accuracy ($p=0.044$), and altered sgACC-NAcc functional connectivity ($p=0.047$) relative to controls, with this connectivity strength positively correlating with delay discounting rates ($r=0.396$, $p=0.027$). In contrast, the NIGP group showed no significant differences in behavioral impulsivity, neural decoding accuracy, or sgACC-NAcc connectivity, nor any significant correlation between connectivity and discounting behavior (all ps >0.3). *Conclusions:* IGD shares core neurobiological impairments with substance addictions involving the sgACC-NAcc circuit, suggesting a potential biomarker for intervention development.

Keywords: internet gaming disorder, impulsivity, subgenual anterior cingulate cortex, nucleus accumbens, functional connectivity

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2D–4

Enhanced inferior frontal gyrus triangular part function as a potential protective neural marker in heavy internet gamers who are non-dependent: An fMRI neural decoding study

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Background: Internet gaming is a widespread form of entertainment globally, yet only a minority of users develop Internet Gaming Disorder (IGD). It remains unclear why some heavy users do not develop addiction despite prolonged engagement, and the underlying neural protective mechanisms require further investigation. The prefrontal cortex plays a central role in cognitive control, goal-directed behavior, and impulse inhibition. In substance use research, enhanced function of the right inferior frontal gyrus triangular part (Frontal_Inf_Tri_R) has been observed in recreational users, potentially linked to improved cognitive control and behavioral regulation, thereby reducing addiction risk (Goldstein & Volkow, 2011). However, direct evidence is lacking regarding whether this region serves a similar protective role in heavy internet gamers without addiction. This study examines the functional characteristics of the inferior frontal gyrus triangular part and its association with gaming behavior to elucidate its potential protective neural mechanism against loss of control. *Methods:* A total of 118 participants were included: control-for-PIGD (n=41), control-for-NIGP (n=27), patients with IGD group (PIGD, n=34), and individuals with non-disordered but heavy gaming use (NIGP, n=16). All participants underwent a delay discounting task fMRI scan to calculate neural decoding accuracy of the inferior frontal gyrus triangular part. Behavioral assessments included impulsivity (delay discounting task k-value) and a multidimensional internet gaming use scale. Analyses comprised: 1) intergroup comparisons of decoding accuracy (two-sample t-tests); 2) within-group correlations (Spearman) between regional function and behavioral measures; 3) identification of “protective brain regions” based on cross-group comparisons and correlation patterns. *Results:* 1. Behaviorally, the PIGD group showed significantly higher impulsivity (k-value) than the control-for-PIGD (t (72)=2.114, p=0.038), while no significant difference was found between the NIGP and the control-for-NIGP groups (t (36) =0.559, p=0.580). 2. Neural decoding analysis revealed significantly higher decoding accuracy in the Frontal_Inf_Tri_R in the NIGP group compared to the control-for-NIGP group (t (36) =2.617, p=0.0129), indicating enhanced function in the NIGP group. In contrast, the PIGD group showed no significant difference in decoding accuracy compared to its control

group ($p > 0.05$). 3. In the NIGP group, the functional level of the Frontal_Inf_Tri_R positively correlated with internet gaming use intensity ($r = 0.670$, $p = 0.001$), whereas this correlation was not significant in the PIGD group ($r=0.140$, $p=0.429$). The correlation in the NIGP group was significantly stronger than that in the PIGD group (Fisher's $Z=2.297$, $p=0.022$). *Conclusion:* Specific functional enhancement of the inferior frontal gyrus triangular part serves as a key neural marker distinguishing heavy internet gamers who do not develop addiction. This upregulation may reflect successful adaptive neural regulation, strengthening prefrontal cognitive control over gaming-related cues, thereby suppressing impulsivity despite frequent use and preventing pathological transition to addiction. Identifying this "protective brain region" provides a novel neural basis for understanding individual differences in internet gaming use risk and suggests potential directions for targeted prevention and early intervention, such as neuromodulation techniques focused on this region.

Keywords: internet gaming use risk, inferior frontal gyrus triangular part, protective factors, neural decoding, functional connectivity

Reference:

Goldstein, R. Z., & Volkow, N. D. (2011). Dysfunction of the prefrontal cortex in addiction: neuroimaging findings and clinical implications. *Nature Reviews Neuroscience, 12*(11), 652–669. https://doi.org/10.1038/nrn3119

2D–5

Reward anticipation in social media: An EEG pilot study using a TikTok-based paradigm

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The rise in social media use, particularly platforms like TikTok, has raised concerns about its addictive potential, with similarities to gambling in its reward structure. However, little is known about whether social media triggers similar anticipatory neural activity to other behavioral addictions. This EEG pilot study aimed to investigate how presenting previews of social media videos impacts reward related anticipatory processing. To do so, we implemented a TikTok based task mimicking naturalistic platform use. Using the stimulus preceding negativity (SPN), an event related potential linked to anticipation, we examined how the expectation of upcoming TikTok content modulates anticipatory neural responses—that is,

whether SPN amplitude varies as a function of the anticipated video valence. Ten right-handed participants (N = 10; 6 females; aged 23–28 years) viewed short videos (TikToks) of different emotional valence (Positive, Negative) as well as a Scrambled control condition while EEG was recorded. SPN amplitudes were analyzed to assess whether anticipatory neural activity was modulated by video valence. Results showed that Positive videos elicited significantly larger SPN amplitudes compared to the Scrambled condition, indicating valence-related modulation of anticipatory processing. Larger amplitudes were also observed for Negative compared to Scrambled and for Positive compared to Negative videos; however, these effects varied across time windows, highlighting the need for further investigation. Overall, these findings support the validity of our paradigm for studying reward anticipation in social media contexts and provide a foundation for future research. The valence dependent modulation of the SPN indicates that anticipating TikTok content can influence neural activity linked to reward anticipation. This work offers an initial basis for examining whether social media engages anticipatory mechanisms similar to those seen in other addictive behaviors and may help identify neural correlates relevant to addictive digital media use, particularly among individuals with problematic social media use.

Keywords: event-related potentials, social media use, reward anticipation, EEG-ERPs, behavioral addiction

2E–1

Identifying internet gaming disorder risk in emerging adults: Preliminary evidence from a large, population-based university study

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Background: Ages 18–25 encompass late adolescence and the transition to adulthood, a developmental period during which a substantial proportion of young people in Turkiye are university students. The university years are characterized by increasing independence and the consolidation of coping strategies, potentially heightening vulnerability to maladaptive behaviors such as Internet Gaming Disorder (IGD). Globally, IGD prevalence among university students ranges from 0.8% to 54.3%. In Turkiye, however, recent large-scale field studies remain limited, with reported prevalence estimates varying between 0.96% and 7.4% (Evren et al., 2018; Evren et al., 2020). This study aimed to determine IGD prevalence among university students in Ankara, identify associated factors, and examine gaming-time patterns as indicators of IGD risk. *Method:* University students aged 18–25 years enrolled in universities across Ankara were recruited via QR-code posters displayed on campus and links shared through student groups. Participants completed an online questionnaire and the Internet Gaming Disorder Test–10 (IGDT-10), which has demonstrated high internal consistency and structural validity, with Turkish validity and reliability previously established (Ozer, 2018; Evren et al., 2020). Gaming-related variables were assessed using items informed by prior large-scale international research on disordered gaming (Pontes et al., 2022). Data collection is ongoing with a planned final sample of 1,600 students; the present findings represent a preliminary analysis of data collected between 1 and 30 December 2025. *Results:* A total of 760 students responded, and analyses were conducted on 738 participants. Of these, 392 (53.1%) were female, 707 (95.8%) were undergraduate students, and 669 (90.7%) reported playing digital games in the past 12 months. Mean daily weekday gaming duration was 1.8 ± 2.28 hours (min: 0, max: 15), total weekend gaming duration was 2.79 ± 3.55 hours (min: 0, max: 30), and total weekly gaming duration was 11.83 ± 13.79 hours (min: 0, max: 90). Twenty-one students (2.8%) screened positive for IGD (IGDT-10 ≥ 5). Higher IGD risk was observed among students who were married and those belonging to a gaming group or clan ($p < 0.001$ and $p < 0.003$, respectively). Students with IGD reported significantly higher weekday, weekend, and weekly gaming durations. IGDT-10 scores correlated with age, weekday, weekend, and weekly gaming duration. ROC analyses identified cut-off values of 19.5 hours for weekly gaming duration (AUC = 0.731) and 6.5 hours for weekend gaming duration (AUC = 0.809). *Conclusions:* As far as we know, this is the first large-scale, population-based study sampling universities across Ankara to report IGD prevalence in a broadly representative and gender-

balanced university population while also proposing empirically derived gaming-time cut-offs using ROC analysis. These preliminary findings highlight weekend gaming duration as a particularly strong indicator of IGD risk and suggest that integrating gaming-time patterns with screening tools may enhance early identification strategies for IGD in emerging adults.

Keywords: internet gaming disorder, gaming disorder, prevalence, gaming duration, university students

2E–2

Machine learning-based classification of gaming disorder risk in a large sample of gamers

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Background: Gaming has become a very prevalent form of entertainment, mainly among young people. As excessive patterns of gaming are often associated with a number of adverse outcomes, it is essential to develop tools for the assessment of problem gaming in at-risk populations, such as highly engaged gamers. Therefore, the main aim of this investigation was to develop machine learning (ML) models to classify gaming disorder (GD) risk in a large sample of gamers. *Methods:* This study was based on an online cross-sectional sample of 14,256 highly engaged Hungarian-speaking gamers (89.1% males), collected in 2020. 75% of the dataset was used for training three ML algorithms (random forests, elastic net, and gradient-boosted trees), and 25% was used for testing performance metrics. Specific clinical, sociodemographic, and gaming-related variables were used as predictors for the development of the ML models. GD risk was assessed with the use of the Ten-Item Internet Gaming Disorder Test (IGDT-10), following DSM-5 criteria. *Results:* Less than 2% of the sample met the criteria for GD risk. In performance terms, all models presented good metrics, with the Elastic Net model presenting the highest AUC ROC (0.935) and sensitivity (0.853), the Random Forests model the highest specificity (0.891), and the Tree Boost model the highest balanced accuracy (0.859). When the models were retrained using the top ten features, the metrics changed only slightly. Specific gaming motives (introjected regulation and escape), depression and ADHD symptoms, and gaming genres were among the most essential variables for

the classification task. *Conclusions:* These results are promising in terms of developing additional strategies for the recognition of individuals with GD risk, and may be of some help in terms of digital tools that assist the clinician in reaching a diagnosis of the condition.

Keywords: gaming disorder, behavioral addictions, machine learning, artificial intelligence, addictive behavior

2E–3

When flow becomes maladaptive: Negative flow as a central mechanism driving internet gaming disorder severity

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Background: Flow is commonly framed as a positive "optimal experience", however several flow components (e.g. time distortion, loss of control, reduced awareness) may become maladaptive in intensive gaming. Evidence linking flow to Internet Gaming Disorder (IGD) are limited, partly because flow is often treated uniformly rather than differentiated into adaptive (positive) and maladaptive (negative/dark) flow dimensions. This study aims to provide insight regarding psychosocial determinants of positive versus negative flow and their downstream associations with IGD severity. *Methods:* We analyzed cross-sectional data from the International Gaming Study (IGS-24) using Partial Least Squares Structural Equation Modeling (PLS-SEM) (N = 1,165). IGD severity was evaluated with the IGDT-10. Depression/anxiety symptoms, ADHD traits, and social engagement were modeled as antecedents of positive and negative flow. Bootstrapped 95% confidence intervals (CI) were estimated using 10,000 resamples. *Results:* Depression/anxiety was associated with lower positive flow (β = -0.105, 95%CI [-0.196, -0.019]) and higher negative flow (β = 0.082, 95%CI [0.013, 0.151]). ADHD traits showed stronger associations with negative flow (β = 0.306, 95%CI [0.236, 0.376]) compared with positive flow (β = 0.091, 95%CI [0.007, 0.176]). Social engagement increased both positive flow (β = 0.202, 95%CI [0.144, 0.265]) and negative flow (β = 0.199, 95%CI [0.145, 0.255]). In the addiction pathway, positive flow was inversely associated with IGD severity (β = -0.077, 95%CI [-0.129, -0.025]), whereas negative flow showed a large positive association (β = 0.537, 95%CI [0.493, 0.582]). Gaming hours were positively asso-

ciated with IGD severity (β = 0.164, 95%CI [0.118, 0.215]), but did not moderate the negative flow and IGD link (β = 0.021, 95%CI [-0.03, 0.069]). *Conclusions:* Negative (maladaptive) flow emerged as a dominant correlate of IGD severity, whereas positive flow appeared relatively protective. Psychological vulnerabilities (depression/anxiety, ADHD) and social engagement may shape whether gaming flow is experienced adaptively or maladaptively, highlighting negative flow as a potential clinical target beyond time-use alone.

Keywords: internet gaming disorder, flow, online flow

2E–4

The paradox of distraction: Cognitive-load sustains craving and craving hijacks working memory in video-game players

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Background: Craving is a defining feature of Gaming Disorder, yet its moment to moment, bidirectional relationship with cognitive control is still poorly understood. This study examines whether experimentally induced craving disrupts working memory resources and, conversely, whether engaging in working memory demands up- or down-regulate induced craving. *Method:* In this pre-registered study, a preliminary sample of sixty regular video game players were randomized to a Cognitive-Load (continuous 2-back task) or Low-Load (watching a neutral documentary) condition following a standardized audio-based craving induction. Craving (VAS) was assessed at baseline, immediately post-induction, and every 5 minutes for one hour. In the Load condition, working memory performance (sensitivity index A') was recorded. Self-reported compulsivity was assessed via the GRACC-18. *Results:* A repeated measures ANOVA revealed a significant Time × Condition interaction ($p < .001$). While craving levels dropped precipitously immediately post-induction in the Low-Load group, the Cognitive-Load group exhibited a significantly slower craving decay rate, maintaining elevated craving levels relative to controls during the initial phase. Regarding the 2-back performance, linear mixed-effects models revealed that elevations in craving intensity were significantly associated with reduced working memory efficiency, specifically in participants with higher compulsivity scores ($p < .05$). *Conclusions:* These findings indicate that cognitive demands interfere with the natural, spontaneous down-regulation of craving. The data support the "hijacking" hypothesis, suggesting that a concomitant working memory task can compete for resources with spontaneous craving-regulation mechanisms and may (somewhat paradoxically) prolong the intrusive state of desire rather than distract from it. Future analyses on the full sample will confirm the moderating role of compulsivity.

Keywords: gaming disorder, craving, working memory

2E–5

Does social engagement in gaming moderate associations between gaming duration and problem gaming?

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Introduction: Greater gaming duration has been associated with problem gaming and loneliness, but evidence suggests that these relationships depend on players' social engagement. Gaming context may also matter, with different effects for gaming during free time ("green box") versus when obligations exist ("red box"). *Method:* Using preliminary cross-sectional survey data from 1162 adult gamers across five countries in the International Gaming Study 2024, we conducted a latent class analysis on five indicators of social engagement. Regressions tested whether these classes moderated associations between total weekly gaming, green box, and red box gaming and the outcomes. *Results:* Four latent classes emerged: solo (22,6%), solo-leaning (26,6%), neutral (36,3%), and social gaming (14,5%). Total gaming duration was positively associated with problem gaming ($F(1, 1161) = 58.74$, $p < .001$) and loneliness ($F(1, 1161) = 12.18$, $p = .001$), but these relationships were not moderated by social gaming class. Red box showed the strongest associations with both outcomes, followed by total gaming duration, whereas green box showed the weakest associations. The interaction term of class × green box was significant in predicting problem gaming ($F(3, 1161) = 3.44$, $p = .016$), with green box predicting higher problem gaming only in the solo class. *Conclusion:* The current findings underscore the importance of considering when individuals game when assessing problematic involvement, with gaming during time of other obligations being the strongest predictor. While social engagement did not robustly buffer against negative outcomes, results suggest that any increased risk linked to free-time gaming may be concentrated among players who predominantly game alone.

Keywords: gaming duration, social gaming, problem gaming, gaming context, loneliness

2E–6

Bidirectional associations between perceived social support and internet gaming disorder in chinese adolescents: A longitudinal study

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The increasing prevalence of Internet Gaming Disorder (IGD) among adolescents has raised concerns about its psychosocial correlates, particularly the role of perceived social support. While social support is often considered a protective factor, emerging theories suggest it may also be a psychosocial outcome of gaming disorder. This study aimed to examine the bidirectional association between perceived social support and IGD using a longitudinal design in a Chinese adolescent population. A total of 1,950 secondary school students from four schools in Guangdong Province participated in a two-wave study over one year. Participants and their primary caregivers completed validated self-report questionnaires assessing IGD (IGDS9-SF), perceived social support (MSPSS), and mental health symptoms (DASS-21). Multilevel autoregressive models were employed to test within-person bidirectional effects, controlling for between-person effects, demographic variables, baseline levels, and propensity score weights for confounding adjustment. Results showed that perceived social support significantly predicted lower levels of IGD over time at within-person ($\beta = -0.331$, $p < .001$) level after controlling for the effects at between-person levels. In contrast, the effect of IGD on subsequent decreases in social support was statistically significant but considerably smaller ($\beta = -0.013$, $p < .001$). These findings suggest that social support functions primarily as a protective factor, though it may also be partially diminished as a consequence of problematic gaming behavior. The results highlight the importance of fostering supportive social environments in adolescence to prevent the onset of IGD. In the context of China's rapid digitalization and evolving youth culture, interventions that strengthen adolescents' real-world social connections may be particularly effective in reducing the risk and severity of gaming-related problems.

Keywords: internet gaming disorder, perceived social support, adolescents, longitudinal study

2F–1

Impact of advertising on behavioral addiction: Evidence and ongoing gambling studies from a national project in Japan

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Background: Preventing gambling and alcohol use disorders requires societal environments that do not encourage excessive consumption. While Japan's industries have established voluntary advertising standards, systematic evidence on advertising impacts on individuals with addiction and comprehensive data on current advertising practices remains limited. *International Evidence:* Research demonstrates that gambling advertising exposure is associated with increased participation and urges, with dose-response relationships. Studies show that advertising restrictions can reduce gambling behavior. However, most evidence focuses on population-level consumption rather than clinical outcomes among individuals with disorders. Two critical research gaps exist: comprehensive measurement of actual advertising exposure levels, and understanding neurobiological mechanisms underlying differential susceptibility between general population and problem gamblers. Importantly, gambling types and environments vary across cultures necessitating culturally-specific evidence rather than reliance on international findings alone. *Japanese Gap:* Despite unique gambling practices and advertising environments in Japan, systematic exposure data and neurobiological evidence among addiction patients is lacking. *Current Project:* We launched a Ministry of Health, Labour and Welfare–funded project, "Survey on the Impact of Advertising on Individuals with Addiction," consisting of three research teams: two focused on gambling and one on alcohol use. The two gambling studies examine (1) online advertising exposure among the general Japanese population and (2) brain activity in patients with gambling disorder when viewing advertisements-like stimuli. The alcohol team addresses parallel questions regarding alcohol advertising. Although the overall project encompasses both gambling and alcohol use, this presentation primarily focuses on the gambling-related studies and reviews international evidence to highlight the necessity of culturally grounded research in Japan.

Keywords: gambling

2F–2

Neural responses to advertisement-like stimuli in gambling disorder patients: A personalised fmri study

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Background: Gambling disorder (GD) patients are frequently exposed to gambling-related visual stimuli, particularly advertisements, in their daily lives, which may trigger craving and relapse. However, neural responses to advertisement-like stimuli tailored to individual preferences remain insufficiently explored. We aimed to investigate neural responses to gambling images alone versus images with advertising text using personalised stimuli in GD patients. *Method:* Fifteen GD patients and 15 matched healthy controls will be recruited. Prior to scanning, each participant's preferred type of gambling was assessed, and personalised stimulus sets (neutral images, gambling images, and gambling images with advertising text) were prepared for each participant. The stimulus sets were created using a combination of Adobe Stock images, pictures provided by collaborators and AI-generated images and advertising phrases, with careful ethical consideration. During fMRI scanning, the three conditions were presented in a block design, and craving levels were measured before and after the task. *Results:* Data collection is currently underway, and preliminary findings based on the collected data will be presented at the symposium. *Conclusions:* To the best of our knowledge, this is the first study to employ personalised, ecologically valid advertisement stimuli, and is expected to elucidate the neural mechanisms underlying the impact of gambling advertisements on GD patients and provide insights for preventive interventions including advertising regulations.

Keywords: gambling

2F–3

Exposure to gambling advertisements and gambling behaviors: A Nationwide ecological momentary assessment study

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Objective: As online gambling—including sports betting, online casinos, and digital lottery services—continues to expand globally, exposure to gambling advertising on digital platforms has become an increasing concern. However, the actual frequency and patterns of such advertisement exposure in everyday life, and how these differ by level of gambling involvement, remain unclear. This study aimed to quantify real-world exposure to gambling advertisements and examine its association with gambling behaviors among habitual gamblers, recreational gamblers, and the general population. *Methods:* A nationwide online survey was conducted with 1,000 adults aged 20–69 years. Participants completed (1) a baseline questionnaire assessing sociodemographic characteristics, gambling behaviors, gambling-related symptoms (PGSI, GSAS), and relevant psychological variables; (2) a 1–2 week Ecological Momentary Assessment (EMA) administered twice daily, capturing momentary gambling urges, triggers, behaviors, and coping strategies; and (3) continuous passive monitoring of gambling advertisement exposure via a custom VPN-based system developed by MioSystem. The system automatically recorded advertisements displayed on participants' smartphones, enabling the extraction of frequency, type, and content of gambling-related advertisements. *Results:*Although analyses are ongoing, preliminary findings indicate that exposure to gambling advertisements is highest among habitual gamblers, followed by recreational gamblers and non-gamblers. Emerging patterns further suggest that greater advertisement exposure is associated with higher momentary gambling urges and a greater likelihood of engaging in gambling during the EMA period. Positive correlations between exposure levels and gambling symptom severity were also observed. *Conclusion:* This study demonstrates the feasibility of combining EMA with passive digital monitoring to quantify real-world gambling advertisement exposure. Preliminary results suggest meaningful associations between advertisement exposure and gambling urges and behaviors, underscoring the need for regulatory and preventive strategies targeting digital gambling advertisements.

Keywords: gambling

2F–4

Challenges and future directions in gambling advertising research: Toward an integrated multidisciplinary framework

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Growing concerns regarding the influence of gambling advertising on public health have fueled the need for research that spans epidemiology, behavioral science, and neuroscience. As digital advertising becomes increasingly pervasive and personalized, understanding its impact requires approaches capable of capturing real-world exposure, momentary psychological responses, and individual differences in susceptibility. However, the field faces several conceptual and methodological challenges that must be addressed to advance evidence-based regulation and prevention. First, accurately quantifying real-world exposure remains a major obstacle. Digital advertisements vary dynamically across platforms, algorithms, and user behaviors, making it difficult to determine how often individuals encounter gambling-related content and which populations are disproportionately exposed. Technological methods such as passive digital monitoring and ecological momentary assessment offer promise but raise questions about measurement validity, privacy, and scalability. Second, the pathways through which advertising influences gambling behavior are not yet fully understood. While psychological mechanisms such as craving, cognitive distortions, and decision-making biases have been proposed, the degree to which these processes differ between recreational gamblers, at-risk individuals, and those with gambling disorder remains unclear. Moreover, cultural and environmental factors shape both advertising practices and consumer perceptions, underscoring the need for context-specific models rather than universal assumptions. Third, the biological foundations of susceptibility to advertising—potentially involving reward processing, attentional biases, and cue-reactivity—are only beginning to be explored. Neurobiological research can offer insights, but translating such findings into public health strategies remains a challenge. Taken together, these issues highlight the necessity of a multidisciplinary research framework that integrates large-scale exposure assessment, longitudinal behavioral data, and mechanistic psychological and neurobiological evidence. Such an approach will be essential for developing culturally grounded, evidence-based guidelines for advertising regulation and for informing preventive interventions aimed at mitigating harm from gambling advertising in an increasingly digital landscape.

Keywords: gambling

2G–1

Psychodynamics of behavioral addictions

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Background: Behavioral addictions can be understood as developmental pathways through which thwarted motivational systems seek expression amid early relational failures and emotion dysregulation. Developmental disruptions in key relationships undermine the possibility of fulfillment of fundamental needs, creating psychic voids in which desires are obliterated and access to authenticity is suspended. Because of these psychic pits, capacities for affect tolerance, impulse regulation, and engagement with authentic motivations are diminished, favoring compulsive enactments of behaviors as surrogate channels for unfulfilled drives. *Method:* This theoretical synthesis integrates psychodynamic perspectives on motivation, dissociation, and self-continuity. It examines how repeated relational failures foster discontinuities in subjective experience, producing behaviors that organize unbearable affect, circumvent relational vulnerability, and enact otherwise inaccessible motivational impulses. Emphasis is placed on the interplay between developmental constraint, emotion dysregulation, and emergent addictive patterns. *Results:* Behavioral addictions appear as displaced enactments of impulses that cannot safely reach relational or experiential fulfillment. These behaviors provide transient affective cohesion and illusory continuity, while dissociative mechanisms shield the self from psychic pain, reinforcing cycles of repetition. Symptom-focused models risk overpathologizing these behaviors, obscuring their adaptive (albeit primitive) role in regulating motivational and affective tension. This framework illuminates how desire, fear, and regulatory processes interweave in the genesis and persistence of behavioral addictions. *Conclusions:* Behavioral addictions arise from complex developmental trajectories in which unmet needs, relational failures, and emotion dysregulation converge. Therapeutic work that addresses dysregulated affect and the mechanisms sustaining dissociative avoidance can create the conditions for blocked motivational drives to emerge safely, allowing compulsive enactments to lose their regulatory hold and enabling the gradual reclamation and integration of experiences long relegated to the psychic void of behavioral addictions.

Keywords: psychodynamics, behavioral addictions, motivational framework

2G–2

Gaming motivation and problematic gaming: A moderating role of self-esteem

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A growing body of research has linked escapism and avoidance coping with problematic gaming. However, using video games to cope with unpleasant real-life experiences may be either adaptive or maladaptive, depending on individuals' psychological states or traits. The aim of this study was to assess the moderating role of self-esteem on the relationship between gaming motivation and problematic gaming. The research was conducted on a nationally representative sample of Croatian residents aged 15 to 64 (N=4,988). Analyses for this study were performed on a subsample of 1,370 participants who reported playing videogames in the last year (Mage=32.07, SDage=12.62). A cross-sectional design was utilized, and data were collected through face-to-face surveys in private households. Gaming Disorder Test, Motives for Online Gaming Questionnaire, and Self-Liking/Self-Competence Scale were used. Moderation effects were tested in two separate models, assessing interactions between escapism and self-esteem and between coping motive and self-esteem, respectively. Results indicated significant interaction terms between both escapism and coping gaming motives and self-esteem, demonstrating that higher self-esteem attenuated the effects of escapism and coping motives on problematic gaming. These findings suggest that individuals with lower self-esteem who rely on videogames to cope with psychosocial difficulties are more likely to engage in problematic gaming, in comparison with individuals with higher self-esteem. Interventions aimed at enhancing self-esteem may therefore represent a promising strategy for prevention of problematic gaming.

Keywords: problematic gaming, self-esteem, gaming motivation

2G–3

Gender differences in the moderating effects of latent body image profiles on the association between problematic smartphone use and anxiety among Korean adolescents

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Background: In South Korea, where smartphone use is among the highest globally, problematic smartphone use (PSU) and anxiety have emerged as critical adolescent mental health concerns. Although body image is closely associated with PSU, the moderating role of body image (body image distortion) in the association between PSU and anxiety remains underexplored. This study identified latent body image profiles based on body mass index (BMI) and subjective body shape perception, examined gender differences, and assessed whether the association between PSU and anxiety varied across profiles. *Methods:* Data were drawn from the 19th Korean Youth Risk Behavior Survey (2023; N=51,467). Latent profile analysis was conducted using body mass index (BMI) and subjective body shape perception to identify distinct body image profiles. Multigroup analyses by gender tested configural and structural invariance of the latent profiles. Mean differences in PSU and anxiety across profiles were examined, followed by profile-specific regression analyses to estimate the effect of PSU on anxiety within each gender. *Results:* Four latent body image profiles were identified for both genders, supporting configural but not structural invariance. Among males, profiles largely reflected congruence between BMI and perceived body shape. Among females, a distinct body image distortion profile—perceiving oneself as overweight despite a normal BMI—comprised 30.5% of the sample. The association between PSU and anxiety was significantly stronger in the body image distortion (B=0.132) and obese (B=0.141) profiles among females, whereas among males a stronger association was observed only in the obese profile (B=0.126).*Conclusions:* These findings demonstrate that the relationship between PSU and anxiety varies by gender and body image profile. Distorted body image appears to function as a key mechanism amplifying anxiety among female adolescents, highlighting the need for gender-responsive interventions and broader social and structural efforts to alleviate excessive body image pressures on adolescents.

Keywords: problematic smartphone use, body image distortion, adolescent anxiety

2G–4

The protective role of self-esteem, self-control, and self-efficacy against smartphone addiction among university students

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Smartphone addiction among university students has raised significant public health concerns. Identifying protective psychological resources is crucial for developing effective interventions. Self-esteem, self-control, and self-efficacy have been suggested as potential protective factors against addictive behaviors. This study aimed to examine whether self-esteem, self-control, and self-efficacy serve as protective factors against smartphone addiction in a university student sample. A cross-sectional survey was conducted with a total of 517 university students (44.90% male; Mage = 19.70, SD = 0.95, age ranged from 17 to 24 years). Hierarchical multiple regression analyses were performed after controlling for gender and age. The results of bivariate correlations indicated that smartphone addiction was significantly and negatively associated with self-esteem, self-control, and self-efficacy ($r = -0.10$ to -0.48, $p < 0.001$-0.05). When entered separately into regression models, all the three predictors (i.e., self-esteem, self-control, and self-efficacy) were significantly and negatively associated with smartphone addiction ($\beta = -0.11$ to -0.46, $p < 0.001$-0.05). However, when all three predictors were entered simultaneously, only self-control remained a significant negative predictor ($\beta = -0.44$, $p < 0.001$) but not the other two ($\beta = -0.06$ and 0.009, $p = 0.219$ and 0.853 respectively). The findings highlight the salient protective role of self-control against smartphone addiction, beyond the effects of self-esteem and self-efficacy. This suggests that interventions aimed at enhancing self-regulation skills may be particularly effective in reducing smartphone addiction among university students.

Keywords: smartphone addiction, self-control

2G–5

A new clinical model of impulsivity for the assessment of behavioral addictions and impulse-control disorders

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Introduction: behavioral self-regulation is essential for human adaptation, involving the monitoring and adjustment of behavior according to goals and consequences. Its failure manifests as impulsivity, characterized by rapid, planned actions oriented toward immediate

gratification and associated with personal and social harm. Impulsivity has a transdiagnostic nature, being present across disruptive impulse-control disorders, personality disorders, attention-deficit/hyperactivity disorder (ADHD), substance-related and behavioral addictions, and conditions marked by aggression. Widely used instruments, such as the Barratt Impulsiveness Scale (BIS-11) and the UPPS, were developed primarily from non-clinical, population-based models, which imposes conceptual and psychometric limitations when applied to psychiatric settings, particularly in capturing the cognitive and metacognitive dimensions of impulsive dyscontrol observed in clinical populations. Given the multidimensional and clinically heterogeneous nature of impulsivity, there is a clear need for a measure better aligned with clinical practice. Accordingly, the aim of this study was to investigate and select items for the construction of a new scale designed to assess cognitive instability associated with impulse control in impulsive outpatients. *Method:* this exploratory, cross-sectional, quantitative, and correlational study was based on a clinical database from a specialized outpatient clinic for impulse-control disorders and behavioral addictions. The sample comprised 1,541 patients who voluntarily sought treatment between 1998 and 2018, with diagnoses established according to DSM-IV-TR and DSM-5 criteria. Diagnoses included kleptomania (KM), pathological love (PL), pathological jealousy (PJ), intermittent explosive disorder (IED), non-suicidal self-injury (NSSI), compulsive buying disorder (CBD), food addiction (FA), gambling disorder (GD), problematic Internet use (PIU), trichotillomania (TTM), and excoriation disorders (ED). Individuals requiring inpatient care, presenting severe cognitive deficits, acute psychosis, or refusing participation were excluded. Instruments included the Adult Self-Report Scale (ASRS-v1.1), the BIS-11, and Cloninger's Temperament and Character Inventory, with emphasis on Novelty Seeking and Self-Directedness. Exploratory and confirmatory factor analyses guided item selection and model refinement, followed by binary logistic regression to assess discriminative validity across diagnostic groups. *Results:* confirmatory analyses led to a substantial reduction of candidate items, from 113 to 48. Exploratory factor analysis yielded a parsimonious final model with excellent fit indices: $\chi^2 = 458$, degrees of freedom = 183 ($p < 0.001$; $\chi^2/df = 2.50$), RMSEA = 0.0314 (90% CI = 0.0278–0.0350), TLI = 0.943, and BIC = −883. The final scale comprised twenty-seven items distributed across seven factors: (1) prodigality versus austerity; (2) negligence versus thoroughness; (3) purpose versus hopelessness; (4) disorderliness versus organization; (5) precipitation versus deliberation; (6) rashness versus restraint; and (7) heteronomy versus autonomy. Logistic regression analyses demonstrated distinct factor profiles for most diagnoses, except TTM, ED, and FA. Specific associations were observed for KM, PL, PJ, IED, NSSI, CBD, GD, and PIU, indicating differential patterns of impulsive dyscontrol across conditions. *Discussion:* these findings reinforce the view that impulsivity is a multidimensional construct rather than a unitary trait. Distinct diagnostic conditions were associated with specific configurations of regulatory deficits, supporting the clinical relevance of a differentiated framework. The proposed scale appears promising as a clinically sensitive tool for characterizing heterogeneous impulsivity profiles and informing more precise assessment and intervention strategies.

Keywords: impulsivity, behavioral addictions, impulse-control disorders, cognitive instability, clinical assessment

2G–6

Behavioral addictions and emotion dysregulation in university students: A profile-based analysis

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Background: Behavioral addictions are prevalent among university students, representing a growing concern due to their association with psychological vulnerability and academic functioning. Emotion dysregulation is a core transdiagnostic process related to behavioral addictions, contributing to reduced psychological well-being, and functional impairment. In university populations, the concurrence of behavioral addictions and emotion dysregulation may exacerbate mental health problems and academic underachievement. The present study aimed to identify risk profiles among university students based on symptoms of behavioral addictions (e.g., gaming disorder, physical exercise, shopping) and emotion dysregulation, and to examine their associations with mental health (e.g, depression, anxiety), psychological flexibility, and perceived academic performance. *Methods:* A sample of 1160 university students (75% females) reporting the risk for at least one behavioral addiction as assessed by the Screener for Substance and Behavioral Addictions, participated in the UNIST-HEALTH project survey, which addressed emotion dysregulation, psychological functioning (specifically: psychological well-being, emotional distress, depression, anxiety, and somatic symptoms, and the risk of self- and other harm),psychological flexibility, and perceived academic performance. A profile analysis using K-means method was conducted to identify homogeneous groups based on emotion dysregulation and behavioral addiction scores. The resulting profiles were compared on measures of psychological functioning, psychological flexibility, and perceived academic performance.*Results:* Profile analysis identified two distinct groups: a high-risk cluster and a low-risk cluster. Compared to the low-risk group, students in the high-risk cluster showed poorer psychological functioning within respect to all the specific domains, significantly lower psychological flexibility and perceived a reduced academic performance. *Conclusions:* The results support the importance of early identification of students at higher risk of behavioral addiction as a key strategy to preempt academic failure and the escalation of psychological distress. Profiling addictive vulnerability may inform targeted, university-based support interventions, as academic counseling programs, aimed at promoting psychological and emotional well-being. *Fundings:* Funded with the contribution of the Ministry of University and Research according to D.D. n.1396 of September 18, 2024, Notice Pro Ben 2024.

Keywords: academic performance, psychological well-being, psychological flexibility

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2H–1

Challenges in assessing addiction: A review from a gender perspective

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Scientific literature has highlighted gender differences in addictive behaviors, pointing out that women and men do not share the same patterns of onset and use, psychosocial and physiological characteristics, evolution, motivations, comorbidity, or associated consequences (Estévez, Macia, Gandarias, López, M., Jauregui, P., & Momeñe, J. (2023) (Prever, Blycker Brandt 2023) (De Luca 2023). In this context, it is essential that psychometric assessment instruments meet criteria of reliability and validity, incorporating adequate sensitivity to measure the specific experience of women with addictions. The objectives of this study were: (1) to analyze instruments and identify deficits in these instruments with respect to the reality of women; and (3) to develop recommendations for the design of assessment tools with a gender focus. A two-round Delphi methodology was used. The results show that, in the gambling instruments, the items with the highest consensus were those related to feelings of guilt, health problems, and emotional impact, highlighting the emotional regulatory function of gambling in women. These findings have implications for clinical practice and for the design of future instruments, guiding the inclusion of items sensitive to the female experience and avoiding androcentric approaches in the assessment of behavioral and substance addictions.

Keywords*:* women, chatbot, AI, psychometric assessment, gender, gender-policies, stigma, addictive behaviors

2H–2

Empowering recovery: Women-centered policies and collaborative approaches to combat stigma

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Founded in 1920, the Turkish Green Crescent Society (TGCS) is a leading civil society organization in the fields of addiction prevention, treatment, and recovery in Türkiye. Its integrated service model addresses both substance-related and behavioral addictions through prevention, early intervention, and recovery-oriented systems of care. One of its flagship services, the Green Crescent Counseling Centers (YEDAM), provides free psychosocial support to individuals and families, grounded in a holistic, family-inclusive recovery framework. A core initiative of TGCS is the Women's Forum on Addiction and Recovery (WFAR), implemented in collaboration with the Ministry of Family and Social Services. WFAR serves as

an international and interdisciplinary platform that addresses the gender-specific dimensions of addiction and recovery, including behavioral addictions. The initiative promotes trauma-informed, stigma-reducing, and empowerment-based approaches, with particular attention to the social, psychological, and structural factors influencing women's pathways into and out of addiction. This case study examines the development, implementation, and impact of WFAR alongside TGCS's broader female-centered recovery models, with relevance to behavioral addictions such as gambling, digital gaming, and other compulsive behaviors. Drawing on evidence-informed practices, the presentation explores how trauma-sensitive care, family-inclusive interventions, and community-based engagement contribute to improved recovery outcomes for women affected by both substance-related and behavioral addictions. Qualitative findings from YEDAM indicate a strong association between family-oriented recovery models and improvements in mental well-being, reduced addictive behaviors, and sustained recovery among women. In-depth case interviews further highlight the importance of safe, voluntary, and dignity-based services in strengthening therapeutic alliance, reducing stigma, and supporting long-term engagement in recovery. Grounded in ethical principles and aligned with human-rights-based public health frameworks, the initiative exemplifies effective civil society–government collaboration. The findings underscore the need for gender-responsive, evidence-informed recovery systems that integrate behavioral addictions into mainstream addiction services, offering transferable insights for researchers, practitioners, and policymakers engaged in advancing recovery-oriented responses worldwide.

Keywords*:* women-centered policies, prevention, treatment, recovery, behavioral addictions

2H–3

Raising voices and defending choices: Advocacy and activism for women with addiction

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In the current socio-political context, women affected by substance use disorders (SUD) and behavioural addictions face growing structural and systemic barriers to care. Shifts in health policy, reduced investment in health equity research, and increasingly punitive legal frameworks have disproportionately impacted women and gender-diverse populations, particularly those navigating pregnancy, caregiving roles, criminalisation, and social marginalisation. This session explores how gendered policy decisions shape access to care, resource allocation, research priorities, and legal responses to addiction, often silencing the voices of those most affected. Drawing on international perspectives from Europe and the United States, the presenters examine the intersection of addiction, gender, mental health,

and social context, highlighting how structural inequities translate into clinical vulnerability and long-term harm. Through real-world advocacy and legislative case studies, this session underscores the critical role of clinicians as advocates beyond the consulting room. Examples from addiction medicine, behavioural addictions, and family-focused care will illustrate how evidence-informed, gender-responsive advocacy can influence policy, protect human rights, and improve outcomes for women living with addiction. Participants will be introduced to practical advocacy strategies and resources developed within international professional networks, including the ISAM Women and Addiction Interest Group (WAIG). Emphasis will be placed on integrating patient and community voices into policy discussions, fostering collaborative approaches between clinicians, researchers, advocates, and individuals with lived and living experience.

This session aims to empower addiction professionals to engage in ethical, relational, and socially informed advocacy, promoting equitable and humane addiction policies that centre women's voices, choices, and lived realities.

Keywords: women and addiction, gender-responsive policy, advocacy in addiction medicine, behavioural addictions, health equity, lived and living experience

2H–4

Clinical and psychological assessment among female patients with gambling disorder: Pilot study results

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Background: Currently, people in Russia with gambling problems tend not to seek professional support, and this tendency is even more pronounced among women, who are generally less likely to seek treatment for addiction, so clinicians often deal with most severe and often comorbid cases. This makes study of approaches to early detection and prevention of gambling disorder highly relevant (Ivanets & Vinnikova, 2024). *Method:* 54 female patients with pathological gambling (diagnosed with F63.0, ICD-10) undergoing inpatient treatment at mental health clinics and rehabilitation center were studied (mean age 34.8 years, SD=10.4). Pathological gambling had comorbidity with addictive disorders in 46.3% cases. The following scales were used: Problem Gambling Severity Index (PGSI), Reasons for Gambling Questionnaire (RGQ), Depression Anxiety and Stress Scale (DASS-21) and Barratt Impulsiveness Scale (BIS-11). Data analysis included descriptive statistics and Spearman's correlation coefficient. *Results:* According to PGSI scores, 69.2% of female patients demonstrated problematic gambling severity, most commonly associated with chasing losses, betting more than they could afford, and recognizing gambling-related problems. RGS results revealed that the most frequent reasons were monetary, anticipated sense of achievement, and excite-

ment. DASS-21 results showed that 63.5% had elevated depression scores, 65.4% had elevated anxiety scores, and 65.4% had elevated stress scores. 71.2% of patients had increased impulsivity according to BIS-11. Correlation analysis showed that the severity of gambling problems (PGSI) was positively associated with motivation to win large amounts of money ($r=0.341$, $p\leq0.05$) and negatively associated with perceiving gambling as a hobby ($r=-0.330$, $p\leq0.05$) (RGQ). More severe PGSI scores were also associated with higher values of depression in DASS-21 ($r=0.299$, $p\leq0.05$) and motor impulsivity in BIS-11 ($r=0.315$, $p\leq0.05$). *Conclusion:* The pilot study demonstrated the applicability of the selected battery of tests, revealing significant associations even at low number of observations. Currently, development of gender-specific diagnostic approaches is complicated due to the limited accessibility and low representation of women with gambling experience in clinical settings. Further recruitment of both female and male patients will be continued.

Keywords: women, gambling disorder, pathological gambling, clinical and psychological diagnostics

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3A–1

Which symptoms of Problematic Social Media Use constitute necessary conditions for negative outcomes? A longitudinal study using Necessary Condition Analysis

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Background: A well-established conceptualization of Problematic Social Media Use (PSMU), based on the cognitive-behavioral model (Davis, 2001; Caplan, 2010), suggests that 1) Preference for Online Social Interaction (POSI) is a precursor of both the use of social media for mood regulation (MR) and deficient self-regulation (i.e, cognitive preoccupation and compulsive use); 2) MR is also a precursor of deficient self-regulation. Negative outcomes result from deficient self-regulation. By using Necessary Condition Analysis (NCA), this study investigated whether the above-mentioned cognitive, motivational, and behavioral symptoms of PSMU constitute necessary conditions (NC, i.e., factor whose absence ensures the absence of the outcome) for negative outcomes. *Method:* A longitudinal design with a six-month interval was implemented. A sample of 229 Italian adolescents (37.60% Female; Mage = 15.46 ± 665) was recruited. PSMU was measured using the GPIUS-2 adapted for social media use. A series of NCA were employed. Only predictors with an effect size $d \geq 0.10$ and an estimated p value < .05 were considered (Dul et al., 2023). Data analysis was performed on 10.000 resamples using approximate permutation. *Results:* POSI at T0 did not emerge as a NC for MR and deficient self-regulation at T1. Mood regulation at T0 was a NC for deficient self-regulation at T1 (d = 0.143, medium effect size, p = .002). POSI (d = 0.150, medium effect size, p = .012), Cognitive Preoccupation (d = 0.170, medium effect size, p = .001), and Compulsive Use (d = 0.195, medium effect size, p = .001) – but not MR – emerged as NC for negative outcomes. *Conclusions:* Feeling more confident on social media (i.e., POSI) does not constitute a NC for losing control over use, whereas mood regulation does. However, POSI, cognitive preoccupation and compulsive use – but not MR – emerged as NCs for negative outcomes, indicating that high levels of functional impairment occur only when a minimum of each factor is present. Twenty years after the original cognitive-behavioral formulation, this study clarifies that all components remain essential, yet suggests they should be repositioned within the model.

Keywords: conceptualization, core symptoms, ecological momentary assessment, longitudinal data, objective data

3A–2

What are the arguments in favor of conceptualizing the problematic use of social media as a potential disorder?

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Background: Problematic social media use (PSMU) is intensively discussed as potential clinical disorder within the addiction framework. Empirical studies illustrate the negative consequences of excessive use (e.g. psychopathological symptoms, sleep deprivation), which is often accompanied by a perceived loss of control and significant impairments in different areas of functioning. However, there is currently no clinical classification of PUSM as a distinct disorder in the international classification systems and no systematic conceptualization of how problematic use should be defined. *Method:* We aim to provide an overview of potential diagnostic criteria, clinical features, and underlying mechanisms of the development and maintenance of problematic use based on theoretical models and empirical findings. In addition, we identified specific characteristics of PUSM in comparison to other types of maladaptive online behaviors. *Results:* The findings suggest that general addiction criteria (e.g., impaired control, preoccupation, marked distress) and specific clinical characteristics (such as preference for online interaction and fear of missing out) may represent potential diagnostic criteria for PSMU. Moreover, the results highlight the importance of underlying mechanisms such as craving and reward sensitivity, while the role of self-control requires more systematic investigation in future experimental and longitudinal research. *Conclusions:* There are good reasons to conceptualize PSMU as a distinct disorder within the addiction framework. Commonalities to other types of problematic Internet use can be identified in the proposed diagnostic criteria and underlying processes. However, it seems at least as important to consider specific characteristics and media-specific aspects of the applications themselves. Furthermore, longitudinal studies on the progression of problematic behavior, clinical samples, and a clear distinction between problematic and intensive use are necessary for a holistic understanding of PSMU.

Keywords: conceptualization, core symptoms, ecological momentary assessment, longitudinal data, objective data

3A–3

Understanding problematic social media use: Insights from an application-based study employing ecological momentary assessment and passive objective monitoring

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Nottingham Trent University

Background: There is growing concern regarding the concept of problematic social media use (PSMU) in the context of well-being. However, many studies that have investigated the role of social media use on well-being are predominantly cross-sectional in nature, and rely on measures of screen time as the index of social media engagement. This is problematic as screen time is typically assessed through self-report measures, relying on estimates of the number of minutes or hours participants spend on a typical day or week (Kaye et al., 2020). As these measures are retrospective in nature, this can lead to distorted time perception when recalling usage time estimates, and contribute to inflated correlations with outcomes regarding social media use and psychological well-being (Kobayashi & Boase, 2012; Sewall et al., 2020). This study aimed to evaluate the viability of objective smartphone-based data collection using a bespoke application DiaryMood within social media and well-being research, focusing on the social media platform Instagram. *Method:* A bespoke Android application DiaryMood was developed to observe Instagram screen time, number of notifications received from Instagram, and number of Instagram app launches on the well-being outcomes of mood, self-esteem, and craving. DiaryMood collected the data of 13 participants across a period of seven days. *Results:* Findings were not significant, however results showed evidence of usage patterns and well-being outcomes as fluctuating in parallel with one another across the period of data collection, highlighting the capability of employing objective smartphone measures within social media research. *Conclusions:* The objective monitoring in this study allowed for a more nuanced understanding of user interaction on Instagram to be observed, indicating that applications such as DiaryMood can contribute towards untangling the conceptualisation of problematic social media use.

Keywords: conceptualization, core symptoms, ecological momentary assessment, longitudinal data, objective data

3A–4

Social media regulation: An international perspective

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Social media have become something we do and an integral part of who we are. As a society, in the UK, adults spend an average of two hours on social media per day, whilst children aged 8-14 years spend three hours daily, indicating a particular social media pull for young vulnerable users. Concerningly, a total of 28% believe they spend too much time on social media, whilst 32% of British social media users think that people are cruel or unkind to each other on social media. As a consequence of the concerns raised about social media use, a number of countries are now limiting access by means of prohibiting use by young people under 16 years old, including Australia. In the UK, the recently ratified Online Safety Act (2023) requires social media companies to enforce their age limits consistently and protect young users. Risks to children from using their platforms must be assessed, and appropriate age restrictions set, ensuring that young people have age-appropriate experiences and are safeguarded from harmful content. In this talk, I will address social media regulation, including different stakeholder perspectives. Considering an international view will help outline what kinds of regulations are out currently used on a global scale. I will furthermore discuss what can be done to make social media a safe space, especially for vulnerable individuals, including young people and people with mental health problems.

Keywords: conceptualization, core symptoms, ecological momentary assessment, longitudinal data, objective data

3A–5

A more dynamic approach is needed! Examining the relationship between symptoms of problematic social media use and well-being at both the within-person and between-person levels

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University of Gdańsk

Problematic Social Media Use (PSMU) is defined as a control-related problem leading to the symptoms commonly observed in behavioral addiction. Previous research on the conceptualization of PSMU has primarily treated PSMU as a relatively stable individual difference (mainly focusing on the between-person level). However, when analyzing PSMU symptoms, it is crucial to consider them as dynamic states experienced by a person (i.e., the within-person level), rather than as stable features. Regarding this, the Experience Sampling Method (ESM) holds significant potential for early identification and time-sensitive monitoring of PSMU symptoms and factors related to their arousal and lingering. Furthermore, to truly understand the effects of PSMU, an idiographic, person-specific approach is needed. This study aimed to investigate the temporal dynamics between experiencing PSMU symptoms and the level of stress, anxiety, and current mood. The presented study has two stages. In the first one, participants completed a full-scale survey to assess PSMU and different indicators of well-being. In the second stage, they participated in the 7-day ESM study, in which they were prompted five times per day to report their current state and the experience of PSMU symptoms. We examined the correlations between these variables both on the between-person and within-person levels and found significant associations at both levels. Moreover, between-person PSMU was associated with greater moment-to-moment variability in its symptoms and well-being indicators (i.e., stress, anxiety, and current mood). Notably, symptoms lingered differently, which means the duration of each experience might vary, suggesting different potential for interventions. The presented results will be discussed in relation to the applicable PSMU conceptualizations.

Keywords: conceptualization, core symptoms, ecological momentary assessment, longitudinal data, objective data

3B–1

Family-perceived stigma among families of people with gambling disorder: Findings from a national survey in Japan

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Background: Family members of individuals with gambling disorder may perceive public stigma directed toward the affected person and internalize these attitudes as stigma toward themselves—referred to as family-perceived stigma. Despite its clinical relevance, factors associated with this construct in gambling-related contexts remain underexplored. This study examined variables related to family-perceived stigma among relatives who sought help at addiction or mental health services. *Methods:* Data were drawn from the national survey on gambling problems (2023). Among respondents to the family questionnaire, 171 family members whose relative's primary problem was gambling and who had complete data were included. Family-perceived stigma was assessed using the Link Devaluation–Discrimination Scale. Predictors were selected based on prior literature and theoretical relevance: family burden (BSFC-S), resistance to seeking help, time to consultation, history of medical service use, taking over someone's debt, personal bankruptcy, and number of problematic behaviors. Hierarchical multiple regression was conducted in four steps: (1) demographic variables, (2) economic and behavioral problems, (3) help-seeking variables, (4) family burden. *Results:* The final model (adjusted $R^2 = .114$) showed that family burden was the strongest predictor of family-perceived stigma ($\beta = 0.205$, $p = .003$). Medical service use was also significant ($\beta = 2.177$, $p = .026$). Resistance to seeking help was significant in Step 3 ($\beta = 0.878$, $p = .022$) but became non-significant after adding family burden ($\beta = 0.644$, $p = .092$). Economic and behavioral indicators (taking over someone's debt, personal bankruptcy, problematic behaviors) were not significant. *Conclusion:* Greater family-perceived stigma was associated primarily with higher subjective family burden rather than external economic difficulties. These results suggest that psychological strain and emotional exhaustion amplify family members' sensitivity to societal stigma toward gambling disorder. Reducing family burden and addressing barriers to help-seeking may be essential in mitigating stigma among affected families.

Keywords: gambling disorder, family, stigma

3B–2

Managing gambling harms in a collectivistic culture: Family characteristics and coping responses among affected family members

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Background: Gambling disorder is increasingly prevalent worldwide and causes substantial harm to the gamblers and their family. In collectivistic cultures, families often play a central role in identifying gambling problems and initiating treatment due to limited patient insight. However, family involvement, particularly through assertive coping, may unintentionally intensify gambling severity and related harms. *Method:* A pilot cross-sectional study was conducted involving 63 affected family members attending our addiction clinic. Descriptive analyses were used to characterize family demographics, coping, and gambling-related harms, measured using the 20-item Gambling Harms Scale for Affected Others (GHS-20-AO) and the 5-Step Method - The Family Member Questionnaire (5SM-FMQ). Linear mixed models (LMMs) with random intercepts were employed to examine associations among patient gambling severity (South Oaks Gambling Screen, SOGS), family coping strategies, and harm, accounting for data clustering. Bootstrapped linear regression analysis was additionally conducted to explore alternative directional relationships. *Result:* One gambler affects six others, affecting predominantly female family members (63.5%) and parents (61.9%). Gambling severity was strongly associated with the total harm score ($\mu = 11{,}33$ $\rho = 0.323$, $p = 0.010$), with the work- and health-related domains showing the greatest relative impact. All coping strategies showed positive correlation with harm ($p<0.05$), while assertive engaged coping significantly moderated the relationship between gambling severity and harm, indicating a buffering effect (B = -0.023, 95% CI -0.03 to -0.18). Assertive coping was positively associated with higher gambling severity (B = 0.467, 95% CI 0.124-0.887) in exploratory analyses, proposing a reactive rather than protective role. *Conclusion:* Assertive coping may function as a response to severe gambling while also buffering further harm escalation. These findings highlight the substantial family burden and the clinical importance of involving families in addressing both gambling disorder and their own functional harms they themselves experience.

Keywords: gambling disorder, family harm, coping

3B–3

Gambling and suicide: A psychological autopsy and qualitative inquiry into socioecological pathways to risk

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Suicide represents the most severe and irreversible form of gambling-related harm, yet the pathways linking gambling to suicidal behaviour remain poorly understood. While epidemiological evidence increasingly demonstrates a strong association between gambling and suicide, there is a critical lack of in-depth research capturing the lived experiences of those directly affected. This study addresses this gap through the first full psychological autopsy investigation of gambling-related suicide conducted in Europe, combined with an extensive qualitative inquiry involving individuals with lived experience of gambling harm and suicidality. The study employed an exploratory psychological autopsy methodology, supplemented by in-depth narrative interviews, to reconstruct the events, circumstances, and contextual factors preceding gambling-related suicide and serious suicide attempts. Twenty core cases were examined: ten individuals who died by gambling-related suicide and ten individuals who had experienced severe gambling-related harm and made a serious suicide attempt. Gambling-relatedness was established using multiple criteria, including participant or informant attribution, documentary evidence (e.g., gambling records, financial statements), and clinical or coroner documentation. Narrative interviews lasting three to four hours were conducted with core participants and bereaved relatives, supported by robust safeguarding and distress protocols. Where available, qualitative accounts were triangulated with financial, gambling operator, medical, and coronial records to construct detailed temporal case timelines. Data were analysed collaboratively using iterative thematic analysis, co-produced with researchers and co-investigators with lived experience. This process generated ten interconnected themes that illuminate the socioecological pathways through which gambling-related suicide risk develops. These include industry practices and product characteristics; the cultural normalisation of gambling; regulatory and policy failures; widespread lack of knowledge and misrecognition of gambling harm; the dominance of the "responsible gambling" narrative and individualisation of harm; shame, self-blame and stigma; financial pressure and debt; ineffective recognition and treatment responses; lapse and re-occurrence within a highly saturated gambling environment; and, ultimately, experiences of entrapment and collapse of hope. Across cases, gambling-related suicide did not emerge as a sudden or isolated act but as the culmination of cumulative and interacting pressures. Participants described trajectories characterised by early exposure to gambling in highly normalised environments, progression to high-risk and high-speed products, targeted inducements during periods of vulnerability, and repeated failures of protective systems to intervene meaningfully. The responsible gambling narrative was found to play a central role in reinforcing shame and self-blame, obscuring structural drivers of harm, and discouraging help-seeking. Financial crises, while not universally severe in objective terms, frequently functioned as psychological triggers within

a broader context of secrecy, stigma, and perceived burden on others. For many, these forces converged into a profound sense of entrapment, consistent with contemporary psychological models of suicide. The findings demonstrate that gambling-related suicide is not the result of individual pathology alone, but a predictable outcome of socioecological conditions shaped by commercial practices, cultural norms, regulatory weaknesses, and inadequate health and support responses. These insights have significant implications for suicide prevention, gambling regulation, clinical practice, and public health, underscoring the urgent need for structural, rather than solely individualised, approaches to reducing gambling-related suicide risk.

Keywords: gambling-related suicide, psychological autopsy, socioecological pathways

3B–4

Examining predictors of treatment-seeking behaviors in gambling disorder

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Background: Research indicates that individuals with gambling disorder often encounter significant barriers to seeking treatment, primarily due to denial of their condition, perceived stigma, and difficulties in accessing healthcare services. Consequently, given the low rates of voluntary help-seeking among these individuals, families are observed to play a pivotal role in initiating the treatment process. *Method:* Between 2021 and 2025, 1,622 family-referred and 6,297 self-referred clients were identified at YEDAM. To minimize selection bias, 1:2 ratio matching based on age and gender was performed using the nearest neighbor method via the R 'MatchIt' package. Consequently, 1,622 family-referred clients were matched with 3,244 self-referred individuals for the final analysis. *Results:* Individuals with an education level of primary school or lower, as well as those with a middle or high school education, exhibited a higher rate of family-referred admissions, whereas university graduates showed a higher rate of voluntary applications ($p < 0.01$). Regarding marital status, single individuals were more likely to seek treatment at their family's request, while married individuals had a higher rate of self-referral ($p < 0.01$). Additionally, individuals who reported having a motivation to quit 'almost always' demonstrated a significantly higher rate of voluntary treatment entry ($p < 0.01$). Depression and anxiety levels were significantly higher among individu-

als who applied to YEDAM voluntarily ($p < 0.01$). Furthermore, results indicated a higher prevalence of casino games in voluntary applicants, while online sports betting predominated in those referred by family members. *Conclusions:* Voluntary treatment entry is significantly associated with higher education levels, being married, and a strong motivation to quit. While family-referred admissions show similar levels of usage, they may be motivationally more fragile. These findings highlight the critical importance of incorporating motivational interviewing and family-oriented interventions throughout the treatment process.

Keywords: gambling, treatment, application

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3B–5

Self-critical rumination as a transdiagnostic association between gambling motives and non-suicidal self-injury: Distinct pathways for engagement and frequency

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Background and aims: While evidence connecting problem gambling to non-suicidal self-injury (NSSI) is emerging, the specific psychological pathways involved have yet to be established. The present study investigated how gambling motives (coping, financial, social, and enhancement) relate to NSSI through theorized mediating roles of problem-gambling severity, perceived stigma, and self-critical rumination. *Methods:* The study included two samples: individuals who gambled online (Sample 1; N=1043) and individuals who sought treatment for gambling-related harm (Sample 2; N=127). In Sample 1, a two-part (hurdle) structural equation model was employed to distinguish between predictors of NSSI engagement and NSSI frequency. In Sample 2, hierarchical logistic regression examined the robustness of identified factors. *Results:* In Sample 1, self-critical rumination was the most robust predictor of both NSSI engagement (OR = 1.081, 95% CI [1.061, 1.101]) and NSSI frequency ($B = 0.061$, $SE = 0.009$, $p < .001$). Coping motives predicted NSSI engagement via an indirect pathway through rumination. Among those already engaging in self-injury, financial motives uniquely predicted greater frequency of NSSI ($B = 0.007$, $SE = 0.003$, $p = .014$). Findings were replicated in Sample 2; in the fully adjusted model, self-critical rumination remained a primary predictor of lifetime NSSI engagement (OR = 1.16; [1.06, 1.27]), attenuating the effects of problem-gambling severity and gambling motives. *Conclusion:* Coping-motivated gambling may facilitate a ruminative cycle that increases NSSI risk, while financial motives may drive gambling frequency. Clinical research should investigate interventions that target self-critical rumination and financial stress as potential strategies for reducing the risk of NSSI among people experiencing gambling-related harm.

Keywords: non-suicidal self-injury, gambling motives, problem gambling, self-critical rumination, two-part hurdle model

3C–1

Development and content validation of standard guidelines for healthy screen use for working professionals in India

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Prolonged screen use has become an inseparable part of modern work, with growing evidence linking excessive exposure to digital screens with digital fatigue or digital burnout. Our study found that the average daily screen time use of working professionals was 9.5 hours. While recommendations for screen use exist, there is a clear lack of structured standard guidelines specifically designed for working adults in the Indian context. This study aimed to develop and validate healthy screen use standard guidelines for working adults. Method: A mixed-methods design was employed using snowball sampling. Quantitative data were collected from working adults (N = 381) to estimate screen time prevalence and examine associations with physical, psychological, and behavioural health indicators using standardized measures. A qualitative needs assessment was subsequently conducted through stakeholder interviews (n = 10) and expert focus group discussions (n = 15). Findings were triangulated and synthesized using the Screen–Life Integration Model (SLIM) framework to guide systematic development of the healthy screen use guidelines. Content validity was established through structured expert panel review. Results: Empirical findings demonstrated high occupational screen exposure and consistent links between prolonged screen use and adverse visual, musculoskeletal, sleep, and mental health outcomes. Stakeholder consultations emphasized the need for practical, workplace-appropriate and culturally adaptable strategies. These insights shaped a structured guideline framework comprising: (1) understanding screen time impact, (2) assessment of screen use, (3) strategies for healthy screen engagement, (4) self-regulation for time management, (5) mindfulness-based screen-free activity modules, and (6) a structured 7-day screen time challenge. Expert content validation demonstrated high relevance, clarity, and usability across domains. Conclusions: The healthy Screen use standard guidelines offer an evidence-informed, adult-focused framework to promote safe and balanced digital engagement. Grounded in the SLIM model, these guidelines offer practical strategies to mitigate screen-related health risks and enhance well-being for working adults.

Keywords: screen time, guideline development, digital well-being, working professional, India

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3C–2

Implementation of phone ban policies in school: A secondary analysis of a natural experiment in South Australia

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Background: School-based mobile phone bans have become increasingly popular. While research has examined the effect of phone bans on student outcomes (Baggio et al., 2025; King et al., 2024), the influence of different implementation approaches on effectiveness is not well understood. *Methods:* We conducted a secondary analysis of a natural experiment examining the implementation of phone bans in two South Australian secondary schools (n=590). Both schools implemented mandatory phone bans but used different approaches: one school stored devices in students' personal lockers, and the other school had students hand their devices to staff at the student services desk. We examined the associations between the type of implementation and phone-related outcomes (adherence, problematic phone use and social media posting), as well as psychological outcomes (psychological distress and positive and negative affect). We used unadjusted and adjusted models with inverse probability treatment

weighting to balance the groups based on pre-identified confounders. *Results:* Implementation type was significantly associated with phone-related outcomes ($p \leq .015$). Compared to those handing devices to staff, students storing phones in individual lockers showed higher adherence (marginal proportions: 91.0% vs. 69.2%), lower problematic phone use (marginal means: 2.27 vs. 2.57), and less frequent social media posting (marginal modes: "one a month or less" vs. "several times a day"), with medium effect sizes. Implementation type showed no significant associations with psychological outcomes in the adjusted models. *Conclusions:* An autonomy-supportive implementation approach was associated with better phone-related outcomes than a controlling approach that required device surrender. This finding is consistent with adolescent autonomy-seeking behavior (Bar et al., 2025). However, implementation type was not independently associated with short-term psychological outcomes. Schools may enhance the effectiveness of their policies by adopting approaches that preserve student autonomy while maintaining meaningful device restrictions.

Keywords: implementation; natural experiment; school phone ban

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3C–3

Evaluating the Australian social media minimum age policy among adolescents

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In 2024 the Australian government announced a world-first policy to regulate adolescents' access to social media accounts. This policy, which came into effect in December 2025, requires social media companies to verify that account holders are at least 16 years old. Similar policies are being considered by other governments around the world to protect adolescents from the problems associated with social media use. This study sought to understand adolescents' adherence to the policy and the policy's impact on wellbeing, learning, and experiences of bullying. Students were recruited from South Australian high schools for two surveys: before (i.e., term 4, 2025) and after (i.e., term 1, 2026) the social media minimum age policy

came into effect in Australia. This survey-based study investigates changes in mental health, social, and academic outcomes. Pre-ban social media use and ban adherence status are examined as moderators to compare adolescents who have and have not had their social media use affected by the minimum age policy. This presentation will discuss the measurable outcomes of the social media policy. This includes potential changes in bullying and cyberbullying, psychological distress, problem use of social media, and academic self-efficacy. Challenges related to underage social media use are a growing focus of research and policy interest. This study provides some of the first data on the potential effects of social media minimum age policies in terms of implementation and psychosocial consequences.

Keywords: adolescents, social media ban, adherence, bullying, problem use of social media

3C–4

Beyond time restriction: Effectiveness of a structured multimodal intervention for adolescent internet gaming disorder using a single-case experimental design

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Background: Interventions for Internet Gaming Disorder (IGD) often prioritize reducing gaming time, yet may underaddress cognitive, affective, and family-system processes involved in symptom maintenance. In our preceding meta-analysis and MASEM, externalizing problems were associated with IGD partly through pathways of academic impairment and emotional distress, motivating a mechanism-informed treatment focus beyond behavioral restriction alone. *Method:* A Single-Case Experimental Design (SCED) with multiple baseline across participants was implemented with 8 adolescents meeting clinical-level IGD criteria and their parents. Baseline phases were staggered across participants to strengthen causal inference. The multimodal protocol comprised 8 individual sessions integrating CBT, ACT, and narrative techniques, plus 4 parallel caregiver/family modules targeting impulse control, emotion regulation (e.g., urge surfing), and supportive parental monitoring/communication. Gaming time was monitored weekly. IGD symptom severity (IGDS9-SF) was assessed at Sessions 1, 4, and 8, and secondary outcomes were assessed at pre-test (Session 1) and post-test (Session 8) using standardized measures of depression (CDI), anxiety (STAI-I/II), and loneliness (UCLA Loneliness Scale). Data were evaluated using visual analysis and Tau-U

effect sizes; maintenance will be evaluated at 3- and 6-month follow-ups. *Results:* Post-intervention analyses indicated reductions in IGD symptom severity across all participants (Tau-U = −0.30 to −0.69, $p < .05$; negative values indicate improvement). Session 4 assessments suggested that meaningful change may begin before treatment completion. Secondary outcomes showed concurrent pre–post reductions in depressive symptoms, anxiety, and loneliness, consistent with transdiagnostic change alongside IGD improvement. *Conclusions:* Findings are consistent with IGD being embedded in psychosocial burden (particularly emotional strain and impairments in family/academic functioning). A mechanism-focused, family-inclusive multimodal protocol may improve outcomes beyond time-restriction approaches. The pattern of findings also suggests that longer-duration protocols or booster sessions may be useful to support maintenance, warranting replication in larger controlled trials.

Keywords: internet gaming disorder; single-case experimental design; family-based intervention

3C–5

Beacon of regulation, hub of opportunity: Modernising gambling legislation in a global licensing hub

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Background: New legislation offers a window to understand what a society identifies as a problem, how this problem is framed and solved. In the global gambling licensing hub of Gibraltar, the Gambling Bill 2025 was written to replace the 20-year-old Gambling Act 2005. The gambling sector accounts for 28% of Gibraltar's GDP, and its licensees serve approximately half the global market. Because of the importance of the sector to Gibraltar's economy, and the substantial role locally licensed operators play in the global market, this new legislation represents an important contribution to the global discourse, and a priority for analysis. *Methods:* This study combines a comparative analysis of the new Gambling Bill 2025 and the old Gambling Act 2005, with an interpretive analysis of the new Act which has much greater regulatory reach than the previous one. The Sociology of Knowledge Approach to Discourse (SKAD) (Keller, 2018) provided the theoretical foundation and analytical toolbox. Three tools were used for analysis, namely the classification schemes used to define terms, the interpretive frameworks or assumptions and values that guided the regulatory objectives and requirements, and the narrative which crafts a story of modernizing outdated legislation. *Results:* Analysis of the first interpretive framework, the regulatory objectives (to protect Gibraltar's reputation, consumers, and the public interest), uncovered contradic-

tory defintions and clauses that simultaneously speak to increasingly rigorous international regulatory standards and Gibraltar's need to protect its gambling market. This latter need is strongly evidenced in the second interpretive framework of attracting industry, as reflected in specific requirements to consult, notify, and consider the licence holders as part of any substantive regulatory function. The narrative maps out substantial regulatory changes to broaden the licensing net, equip the regulator with expanded enforcement powers, and vest substantial power in the Minister to make any changes needed to protect the public interest. *Conclusion:* In a global licensing hub, the public interest is tied, not to reducing population harm from gambling, but to cultivating a thriving gambling sector. This leads to regulatory dualism whereby gambling legislation must address increasingly rigorous international standards while simultaneously offered regulatory escape to the industry.

Keywords: gambling, regulation

3D–1

Collectible Card Games (CCG) and booster packs: Another form of gamblification?

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Collectible Card Games (CCG), such as Pokémon Trading Card Game and Magic: The Gathering, generate billions in revenue by selling booster packs. These products share several characteristics with video game loot boxes. Both are game-related purchases made with real money involving randomization, where the purchaser has the potential to win products of greater value than what they paid. However, the value of booster packs or loot boxes in most cases is far lower than the cost. Like pay-to-win loot boxes, booster packs are essential for competitive play. Research has established that loot boxes are psychologically like gambling, and we contend that booster packs also fit these criteria. This presentation will report initial findings from a large Canadian online panel (n=10,000) on gambling, gaming, and CCG play. Using a case-control design we will assess 1) the prevalence and descriptive characteristics of CCG players in Canada and their booster pack engagement; 2) the associations between CCG, booster packs, gambling, and problem gambling; and 3) the association between CCG and booster packs, and video games and loot boxes. CCG booster packs may be another form of 'gamblification' in gaming. Further research is needed to better understand CCG players, their behaviour and motivations behind buying booster packs, and their relevance in a gambling context.

Keywords: Collectible Card Games, booster packs, loot boxes, gaming harm, gamblification

3D–2

Moving the gambling disorder assessment landscape forward

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Gambling disorder is an officially recognized mental health condition and a prominent public health issue worldwide, yet its assessment has not fully kept pace with contemporary conceptual and diagnostic developments. Although accumulating clinical and epidemiological evidence has supported the reconceptualization of gambling disorder from an impulse control disorder to an addictive disorder, many commonly used screening and diagnostic instruments were developed under earlier conceptualizations and relied on arguably outdated criteria and assessment approaches, with current research still heavily relying on such inadequate assess-

ment tools. This misalignment risks obscuring its true clinical presentation and hindering the potential comparability of future cross-cultural research. Although the World Health Organization incorporates this evolving understanding by introducing updated diagnostic criteria for gambling disorder in the 11th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-11), no standardized psychometric test currently exists that explicitly reflects these latest ICD-11 developments. Based on this, this talk will present the findings of a large-scale study conducted to develop and evaluate the psychometric properties of the Gambling Disorder Test (GDT), a brief four-item measure designed to operationalize the ICD-11 diagnostic criteria for gambling disorder. The present study has recruited a nationally representative sample of British adults was recruited (N = 1,028; Mage = 46.54 years, SDage = 15.71). The results obtained provided support for a unidimensional factor structure for the GDT, alongside initial evidence for its factorial validity, population cross-validity, criterion validity, concurrent validity, and reliability. Gender-based measurement invariance analyses demonstrated full scalar invariance while latent mean comparisons showed that males had significantly higher GD latent means than females. The self-reported prevalence of GD within the sample recruited was 0.49%. Overall, the study concludes that the GDT emerges as a promising brief assessment tool for gambling disorder grounded in the most recent conceptualization and ICD-11 diagnostic criteria proposed by the World Health Organization, suitable for use in both clinical practice and research.

Keywords: gambling, gambling disorder, World Health Organization, ICD-11, GDT

3D–3

Online gambling among young Canadian adults

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Background/Research Objectives: Digital technologies have transformed gambling globally, enabling continuous access through smartphones and other online platforms. In Canada, until 2022, legal gambling was only available via provincial Crown corporations (i.e., government-owned gambling monopolies). The decision by one Canadian province (Ontario) to permit large, private, transnational gambling companies to offer online gambling has resulted in aggressive competition for market share and unprecedented rapid increases in gambling availability and advertising. Despite these changes, national surveillance of gambling-related harm has been limited. This study, conducted by Greo Evidence Insights, Mental Health Research Canada (MHRC), and the Canadian Centre on Substance Use and Addiction (CCSA),

examined patterns and harms associated with online gambling in Canada, with a focus on young adults. *Methods:* In 2024, an online survey of 8,211 Canadian adults aged 18 years and older was conducted by the investigators. The survey included validated measures of gambling participation, problem gambling (the Problem Gambling Severity Index), and gambling-related harms (10-item Gambling Harms Scale).*Results and Analysis:* Individuals who gambled online were substantially more likely than those who reported lottery-only gambling to exceed lower-risk gambling thresholds (93.8% vs. 9.4%), meet criteria for problem gambling (40.8% vs. 0.9%), and report high levels of gambling-related harm (19.0% vs. 0.9%). Approximately one-third of young adults aged 18–29 reported online gambling; among this group, 69.4% met criteria for problem gambling and 23.5% reported high harm (i.e., reporting 6 or more harms on the 10-item Gambling Harms Scale). Elevated risks associated with online gambling were observed consistently across gender, age, and regional subgroups.*Conclusions:* Online gambling is associated with markedly higher levels of risk and harm compared with more traditional forms of gambling, with young adults experiencing disproportionate impacts. These findings align with emerging international evidence that digital gambling environments may amplify harm through features such as continuous availability, rapid play, and intensive marketing.*Implications:* As online gambling continues to expand across jurisdictions, population-level data on gambling harms are essential to inform evidence-based regulation, harm-prevention efforts, and the protection of young adults from long-term adverse outcomes. Within this context, the presentation will review trends in gambling availability and advertising in Canada and examine how these developments align with, or differ from, approaches observed in other jurisdictions, situating the Canadian evidence within a broader international context.

Keywords: online gambling, young adults, gambling harm

3D–4

Latent class analysis of gambling-type preference patterns and gambling risk severity: Parallel analyses of two national population surveys in Japan

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Background and aims: Gambling-related problems are known to be associated with specific gambling types, such as electronic gaming machines, sports betting, and online gambling. However, most gamblers engage in multiple gambling types rather than a single activity. In Japan, little is known about how patterns of gambling-type preferences are associated with gambling risk at the population level. This study aimed to identify gambling participation classes and examine their associations with gambling risk severity using national survey data.

Methods: We analyzed two randomly sampled national cross-sectional surveys conducted in Japan in 2020 (n = 2,643) and 2023 (n = 3,045). Using the same analytical framework in both datasets, latent class analysis (LCA) was conducted based on past-year participation (yes/no) in multiple gambling types. Model selection was guided by the Bayesian Information Criterion and interpretability. Associations between latent classes and Problem Gambling Severity Index (PGSI) categories were examined using a three-step approach accounting for classification uncertainty. *Results:* LCA indicated that a five-class solution provided the best fit in both 2020 and 2023. The identified classes and their estimated membership proportions (2020→2023) were: a lottery-dominant class (50.5%→49.3%), a pachinko/pachi-slot class (23.3%→26.3%), a government-sponsored gambling class including horse and boat racing (12.6%→11.5%), a sports lottery–lottery mixed class (9.0%→7.3%), and a multi-type high-involvement class (4.6%→5.6%). Based on posterior mean probabilities from the three-step analysis, problem gambling was most prevalent in the pachinko/pachi-slot class, followed by the multi-type high-involvement class. Moderate-risk gambling was also highest in the pachinko/pachi-slot class in both years; secondary elevations were observed in the government-sponsored and multi-type classes in 2020, and in the lottery-dominant and public gambling classes in 2023.*Conclusion:* Gambling participation class structure was stable across 2020 and 2023, with problem and moderate-risk gambling consistently concentrated in pachinko/pachi-slot and multi-type classes, highlighting persistent risk among multi-involvement gamblers in Japan.

Keywords: gambling disorder, gambling-type preferences, gambling problem, Latent class analysis

3D–5

Assessing gaming–gambling convergence through network analysis: Evidence from a national population-based survey

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Background: Convergence between gaming and gambling has traditionally been examined through diagnostic comorbidity and prevalence-based approaches. However, these frameworks provide limited insight into how specific symptoms interact across behavioral domains. This study applied network analysis to evaluate the structural convergence between gaming and gambling in a nationally representative Brazilian sample. *Methods:* Data were obtained from the third edition of the Brazilian National Survey on Alcohol and Drugs, a household-based survey of individuals aged 14 years and older. Gaming-related symptoms

were measured using the Internet Gaming Disorder Test (IGDT-10), and gambling-related symptoms using the Problem Gambling Severity Index (PGSI). All analyses accounted for sampling weights. Prevalence estimates and odds ratios were computed to contextualize structural findings. *Results:* The estimated network displayed a highly interconnected structure with numerous non-zero edges linking gaming and gambling symptoms, indicating substantial cross-domain dependence. Expected influence analyses identified a subset of gaming and gambling symptoms exerting disproportionate impact on the network, consistent with transdiagnostic processes such as impaired control, persistence despite harm, and escalation of involvement. Quantitative analyses showed that individuals meeting criteria for problem gaming had markedly higher odds of at-risk or problem gambling compared to non-problem gamers (OR ≈ 6.8), aligning with the symptom-level convergence observed in the network. *Conclusions:* A network-based approach revealed that convergence between gaming and gambling in Brazil is structured at the symptom level rather than solely at the diagnostic level. Bridge symptoms and highly influential nodes support models of shared vulnerability and transdiagnostic risk. Methodologically, these findings demonstrate the utility of network analysis for investigating behavioral addiction convergence and identifying strategic targets for integrated intervention and prevention strategies.

Keywords: gaming disorder, gambling disorder, network analysis, convergence

3E–1

Similar, yet not the same: EEG studies on prediction error signaling in gaming, binge eating, and compulsive sexual behaviour disorders

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Background and aims: The neural mechanisms of behavioral addictions are often assumed to be similar, yet few studies have examined different addictions using harmonized methodology. This multi-site project addressed this gap by comparing prediction-error (PE) signaling across compulsive sexual behavior disorder (CSBD), internet gaming disorder (IGD), food addiction (FA), and alcohol use disorder (AUD), using identical EEG procedures and both disorder-specific and non-specific rewards. *Methods:* Using Electroencephalography (EEG) and Incentive Delay Task with non-specific addiction (money) and specific (e.g. erotic, games, food, alcohol) stimuli, we have assessed neural activity during reward expectation and reward processing across 3 different behavioral addictions: compulsive sexual behavior disorder (CSBD), internet gaming disorder (IGD), food addiction (FA), and alcohol use disorder (AUD). The experimental task provided participants with cues encoding information about the upcoming reward (monetary vs. addiction-specific) and its probability (low vs. high), which allowed us to measure PE – neural activity signaling the discrepancy between one's expectations and the outcome of their behavior. Efficient PE signaling is important in behavior adjustment and learning, and its impairment can contribute to addictions. *Results:* All addiction groups showed alterations in PE signaling (measured with feedback-related negativity potential in EEG) relative to age-matched healthy controls (HCs), but the direction and reward specificity of these alterations differed. Individuals with CSBD show attenuated PE signaling for erotic rewards compared to monetary rewards, as well as compared to HCs. This pattern is inverted when it comes to non-erotic (monetary) outcomes and rewards. Here, CSBD individuals showed elevated PE signaling compared with HCs. Similarly, individuals with FA show attenuation of PE signaling for food rewards compared to monetary rewards and to HC, both in hunger and satiety states. Interestingly, the IGD group, unlike CSBD and FA, demonstrated increased PE signaling for gaming rewards while neglecting monetary feedback. Compared with HC, IGD did not differ. In addition, in CSBD and FA groups, PE signaling was significantly associated with clinical severity and individual features (e.g., impulsivity, anhedonia), whereas in IGD it was not. *Discussion and Conclusions:* Our finding demonstrates involvement of PE signaling in behavioral addictions and its distortion in CSBD, FA, and IGD. However, it also shows similarities between CSBD and FA (perhaps due to the primary nature of stimuli such as sex and food) and differences between them

and IGD, which warrant further investigation. The methodology shows the importance of systematic investigation of similarities and differences across different behavioral addictions as well as the advantages of studying them with addiction-specific and non-specific contexts, as the majority of findings are not due to the between-group differences (addiction vs HC), but within-group: addiction-specific rewards vs non-specific (money). And these differences seem to be the most sensitive biomarkers of behavioral addictions.

Keywords: reward processing, EEG, gaming disorder, compulsive sexual behavior disorder, food addiction

3E–2

Investigating neuronal mechanisms of reward processing in Compulsive sexual behavior disorder with an event-related potentials study

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Previous research suggests that individuals with Compulsive sexual behavior disorder (CSBD) exhibit increased activation of the ventral striatum in response to erotic cues but not to monetary cues. Studies on altered reward processing in addictive behaviors present their findings in the context of two theories: Incentive Sensitization Theory (IST), which highlights stronger neuronal responses to addiction-specific stimuli, and Reward Deficiency Syndrome (RDS), which suggests attenuated brain reactivity to both cues and rewards. Our study aimed to verify both theories and their plausible co-occurrence. Reward processing consists of two neuronal processes: reward anticipation, reflecting the motivational and attentional aspects of cue reactivity, and reward evaluation, which resembles the cognitive and affective responses to the outcome. We examined the anticipatory phase using the cue-P300, a neural response observed 300-500 ms after the cue in parietal areas. The evaluation stage was investigated using Feedback-related Negativity (FRN) around 200-350 ms post-feedback over the frontocentral area, as the initial outcome processing, and fb-P300, associated with later attentional and salience-related processes. Thirty-one individuals with CSBD and 31 healthy controls (HCs) participated in an EEG study incorporating a modified Incentive Delay Task (IDT) with addiction-specific (erotic) and non-specific (monetary) rewards. ERP results showed that in the cue-P300, there were no group differences in erotic cue-reactivity, suggesting that the anticipatory salience attribution remains congruent in CSBD and HC groups. The significant group by reward category interaction in the fb-P300 indicates that CSBD is associated with selective modulation of evaluative reward processing for erotic

outcomes. Contrary to predictions derived from IST, individuals with CSBD did not exhibit increased neural responses to erotic rewards. Instead, both FRN and fb-P300 showed an attenuated pattern of erotic to monetary outcomes, which implies reduced sensitivity to erotic rewards. These findings suggest desensitization mechanisms, linked to repeated exposure to sexual stimuli, diminishing their evaluative significance.

Keywords: addictive behavior, compulsive sexual behavior disorder, EEG, event-related potentials, reward processing

3E–3

rTMS Effects on cue reactivity and reward positivity in behavioural addictions

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Introduction: Behavioural addictions (BAs), such as Internet Gaming Disorder and problematic social media use, are increasingly recognised in adolescence and are associated with dysregulation of reward and inhibitory control networks. Individuals with BAs often show heightened sensitivity to addiction-related cues alongside reduced responsiveness to natural rewards. Non-invasive neuromodulation techniques like repetitive transcranial magnetic stimulation (rTMS) may modulate cue-induced neural reactivity and craving, offering potential adjunctive therapeutic strategies. *Methods:* In this randomised, sham-controlled trial, adolescents aged 12–17 with BAs receive a single session of rTMS targeting the left dorsolateral prefrontal cortex. Cue reactivity is assessed via a TMS-EEG paradigm presenting addiction-related and neutral stimuli before and after stimulation. Reward Positivity (RewP) is elicited to capture potential changes in reward processing. Clinical interviews and self-report questionnaires assessing craving and symptom severity complement the neurophysiological measurements. *Results:* Preliminary results will illustrate acute effects of rTMS on reward-related neurophysiology in adolescents with BAs. Changes in Cue reactivity and RewP will be analysed in relation to clinical symptom severity and self-reported craving. *Discussion:* This study contributes to the understanding of rTMS as a non-invasive intervention for BA. It provides novel insights into neurobiological mechanisms underlying BAs with focus on reward system. Findings may serve as a basis for larger-scale clinical studies and the development of neurophysiology-informed intervention strategies.

Keywords: rTMS, cue reactivity, reward positivity, TMS-EEG, neurobiology

3E–4

Epigenetic findings associated with CSBD/hypersexual disorder in Brazil

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Background: Recent biomarker studies in Compulsive Sexual Behavior Disorder (CSBD) suggest dysregulation across stress-related epigenetic pathways, including altered methylation in HPA-axis genes and DST non-suppression. Neuroendocrine findings point to elevated LH and testosterone–sexual compulsivity associations, while immune studies report increased TNF-α and reduced IL-6. Neuropeptide research shows higher baseline oxytocin in CSBD, whereas problematic pornography use presents a distinct profile marked by elevated AVP and lower oxytocin/AVP ratios. We conducted the first epigenetic study outside Europe and North America comparing methylation patterns of 32 individuals with CSBD and 14 healthy controls. *Method:* All participants were screened for CSBD (ICD-11), hypersexual disorder criteria under semi-structured psychiatric diagnosis interview. Those who reached criteria for CSBD or HD were considered individuals with CSBD. Those who did not reach those criteria were considered healthy controls. Genome-wide DNA methylation profiles were assessed using the Illumina HumanMethylationEPIC BeadChip®. Genomic DNA was quantified, bisulfite-converted, amplified, fragmented, and hybridized to the array following a validated protocol. Methylation signals were detected using the Illumina iScan® system, enabling high-resolution analysis of cytosine methylation across the genome. *Results:* Genome-wide DNA methylation analysis revealed a clear separation between groups, with over 14,000 differentially methylated positions, predominantly showing hypermethylation in individuals with hypersexuality/compulsive sexual behavior. Differential methylation was enriched in genes and pathways related to DNA damage response, cell cycle regulation, vesicular transport, and neural maintenance. Principal coordinates analysis indicated that methylation patterns significantly contributed to group differentiation, supporting a robust epigenetic signature associated with hypersexual behavior. *Conclusions:* These findings identify a distinct epigenetic signature associated with hypersexuality, characterized by widespread DNA hypermethylation in pathways related to cellular regulation and neural stability. The results support a bidirectional relationship between epigenetic regulation and hypersexual behavior, highlighting DNA methylation as a potential mechanism underlying vulnerability and adaptation in compulsive sexual behavior.

Keywords: DNA methylation, hypersexuality, epigenetics

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3E–5

rTMS effects on TEPs in behavioural addictions

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Introduction: Adolescents with behavioural addictions (BAs), such as Internet Gaming Disorder or problematic social media use, frequently exhibit alterations in cortical excitability and inhibitory control, which may contribute to impaired self-regulation and heightened vulnerability to addictive behaviours. TMS-evoked potentials (TEPs), including N45, P60, and N100, provide a temporally precise measure of cortical reactivity and inhibitory processes. Repetitive transcranial magnetic stimulation (rTMS) offers a non-invasive method to modulate these processes, but its effects in adolescents with BAs remain underexplored. *Methods:* In this randomised, sham-controlled trial, adolescents (12–17 years) with BAs receive a single session of rTMS targeting the left dorsolateral prefrontal cortex. TMS-EEG recordings assess TEP components (N45, P60, N100) before and after stimulation. Clinical assessments of craving, symptom severity, and behavioural control are obtained via structured interviews and questionnaires. *Results:* Analyses of TEP components are expected to clarify how rTMS acutely modulates cortical excitability and inhibitory processes in adolescents with BAs. Findings may reveal patterns of neurophysiological change related to symptom severity or behavioural control and help identify electrophysiological biomarkers for future interventions. *Discussion:* This study aims to characterise acute neurophysiological responses to rTMS, providing mechanistic insights into cortical dysfunction in BAs. The results are anticipated to inform biomarker-guided, targeted neuromodulation strategies to improve inhibitory control and reduce addictive behaviours, forming a foundation for future clinical trials.

Keywords: rTMS, behavioral addiction, TMS-EEG, TEP, craving

3F–1

New hints for gender-sensitive care, dedicated prevention programs and gender-responsive policy: Thinking of health equity from a transcultural female perspective

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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 exponential improvement in technologies (IA), 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 and revisited diagnostic criteria. This brings to the great importance of new dedicated prevention programs. It is essential to have a gender-responsive policy and a dedicated transcultural women's network to think of health equity from a transcultural female perspective. Our aim is to gather data and ideas from all over the world to enrich our shared understanding of these issues from a female point of view, working together for a gender-responsive, evidence-based recovery systems in also for behavioural addictions, integrated in addiction services; we need to compare, discuss and improve research and treatment for the women on whose behalf we are working.

Keywords: women, behavioral addictions, violence, stigma, prevention, gender-sensitive policy, health equity

3G–1

Pathological buying/shopping: Empirical support for its classification as a mental disorder

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Background: This study investigated whether pathological buying/shopping (pBSh) differs from risky (rBSh) and non-problematic buying/shopping. *Method:* A post-hoc analysis of data from the Addiction Research Unit FOR2974 compared three groups identified through diagnostic interviews: pBSh (n = 62), rBSh (n = 62), and controls (n = 117). Questionnaires assessed ICD-11 criteria for addictive behaviors (including distress and functional impairment), craving, gratification/compensation while shopping, self-esteem, materialism, anxiety, depression, impulsivity, and self-directedness. Laboratory tasks included a cue-reactivity paradigm and a Go/No-Go affective shifting task with shopping cues, and standard cognitive function tests. *Results:* The pBSh participants scored significantly higher on ICD-11 criteria, gratification/compensation while shopping, craving, materialism, and impulsivity, and showed lower self-esteem and higher anxiety and depression compared to other groups. They also exhibited steeper delay discounting and poorer Go/No-Go performance than controls. Bonferroni corrected comparisons did not indicate group differences in the Stroop, card sorting, or game of dice tasks. *Conclusion:* Pathological buying/shopping represents a distinct clinical syndrome characterized by affective and cognitive dysfunctions, resulting in significant distress and impairment. Findings support its classification as a disorder due to addictive behaviors.

Keywords: compulsive buying, diagnostic, pathological buying, personality factors, motives

3G–2

From phenomenology to clinical reality: Mapping diagnostic approaches for compulsive buying-shopping disorder

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Background: Compulsive Buying-Shopping Disorder (CBSD) is characterized by persistent, dysfunctional buying behaviors that lead to significant distress and impairment. Despite an estimated prevalence of around 5%, CBSD remains underdiagnosed and poorly understood in clinical practice. Current psychiatric classifications (ICD-11) reference CBSD only as an example within residual categories, without formal diagnostic specifications, making its clinical manageability highly challenging. *Method:* A narrative review was conducted to synthesize the evolution of diagnostic approaches for CBSD, including historical conceptualizations and proposed criteria. *Results:* Sources included seminal works (McElroy et al., 1994), contemporary phenomenological studies, and the outcomes of an international Delphi process that generated nine expert-driven criteria for CBSD (Müller, Laskowski et al., 2021). The review reveals that current diagnostic approaches are heterogeneous, theoretically derived, and insufficiently tested in clinical populations. While the Delphi study represents a major advance toward consensus-based criteria, no structured clinical interview or validated diagnostic standard currently exists. *Conclusions:* Existing diagnostic frameworks for CBSD are not ready for clinical implementation. This gap limits reliable prevalence estimates, hinders the evaluation of treatment efficacy, and perpetuates CBSD's invisibility in mental health care. Empirical validation in patient samples is urgently needed to establish standardized diagnostic criteria and improve assessment accuracy. Future research should prioritize feasibility studies and innovative analytic methods to refine diagnostic tools and support personalized treatment strategies.

Keywords: compulsive buying, diagnostic, pathological buying, personality factors, motives

3G–3

Hopelessness and youth buying: Alexithymia's role

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Compulsive buying is characterized by persistent, excessive, and uncontrollable purchasing behaviors, despite the negative consequences that may arise. This phenomenon appears to be particularly prevalent among young people and has shown a growing trend in recent years. It also shares certain features with other behavioral addictions, although it is not currently classified as such in existing psychopathological manuals. Previous research has linked alexithymia and hopelessness to various behavioral addictions. Within this context, the present study examines the relationship between compulsive buying, alexithymia, and hopelessness, aiming to determine whether these variables may increase the likelihood of developing compulsive buying behavior. A cross-sectional quantitative study was conducted with a young population. The analysis allowed for the identification of meaningful patterns regarding how these variables relate to one another and provided insights that may help improve understanding of the development, prevention, and intervention of compulsive buying, as well as contribute to theoretical frameworks and population profiling.

Keywords: compulsive buying, diagnostic, pathological buying, personality factors, motives

3G–4

Coping and enhancement motives of buying in excessive buying of fast fashion products: A cluster analysis of Canadian young adults

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Background: In the domain of compulsive buying research, researchers have paid little attention to the category of things that are purchased. The purchase of fast fashion products among young adults in advanced countries have dramatically risen, contributing to environmental degradations (Niinimäki et al., 2020) as well as negative financial consequences to the buyers. Affective motives of excessive buying, especially the coping and enhancement motives (Yi et al., 2024), are likely to be a strong trigger of fast fashion purchase among young adults. We conducted an exploratory online survey with university students to explore the possibility that a small number of meaningful clusters of fast fashion buyers that differ in coping and enhancement motives of buying may emerge. *Method:* An online survey was distributed to Canadian university students who purchased fast fashion products at least once in the past 2 months (N=364). About 12% of the participants exceeded the cuf-off for Faber & O'Guinn's (1992) compulsive buyer. Average amount spent on fast fashion items for 2 months was $213.

K-means cluster analysis was used based on the coping and enhancement buying motives (Yi et al., 2024). A 3-cluster solution was deemed most interpretable. One-way ANOVA with Games-Howell pair-wise comparisons was used to compare the three groups on self-report variables with (quasi-) interval measurement. *Results:* One cluster was characterized by high coping motive along with moderate enhancement motive (labeled "coping buyers": 24.4%), another cluster by high enhancement motive and low coping motive (labeled "enhancement buyers": 41.3%), still another cluster by low on both motives (labeled "low affective motive buyers": 34.3%). Coping buyers were significantly greater in the frequency as well as purchase amount of fast fashion items than enhancement buyers, followed by low affective motive buyers. Also, coping buyers were significantly higher in PBS (Mueller et al., 2015) and significantly lower in self-esteem than the other two groups. Furthermore, coping buyers were significantly higher than enhancement buyers in social media overuse and perceived parasocial relationship with social media influencers. Lastly, coping buyers reported significantly higher ambivalence (i.e., feeling glad yet bothered) about their fast fashion purchase than the other two groups. *Conclusion:* Current findings indicate that the motive of escaping negative feelings via buying is more significantly associated with social media overuse and excessive purchase of fast fashion items than the motive of seeking or extending positive feelings. Further research is necessary to explore whether overuse of fashion-focused social media may mediate the link from coping motive of buying to excessive buying.

Keywords: compulsive buying, diagnostic, pathological buying, personality factors, motives

3H–1

Risk of Parkinson's disease in ADHD in adults: New advances in the diagnostic approach

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Introduction: The association between Attention-Deficit/Hyperactivity Disorder (ADHD) and Parkinson's disease (PD) is still poorly defined, and limited data describe ADHD clinical expression in individuals already diagnosed with PD. Considering the overlap between neuropsychiatric symptoms, executive dysfunction, and non-motor prodromal markers, a structured diagnostic pathway may improve early recognition and personalized management. *Methods:* Based on a critical literature review and clinical case series, we propose a decision-making algorithm for ADHD diagnosis and treatment in adults with PD. ADHD assessment includes retrospective and current symptom evaluation using standardized tools (WURS, ASRS-5, DIVA-5, BAARS-4). To estimate PD risk and identify prodromal features, patients undergo screening for REM sleep behavior disorder using the REM Insbruck Test, constipation according to Rome IV criteria, and olfactory dysfunction through a validated smell test. Objective sleep–wake patterns are monitored using actigraphy. When PD risk is suspected, transcranial sonography of the substantia nigra is suggested, followed by DAT scan in positive cases. Motor involvement is assessed using UPDRS-III, and an L-DOPA test is performed when indicated. *Results:* Within our cohort of PD patients diagnosed with ADHD (DIVA-based), impulsive-compulsive behaviors were frequently observed. The integration of sleep, gastrointestinal, and olfactory markers improved clinical stratification and supported tailored therapeutic choices, particularly when considering stimulant or non-stimulant pharmacological options.*Conclusions:* A multidimensional algorithm combining neuropsychological testing with prodromal PD markers (REM behavior, hyposmia, stypsis) and actigraphy may enhance diagnostic accuracy and optimize treatment planning. Early identification of ADHD in PD could improve quality of life and promote preventive neuroprotective strategies.

Keywords: sleep, behavioral addiction, ADHD, Parkinson, gambling

3H–2

Physical activity, sleep, and impulsivity

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Physical activity, sleep, and impulsivity are dynamically interconnected behavioral domains that jointly influence cognitive control, emotional regulation, and long-term health outcomes. This presentation examines how regular physical activity may modulate impulsive behavior both directly, through neurobiological adaptations in executive network and indirectly by improving sleep quality and circadian stability. Physical activity emerges as a potential protective factor: aerobic and resistance training have been linked to enhanced executive functioning, reduced stress reactivity, and more stable affective states, all of which may reduce impulsive responding. Moreover, engaging in daytime physical activity can strengthen sleep–wake rhythms, shorten sleep onset latency, and increase sleep efficiency, thereby supporting self-regulation capacity the following day. In our study, special attention is given to clinical populations such as ADHD, SA, BA and PD, where impulsivity and sleep problems frequently co-occur and where movement-based interventions may be particularly impactful. In our experimental approach we used UPPS-P Impulsive Behavior Scale, Baratt Impulsiveness Scale (BIS-11), International Physical Activity Questionnaire) Sedentary Behaviour Questionnaire.and QUIPRS. For analysis of covariates we used PSQI (sleep quality) PHQ-9 (depression) and/or GAD-7 (anxiety) ASRS v1.1 (adult ADHD screener). The presentation also addresses practical considerations, including dose–response relationships, timing of exercise, and individual differences in chronotype and baseline sleep disruption. Overall, integrating physical activity into preventive and therapeutic strategies may represent a feasible and scalable approach to improving sleep and attenuating impulsivity, ultimately enhancing cognitive resilience and behavioral health.

Keywords: sleep, behavioral addiction, ADHD, Parkinson, gambling

3H–3

Sleep, impulsivity and Parkinson's disease

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Sleep disturbances are highly prevalent in Parkinson's disease (PD) and represent a major non-motor contributor to reduced quality of life and functional impairment. Beyond fatigue and daytime sleepiness, disrupted sleep may also influence higher-order cognitive and affective processes, including impulsivity. Impulsivity in PD is clinically relevant because it can manifest as impulsive-compulsive behaviors (ICBs) such as pathological gambling, compulsive shopping, hypersexuality, and binge eating, often exacerbated by dopaminergic therapies. Emerging evidence suggests that poor sleep quality, insomnia symptoms, REM sleep behavior disorder, fragmented nocturnal sleep, and excessive daytime sleepiness can interact with dopaminergic dysregulation and frontostriatal dysfunction, potentially increasing vulnerability to impulsive decision-making and impaired inhibitory control. Mechanistically, sleep loss may reduce prefrontal cortex efficiency, alter reward sensitivity, and impair cognitive flexibility, thereby amplifying maladaptive responses to rewarding stimuli. We use an approach of protocol by a combination of mindfulness with transcranial direct current stimulation (tDCS) or repetitive transcranial magnetic stimulation (rTMS) on sleep disorders in individuals with PD. Patients with clinically significant sleep disturbance (Parkinson's Disease Sleep Scale-2 [PDSS-2]) follow a protocol including from 1th and 12th session by rTMS, and from 3th to 10th tDCS stimulation for a total of 12 sessions over 2 weeks. Primary outcome is change in sleep quality (PDSS-2; Pittsburgh Sleep Quality Index [PSQI]) from baseline to post-treatment and 4-week follow-up. Secondary outcomes include daytime sleepiness (Epworth Sleepiness Scale), mood (HADS), cognition (MoCA), and impulsivity/ICBs (QUIP-RS). Targeting sleep disturbances through behavioral, pharmacological, and neuromodulation strategies may represent a promising avenue to mitigate impulsivity and improve outcomes in individuals with PD.

Keywords: sleep, behavioral addiction, ADHD, Parkinson, gambling

3H–4

Sleep disorders, impulsivity, and addictive behaviors in adult ADHD

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Sleep disturbances are highly prevalent in adults with Attention-Deficit/Hyperactivity Disorder (ADHD) and may exacerbate core symptoms, impair cognitive functioning, and increase vulnerability to impulsive and addictive behaviors. This study aimed to investigate the impact of poor sleep quality on impulsivity and behavioral addictions in an adult ADHD sample. Approximately 300 adults with ADHD were assessed and stratified according to sleep quality. Participants were classified as having poor sleep quality based on subjective measures and/or objective actigraphy parameters, and compared with individuals showing sleep quality within normative ranges. Outcomes included cognitive performance (attention, impulsivity, executive functions, and memory), clinical characteristics, and symptoms of behavioral addictions, including problematic internet use, compulsive pornography use, food addiction, and compulsive shopping. Preliminary findings indicate that participants with sleep disturbances and/or poor sleep quality exhibit a distinct cognitive and clinical phenotype. These preliminary results highlight sleep quality as a key contributor to heterogeneity in adult ADHD and support the clinical relevance of identifying sleep-related subgroups. Prioritizing sleep assessment and targeted interventions may represent an important strategy to reduce impulsive and addictive behaviors and optimize ADHD treatment outcomes.

Keywords: sleep, behavioral addiction, ADHD, Parkinson, gambling

3H–5

Addiction profiles and sleep quality: Clinical insights from gambling, technology, substance, and alcohol use disorders

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This study aimed to evaluate sleep disorders among 500 individuals diagnosed with gambling, technology, substance, and alcohol use disorders who were under follow-up at Yeşilay Counseling Centers (YEDAM). Participants completed a Sociodemographic and Clinical Data Form, the Addiction Profile Index – Clinical Form (API-C), and the Pittsburgh Sleep Quality Index (PSQI). These instruments allowed for a multidimensional assessment of participants' addiction histories, psychological risk factors, and sleep quality. Conducted with a cross-sectional design, the study compared sleep quality across parameters such as type of addiction, severity, and remission duration. Findings revealed that sleep disturbances varied according to addiction type. Individuals with gambling and technology addictions showed higher scores in sleep latency and daytime dysfunction, whereas those with substance and alcohol addictions exhibited more pronounced depression and anxiety levels, which strongly influenced sleep quality. Results from the API-C indicated that psychological risk factors differed by addiction type. Gambling disorder patients demonstrated higher impulsivity and sensation-seeking scores, while substance and alcohol users scored higher on depression and anxiety dimensions. These psychological risk factors were closely linked to PSQI scores, suggesting that elevated impulsivity and anxiety were associated with longer sleep latency and reduced sleep efficiency. Sociodemographic data further highlighted that lower educational attainment and unemployment negatively affected sleep quality. Additionally, individuals with early onset of addiction and those exposed to gambling or substance use within family and peer environments were more likely to experience sleep disturbances. These findings emphasize the role of social context in shaping both addictive behaviors and sleep health. In conclusion, addiction type, psychological risk factors, and sociodemographic characteristics emerged as significant determinants of sleep quality. Regular evaluation of sleep disorders during YEDAM follow-up is crucial for treatment planning and rehabilitation. These results underscore the importance of integrating sleep health into addiction treatment and highlight the need for multidisciplinary approaches. Early identification of sleep problems may enhance treatment effectiveness and contribute to sustained remission.

Keywords: sleep, behavioral addiction, ADHD, Parkinson, gambling

4A–1

Problematic pornography use severity, not frequency of use, predicts poorer partnered sexual functioning: A two-year, multi-sample longitudinal study

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Introduction: Associations between pornography use and sexual health is a subject of intense academic debate. Recent findings suggest that problematic pornography use (PPU), rather than the mere frequency of pornography consumption, is associated with poorer sexual health. However, the field is limited by a scarcity of longitudinal studies and a lack of methodological nuance. Specifically, clinical accounts and qualitative research link PPU with poorer sexual functioning with partners, but preserved function during pornography use. Yet, prior empirical research typically fails to distinguish sexual functioning across different behaviours, thereby obscuring potentially important insights regarding the scope of sexual functioning pertaining to PPU. To this end, the current study examined the longitudinal associations between pornography use frequency, PPU severity, and sexual functioning across different contexts (partnered sexual activity and pornography-assisted masturbation) over two years. *Methods:* Two independent online samples of male pornography users (Sample 1: Baseline N = 1,219, 2-year N = 390; Sample 2: Baseline N = 903, 2-year N = 515) completed assessments over two years (five waves with six month intervals). Univariate and multivariate linear mixed models with random intercepts examined the within-person (fluctuations) and between-person (stable differences) associations of pornography use frequency and PPU severity with behaviour-specific sexual functioning (with real partners, ASEXpartner; during pornography use, ASEXporn), controlling for age and psychological distress. *Results:* Across both samples, PPU severity, but not frequency of pornography use, was associated with poorer sexual functioning with partners (ASEXpartner), whereas sexual functioning during pornography use (ASEXporn) remained generally preserved. While between-person effects were relatively more robust, within-person effects signalled that increased PPU severity was also associated with poorer sexual functioning with partners. *Discussion:* This study provides the first longitudinal evidence that PPU severity (rather than mere frequency of pornography use) may be differentially associated with behaviour-specific sexual functioning. Findings

support a functional dissociation model wherein PPU appears associated with poorer sexual functioning during partnered sex but not for pornography consumption. The dominance of between-person effects suggests PPU operates primarily as a stable individual characteristic across the observed period, though state-dependent fluctuations also appear relevant. These findings have clinical implications for assessment and treatment and highlight the importance of behaviour-specific measurement in sexual functioning research.

Keywords: compulsive sexual behavior disorder, problematic pornography use, sexual health, cross-cultural research, adolescence

4A–2

Pornography use characteristics and sexual well-being across genders and relationship contexts: A large-scale survey study

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Background: Pornography use is widespread across cultures, with most individuals engaging without harm, yet a subset experience problematic pornography use (PPU) characterized by distress, loss of control, and negative consequences. Both pornography use frequency (PUF) and PPU have been linked to sexual wellbeing outcomes such as sexual satisfaction, functioning, and distress, but findings remain mixed. Prior research has largely focused on heterosexual men and women, leaving gaps regarding gender diverse populations, as well as the role of relational context. *Method:* Data will be drawn from the International Sex Survey, a large cross-cultural dataset including over 80,000 participants from 42 countries. The associations between PUF, PPU and sexual wellbeing indicators (sexual function, sexual distress, and partnered sexual satisfaction among those in a relationship) will be examined using structural equation modeling (SEM). Multigroup SEM will test invariance across groups based on the interaction between gender and relationship status, while controlling for age and masturba-

tion frequency. *Expected results:* We hypothesize that both PUF and PPU will predict poorer sexual wellbeing, with PPU showing stronger and more consistent negative associations. Specifically, higher PPU is expected to relate to lower sexual function and satisfaction and higher sexual distress. Group differences are anticipated, with men showing stronger negative links between PUF and satisfaction, and women showing stronger associations between PPU and distress, with most effects expected to be stronger among partnered individuals. Analyses involving gender diverse groups will be exploratory. *Implications:* This study will provide an overview of how pornography use characteristics may relate to sexual wellbeing among cross-cultural, diverse populations. Findings will clarify whether associations generalize to diverse samples (e.g., gender-diverse individuals), highlight the importance of the relational context, and inform inclusive sexual health research and interventions.

Keywords: compulsive sexual behavior disorder, problematic pornography use, sexual health, cross-cultural research, adolescence

4A–3

A spectrum of unwanted sexual experiences and their potential associations to sexual compulsivity and well-being: An exploratory topic modeling study

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Background: A wide range of abusive or otherwise unwanted sexual experiences (USEs) are posited to be associated with sexual and psychological problems, including dysregulated or compulsive sexual behavior (CSB). However, little empirical work has examined the broader spectrum of USEs or their specific associations with CSB and sexual well-being (e.g., sexual distress, satisfaction). Given accumulating evidence that sexual trauma and related stress- and affect-regulation difficulties are linked to dysregulated sexual behavior, it is important to test whether a wider range of USEs show distinct associations with CSB and

sexual well-being. *Aim:* Using a large, culturally, sexually, and gender-diverse sample and a computational bottom-up approach to identify a wider range of USEs than traditional survey measures typically capture (e.g., non-consensual recording), we aim to explore how different forms of USEs are associated with CSB and sexual well-being. We will also examine whether these associations persist after adjusting for key sociodemographics. *Method:* Data are sourced from the International Sex Survey, a 42-country, multi-lingual, online self-report survey. Participants responded to the Sexual Abuse History Questionnaire's (SAHQ) items about five forms of USEs (e.g., touching genitals) during their lifetime and provided open-ended text responses to a sixth item about "other unwanted sexual experiences". A total of 7880 participants provided text responses describing USEs. A form of topic modeling (Latent Dirichlet Allocation, LDA) will be used to identify emerging topics (i.e., forms or themes of USEs). We will compare the associations between different forms of USEs and CSB and sexual well-being considering gender-related differences.
Implication: By linking a broader spectrum of USEs to CSB and sexual well-being indicators, this study will highlight the need for comprehensive trauma screening in clinical settings addressing sexual concerns.

Keywords: compulsive sexual behavior disorder, problematic pornography use, sexual health, cross-cultural research, adolescence

4A–4

Psychosexual correlates of problematic pornography use in Mexican and Spanish adolescents

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Background: Pornography use has increased significantly among adolescents, raising questions about its correlates with sexual health and psychosexual development. For some adolescents, this behavior may become problematic. Previous research has suggested associations between problematic pornography use (PPU), maladaptive sexual attitudes, and psy-

chosexual vulnerabilities, yet findings remain heterogeneous. This project examines how PPU relates to key sexual health variables, including online sexual victimization, sexual double standards, and sexual risk behaviors, as well as sociodemographic factors. *Method:* A cross-sectional study was conducted with N = 1810 adolescents from Spainand Mexico. Participants completed validated questionnaires assessingsociodemographic variables (sex, sexual orientation, religiosity, family relationships), PPU, online sexual victimization, sexual double standard, sexual risk behaviors, and loneliness. Structural equation modeling (SEM) and network analysis were used to explore associations and underlying mechanisms. *Results:* PPU was associated with poorer indicators of sexual health. Online sexual victimization emerged as a robust correlate of greater vulnerability to developing PPU. PPU was also associated with sexual double standards, endorsing unequal gender norms. Higher pornography use was additionally linked to sexual risk behaviors, including reduced protection use and relationships occurring under the effects of alcohol and drugs. Differences by sex, religiosity, and sexual orientation further shaped these patterns, indicating that the impact of PPU varies across individual profiles. *Conclusions:* Findings provide consistent empirical evidence linking PPU with several dimensions of sexual health, although results show varied patterns that reflect the complexity of adolescent sexuality. Online sexual victimization, sexual standards, and sexual risk behaviors appear central, with effects moderated by individual differences such as sex, religiosity, and sexual orientation. These results underscore the need for preventive interventions incorporating comprehensive sexuality education, a gender perspective, and pornography literacy, as well as longitudinal research to clarify causal directions.

Keywords: compulsive sexual behavior disorder, problematic pornography use, sexual health, cross-cultural research, adolescence

4B–1

The Interaction of Person-Affect-Cognition-Execution (I-PACE) model: Updates and current interpretations

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Background: The Interaction of Person-Affect-Cognition-Execution (I-PACE) model for addictive behaviors was published in 2016 and is frequently used in research to formulate explicit hypotheses about affective and cognitive mechanisms that play a role in the development and maintenance of behavioral addictions. Based on recent empirical findings, the model was updated in 2019. Given that research on behavioral addictions is a rapidly evolving field, the core authors of the I-PACE model provided current interpretations of specific elements and processes in a 2025 viewpoint article. *Method:* Narrative review that aims to provide a critical evaluation of specific interpretations of the model and to address controversial debates. The review also includes background information about why and how the current interpretations were generated. *Results:* Almost all parts of the I-PACE model were critically examined. The positive and negative reinforcement processes have been modeled non-linearly. Desire thinking and permissive beliefs have been added to the concepts of cue-reactivity and craving. Self-control has been distinguished more precisely into general and stimulus-specific processes. Punishment (in)sensitivity has also been discussed. For the interactions of the affective, cognitive, and executive mechanisms, a cascade model has been suggested, i.e. that reduced self-control may be risk factor for developing behavioral addictions, but may decline further in the course of addictive behaviors, particularly when cue-reactivity and craving as well as habitual behaviors increase. *Conclusions:* The more detailed interpretations of the I-PACE model, which hopefully provide greater precision and clarity, may help stimulate behavioral addiction research and theoretical controversies. The current interpretations may also advance clinical care as clinicians may ask more specific questions to better understand individual driving factors among individuals with addictive behaviors.

Keywords: problematic usage of the internet, food addiction, pornography

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4B–2

An update on problematic usage of the internet

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Background: Digital technologies have changed rapidly, leading to psychiatric, public health and policy challenges. *Method:* Data from multiple sources will be reviewed to provide insight into problematic usage of the internet. Sources will include the Lancet Psychiatry Commission Report on problematic usage of the internet and new findings from the Adolescent Brain Cognitive Development (ABCD) data. *Results:* The Lancet Psychiatry Commission Report has considered multiple forms of problematic usage of the internet (online gambling, gaming, shopping/buying, usage of pornography and social media and behaviors like streaming and usage of chatbots). Prevalence, costs, theoretical considerations, and policy, prevention and treatment approaches will be discussed. Data from the ABCD will also include neurobiological and clinically relevant findings including how connectome-based predictive modeling may provide insights into severities of problematic gaming and usage of social media in developing youth. *Conclusions:* Problematic usage of the internet represents a growing concern globally, especially for developing youth. Using multiple approaches to understand and address the concerns related to problematic usage of the internet is important.

Keywords: problematic usage of the internet, food addiction, pornography

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4B–3

Food Addiction: Clinical and therapy updates

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Background: Over the past 15 years, research on Food Addiction (FA) has expanded significantly, evolving from animal models to human studies examining associated psychological and biological traits. Recently, interest has grown in establishing a phenotypical characterization of individuals with FA, incorporating neurocognitive features and treatment response. *Methods:* We present data on neurocognitive traits in individuals with FA across different populations, including patients with obesity (OBE), other behavioral addictions such as gambling disorder (GD), eating disorders (ED), and metabolic syndrome patients (MSP). *Results:* The prevalence of FA ranged from 7.7% to 90%, with the highest rates observed in individuals with bulimia nervosa and binge eating disorder (BED). Higher FA severity was associated with greater cognitive impairment, increased impulsivity, and poorer treatment outcomes. Crossoverdiagnosis may be partially explained by FA-positive status. *Conclusions:* FA appears to represent a construct linked to more severe symptomatology and a distinct cognitive profile. Differentiating FA within clinical populations may be essential for developing personalized interventions and identifying predictors of poor therapeutic response.

Keywords: problematic usage of the internet, food addiction, pornography

4B–4

From cognitive vulnerabilities to treatment response: A comprehensive view of gambling disorder

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Background: Gambling Disorder (GD) is a complex condition characterized by executive dysfunction, impulsivity, compulsivity, specific personality traits often worsened by comorbid substance use. These factors influence clinical severity and treatment response. To synthesize evidence on neurocognitive, personality and comorbidity with substance use disorders in GD and their impact on treatment outcomes, considering sex differences and contextual variables. *Methods:* Findings from recent clinical and neuropsychological research were integrated, focusing on executive functioning, impulsivity, compulsivity, personality traits, comorbidity and treatment predictors in GD. *Results:* GD patients show significant

deficits in decision-making, inhibitory control, and cognitive flexibility, alongside elevated novelty seeking and harm avoidance. These impairments correlate with maladaptive gambling patterns and poorer engagement in therapy. Comorbid substance use predicts higher psychopathological distress, worse neuropsychological performance, and increased dropout risk. Gambling type also matters: strategic gambling preferences are linked to greater severity. Although involvement of concerned significant others (CSOs) has been proposed as protective, its impact on treatment outcomes appears limited. Sex differences are notable: women with GD exhibit higher impulsivity and compulsivity than men, suggesting a need for gender-sensitive interventions. *Conclusions:* Integrating cognitive assessment, substance use evaluation, and individualized behavioral profiling into GD treatment may enhance precision and sustainability. Interventions should target executive dysfunction and impulsivity/compulsivity, with tailored strategies for women and patients with comorbid substance use.

Keywords: gambling disorder, executive functions, treatment outcomes

4B–5

Rethinking sex education in the age of online pornography: Insights from educational stakeholders and experts

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Background: For many adolescents, pornography has become a primary source of sexual information, potentially fostering distorted sexual beliefs and problematic patterns of use linked to behavioral addictions. In this context, early and comprehensive sex education (CSE) may serve as a protective factor by promoting critical thinking, healthy sexuality, and prevention of online risks. However, empirical research specifically addressing CSE remains limited. This study aimed to analyze perceptions and opinions regarding CSE among the educational community, including teachers, parents, and adolescents aged 12–18 years, as well as experts in sexual education. *Method:* Eighteen focus groups were conducted with 16 teachers, 16 parents, and 56 adolescents to explore stakeholders' perceptions. Addition-

ally, a two round Delphi study with 64 experts was carried out to assess expert consensus. Questionnaires were structured into nine thematic blocks addressing content, digital environments, program format, family involvement, teaching staff, methodological strategies, evaluation, and perceived barriers. *Results:* Eight core categories emerged across teachers, parents, and adolescents: personal experiences; barriers and challenges; content and methodology; information sources and digital technologies; online risks and prevention strategies; emotional well being and development; collaboration between families and educational centers; and proposals for improvement. Experts prioritized content related to tolerance, inclusion, and respect; gender equality, stereotypes, and gender based prejudice; and consent, privacy, and physical integrity across all educational stages. Preferred formats included long term, in person programs, comprehensive family training, and the creation of a compulsory subject, emphasizing continuity over short term interventions. Interactive methodologies such as group dynamics, debates, games, audiovisual resources, and contextualized experiences were strongly recommended, while purely theoretical approaches were discouraged. No substantial disagreements were identified. *Conclusions:* Educational stakeholders emphasized the importance of both content and format in CSE, with broad consensus on addressing sexuality positively before age twelve, and expert concerns regarding pornography consumption and digital risks.

Keywords: pornography, sexual education, adolescents

4C–1

Breaking the cycle: A rapid evidence review of gambling relapse

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Over recent decades, gambling research has expanded significantly, with growing interest in the clinical dimensions of harmful gambling, including relapse, and improved methodologies. Despite widespread recognition that relapse is a core feature of harmful gambling – and a key contributor to personal, family, and societal harm – no systematic synthesis has been conducted to assess the current state of evidence. This gap leaves service providers, public health agencies, policymakers, and researchers without a comprehensive resource to understand relapse trajectories, risk and protective factors, or how best to reduce the likelihood of relapse. This presentation describes the findings of a rapid review, conducted by researchers from leading clinical gambling research teams, in which the aim was to identify, synthesis, and critically appraise the existing literature that directly examines gambling relapse before treatment, after treatment, and in community samples. Specifically, the aims were to examine the: (1) definitions of relapse; (2) prevalence and trajectories of relapse; (3) warning signs of relapse; (4) determinants (i.e., risk and protective factors) of relapse; (5) consequences or harms associated with relapse; and (6) relapse prevention, aftercare, and continuing care interventions explicitly designed to address relapse. The findings will be contextualised within the broader addiction literature to enhance interpretation, relevance, and impact. This rapid review has generated evidence-based insights to inform global gambling treatment, public health strategies, and policy.

Keywords: gambling, relapse, treatment, community

4C–2

Pulling out of gambling treatment: Research, service, practitioner, and client perspectives

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Background: Early disengagement from psychological gambling treatment is common and may limit clinical benefit, yet little is known about when clients pull out, why this occurs, the consequences, or how services might better support retention. Research has largely relied on

session-based definitions of "dropout," which may oversimplify engagement and overlook non-linear change or early goal attainment. This study examined definitions, prevalence, predictors, reasons, consequences, and potential solutions related to pulling out of psychological gambling treatment in Aotearoa New Zealand. *Methods:* This mixed-methods project integrated evidence from four complementary studies, informed by an Expert Advisory Panel of people with lived experience of gambling harm: (1) a scoping review of gambling treatment literature (2004–2025; 66 studies); (2) a retrospective analysis of 10 years of routinely collected data from specialist gambling treatment services (n = 18,642); (3) an online survey and follow-up hui with gambling treatment practitioners (n = 15); and (4) a two-timepoint client survey conducted at treatment entry and one-month follow-up (n = 67). *Results:* Across datasets, approximately one in three clients pulled out of treatment, most commonly within the first one-to-two sessions. Few consistent predictors emerged, suggesting disengagement reflects a combination of individual, gambling-related, and treatment-experience factors. Clients and practitioners identified similar reasons for early disengagement, including practical barriers, low readiness or motivation, concerns about treatment, lack of support, and in some cases early goal attainment. Evidence on consequences was limited, but emerging findings suggest early disengagement may be associated with poorer gambling and mental health outcomes, alongside occasional perceived benefits such as increased insight. *Conclusions:* Pulling out of gambling treatment is common, typically occurs early, and reflects diverse engagement pathways. Findings highlight the need to prioritise early engagement, strengthen therapeutic relationships, reduce logistical barriers, and adopt flexible, client-centred, and culturally responsive approaches to improve retention and outcomes.

Keywords: gambling, treatment, dropout, engagement

4C–3

From early treatment dropout to sustainable recovery: Predictors of treatment dropout in gambling disorder

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Background: Gambling disorder is a behavioral addiction marked by fluctuating treatment engagement. Early treatment dropout is a major barrier to sustainable recovery, with reported rates between 27% and 52% (Hawker et al., 2025; Chamberlain et al., 2024; Roberts et al.,

2020). Previous studies have identified predictors of dropout such as male gender, younger or older age, low perceived control, higher education, and increased gambling severity (Hawker et al., 2025; Roberts et al., 2020), as well as comorbid psychiatric conditions and unclear treatment expectations (Ronzitti et al., 2017). This study aims to comparatively examine predictors of early treatment dropout in individuals seeking treatment for gambling disorder using nationwide clinical data. *Method:* This retrospective study analyzed data from 17,265 individuals who sought gambling treatment at YEDAM between 2021 and 2025. Demographic and gambling related characteristics, Addiction Profile Index (BAPI-K) and Gambling Risk Screening Scale (GRSS) scores were evaluated. Predictors of early treatment dropout were identified using binary logistic regression. *Results:* Logistic regression identified female gender (OR = 1.425), lower education (primary or below: OR = 2.162; middle/high school: OR = 1.563), anger management problems (OR = 1.080), and no intention to quit gambling (OR = 2.216) as predictors of early dropout. Older age (OR = 0.977), higher lack of assertiveness (OR = 0.951), and higher total GRSS scores (OR = 0.977) were associated with lower dropout risk ($p < .05$). *Conclusions:* Early treatment dropout and continuity reflect a multidimensional, dynamic process rather than single-factor effects. Treatment dropout should be conceptualized within the non-linear nature of recovery. Early identification of at-risk individuals and individualized interventions are important role to improve treatment retention and support sustainable recovery.

Keywords: gambling disorder, early treatment dropout, treatment retention

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4C–4

The role of family sessions in the treatment of gambling disorder: A comparative analysis of participants with and without family involvement

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Background: Gambling disorder is a multifaceted disorder that affects not only the individual but also family members. In the literature, addiction is frequently conceptualized as a "family disease" due to the reciprocal interactions among family members. This interaction underscores the importance of family involvement in the treatment process. This study aims to examine the role of family sessions in the treatment of gambling disorder and to compare treatment continuity, treatment retention, remission, and drop-out rates between clients who receive family sessions and those who do not. *Method:* The study was conducted on 16,342 clients who applied to YEDAM for gambling disorder between 2021 and 2025. Of these clients, 12,794 attended at least one follow-up session after the initial assessment, and 5,770 were followed for at least three months. A total of 7,738 clients received family sessions. Follow-up attendance, drop-out behavior, early remission, and the number of follow-up sessions were evaluated based on recorded clinical data. The family member participating in the sessions (mother, father, spouse) was also examined. Relationships between variables were analyzed using Pearson's Chi-Square test and Student's t-test. A significance level of $p<0.01$ was accepted. *Results:* The drop-out rate after the initial assessment was higher among clients who did not receive family sessions ($p<0.01$). Clients who received family sessions had significantly higher remission rates ($p<0.01$). In addition, those who received family sessions attended a greater number of follow-up sessions ($p<0.01$). Furthermore, clients whose parents participated in family sessions attended more follow-up sessions compared to those whose spouse participated ($p<0.01$). *Conclusions:* The findings indicate that family sessions have a protective effect on treatment continuity, remission, and drop-out rates in the treatment of gambling disorder. Clients who received family sessions attended more follow-up sessions and achieved higher remission rates. Parental participation was associated with a greater number of follow-up sessions compared to spousal participation. Existing literature also shows that family involvement supports treatment engagement and recovery.

Keywords: gambling disorder, treatment, family functioning

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4C–5

The evolution of Cognitive Behaviour Therapy (CBT) for gambling harms: Foundational elements and future directions

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With the increased recognition of gambling harms as a public health concern in England, UK, and the development of a network of public-funded treatment clinics, the National Institute for Health and Clinical Excellence (NICE) issued clinical guidelines for gambling harms (NICE, 2025).

The guidelines recommend Cognitive Behavioural Therapy (CBT) as the treatment of choice for gambling disorder (GD) (NICE, 2025) but key questions for clinicians remain unanswered. Such questions include how to choose among the 32 therapist-delivered CBT protocols reviewed by the NICE (2025) and how to adapt them to meet the needs of a highly heterogenous client group in real-world settings. This abstract critically reviews the theoretical and technical developments of CBT for GD over the last 30 years and their limitations. It discusses how contemporary streams of CBT in the broader psychotherapy field (e.g. Hayes & Hoffman, 2018) call for shifting our attention in treatment away from discrete manuals and towards effective shared components and formulation-based decision making. A comparable shift in the CBT framework for GD would have clear clinical and research implications. Such a framework would emphasise taxonomies of shared evidence-based elements of CBT for GD, treated as the building blocks of effective treatment and the foundations of core training. Process-based formulations (e.g. Bonnaire and Billieux, 2022) would instrumentally guide CBT interventions. Future research about CBT for GD would examine the specific efficacy of treatment elements, potentially through a component analysis, and pay increased attention to mediating or moderating mechanisms.

Keywords: CBT, gambling-harms, process-based, NICE

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4D–1

Glutamatergic and GABAergic alterations in gambling disorder: Evidence from PET/MR and cortical synaptic plasticity

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Background: Imbalances between glutamatergic and GABAergic neurotransmission are implicated in addiction pathophysiology, but their role in gambling disorder remains unclear. *Methods:* We investigated receptor availability and cortical excitability in 20 patients with gambling disorder. Using PET/MR, GABA receptor distribution was assessed with [^{18}F]FMZ and metabotropic glutamate receptor 5 (mGluR5) with [^{18}F]PSS232. Cortical synaptic plasticity was evaluated via transcranial magnetic stimulation (TMS) measuring GABA-ergic (short- and long-interval intracortical inhibition (SICI and LICI)) and glutamatergic (intracortical and short-interval intracortical facilitation (ICF and SICF)) excitability of M1 from each subject. *Results:* PET imaging revealed no significant alterations in GABA receptor availability. However, patients showed reduced mGluR5 availability in bilateral striatal regions. TMS assessments indicated impaired GABA-mediated cortical inhibition, reflected in reduced SICI, while glutamatergic facilitation measures remained intact. *Conclusion:* Gambling disorder is associated with distinct abnormalities in striatal glutamatergic (mGluR5) signaling and cortical GABAergic inhibition, suggesting a dissociation between receptor expression and functional inhibitory circuitry. These findings highlight potential targets for neuromodulatory interventions.

Keywords: behavioral addictions, neurobiological mechanisms, intervention strategies, internet addiction, smartphone addiction, psychological intervention

4D–2

Modeling daily sleep–gaming processes in high-risk gamers: A dynamic structural equation approach combining wearable tracking and self-report data

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Background: This study examined the dynamic associations between sleep and gaming duration among Chinese university students with high-risk gaming behaviors, and tested the mediating role of daily physical activity. *Methods:* 40 participants (92.5% for male; Mean age= 18.43, SD = 1.30) who met criteria for high-risk gaming behavior completed a 28 day daily diary protocol. Using a combination of self report and wearable data, participants reported daily gaming duration and subjective sleep quality, while objective sleep duration and daily

step counts were captured via Huawei wearable devices. Dynamic structural equation modeling was used to separate within person and between person variance and to estimate lagged day to day effects. *Results:* Better subjective sleep quality predicted longer gaming time on the following day, whereas objective sleep duration was not associated with next day gaming duration. Neither subjective sleep quality nor objective sleep duration predicted subsequent physical activity. In contrast, higher levels of objective physical activity were associated with shorter gaming duration. Daily gaming duration also showed strong temporal stability, with longer gaming on one day reliably predicting longer gaming on the following day. *Conclusions:* These findings suggest that sleep quality, rather than sleep duration, is more relevant for understanding gaming behavior among high risk gamers. When designing sleep based interventions for this population, clinicians should consider individuals' behavioral habits and may need to combine sleep focused strategies with guidance that promotes engagement in alternative activities such as physical exercise.

Keywords: behavioral addictions, neurobiological mechanisms, intervention strategies, internet addiction, smartphone addiction, psychological intervention

4D–3

Current status and psychological intervention strategies of Internet addiction and smartphone addiction in China

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Background: Behavioral addiction has been classified under "addiction category" in the DSM-5 (2013), with internet addiction listed as "other conditions that may be the focus of clinical attention". Since 2015, with the rapid development of China's internet technology and the widespread popularity of various online games and smart phones, internet and smart phone addiction have become increasingly prominent among teenagers and even the elderly. The COVID-19 pandemic has further exacerbated this trend. *Methods:* Based on relevant research reports and epidemiological surveys conducted both domestically and internationally, this paper systematically reviews the prevalence, influencing factors, and psychosocial consequences of Internet and smartphone addiction in China, and synthesizes the theoretical and practical foundations underlying existing intervention strategies. *Results:* The overall prevalence rate of Internet addiction in China is 36.7%, with 2.8% classified as severe cases. Furthermore, the widespread accessibility, low entry barriers, and variable reward mechanisms of smartphones have exacerbated addictive behaviors. The prevalence of smartphone addiction among Chinese adolescents reaches as high as 71.7%. Such addictive behaviors significantly impair emotional regulation capacities, contributing to heightened levels of anxiety, loneliness, and other psychological distress, while also leading to academic maladjustment and family conflict. Additionally, emerging trends indicate a growing tendency to-

ward short video addiction among the elderly, which has become a significant risk factor for depressive symptoms. To address these challenges, researchers and governmental agencies have promoted psychotherapy as the cornerstone of behavioral addiction intervention, advocating multidimensional strategies that integrate cognitive restructuring, behavioral modification, familial and environmental support. *Conclusion:* Internet and smartphone addiction has emerged as a significant public health concern in China. Future interventions should prioritize systematic approaches, such as integrating mindfulness-based training, virtual reality technology, and family-centered psychotherapy, to strengthen individual self-regulation capacities and foster supportive environments.

Keywords: behavioral addictions, neurobiological mechanisms, intervention strategies, internet addiction, smartphone addiction, psychological intervention

4E–1

Inhibitory control across neutral, food, and alcohol contexts: The roles of mindfulness, BMI, and alcohol consumption

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Background: Previous research suggests that overweight and obesity are associated with reduced inhibitory performance, particularly in the presence of palatable food. The present online study examined whether this reduction extends to alcohol-related contexts and whether alcohol use moderates this relationship. Additionally, we further explored the association between trait mindfulness and inhibitory control. *Method:* In this study, 892 adults (501 women, 379 men, 12 non-specified; mean age = 24, SD = 4.1) participated, including 238 individuals with obesity and 655 of normal weight. Participants filled out the Alcohol Use Disorders Identification Test (AUDIT-C), the Mindfulness Attention Awareness Scale (MAAS), and performed an adaptation of a Go/No-Go task with a neutral, food, and alcohol condition. *Results:* Participants with overweight and obesity did not show a significantly reduced inhibitory performance, and there was no significant moderation by reward context and alcohol use. Trait mindfulness was positively associated with inhibitory control in neutral and food contexts and negatively correlated with alcohol consumption. *Conclusions:* These findings suggest that, in this sample, overweight and obesity were not significantly associated with general or reward-specific inhibitory deficits, while mindfulness may support inhibitory control and lower alcohol use.

Keywords: inhibition, reward, BMI, mindfulnes, alcohol use

4E–2

Attentional bias in gambling: Integrating free-viewing eye-tracking and dot-probe measures

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Background: Attentional bias (AB) is a key cognitive factor in the development and maintenance of problem gambling. Although systematic reviews report significant AB toward gambling-related stimuli, findings may be influenced by methodological heterogeneity and the use of non-specific or unvalidated materials. Eye tracking is widely regarded as the gold standard for assessing attentional processes. However, many studies employ behavioral tasks, including the dot-probe task. The present study examined the relationship between AB and gambling severity using both methodologies together with a set of validated stimuli. *Methods:* A total of 60 adults, ranging in age from 19 to 55 years (M = 25.98; SD = 7.86), participated in a survey that assessed their sociodemographic characteristics, gambling habits, and the Problem Gambling Severity Index (PGSI). In the subsequent phase of the study, participants were presented with pairs of validated gambling-related stimuli, representing different gambling activities and neutral images. This was administered through a free-viewing, eye-tracking paradigm. Eye movements were recorded to measure attentional allocation. A dot-probe task was also administered, measuring AB through response-time differences to probes replacing gambling-related versus neutral images. *Results:* The participants were classified according to PGSI scores, ranging from no risk to problem gambling. Preliminary analyses indicated the potential modulation of attentional bias as a function of gambling severity. In participants reporting higher levels of gambling involvement, both eye-tracking metrics and behavioral performance appeared to show patterns consistent with increased attentional allocation toward gambling-related stimuli. *Conclusion:* These findings underscore the role of AB in gambling severity and highlight the value of comparing eye-tracking and behavioral measures. Furthermore, the necessity of employing controlled and validated research stimuli in future studies is emphasized. Limitations and future research directions, including the exploration of other relevant cognitive and behavioral factors, will be discussed.

Keywords: gambling, attention, eye-tracking

4E–3

Understanding decision-making deficits in problematic usage of the internet from a computational modeling perspective

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Background: Problematic usage of the internet (PUI) is an umbrella term including multiple potential behavioral addictions related to internet use, such as internet gaming disorder (IGD) and problematic social media use (PSMU). Individuals with PUI typically exhibit excessive internet use despite negative consequences, suggesting deficits in decision-making and learning. With the emergence of computational psychiatry, computational modeling has become a powerful approach for quantifying cognitive alterations in psychiatric disorders. *Method:* Leveraging this approach, we have conducted a series of studies to examine decision-making and learning alternations in PUI, using a combination of behavioral tasks and computational models (e.g., reinforcement learning models). *Results:* Individuals with PUI generally showed worse performance in most tasks at the behavioral level. Moreover, computational modeling enabled us to precisely characterize dysfunctional processes, such as reward expectation, feedback learning, and cognitive control. *Conclusions:* These findings highlight the potential of computational modeling in elucidating the cognitive mechanisms underlying PUI and other addictions. This approach not only advances our theoretical understanding of PUI but may also inform the development of targeted intervention strategies.

Keywords: problematic usage of the internet, decision-making, computational psychiatry

4E–4

Research on the cognitive neurotypical mechanism of gaming disorder based on reward-seeking and social withdrawal motivation

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Background: Online gaming has become a primary form of entertainment and an important social platform for children and adolescents, exerting a "double-edged sword" effect. Gaming disorder, as a behavioral addiction, poses serious risks to the physical and mental health of young people. Identifying predictive indicators and mechanisms associated with addiction

risk among gamers holds significant societal implications. Gaming motivation is a core factor in the development and maintenance of gaming disorder. Previous literature suggests that socially motivated players engage in positive social interactions during gameplay, which may benefit mental health; whereas reward-seeking and socially withdrawn players may exhibit higher risks of gaming disorder, though longitudinal causal evidence and mechanistic studies are lacking. Based on a multi-omics follow-up cohort of college student gamers, this study aims to clarify the impact of different gaming motivations on addiction and related psychiatric symptoms, and to explore the similarities and differences in cognitive-behavioral and neuroimaging mechanisms among gamer subtypes with distinct motivational profiles. *Methods:* The study first conducted an online questionnaire survey among 4,463 college student gamers in Tianjin, from which 823 were recruited for follow-up in a multi-omics cohort. Questionnaires covered gaming usage patterns, mental health status, life events, social reward processing, etc. (followed up every six months). Among them, 136 participants underwent EEG scanning (Brain Products 32-channel portable EEG) during cognitive tasks (gaming/social cue reactivity tasks), and 91 underwent fMRI scanning (3.0T Siemens Prisma) during cognitive tasks. EEG and fMRI data were collected annually. Behavioral data were analyzed using R 4.4.1, while EEG and neuroimaging data were processed via EEGLAB in MATLAB and SPM12, respectively. *Results:* 1) Binary factor analysis identified four gaming motivation subtypes: offline socialization, online socialization, reward-seeking, and social withdrawal. Reward-seeking and social withdrawal motivations were associated with significantly higher levels of addiction and psychiatric symptoms compared to online or offline socialization motivations. Both reward-seeking and social withdrawal motivations showed significant positive correlations with gaming disorder severity and psychiatric symptom indices. 2) Longitudinal cross-lagged analysis revealed that increased reward-seeking motivation predicted later increases in addiction problems and psychiatric symptoms, whereas increased social withdrawal motivation was predicted by prior increases in addiction problems and psychiatric symptoms. 3) Neuroimaging findings indicated that under negative-positive gaming cue conditions, the left inferior frontal gyrus was significantly activated. This activation was positively correlated with gaming disorder severity in non-social players, but negatively correlated in social players. Furthermore, activation in this region significantly mediated the negative association between offline socialization motivation and gaming disorder severity among social players. *Conclusion:* Social motivation serves as a protective factor against gaming disorder. Reward-seeking motivation leads to increased gaming disorder severity and psychiatric symptoms, whereas social withdrawal motivation is more likely a consequence of gaming disorder or psychiatric symptoms. Social and non-social players exhibit distinct neural mechanisms in processing gaming-related cues.

Keywords: gaming disorder, game motivation, neuroimage

4E–5

The role of attentional bias in gambling and other behavioural addictions: A systematic review and meta-analysis

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Background: The current systematic review and meta-analysis will aim to compile up-to-date empirical evidence on attentional bias in gambling and other behavioural addictions. To date, and to the best of authors' knowledge, the few literature reviews on attentional biases in behavioural addiction have focused mainly on gambling or gaming behaviour. Therefore, there is a need to synthesize information on attentional bias among other behavioural addictions, as this could ultimately help us understand these disorders in greater depth while developing and implementing interventions based on modifying attentional biases. *Methods:* The current systematic review and meta-analysis will be conducted and reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses for Protocols 2015 (PRISMA-P 2015) guidelines and will be registered in PROSPERO International Prospective Register of Systematic Reviews. *Results:* This section will be updated later. *Discussion:* This section will be updated later. *Conclusion:* This section will be updated later.

Keywords: attentional bias, behavioural addictions, systematic review, meta-analysis

4E–6

Impaired implicit learning 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. In the current study we apply a computational modelling approach to investigate learning strategies and choice behaviour in an implicit learning task (Weather Prediction Task; Knowlton et al., 1994). To this end, we analyse and contrast data from

participants with GD symptomatology (N=30) and a matched control group (HC; N=27). Preliminary results indicate an overall reduced performance in the GD group, while reaction times were similar to HC participants. First model-based findings show differences in learning aub-components. Participants from the GD group exhibit lower learning rates for negative outcomes. Learning rates for positive outcomes as well as choice consistency were also somewhat reduced in the GD group. We are currently extending our model-based analysis approach to account for further decision-making components. Additionally, we plan to investigate associations between model-agnostic as well as model-derived task measures and self-reported GD-related symptomatology. This way we aim to draw nuanced relations between clinical indices of GD and more elusive, abstract model-components, which may further our understanding of latent disease mechanisms.

Keywords: computational modeling, reinforcement learning, implicit learning, gambling disorder

4F–1

What happens to the individual?

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Gambling disorder is a behavioral addiction formally recognized in both the DSM and ICD-11, characterized by persistent and recurrent gambling behavior that results in clinically significant impairment or distress. It represents a chronic and potentially progressive condition involving dysregulation of reward processing, impaired impulse control, maladaptive cognitive distortions related to probability and loss, and increased vulnerability to stress. Individual harms associated with gambling disorder arise through interrelated mechanisms. Repeated activation of dopaminergic reward pathways reinforces gambling behavior, while loss-chasing and escalating financial involvement intensify economic strain. At the same time, emotional dysregulation, comorbid mood and anxiety symptoms, and increasing concealment contribute to social withdrawal and psychological distress. These processes interact to create a self-reinforcing cycle in which gambling behavior and individual harms mutually exacerbate one another. Individual-level harms can be broadly categorized into economic harms, including debt accumulation and financial instability; mental health harms, such as depression, anxiety, and elevated suicide risk; physical harms, including sleep disturbance and stress-related somatic symptoms; and social harms, encompassing family conflict, occupational impairment, and social isolation. Also, cognitive dysfunction may be occur. Economic and mental health harms are particularly intertwined and play a central role in the maintenance of the disorder. Effective responses require a continuum-of-care approach integrating early identification, evidence-based psychological interventions, treatment of comorbid psychiatric conditions, financial counseling, family-based support, and long-term relapse prevention.

Keywords: gambling disorder, individual harm, mental health, suicide, behavioral addiction, family impact, public health, social costs, family, family burden

4F–2

What happens to the family?

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Background: Gambling disorder is a chronic behavioral addiction that affects not only the individual but also the family system, leading to long-term and multidimensional consequences. The gambling behavior often progresses covertly, resulting in delayed recognition by family members and the accumulation of serious financial losses, erosion of trust, role conflicts, and social isolation. The literature indicates that family members of individuals

with gambling disorder experience substantial stress and burden, with marked impairment in family functioning and quality of life. This presentation aims to review the literature addressing the challenges faced by families affected by gambling disorder from a comprehensive perspective. *Method:* This presentation is planned as a narrative review encompassing recent empirical and theoretical studies examining the impact of gambling disorder on families. The review focuses on economic difficulties, relational conflicts, caregiving burden, disruptions in social and occupational functioning, and associated emotional strain experienced by family members. In addition, the presentation briefly refers to findings from a comparative study conducted by the authors, which examined depression, anxiety, hopelessness, and burnout among first-degree relatives of individuals with gambling disorder. *Results:* The literature demonstrates that gambling disorder is associated with significant financial problems, loss of trust, deterioration in marital and parental roles, and social withdrawal within families. Chronic stress related to these difficulties increases vulnerability to psychological distress among family members. Consistent with previous findings, the authors' study revealed elevated levels of anxiety, hopelessness, and burnout among relatives of individuals with gambling disorder. *Conclusions:* Gambling disorder imposes a substantial and often overlooked burden on families. Treatment approaches should extend beyond the affected individual and incorporate assessment and intervention strategies targeting the family system.

Keywords: gambling disorder, individual harm, mental health, suicide, behavioral addiction, family impact, public health, social costs, family, family burden

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4F–3

What happens to society?

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Gambling is widespread, yet its societal consequences extend far beyond individual problem gambling. This talk reviews research on the social costs of gambling, emphasizing direct, indirect, and intangible harms. Direct costs include expenditures on health care, treatment services, and the criminal justice system. Indirect costs capture productivity losses, financial strain, and impacts on families and communities, while intangible costs encompass psychological distress, reduced quality of life, and relational harms that are difficult to quantify. Evidence from multiple national contexts shows that social costs are broadly distributed and often disproportionately affect socioeconomically disadvantaged populations. Indirect and intangible harms frequently exceed direct costs and extend beyond the gambler to partners, children, and the wider community. Cross-national studies reveal both common patterns and contextual differences in how social costs emerge and are addressed. The presentation also highlights challenges in estimating these costs, including definitional boundaries, attribution, and measuring intangible effects. By framing gambling as a societal issue rather than solely an individual behavior, this review underscores implications for public health policy, prevention, and harm reduction. The session concludes by outlining priorities for future research and strategies to mitigate the wide-ranging societal impacts of gambling.

Keywords: gambling disorder, individual harm, mental health, suicide, behavioral addiction, family impact, public health, social costs, family, family burden

4G–1

Impulsivity and binge scrolling: Unraveling their roles in problematic internet and social media use among Turkish adults

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In the present study, we aimed to examine the relationships among impulsivity, binge scrolling (BS), problematic internet use (PIU), and problematic social media use (PSMU). Data were collected online from 251 adults in Turkey and analyzed using structural equation modeling. Our hypothesized model tested direct effects of impulsivity on BS, and BS on PIU and PSMU, as well as indirect effects of impulsivity on PIU and PSMU through BS. The results indicated that impulsivity was significantly and positively associated with BS, which in turn was positively related to both PIU and PSMU. Furthermore, BS fully mediated the relationship between impulsivity and both PIU and PSMU. An alternative model examining direct associations between impulsivity and PIU/PSMU was also tested and showed acceptable fit, with impulsivity positively related to PIU and PSMU. These findings highlight the role of binge scrolling as a key mediator linking impulsivity to problematic online behaviors. The results contribute to understanding mechanisms PIU and PSMU and have implications for theoretical models of problematic technology use.

Keywords: impulsivity, binge scrolling, problematic internet use, problematic social media use

4G–2

Ideal life pursuits and short-form video addiction among adolescents

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The rise of short-form video addiction among adolescents is a growing societal concern. Recent well-being research differentiates between the three types of pursuing ideal life, including the pursuit of happiness, the pursuit of psychological richness, and the pursuit of meaningfulness. Whether and how these distinct life pursuits relate to short-form video addiction remains under investigated. This study aimed to examine the potential protective roles of pursuing a happy life, a psychologically rich life, and a meaningful life against short-form video addiction in adolescents. A cross-sectional survey was conducted with a total of

330 adolescents (52.40% male; Mage = 12.51, SD = 1.59, age ranged from 10 to 16 years). Bivariate correlations indicated that only the pursuit of meaningfulness was significantly correlated with short-form video addiction ($r = -0.15$, $p < 0.01$). When entered separately into regression models after controlling for demographics, only the pursuit of a meaningful life was a significant negative predictor of addiction ($\beta = -0.17$, $p < 0.01$). However, when all three pursuits were entered simultaneously, both the pursuit of a happy life ($\beta = 0.24$, $p < 0.01$) and a meaningful life ($\beta = -0.31$, $p < 0.001$) emerged as significant but opposite predictors. This study identifies that, when considered jointly, the pursuit of a meaningful life is a more salient protective factor than the pursuits of happiness or psychological richness. It is crucial to note that an excessive focus on the pursuit of happiness may potentially contribute to higher risks of short-form video addiction. Therefore, interventions should prioritize cultivating a life orientation centered on meaning for adolescents, while simultaneously guiding them to develop a balanced and healthy approach to deriving happiness.

Keywords: short-form video addiction, ideal life pursuits, meaningfulness

4G–3

An online study on the extent of phubbing and its correlates among undergraduate medical students in Nepal

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Introduction: Phubbing is defined as attending to one's mobile phone during face-to-face interaction. It has emerged as a growing concern with increasing smartphone and internet use, especially among medical students. However, there is dearth of research of phubbing among medical students. The aim of this study was to assess the extent of phubbing and examine its correlates among undergraduate medical students in Nepal. *Methods:* A cross-sectional study was conducted among undergraduate medical students (N= 277) in a medical college in Nepal in using an anonymous, online questionnaire. Sociodemographic details, internet and social media use, and academic performance were collected. Phubbing Scale, Smartphone Addiction Scale–Short Version, PHQ-4, Fear of Missing Out Scale(FoMO), and Physical Activity Rating Scale were used. Descriptive statistics, group comparion and correlation analyses were performed. The level of statistical significance was considered at $p < 0.05$. *Results:* Mean duration of social media use was 3.52 ± 2.19 hours per day and inter-

net use was 6.54 ± 2.66 hours per day. Mean phubbing score was 24.39 24.39 ± 5.21. Phubbing score showed a significant association with physical activity (p=0.003) and psychological distress(PHQ-9 score)(p=0.032). Phubbing score was negatively correlated with physical activity score (p=0.031). It was positively correlated with duration of phone use(p=0.004), internet use(p<0.001, social media use(p<0.001), FOMO score (p<0.001), and smartphone addiction score (p<0.001). *Conclusion:* Phubbing is associated with reduced physical activity, greater psychological distress, greater fear of missing out, longer internet and social media use and higher levels of digital dependency. These findings highlight the need for awareness and targeted interventions to promote healthier digital behaviors in medical education.

Keywords: phubbing, smart phone addiction, medical students, social media use, internet use

4G–4

Latent profile analysis of digital literacy and problematic phone use among Chinese adolescents

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Parents are devoted to cultivating their children's digital literacy and mitigating their digital addiction. While previous research has demonstrated the effectiveness of such family mediation, results were mostly based on variable-centered methods and overlooked the heterogeneity within adolescent populations. From a person-centered perspective, the present study explored whether different types of adolescent phone users exist. Digital literacy and problematic phone use constitute two important yet potentially independent aspects of digital engagement; examining them together may uncover distinct user patterns. We applied Latent Profile Analysis (LPA) to classify user types based on these two dimensions and explored their correlates. A total of 996 Chinese adolescents (52.7% female, grades 7-9) completed questionnaires assessing digital literacy, problematic mobile phone use, socioeconomic status (SES), perfectionism, depressive symptoms, and perceived parental phubbing and digital mediation. LPA and BCH analyses were used. Three profiles were identified: high literacy-high addiction, high literacy-low addiction, and low literacy-high addiction. SES was significantly higher in both high literacy groups compared to the low literacy group. Students in the high literacy-high addiction group reported greater parental phubbing and more active mediation, whereas those in the low literacy-high addiction group experienced more maternal restrictive mediation. Regarding perfectionism, the high literacy-high addiction group scored high on both adaptive and maladaptive dimensions, while the low literacy-high addiction group was characterized by predominantly maladaptive perfectionism. Depressive symptoms were higher in both high addiction groups. This study identified three types of adolescent phone users and validated these profiles. Results indicate that SES is linked to digital literacy acquisition, while cognitive characteristics such as perfectionism patterns appear to play a

key role in determining whether high digital literacy is associated with addictive behaviors. These findings have implications for designing interventions tailored to adolescents' diverse needs.

Keywords: digital literacy, problematic phone use, latent profile analysis, adolescents

4H–1

Global survey of addiction experts on problematic usage of the internet and health responses

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Background and Aims: Problematic usage of the internet (PUI) is a growing global concern, emerging among more than 5.3 billion people who use the internet worldwide. While specific forms such as online gaming and gambling are recognized as disorders or conditions for further study in diagnostic manuals, global data on prevalence, treatment, and health responses to PUI remain limited. This study aimed to obtain perspectives from representatives of addiction medicine/psychiatry societies regarding the scope, treatment, and health responses to PUI and identify gaps. *Methods:* A global survey was conducted through the International Society of Addiction Medicine's Global Expert Network (ISAM-GEN), involving addiction societies from 38 countries across Europe, Asia/Oceania, the Americas, and Africa. The survey assessed responses to non-specific PUI and five subtypes: online gaming, gambling, pornography, social media, and online shopping. It included case scenarios and questions on the significance and severity of PUI, and country-level health responses. *Results:* Online gambling (94.8%) and gaming (86.9%) were the most frequently reported PUI forms, followed by social media (84.2%), pornography (68.3%), and online shopping (52.6%). Psychotherapeutic approaches, particularly cognitive behavioral therapy, were the most widely available treatments, reported as accessible by over 70% of country respondents. Despite growing awareness—reflected in the formation of PUI interest groups in 44.7% of societies—gaps were reported, including lack of professional certification (78.9%), insufficient practitioner education (68.4%), and inadequate expert training (63.2%). Notably, 65.8% rated the 10-year severity of PUI as extremely or very important. *Discussion and Conclusion:* Global attention to PUI is increasing, but more robust healthcare responses are needed. Addressing existing gaps requires enhanced training and sustainable international efforts.

Keywords: internet addiction, global survey, pornography, technology addiction, video games

4H–2

Connected adolescents, vulnerable adolescents: Toward a multidimensional evaluation of problematic internet use

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Background: Problematic Internet Use (PIU) is increasingly recognized as a major public health issue among adolescents, who are particularly exposed to intensive digital practices. Although the World Health Organization has raised concerns about PIU, its clinical and psychosocial consequences remain only partially understood. In particular, few studies have examined simultaneously the associations between PIU, mental health symptoms, quality of life, and substance use, or explored whether distinct vulnerability profiles can be identified. Such an approach is essential to improve early detection and to design targeted prevention strategies. *Methods:* We conducted a cross-sectional analysis using data from the French DOPADOS survey, based on a representative two-stage stratified cluster design. A total of 4,861 adolescents from 61 educational institutions completed an electronic self-administered questionnaire assessing PIU (Internet Addiction Scale), psychoactive substance use, psychological distress, anxiety and depressive symptoms, quality of life, and sociodemographic factors. Multiple correspondence analyses were performed to identify specific vulnerability profiles associated with PIU. *Results:* More than half of the adolescents (53.1%) presented PIU, including 42.0% with risky use and 11.0% at risk of dependence. Girls were overrepresented in the high-risk PIU group. PIU was strongly associated with higher substance use, increased psychological distress, more anxiety and depressive symptoms, and a marked impairment in quality of life. Multivariate profiling revealed several distinct vulnerability profiles, underlining the heterogeneity of clinical and behavioral patterns linked to PIU. *Conclusions:* Our findings highlight a worrying level of digital vulnerability among adolescents. The strong interplay between PIU, mental health symptoms, substance use, and quality of life supports the need for integrated screening and prevention strategies. Identifying specific vulnerability profiles may help tailor early interventions and optimize preventive actions in adolescent populations.

Keywords: problematic internet use, adolescents, vulnerability profiles

4H–3

Exploring interoceptive awareness and personality in Problematic Internet Use

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Background: Problematic Internet Use (PIU) has emerged as a growing concern, yet the cognitive-perceptual factors underlying this behaviour remain underexplored. Interoceptive awareness, one of cognitive-perceptual factors, refers to the ability to perceive internal bodily sensations and has been implicated in addictive behaviours but its role in PIU is unclear. *Methods:* This study examined the relationship between interoceptive awareness and PIU, and the moderating influence of personality traits in a non-clinical sample of 161 regular internet users (71 males). Participants completed the PIUQ-9 (Nine-Item Problematic Internet Use Questionnaire), DPIU (Dimensions of Problematic Internet Use), Neo-Pi-R NEO (Personality Inventory-Revised) and MAIA (Multidimensional Assessment of Interoceptive Awareness) questionnaires. Spearman correlations and network analysis were conducted to assess relationships and interconnections among the variables. *Results:* Neuroticism emerged as a central factor, strongly linked to both PIU and interoceptive awareness. Network analysis highlighted specific negative connections between the interoceptive states of Trusting and Not-Distracting and PIU. *Conclusion:* These preliminary findings suggest that specific interoceptive states and personality traits, particularly neuroticism, are significantly associated with PIU. By highlighting interoceptive dimensions as relevant factors, this study addresses a critical gap and underscores the need for further research into cognitive-perceptual mechanisms underlying PIU.

Keywords: Problematic Internet Use, interoceptive awareness, personality

4H–4

Emotion regulation and cognitive flexibility as self-regulatory mechanisms in internet addiction

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Internet addiction is increasingly conceptualized as a behavioral addiction involving impaired self-regulation and maladaptive coping. While prior research has largely emphasized impulsivity and attentional deficits, the roles of emotion regulation and cognitive flexibility as underlying mechanisms remain comparatively underexplored. The present study aims to

examine the associations between internet addiction severity, difficulties in emotion regulation, and cognitive flexibility among young adults. Emotion regulation is defined as the capacity to monitor and modulate emotional responses, whereas cognitive flexibility refers to the ability to adapt cognitive and behavioral strategies in response to changing demands. Drawing on self-regulation and executive dysfunction frameworks, the study proposes that deficits in emotion regulation may be linked to reduced cognitive flexibility, contributing to rigid and compulsive internet use patterns. A cross-sectional quantitative design is proposed. Standardized self-report measures will assess internet addiction, emotion regulation difficulties, and cognitive flexibility. Correlational and regression analyses will be conducted to examine relationships among the study variables. This mechanism-oriented approach aims to advance understanding of self-regulatory processes underlying internet addiction and inform intervention strategies.

Keywords: internet addiction, emotion regulation, cognitive flexibility, self-regulation, behavioral addiction

4H–5

The cyclical relationship between psychological dispositions and internet addiction: A two-wave study with gender moderation

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Background: Behavioral addictions can act as both a cause and a consequence of self-compassion (SC) (Mitropoulou et al., 2022), self-esteem (SE) (Mei et al., 2016) and psychological wellbeing (PW) (Soriano-Molina et al., 2025), and these effects may differ based on gender (Bluth et al., 2017). This research aimed to be the first to evaluate the extent of the significant cyclical relationship between psychological dispositions and Internet addiction (IA), considering the role of gender. *Method:* The study involved 527 participants (44% male, 52% holding a bachelor's or postgraduate degree) aged 18–44, who completed the Psychological Well-Being Scale, the Self-Compassion Scale-Short Form, the Young Internet Addiction Test-Short Form, and the Rosenberg Self-Esteem Scale online at three-month intervals. *Results:* An ANCOVA analysis showed that even when controlling for Wave 1 (W1) IA scores, males (Adjusted M = 28.90, SE = .43) exhibited higher IA than females (Adjusted M = 27.76, SE = .38) did in Wave 2 (W2). The moderated mediation tested via the PROCESS macro Model 7 (5,000 bootstrap samples) revealed a significant indirect effect of W1-SE on W2-IA via W2-PW, b=.03, 95% CI = [.00, .08]. The effect of W1-SE on W2-PW was significantly moderated by gender (t(527)= -2.20, b= -.25, 95%, p=.03) with a stronger effect for males (b =.74, p<.001) than females (b=.49, p<.001). Conversely, a PROCESS Model 4, independent of gender, supported the reciprocal link by revealing a significant indirect effect of W1-IA on W2-PW, mediated by W2-SE, b= −.11, 95% CI=[−.17, −.06]. *Conclusion:* The

findings confirm longitudinal reciprocal relationship between Internet addiction and psychological dispositions, demonstrating that these constructs influence each other over time. Specifically, the strong, gender-moderated role of self-esteem highlights the need for targeted, gender-specific interventions. These influential mechanisms, particularly the effects tied to self-esteem and gender, warrant discussion within the framework of honor and collectivist cultures.

Keywords: internet addiction, self-esteem, self-compassion, psychological wellbeing, longitudinal cyclical relationship

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5A–1

From restriction to resilience: A personalised digital tool to promote self-regulation and sustainable behaviour

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Interventions to reduce gambling harm often focus on limiting risk or restricting behaviour, yet uptake of existing tools by consumers remains low. Many gamblers do not perceive these tools as personally relevant, particularly those who do not identify as experiencing problems. This creates a gap between the intention to promote safer gambling and the reality of limited engagement. This presentation outlines the development and early-stage evaluation of a novel digital tool, Bet Well, designed to support financial capability and self-regulation among regular online gamblers as protective factors in gambling harm prevention. The tool enables individuals to upload their gambling activity from multiple operators and receive personally tailored feedback on spending patterns, wins and losses, comparative social norms, and affordability. Rather than focusing on behavioural control or risk messaging, the tool aims to prompt intentional decision-making by increasing financial awareness and aligning gambling with individual goals. The tool was developed using a user-centred co-design process, incorporating insights from people with lived experience, clinicians, and behavioural scientists. It draws on principles from behavioural economics and digital mental health to maximise usability, engagement, and personal relevance, factors known to predict uptake and effectiveness across digital health tools. Feasibility and acceptability studies conducted with Australian and international gambling consumers (N=188) found moderate to high levels of perceived usefulness and engagement, particularly among higher-risk individuals. Motivations for using the tool included a desire for increased financial insight, better control over gambling spend, and curiosity about cumulative activity. The findings suggest the tool is well-positioned to fill a current gap in the prevention ecosystem, offering support to individuals who may not seek help, but who are open to reflecting on their behaviour when feedback is framed in personally meaningful, non-judgemental ways. The presentation will also share results from an experimental study involving approximately 200 regular Australian sports bettors, examining the immediate cognitive and intentional effects of using the tool with their own gambling data. Primary outcomes include changes in awareness of spend, planned gambling expenditure, perceived control, and confidence in managing gambling. These outcomes are aligned with foundational elements of financial capability and self-regulation and may act as early mechanisms of longer-term behavioural resilience. By shifting the focus from restriction to resilience, this work proposes a new direction for digital interventions in gambling and behavioural addictions more broadly, one that supports autonomy, personal relevance, and sustainable behavioural patterns through increased self-knowledge and capability. Findings have implications for the design of digital interventions across behavioural addictions and for policy frameworks seeking to balance protection with autonomy.

Keywords: financial awareness, online gambling, player tracking, prevention

5A–2

Optimising the identification of at-risk individuals on online gambling sites via machine learning

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Background: Online gambling operators collect detailed behavioural data that can be used to identify customers at risk of harmful gambling. This study examined the value of machine learning in this context. We compared models trained on 30 days versus six months of behavioural data and explored whether incorporating self-reported survey responses enhanced performance. *Methods:* Customers from two Australian sports and race betting sites (N=1,470) completed a survey including the Problem Gambling Severity Index (PGSI) and measures of employment, income, gambling satisfaction, number of gambling accounts, and estimated past-30-day expenditure. Survey responses were matched to participants' account data provided by operators. We built a series of machine learning models to classify participants into risk groups (PGSI 1-7 [no-to-moderate-risk] vs. PGSI ≥8 [high-risk]), comparing performance across data windows (30 days vs. six months), and with or without survey variables. *Results*: Models using only behavioural data achieved adequate classification accuracy (Area Under the Receiver Operating Characteristic curve [AUROC]=0.74–0.75), with similar performance across 30-day and six-month data windows. The most predictive account-based variables were age, deposit intensity (deposits per active day), average stake size, and days since last bet. Combining behavioural data with self-reported variables substantially enhanced performance (AUROC=0.76–0.85). Two self-reported variables—number of gambling accounts held and gambling satisfaction—were primarily responsible for improvements. *Conclusions:* Machine learning models can effectively detect at-risk customers on online sports and race betting sites using only 30 days of behavioural data. Performance can be improved by adding minimal, non-intrusive self-report measures.

Keywords: gambling disorder, risk detection, artificial intelligence, algorithm, behavioural marker

5A–3

Feasibility and acceptability of lower-risk gambling guidelines in Belgium and France: A qualitative study

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Background and aims: The SAFEGUARD project aims to evaluate the feasibility and acceptability of the Lower-Risk Gambling Guidelines (LRGG) (Hodgins et al., 2023; Young et al., 2024), originally developed in Canada and previously tested in Finland (Egerer et al., 2025; Palomäki et al., 2024), within Belgium, France and Italy. The LRGG provide evidence-based recommendations intended to reduce gambling-related harms and include thresholds for gambling expenditure, frequency, and breadth of gambling activities. This qualitative study examines whether the LRGG are perceived as relevant, understandable, and acceptable across different cultural contexts and among key stakeholder groups involved in behavioral addictions. *Methods:* Focus groups are being conducted in Belgium and France with four categories of participants: regular gamblers (gambling at least once per week), individuals with problem gambling, relatives of individuals with gambling problems, and mental health professionals involved in the treatment of gambling disorder. During the focus groups, participants discuss key gambling parameters addressed by the LRGG (e.g., expenditure, frequency, and number of gambling modalities) and express their views on the feasibility, acceptability, and potential limitations of each guideline. All sessions are audio-recorded and transcribed verbatim. A thematic analysis is conducted independently by two researchers, with discrepancies resolved through discussion to achieve consensus. *Results:* The analysis aims to identify perceived barriers and facilitators related to the implementation of the LRGG, as well as culturally specific concerns and suggestions for adaptation. Particular attention is paid to reasons why certain quantitative thresholds may be considered unrealistic, unacceptable, or incompatible with lived gambling practices. *Conclusions:* Findings from this study will inform whether the LRGG can be adopted as currently formulated, require adaptation to European contexts, or face significant acceptability challenges. Overall, the SAFEGUARD project seeks to support the development of evidence-informed, culturally sensitive public health strategies and prevention campaigns addressing gambling-related harms in Europe.

Keywords: gambling, guidelines, harm reduction, qualitative study

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5A–4

Behaviourally derived guidelines for lower-risk online betting: Evidence and consumer validation

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This presentation introduces a prevention-focused approach to supporting lower-risk online sports and race betting using empirically derived behavioural guidelines and new consumer validation data. Our recent research established Australian low-risk gambling guidelines (LRGGs) for online wagering using objective account-level behavioural data rather than self-reported gambling. These guidelines define four behavioural thresholds associated with a significantly lower likelihood of gambling-related harm: depositing no more than 2% of pre-tax household income per month, using no more than two wagering accounts, making four or fewer deposits per month, and betting on four or fewer types of sports or racing products. The value of these guidelines as a harm prevention strategy depends on how people who gamble understand and use them. This presentation extends our published work by presenting new, unpublished data from 271 Australian adults who regularly engage in online sports and race betting recruited from an online betting operator. The data examine consumer perceptions of the guidelines' acceptability, feasibility, and fairness, alongside preferences for alternative thresholds, timeframes, and additional behavioural indicators. Participants rated the guidelines as acceptable and feasible, exceeding pre-specified benchmarks, and judged them as generally fair across gambling risk levels. Gambling severity and readiness to change did not meaningfully predict these perceptions, indicating that behaviourally derived guidelines may support harm prevention across the full risk continuum. Participants consistently identified income-relative expenditure and deposit frequency as the most salient indicators of risk,

while expressing preferences for higher numerical thresholds and shorter timeframes. These responses highlight the tension between statistically derived risk thresholds and perceived behavioural realism. The findings demonstrate that effective harm prevention requires more than identifying behavioural risk thresholds. Guidelines must align with consumer understanding, values, and everyday gambling practices to support engagement. Framing LRGGs as universal self-monitoring tools, rather than interventions targeted at problem gambling, may reduce resistance and increase relevance, particularly among those who do not self-identify as at risk.

This presentation discusses implications for clinicians, community practitioners, and policymakers. It outlines how behaviourally grounded guidelines can support early intervention conversations, complement mental health and financial counselling services, and inform the design of safer gambling tools and consumer protection policy. By integrating objective behavioural evidence with consumer validation, this work advances a practical, credible approach to preventing gambling-related harm in technology-enabled gambling environments.

Keywords: online betting, guidelines

5A-5

From evidence to practice: Adapting lower-risk gambling guidelines for the Finnish context

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The Lower-Risk Gambling Guidelines (LRGG) represent an important advance in translating empirical evidence on gambling-related harm into clear public health guidance. Developed in Canada through extensive multi-method research, the LRGGs provide evidence-based thresholds for g expenditure, frequency, and breadth of participation associated with reduced risk of gambling-related harm. As they are disseminated internationally, effective implementation requires consideration of language differences, cultural norms, and regulatory contexts. This presentation examines the feasibility, acceptability, and applicability of adapting the LRGG to the Finnish environment.

Finland offers a distinctive setting for guideline adaptation due to its individualized financial norms, comprehensive population-level gambling data, and ongoing regulatory changes. A challenge in adapting the Canadian LRGG was use of household gross income as the basis

for the expenditure threshold. Drawing on Finnish quantitative and qualitative research, we describe the rationale for modifying expenditure limits from 1% of annual household income to 2% of personal net income. This adjustment improves cultural resonance, enhances clarity for individuals who gamble, and aligns with existing Finnish survey practices, while remaining conservative and consistent with the original evidence base. The Finnish adaptation demonstrates that empirical fidelity and contextual flexibility are compatible in public health guideline development. By maintaining the underlying harm-risk logic while improving interpretability and acceptability, the adapted LRGGs are more likely to support uptake and preventive impact. This case illustrates the importance of culturala adaptation and evidence translation and provides a model for how the LRGGs can be adapted across diverse jurisdictions without undermining their scientific foundation.

Keywords: gambling, lower risk gambling, harms, prevention

5B–1

Development of the Diagnostic Interview Schedule for Disorders due to Addictive Behaviours (DISDAB)

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Background: Assessments of internet use disorders (IUDs) primarily rely on screening questionnaires. However, most of these instruments have not been validated using clinical interviews. This may decrease the clinical utility and the appropriateness of cutoff scores. In general, few diagnostic interviews for IUDs exist. Furthermore, there are currently no standard instruments for assessing IUDs. For this purpose, the WHO has developed the Diagnostic Interview Schedule for Disorders due to Addictive Behaviours (DISDAB). *Methods:* The DISDAB was developed using existing tools from Japan, Korea, Australia, and Germany based on the diagnostic requirements for gaming and gambling disorders according to the 11th edition of the International Classification of Diseases (ICD-11). An international group of experts rated the usefulness of each item. Additionally, items were evaluated to ensure they cover various aspects of the diagnostic requirements. Several rounds of expert meetings evaluated the draft, leading to the final version. Subsequently, the DISDAB for gaming disorder was adapted for gambling disorder. *Results:* The DISDAB covers diagnostic requirements such as impaired control, prioritizing gaming over other activities, and continuing to game despite negative consequences. It also covers items for harmful and hazardous use, as well as additional clinical features such as tolerance, withdrawal, and craving. While the latter are not necessary for diagnosing gaming and gambling disorder, they are useful for clinical and research purposes. The DISDAB allows for distinction between lifetime and past-year diagnoses. The tool has been translated into several languages and will be validated in a large, multisite, international study. In addition to gambling and gaming, an adapted version for social media use disorder is available. Adaptations for shopping and pornography use disorders are also suggested. *Conclusions:* The DISDAB shows promise as an international standard tool. It will improve the precision of diagnoses and make them more comparable across samples and countries.

Keywords: gambling disorder, gaming disorder, diagnostic interview, WHO

5B–2

Could Screen Use Disorder exist? Item response theory analysis of the DSM-5 substance use criteria adapted to screen use

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Aim: Worldwide, screen exposure has increased significantly, and reports of related adverse outcomes have been documented. Excessive screen use may share common mechanisms with addictions. In a context where the line between pathological and recreational use is blurred, the development of diagnostic tools is essential to better understand these behaviors. *Objective:* To evaluate the psychometric properties of a Screen Use Disorder (ScUD) scale composed of the 11 DSM-5 Substance Use Disorder (SUD) criteria adapted to screen. *Method:* These 11 ScUD criteria have been assessed through a self-administered questionnaire among adult participants recruited online in French general population. Unidimensionality, local independence, and psychometric properties of the scale was explored by confirmatory factor analysis (CFA) and a two-parameter Item Response Theory (IRT) model (2PL) to assess discrimination (a, the item's ability to distinguish severity) and difficulty (b, the severity level at which the item is endorsed) of each item. *Results:* The sample included 3,038 participants, (73.4% women; age 42.2 (SD = 13.9)). Among them, 79.1% (n = 2,403) reported at least one ScUD criterion, and 16.3% (n = 494) reported five or more criteria. CFA confirms unidimensionality. The most frequently reported criterion was "larger/longer" (67.3%), whereas the least reported was "tolerance" (4.7%). The IRT model shows good discrimination for most items (a ≈ 1.9–2.4), with difficulty parameters spanning a wide continuum (b = −0.60 to 2.15). The "craving" criterion shows strong discrimination (a = 1.87) and difficulty level in the core range of the severity continuum (b = 1.43). *Conclusion:* Results shown that the 11 ScUD criteria constituted a globally consistent, unidimensional, and psychometrically robust scale, suggesting they may be useful indicators of various severity of ScUD. Further analyses should explore if alternative subsets of items may offer different diagnostic potential. *Financial Support:* This research was supported by University of Bordeaux's IdEx "Investments for the Future" program/GPR BRAIN_2030 (Adapsy project); doctoral grants 2024, co-sponsored by IReSP and INCa (AAP-2024-CADDOC-363509); France.

Keywords: psychometric analysis, screen use

5B–3

Validating the Gaming Disorder Identification Test in English, Chinese, Dutch and Indonesian

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Background: Gaming disorder has been formally recognized by the World Health Organization as a mental disorder in the ICD-11, but validated screening tools remain limited. We aim to assess the Gaming Disorder Identification Test (GADIT) for screening for gaming disorder across multiple languages and countries. *Methods:* The GADIT was translated into Chinese, Dutch, and Indonesian and validated using data from 1,519 participants (played video games at least 3 hours per week) across five countries (Australia, China, Indonesia, Netherlands, USA) recruited through the Nielsen Global Insight online panel. We conducted: (1) item response theory (IRT) analyses and reliability assessment for each diagnostic requirement, (2) multi-group confirmatory factor analysis across countries, (3) IRT analyses, and (4) validation analyses examining associations with the Internet Gaming Disorder Test (IGDT-10), depression (PHQ-2), anxiety (GAD-2), gaming intensity (high vs low), and gaming-related financial problems (yes vs no). *Results:* The GADIT had excellent internal consistency ($\geq$0.85). Confirmatory factor analysis supported factor loading invariance across countries ($\chi^2(28)=19.36$, p=.886; RMSEA=.054; CFI=.986; TLI=.984), indicating a single-factor structure of gaming disorder. There were variations in sensitivity, showing lower sensitivity for the physical complaint item in China and Indonesia, where high scores on continuing to play despite adverse impact on health may not necessarily indicate gaming problem. It had strong concurrent validity (all $p<0.001$) with the IGDT-10 (b=0.67) and was significantly associated with depression (b=0.38, R^2=20.66%), anxiety (b=0.35, R^2=19.74%), gaming intensity (OR=3.11), and gaming-related financial problems (OR=3.11). *Conclusions:* The GADIT screening tool for gaming disorder generally demonstrates robust psychometric properties and high validity, but some cultural or language revisions may further improve its international use.

Keywords: gaming disorder, video game, psychometrics, validation, scale

5B–4

Gaming disorder assessment tools: Psychometric foundations and application in neurobiological research

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The recognition of gaming disorder (GD) in the ICD-11 has led to global research efforts to advance screening methods. The measurement landscape is complex, with numerous tools differing in their conceptual foundation and test content and structure. This talk will present the findings of a comprehensive review of GD screening instruments, analysing 49 tools used across 1,292 peer-reviewed studies. This focus of this review was on tools' conceptual basis, diagnostics, psychometric information, and applications in different types of research. Findings show consistent expansion in available measures, including 17 new tools since 2019. The review underscores that many neurobiological studies have applied GD screening instruments that lack robust psychometric validation, highlighting the urgent need for standardized, reliable tools. By mapping nearly three decades of tool development, this review provides a major update on the status of GD assessment practices and suggests future directions.

Keywords: gaming disorder, screening tools, psychometrics, neurobiology

5B–5

Measuring digital well-being beyond addiction: Development and validation of a multidimensional scale

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The growing pervasiveness of digital technologies in everyday life—accelerated by remote work, mobile connectivity, and algorithm-driven platforms—has prompted increasing concern for individuals' digital well-being (DW). While early research has often focused on problematic or addictive use, recent approaches emphasize DW as a subjective and multidimensional experience, encompassing both the benefits and the potential drawbacks of digital life. However, a validated, theory-driven instrument to assess digital well-being in its complexity is still lacking. This project introduces and validates a new Digital Well-Being Scale, designed to capture a broad spectrum of physical, emotional, cognitive, and social experiences related to digital technology use. In two cross-sectional studies (total N = 750), we employed state-of-the-art psychometric procedures. In Study 1, we developed a large item pool based on the existing literature and conducted exploratory factor analysis to identify the underlying dimensions and reduce item redundancy. In Study 2, we tested the factorial structure using confirmatory factor analysis and assessed construct and convergent validity. The final version of the scale reflects some specific experiential domains, including digital fatigue, physical strain, self-efficacy, multitasking stress, intrusion into offline life, privacy concerns, social connection, and growth/purpose. Correlational analyses explored associations with mental well-being, job satisfaction, technostress, and existing measures of digital well-being. Our findings suggest that digital well-being cannot be reduced to screen time or addiction risk but should be understood as a dynamic interplay between control, satisfaction, and integration of digital tools into daily life. The scale offers a novel instrument for both researchers and practitioners interested in promoting healthy digital habits and preventing digital burnout in the general and working population.

Keywords: digital well-being, problematic technology use, digital health, scale development, psychometric validation

5B–6

Trustworthiness in qualitative research: A focus on gambling and gaming harm

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Background: Qualitative research is central to understanding gambling and gaming harm because it documents lived experience and captures processes that are difficult to measure quantitatively. Confidence in qualitative findings relies on how clearly researchers describe their analytic decisions and strategies for establishing trustworthiness. However, little is known about how these practices are reported in gambling and gaming research. *Aim:* The aim of this study was to systematically review recent qualitative gambling and gaming studies to identify how approaches to trustworthiness are reported. *Methods:* We reviewed qualitative studies published in the past five years that examined the experiences of people with gambling or gaming problems. Studies were identified using a systematic search and analysed using a structured coding framework focused on the reporting of trustworthiness practices. *Results:* Studies were coded for whether they reported data triangulation, respondent validation or member checking, audit trails, deviant case analysis, and researcher reflexivity or positionality. Reporting of these practices varied across studies. Many papers provided limited detail on how trustworthiness was considered during analysis. *Conclusions:* Qualitative studies form an important part of the evidence base on gambling and gaming harm. Clearer reporting of trustworthiness practices would support more confident interpretation of findings and strengthen the contribution of lived experience research in this field.

Keywords: qualitative, methodology, research design, reproducibility of results

5C–1

Daily gaming-related conflicts and parent-adolescent relationship quality: Quantitative and qualitative insights

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Background: The rapid expansion of digital technology has created new sources of parent-child tension. Parental concerns about excessive device use often lead to disagreements regarding rules, limits, and monitoring. Despite the prevalence of adolescent gaming and its potential to intensify autonomy-related disputes, how gaming conflicts shape daily parent-child relationship quality and conflict resolution remains underexplored. *Methods:* Study 1 is part of a longitudinal project utilizing a 14-day ecological momentary assessment. For this presentation, we analyzed the daily measures captured across the 14-day period. The study involved 63 Chinese parent-adolescent dyads (adolescents aged 12 to 18 who self-identified as gaming ≥21 hours/week). Daily measures included parent-child relationship satisfaction and gaming/non-gaming related parent-child conflicts. Pre-assessment parent-child attachment was also measured. Study 2 involved qualitative interviews with 10 parents/adolescents exploring their experiences and resolution strategies (including repairment strategies) for gaming-related conflicts. *Results:* Using a multilevel actor-partner interdependence model, Study 1 revealed that daily game-related conflict between parents and children were statistically significantly associated with worse daily parent-child relationship satisfaction at the actor level only (β = -0.063, 95% CI = -0.102−-0.024, p = 0.0017). This association was non-significant at the partner level (β = -0.001, 95% CI = -0.038−0.037, p = 0.9742). Moderated multilevel actor-partner interdependence analyses showed that attachment anxiety (β = -0.001, 95% CI = -0.009−0.008, p = 0.8637) and attachment avoidance (β = 0.001, 95% CI = -0.005−0.007, p = 0.7956) did not moderate this relationship. Qualitative findings from Study 2 will be finalized and presented at the conference. *Conclusions:* This research suggests that daily gaming conflicts negatively impact adolescents' or parents' own perception of relationship quality, independent of their partner's experience. These findings, together with forthcoming qualitative insights from Study 2, highlight the need for targeted interventions to address gaming-related parent-child disputes.

Keywords: gaming, parent-child conflict, daily diary

5C–2

Interparental (in)congruence in parenting: Implications for adolescent problematic social media use

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Problematic social media use (PSMU) among adolescents has been a public health concern given its high prevalence and linkage with poor outcomes such as sleep disorders, poor academic performance, and increased mental health issues. Parenting has long been identified as one predictor of adolescent PSMU. However, limited research has examined how parental discrepancies in parenting affect adolescent PSMU. The present study investigated the associations between interparental (in)congruence in autonomy-relevant parenting and adolescents' PSMU using polynomial regression and response surface analysis (RSA). 2,356 Chinese adolescents (Mean age = 14.06 ± 1.63; 54.8% girls) reported perceived maternal and paternal psychological control (PC) and autonomy support (AS) and PSMU. Results revealed that interparental congruence in PC ($a1 = 0.380$, $p < .001$) and AS ($a1 = -0.219$, $p < .001$) was positively and negatively associated with PSMU, respectively. In addition, both associations demonstrated significant inverted-U-shaped effects (PC: $a2 = -0.097$; AS: $a2 = -0.099$, $ps < .001$). Unexpectedly, interparental discrepancies in both PC ($a4 = -0.109$, $p < .05$) and AS ($a4 = -0.082$, $p < .05$) were associated with lower levels of PSMU, regardless of the direction of the discrepancy (i.e., whether maternal PC/AS were higher or lower than paternal PC/AS). Our findings suggest that interparental congruent high PC may exacerbate adolescent PSMU, whereas congruent high AS generally functions as a protective factor. Nevertheless, interparental discrepancies in autonomy-relevant parenting were not a risk factor for adolescent PSMU in the present study, suggesting that having one parent with low PC or high AS may buffer against the adverse effect associated with the other parent's less supportive parenting. Overall, these findings highlight the roles of interparental (in)congruence in parenting in adolescent PMSU and provide implications for interventions aimed at reducing the risk of adolescent PMSU from an interparental discrepancy perspective.

Keywords: problematic social media use, interparental discrepancy, parenting, adolescents, polynomial regression

5C–3

Developing a parenting needs assessment tool for engaging parents in treatment of youth gaming disorder

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Background: Despite growing public concerns about Gaming Disorder (GD) among children and adolescents, evidence-based treatment models remain under-developed. While treatment studies and systematic reviews highlight the importance of parental engagement in treatment, empirical knowledge and clinical guidelines regarding specific parental support intervention needs and implementation strategies are lacking. This study investigated parenting needs among parents of adolescents with GD participating in a community-based treatment program in Singapore, aiming to develop a parenting needs assessment tool for practitioners. *Method:* We employed concept mapping methodology with 15 parents and 13 counselors through sequential focus group sessions for brainstorming and sorting-rating of parenting needs. Individual qualitative interviews with the parents were conducted to contextualize needs and identify barriers to treatment engagement. *Results:* Hierarchical cluster analysis of concept mapping data identified nine parenting needs clusters: handling GD-inflicted problem behaviors; damaged parent-child relationships; communication breakdowns; inconsistent discipline and boundary-setting on child gaming; managing parents' emotional reactions to child gaming; inadequate knowledge and stress about GD; worries about child safety, health, education, and future; finding healthy gaming alternatives; and lack of support from schools and the community. Interview analysis revealed parents primarily used intrapersonal coping strategies (e.g., mindset changes and emotional regulation) while identifying limited service capacity and help-seeking stigma as barriers to receiving support. Parents requested enhanced psychoeducation on child GD across systemic levels as well as emotional and practical support interventions. *Conclusion:* Four domains emerged for a parenting needs assessment tool: 1) managing GD-inflicted behaviors, damaged parent-child relationships and communication breakdown; 2) comprehensive GD knowledge and digital literacy; 3) parental emotional burden and mental health; and 4) practical support needs. A domain-specific assessment tool with corresponding items will be developed through Delphi expert consensus methodology to facilitate clinician-parent engagement in adolescent GD treatment.

Keywords: youth gaming disorder, gaming disorder treatment, parenting, parenting assessment

5C–4

Navigating digital parenting across cultures: Malaysian parents' perspectives on technology for managing children's screen time

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Background: Children's excessive screen use is an increasing concern due to its association with adverse physical, behavioural, and psychosocial outcomes. Although parents employ various approaches to manage screen exposure, the use of technology-based mediation—particularly technical restriction strategies such as parental control tools—remains limited. This is especially evident in culturally diverse contexts such as Malaysia. This study aimed to explore Malaysian parents' perspectives, beliefs, and needs regarding the use of digital tools to manage their children's screen time. *Methods:* A qualitative study was undertaken involving twenty-one parents from four cultural backgrounds in Malaysia, recruited through purposive sampling. Semi-structured interviews were conducted either face-to-face or online, based on participant preference. Interviews were audio-recorded, transcribed verbatim, and analysed thematically using NVivo version 15. *Results:* Analysis yielded thirty-seven initial categories, which were consolidated into twelve sub-themes and four overarching themes. Realities of Digital Parenting described parental concerns about the impact of screen use on children's development, behaviour, and family life. Balancing Parenting Values highlighted how parental approaches were influenced by lived experiences, children's developmental stages, and cultural or religious considerations. Navigating Technology-Based Mediation reflected varying levels of engagement with digital tools, shaped by digital literacy and challenges integrating existing solutions into daily routines. Needs in Digital Parenting Tools emphasised expectations for tools that are intuitive, adaptive, and culturally sensitive, alongside institutional and policy-level support. *Conclusion:* Although parents acknowledge the potential role of technology-based mediation in managing children's screen time, practical barriers related to usability and integration limit uptake. Digital parenting tools that align with real-world parenting practices and are supported by broader stakeholder collaboration may enhance effective adoption.

Keywords: digital parenting, technology-based mediation, Malaysia, screen time, qualitative research

5D–1

Putting design into practice: Proof-of-concept evaluation of a player-tailored online responsible gambling promotion framework

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Background: Effective prevention in digital gambling environments requires adaptive systems that respond dynamically to behavioural risk, yet most responsible gambling (RG) tools remain static, narrowly targeted at high-risk players, and weakly integrated with real-time data. We developed an evidence-based, risk-based RG intervention framework to enable player-tailored promotion of more sustainable gambling under real-world conditions. *Methods:* Using a population-level interrupted time series (ITS) design, this study evaluated the proof-of-concept deployment of the framework among 5,808 UK online gamblers on a live operator platform, spanning a 6-month baseline and 6-month intervention period. Players received monthly RG tool packages comprising regulatory and pseudorandomised add-on interventions, assigned according to a 30-day dominant risk classification. Behavioural outcomes, tool engagement, and longitudinal risk patterns were examined using high-frequency, player-level tracking data. *Results:* Preliminary analyses showed significant reductions in gambling frequency, monetary involvement, and time spent gambling following deployment, with no evidence of platform attrition. Median risk levels decreased across the intervention period, with the most marked improvement observed among moderate-risk players. These reductions coincided with expanded RG tool adoption and voluntary limit-setting behaviour beyond system prompts; comprehensive engagement analysis continues. To better quantify risk transition dynamics, a Bayesian multi-state Markov model (Low, Moderate, High, Inactive) will be applied to estimate changes in escalation, recovery, and stability probabilities; final posterior estimates will be presented. *Conclusions:* Preliminary findings demonstrate the feasibility and impact of deploying a scalable, adaptive RG intervention framework in a live operator setting. The combination of public health evaluation, engagement analysis, and transition modelling offers a robust approach to evaluating next-generation RG systems.

Keywords: responsible gambling, online gambling, behavioural tracking

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5D–2

Preliminary evidence of the efficacy of an intervention to reduce cognitive distortions related to online trading in adolescents

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Online trading (OT) refers to the buying and selling of financial assets electronically through an internet-based trading platform or brokerage service. Although most brokerage platforms legally require users to be at least 18 years old to open and manage a trading account, there is a rising trend among 16-17 years youth. The goal of this study was to develop and evaluate a targeted intervention aimed at reducing cognitive distortions related to OT among adolescent gamblers. Indeed, OT is associated with gambling frequency and problem gambling, and salient similarities exist with gambling, among which the risk for cognitive distortions, such as illusions of control. Participants were 177 young gamblers (58% males, Mage = 17.35, SD = .92) attending high school in Italy and assigned to an experimental group (n = 127), who was involved in two didactic units about cognitive distortions related to gambling and OT, and a control group (n = 50), who regularly carried out the school activity. Cognitive distortions related to OT were measured at the pre- and post-test session with a new developed self-report instrument, preliminarily subjected to psychometric analysis. The two groups turned out to be equivalent in terms of OT-related cognitive distortions. A mixed ANOVA with Time (pre-test, post-test) as within factor and Group (Experimental, Control) as between factor was performed. A significant interaction effect ($p = .044$, $\eta p^2 = .045$) was found. Paired t-tests attested that a significant decrease in cognitive distortions related to OT was obtained only in the Experimental group ($p < .001$, $d = .479$) and not in the Control group ($p = .307$, $d = .086$). Although preliminary, findings suggest the efficacy of the intervention in reducing cognitive distortions related to OT among adolescent gamblers.

Keywords: online trading, gambling, adolescents, cognitive distortions, intervention

5D–3

Using online behavioural marker data to identify differences in product risk

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Background: Many studies have been conducted to identify potentially useful behavioural markers of harmful behaviour using online gambling data sourced from operators. However, less is known about how such markers could be used to identify higher risk products. This paper presents findings from 2 studies conducted using very large datasets to examine the relationship between exposure different gambling products and risk indicators. *Method:* Measures included individual-level expenditure data across multiple forms of gambling and a series of literature-informed behavioural markers of harm including declined deposits, within-session repeat deposits (or 'top-ups'), and gambling at unusual hours. Study 1 used data from 100,000 gamblers active in the UK over a 6-month period and Study 2 examined data from 21464 online gamblers who also completed the PGSI. *Results:* The markers covaried with the number of active days engaging in specific product types, most notably slots, in-playing betting and some forms of complex sports bets. PGSI scores were positively associated with the incidence of behavioural risk indictors. *Conclusions:* These findings highlight the potential value of using measurable markers to differentiate the risk and potential harm associated with different online products.

Keywords: product risk, behavioural markers, harm

5D–4

When algorithms gamble: Implications for player protection and public health policy

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The integration of advanced technologies, particularly Artificial Intelligence and other deep tech systems, into the entertainment industry has enhanced user engagement in digital games while simultaneously introducing emerging public health concerns. These risks demand timely and coordinated responses from governments, regulatory authorities, academia, and society. This landscape is further intensified by the rapid growth of both licensed and unlicensed online gambling platforms and by pervasive, persuasive marketing practices. Methods included a systematic review of the literature addressing the use of deep technologies in online gambling, an analysis of relevant legal and regulatory frameworks, and qualitative interviews with experts in the social and human sciences, technology professionals, and gamblers. Results indicate that, in the context of online gambling, such technologies are increasingly deployed to maximize player acquisition and retention through highly immersive, data-driven design features that can amplify harmful behaviours, including impulsive and excessive gambling. Game personalisation mechanisms, the lack of harmonized technical safeguards, limited digital oversight, and gaps in existing protective measures create an environment conducive to the escalation of risk. Therefore, the findings suggest a structural imbalance between technological innovation and protective governance, highlighting how platform design, regulatory fragmentation, and insufficient enforcement contribute to increased exposure to gambling-related harm, particularly among vulnerable populations. To conclude, strengthening legislation, improving regulatory coordination, and implementing robust, evidence-based, technology-informed player protection measures are essential to reconceptualize digital gambling environments as socio-technical systems with measurable health impacts. These steps are crucial to advancing cross-sector regulatory modernization, promoting healthier online ecosystems, and safeguarding market integrity.

Keywords: deep technology, AI, gambling disorder, pathologic gambling, harm reduction, harm minimization, safer gambling

5D–5

Human-centred design for responsible gambling interventions: A qualitative inquiry into player experiences

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Background: Responsible gambling (RG) tools are increasingly embedded in online gambling platforms, yet their design remains dominated by regulatory and industry perspectives. Human-centred design approaches to RG and qualitative research on how players experience these tools and what shapes their engagement remain sparse. This study examined players' perceptions of and experiences with RG tools and communication styles across two regulated European markets. *Methods:* Two qualitative research streams were integrated. Semi-structured interviews (n = 17) with UK players exposed to risk-tailored RG tools and Dutch players using nationally mandated RG tools were sampled across gambling risk-transition groups (stable, escalating, decreasing, drop-out). Interviews explored discovery and use of tools, user experience, tolerability, and perceived behavioural impact. Focus groups (n = 6) with Dutch players, stratified by risk level (low, moderate, high), examined RG messaging (content, tone, wording) through open discussion and Q-methodology sorting exercises to assess personal relevance, perceived effectiveness, and emotional response. All sessions have been transcribed; analysis is underway using reflexive thematic analysis, complemented by inspection of Q-sorting patterns across risk segments. *Results:* Preliminary interview findings suggest risk trajectory functions not only as a behavioural classification but as a marker of motivational readiness, reflecting orientation toward change. Context-insensitive delivery of RG interventions (e.g., mid-session pop-ups) and contradictory communications pairing RG warnings with promotional content emerged as barriers to RG tool engagement and operator trust. Preliminary inspection of Q-sort patterns indicates moderate-risk participants often perceived warning-based messaging as relevant for others but not themselves, echoing the "not for me" phenomenon. Across risk segments, participants preferred shorter, information-dense messages containing concrete data over generic cautionary language. *Conclusion:* Effective RG strategies cannot advance without shifting towards a player-centred research and design approach. Triangulating findings across jurisdictions and risk segments, full results will provide actionable, evidence-based recommendations on communicative and design features that support player-centred RG tool development.

Keywords: responsible gambling, online gambling, lived experience

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5E–1

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

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Background: Social Networks Use Disorder (SNUD) describes the addictive use of social networking sites and online communication platforms, leading to negative consequences and functional impairment in daily life. Although SNUD is highly prevalent, evidence-based treatment options remain limited. *Methods:* The oral presentation will summarize findings from two waves of a preregistered pilot randomized controlled trial (RCT) evaluating the feasibility and preliminary efficacy of a novel eight-week mindfulness-based program (MBP) specifically developed for SNUD (Registration: DRKS00036699). The primary outcome was a reduction in SNUD symptom severity. Secondary outcomes included depressive and anxiety symptoms as well as functional impairment. Proposed mechanisms of change included craving, inhibitory control, state mindfulness, and affect, assessed via momentary assessment (wave 1) or end-of-day diaries (wave 2). Feasibility indicators comprised attendance, intensity of home practice, and participant satisfaction. *Results and Conclusions:* The project follows an iterative, formative evaluation approach, combining qualitative interviews with quantitative outcome assessment. Data from the first wave (April-September 2025) were promising and informed refinements of both the MBP and assessment procedures implemented in the second wave (October 2025-March 2026). Data from both waves will be available for presentation at the ICBA in August 2026.

Keywords: social networks, mindfulness, RCT

5E–2

Gender differences in the effectiveness of psychotherapeutic interventions for behavioral addictions: A systematic review and individual patient data meta-analysis

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Background: Psychotherapeutic interventions for behavioral addictions are widely used and generally effective, yet it remains unclear whether men and women benefit equally. Existing evidence suggests meaningful gender differences in prevalence, symptom profiles, and comorbidities, underscoring the need for a systematic investigation of gender-specific treatment outcomes. To date, no review has comprehensively synthesized treatment effects by gender across behavioral addiction diagnoses. *Objective:* This systematic review and individual patient data meta-analysis (IPD-MA) aims to synthesize the current evidence on gender differences in the effectiveness of psychotherapeutic interventions for behavioral addictions and, where possible, quantify gender-specific treatment effects using individual-level data. *Methods:* A comprehensive multi-database search (October 2025) identified 51,492 records for screening, sourced from PubMed (10,197), Web of Science (9,443), PsycINFO (8,276), Scopus (7,660), Lilacs (6,818), PubPsych (6,238), Cochrane Trials (1,846), Livivo (594), and ClinicalTrials.gov (420). Eligible studies include randomized intervention trials reporting gender-specific treatment outcomes, subgroup comparisons, or providing access to individual patient data. Screening, data extraction, and risk of bias assessment follow PRISMA 2020 guidelines. Principal investigators of eligible trials are being contacted to request IPD; where datasets cannot be shared, standardized gender × treatment effect estimates will be obtained. *Results:* At the time of submission, study screening, risk of bias assessments, and IPD acquisition are ongoing. Synthesis including narrative and quantitative components is expected to be completed before the conference. *Discussion:* This project will provide the first comprehensive synthesis and quantitative estimation of gender-specific treatment outcomes across behavioral addictions. The findings will highlight gaps in the current evidence base, inform gender-responsive clinical recommendations, and guide future research priorities.

Keywords: gender differences, behavioral addictions, treatment, IPDMA, individual patient data meta-analysis

5E–3

The Center for Advanced Research on Addictive Behaviours (CAR-AB) for addressing digital technology-related addictions and youth mental health in India

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Background: India is experiencing rapid digital expansion alongside a large youth population, contributing to rising behavioral addictions such as problematic use of the internet, gaming, smartphones, social media, gambling, and other online activities. These behaviors are linked to stress, anxiety, depression, and addiction. Despite high prevalence and significant public-health impact, India lacks evidence-based, scalable prevention and intervention strategies, standardized digital-wellness curricula, and predictive tools for early identification. In response, the Indian Council of Medical Research funded the Centre for Advanced Research on Addictive Behaviours (CAR-AB) to systematically address these gaps through a national, multisectoral initiative. *Objectives:* CAR-AB aims to develop AI-based predictive models to detect vulnerability to excessive/problematic technology use among youth; create and validate prevention-focused intervention packages for youth, parents, and teachers; develop and evaluate a Screening, Brief Intervention and Referral to Treatment (SBIRT) model for early detection and harm reduction; build standardized training modules for educators and health-sector staff to promote digital well-being; generate evidence-based national recommendations on digital-wellness promotion and behavioral-addiction prevention. *Methods:* CAR-AB consists of five interlinked studies employing cross-sectional surveys, qualitative inquiry, mixed-methods evaluation, quasi-experimental designs, and randomized controlled trials across multiple sites. Data collection includes validated psychological scales, digital-phenotype measures, and cognitive tasks. Machine-learning approaches will be used for model development with SHAP/LIME-based interpretability. Intervention packages will undergo iterative qualitative development, feasibility testing, and process evaluation using established frameworks. SBIRT effectiveness will be tested via a randomized controlled trial. *Expected Results:* The initiative is expected to generate a validated AI-driven predictive algorithm for early risk identification; modular prevention packages for youth, parents, and teachers; a tested SBIRT protocol for technology-use–related harms; standardized national training resources for educators and health professionals; policy and programmatic recommendations to integrate digital-wellness strategies within mental-health and education systems. *Conclusions:* CAR-AB represents the first comprehensive national initiative in India combining AI, behavioral science, and implementation research to address digital-technology–related addictions. Its outputs aim to shift the focus from clinical treatment alone to scalable, preventive, and system-level approaches that strengthen youth mental health and contribute to global digital-wellness efforts. The model is adaptable for other low- and middle-income contexts.

Keywords: internet addiction, gaming disorder, gambling disorder, social media addiction

5E–4

Fear of Missing Out (FOMO) as a driver of social media addiction: An empirical study and the role of Digital Tabayyun as an ethical intervention

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The rapid expansion of social media platforms has intensified concerns regarding behavioral addiction, particularly among young adults. One prominent psychological mechanism associated with problematic social media use is the Fear of Missing Out (FOMO), which manifests through compulsive checking, excessive engagement, and anxiety-driven online behavior. While existing studies have extensively examined the prevalence and psychological correlates of FOMO, limited attention has been given to ethical–cognitive interventions that promote self-regulation and reflective digital behavior. This study aims to examine the role of FOMO-related behavioral patterns in driving social media addiction and to explore Digital Tabayyun as an ethical intervention framework for mitigating compulsive social media use. Employing a quantitative survey design, data were collected from 215 respondents, predominantly young adults and university students, to assess social media usage behavior and self-regulatory practices related to information engagement. Descriptive analysis, correlation, and regression tests were conducted to examine behavioral patterns and their predictive relationships. The findings indicate a high level of social media engagement, with prolonged daily usage and strong behavioral tendencies associated with compulsive interaction. Statistical analysis reveals a significant and strong relationship between social media use behavior and self-regulatory practices, suggesting that increased engagement is closely linked to heightened cognitive and behavioral involvement. These patterns reflect characteristics commonly associated with FOMO-driven problematic social media use, including loss of control, habitual checking, and heightened responsiveness to online stimuli. Building on these findings, the study proposes Digital Tabayyun as an ethical–cognitive intervention model that emphasizes reflective delay, critical awareness, and self-restraint in digital engagement. Rather than functioning as a technical moderation tool, Digital Tabayyun is conceptualized as a human-centred framework that supports behavioral regulation and ethical decision-making in online environments. This study contributes to the growing discourse on behavioral addictions by offering an empirically informed, ethically grounded intervention framework that complements existing psychological and technological approaches to addressing social media addiction.

Keywords: social media addiction, Fear of Missing Out (FOMO), problematic social media use, ethical self-regulation, Digital Tabayyun

5E–5

Elibrè Digital: A Novel 90-day integrated protocol for Problematic Internet Use treatment: Preliminary results from initial implementation

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Background: Problematic Internet Use (PIU) poses significant challenges to mental health and social functioning in adolescents and young adults. Evidence-based integrated interventions combining intensive immersion with longitudinal care remain limited. This study presents the Elibrè Protocol, a structured 90-day program combining a 3-day immersive experience with digital detox, family engagement, psychoeducation and lifestyle medicine interventions, followed by a 90-day evidence-based outpatient treatment program. *Method:* The protocol comprises three phases: psychiatric screening for eligibility (Days -30 to -7), intensive immersion and digital detox at a nature-based boutique hotel (Days 0-3), and longitudinal follow-up program, using evidence-based treatment (Days 1-90). Phase 1 (hotel immersion) includes structured activities (mindfulness, physical activity, psychoeducational talks), psychiatric lectures, and the mental health screening (questionnaires, InBody 770 bioimpedance, type-4 polysomnography). Phase 2 (outpatient treatment program) involves weekly psychology sessions, biweekly psychiatry when needed, psychoeducational webinars, in-person group meetings, and continuous metrics monitoring (screen time, sleep and other validated screening tools). The protocol will be applied to the first cohort of patients between March and May 2026. *Results:* (expected outcomes) Based on the protocol's evidence-based design and integration of best practices for behavioral addiction treatment, we anticipate improvements in mental health parameters, reduction in PIU and gaming disorder symptoms, and enhanced self-regulation skills. Family engagement is expected to be a key therapeutic element. Preliminary results from this initial implementation will be presented at this congress. *Conclusions:* The Elibrè Protocol represents an innovative, evidence-based approach to PIU treatment integrating intensive psychoeducation immersion with sustained longitudinal care. This presentation will introduce the protocol's design rationale and present preliminary outcomes from the first patient cohort. Larger prospective studies are warranted to establish long-term effectiveness and cost-benefit analysis.

Keywords: Problematic Internet Use, gaming disorder, behavioral addictions

5E–6

Effectiveness of a program using self-control strategies to reduce relapse among a sample of individuals dependent on behavioral addictions

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Introduction: The rapid spread of behavioral addictions and the continuous increase in the number of addicts in all societies represent one of the most critical contemporary problems. The most dangerous challenge in dealing with this phenomenon is relapse and its underlying causes. Relapse—returning to addictive behaviors after a period of abstinence—leads to the loss of all recovery efforts. In many cases, behavioral addictions serve as a primary catalyst for severe psychological and behavioral deterioration, and understanding how to manage relapse through self-control is essential . *Problem of the Study:* What is the effectiveness of using a self-control strategies treatment program in reducing relapse rates among individuals dependent on behavioral addictions? Objective of the Study: The current research aims to reduce relapse rates among a sample of individuals dependent on behavioral addictions through a treatment program utilizing self-control strategies. *Hypotheses of the Study* There are statistically significant differences between the mean ranks of the experimental and control groups in readiness for relapse in the post-test measurement, in favor of the post-test experimental group. There are statistically significant differences between the mean ranks of the experimental group in the pre- and post-test measurements regarding readiness for relapse, in favor of the post-test measurement. There are no statistically significant differences for the experimental group in readiness for relapse between the post-test and follow-up measurements. *Study Sample:* The study sample consisted of 20 male and female participants dependent on behavioral addictions who received treatment in addiction treatment clinics, aged (20–45 years). They were divided into two equal groups: an experimental group and a control group (10 participants each.) Study Tools (. Relapse Situations Questionnaire (RSQ) – Prepared by Prof. Abdalla Asker 2004).) Self-Control Scale. Self-Control Strategies Treatment Program – Prepared by the researcher. *Statistical Methods:* The researcher used the Wilcoxon Signed Ranks Test to calculate differences between paired related scores, alongside Z-values. *Results:* Post-test results show statistically significant variations in the averages between the control and experimental groups across all dimensions of the Relapse Situations Questionnaire (RSQ) and its total score, in favor of the experimental group. There are significant variations in the average results of both pre- and post-tests on the total score of the Relapse Situations Questionnaire and its dimensions, in favor of the post-test. Post-test results show statistically significant variations in the averages between the control and experimental groups across all dimensions of the Self-Control Scale and its total score, in favor of the experimental group. There are significant variations in the average results of both pre- and post-tests on the total score of the Self-Control Scale and its dimensions, in favor of the post-test.

Keywords: self-control, relapse and behavioral addictions

5F–1

Opponent process dynamics in pornography use: Evidence from Ecological Momentary Assessment

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Background: The causal mechanisms linking problematic pornography use (PPU) to mental health outcomes, such as depression, are poorly understood. While cross-sectional research consistently links PPU to depression, the temporal dynamics associated with pornography use and masturbation remain unquantified. We investigated whether pornography use and masturbation generate "opponent processes" - specifically, whether the initial hedonic peak during sexual experiences (a-process) is followed by a transient period of negative affect (b-process), and whether moral incongruence moderates these dynamics. *Method:* We utilized an exploratory Ecological Momentary Assessment (EMA) design to capture high-resolution temporal data from 22 participants over four weeks. Participants completed five daily prompts and event-based surveys surrounding sexual episodes. We employed Bayesian hierarchical mixed-effects models to estimate the temporal dynamics (spikes and exponential decays) of cognitive and affective states preceding and following pornography use and masturbation. *Results:* Participants with high moral incongruence exhibited distinct opponent process dynamics. This group experienced significant post-episode spikes in shame, guilt, relationship disconnectedness, and mood deterioration, which followed an exponential decay back to baseline over several hours. Conversely, low-incongruence participants showed reduced negative after-effects but exhibited paradoxical post-episode spikes in craving, suggesting sensitization. Notably, both groups reported increased "difficulty thinking" post-episode, providing quantitative support for a possible mechanism leading to "brain fog" following pornography use. *Conclusions:* These findings offer preliminary evidence that moral incongruence moderates the affective dynamics of pornography use. The results support an allostatic opponent process model, suggesting that for high-incongruence individuals, the accumulation of transient negative after-effects (b-processes) may drive depressive symptoms. These results highlight the necessity of high-resolution temporal data in distinguishing problematic pornography use from normative behavior.

Keywords: pornography, problematic pornography use, opponent process, depression, Ecological Momentary Assessment

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5F–2

Moderating effects of trait sexual motivation on the relationship between personality and problematic pornography use

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Background: Drawing on the I-PACE model (Brand et al., 2019), this study examines how the interaction between general predispositions and domain-specific factors influences problematic pornography use (PPU). While broad personality traits are known risk factors, it remains unclear how they interact with behavior-specific dispositions. This research aims to investigate whether Trait Sexual Motivation (TSM) functions as a moderator that amplifies the relationship between personality traits (impulsivity, reward sensitivity, Big Five) and PPU. *Method:* A cross-sectional observational design is employed, where data is collected from a non-clinical sample of pornography users via an online panel. Participants complete the Problematic Pornography Consumption Scale (Bőthe et al., 2018), the Trait Sexual Motivation Questionnaire (Stark et al., 2015), and established measures for impulsivity, reward sensitivity, and the Big Five. Multiple linear regression and simple slopes analyses are conducted separately for men and women to test for moderation effects. *Results:* It is hypothesized that TSM significantly moderates the associations between personality and PPU. Specifically, higher TSM is expected to strengthen the positive associations between PPU and impulsivity, reward sensitivity, and neuroticism. Furthermore, we test whether the negative associations of agreeableness and conscientiousness with PPU are more pronounced at higher levels of TSM. Exploratory analyses further investigate the role of solitary sexuality and potential mediation models. *Conclusions:* The findings will provide a more nuanced understanding of how general vulnerabilities and domain-specific drives jointly contribute to

PPU. By testing core assumptions of the I-PACE model, the results will potentially highlight the necessity of integrating individual sexual motivation into the clinical assessment and prevention of problematic sexual behaviors.

Keywords: problematic pornography use, trait sexual motivation, I-PACE, personality

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5F–3

Profiles of pornography consumption based on frequency of use, problematic pornography use and emotional distress

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Background: Emotional distress is a core characteristic across multiple behavioral addictions, such as gambling disorder, gaming disorder, or compulsive buying, in which elevated levels of depression, anxiety, and stress are associated with greater symptom severity and functional impairment (Mishra et al., 2023). In this context, problematic engagement in addictive behaviors is not defined solely by frequency of involvement, but by emotional and psychological correlates (Brand et al., 2019). Similar patterns have been observed in pornography consumption: frequency of use does not distinguish between problematic and non-problematic use, whereas elevated emotional distress emerges as a central feature in individuals with PPU (Bőthe et al., 2020; Vieira & Griffiths, 2024). Most studies have examined emotional distress as a consequence of PPU rather than as part of the clinical picture, resulting in limited knowledge about the coexistence of distinct patterns of pornography consumption and emotional distress. The aim of this study was to identify subtypes of pornography users based on frequency of use, emotional distress, and problematic pornography use (PPU). *Method:* A total of 645 adults (55.8% women; Xage= 29.2, SD= 10.5) completed an online survey assessing frequency of pornography consumption (single ad hoc item rated on an 8-point Likert scale), PPU (PPCS-18), and emotional distress (depression, anxiety, and

stress measured by the DASS-21). All indicators were standardized and included in a latent profile analysis. *Results:* A six-profile solution with freely estimated variances showed the best fit to the data (BIC= 7352; entropy= 0.84). The profiles revealed substantial heterogeneity among consumers. The largest profile (27.3%) showed moderate-to-high consumption with low emotional distress and low PPU (frequent but non-problematic users). In contrast, a smaller but clinically relevant profile (5.7%) exhibited extremely high emotional distress and very high PPU despite low-to-moderate consumption. Remaining profiles reflected intermediate configurations across consumption, emotional distress, and PPU severity. Classification accuracy was high (AvePP= 0.85–0.93). *Conclusions:* These findings support heterogeneous subtypes of pornography consumers and indicate that consumption frequency alone is insufficient to characterize problematic patterns. Emotional distress and problematic use severity are key dimensions for distinguishing clinically relevant profiles, including those marked by low consumption but high emotional distress. The results underscore the importance of person-centered approaches for PPU.

Keywords: pornography, problematic pornography use, emotional distress, latent profile analysis (LPA)

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5F–4

Compulsive sexual behavior disorder in the public eye: Media narratives, stigma, and their impact on support and communication

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Background and aims: Public understanding of compulsive sexual behavior disorder (CSBD), including stigma and willingness to discuss the topic, remains poorly documented. Media narratives may shape how CSBD is perceived socially, yet their downstream implications for

public support and communication are unclear. This study aimed to map the societal context of CSBD in Poland and test a model in which sensationalist media portrayals are associated with perceived stigma, which in turn relates to support for CSBD-related programs and willingness to talk about CSBD.*Method:* We conducted an online survey in large, population-representative sample of Polish adults (aged 18+; N = 2515; 1349 women, 1160 men). Participants answered questions about media portrayals of CSBD and perceived stigma, reported support for treatment, research funding, and educational initiatives as well as indicated their willingness to discuss CSBD (in general and with friends, family, partners, and clinicians). A structural equation model (SEM) tested four latent constructs and the hypothesized paths. *Results:* The model showed acceptable-to-good fit (scaled $\chi^2(86) = 636.31$, $p < .001$; robust CFI = .944, TLI = .932, RMSEA = .058 [90% CI .053, .062], SRMR = .046). Sensationalist media portrayals strongly predicted higher perceived stigma ($\beta = .850$, $p < .001$; $R^2 = .723$). Perceived stigma predicted greater support for CSBD-related programs ($\beta = .400$, $p < .001$; $R^2 = .160$). Willingness to talk was predicted by program support ($\beta = .234$, $p < .001$) and perceived stigma ($\beta = .131$, $p < .001$; $R^2 = .097$). *Conclusions:* Results suggest that sensationalist media narratives are closely tied to CSBD-related stigma. Importantly, higher perceived stigma co-occurred with stronger support for programmatic responses and, to a lesser extent, greater willingness to talk - highlighting stigma-informed public education and clinical communication as actionable targets.

Keywords: compulsive sexual behavior, stigma, support

5F–5

Prevalence of problematic pornography use in the Turkish population: Evidence from a national health survey

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Background: Problematic pornography use (PPU) is increasingly recognized as a public health concern globally. However, existing literature relies heavily on convenience samples from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) populations, limiting the generalizability of findings to culturally conservative and non-Western societies. Em-

pirical data from Muslim-majority countries like Turkey are particularly sparse. This study aims to fill this gap by providing the first population-based estimates of PPU prevalence, derived from a nationally representative sampling frame of the Turkish general population. It further investigates the impact of data collection modalities (face-to-face vs. self-administered) on disclosure rates and examines the relationship between moral disapproval and PPU severity. *Methods:* The study employed a stratified two-stage cluster sampling strategy based on the Address-Based Population Registration System to select a representative sample of the From the total sample of the Turkish adult population (N = 35,292), the pornography module was completed by 4,248 participants who volunteered to answer the pornography use related questions. To mitigate social desirability bias associated with sensitive sexual behaviors, a mixed-mode design was utilized: 72.3% of participants completed the survey via Computer-Assisted Personal Interviewing (CAPI), while 27.7% opted for Computer-Assisted Self-Interviewing (CASI). PPU was assessed using the Brief Problematic Pornography Consumption Scale (PPCS-6) with a validated cut-off score of ≥20. Moral disapproval of pornography use was measured using a single item extracted from the Turkish Measure of Moral Disapproval of Pornography Use. *Results:* Among participants with lifetime pornography exposure (n = 1,079), the overall prevalence of PPU was found to be 8.4%. Contrary to common assumptions associating PPU with emerging adulthood, prevalence was significantly higher in the 35–44 age group (12.8%). A critical finding was the significant influence of administration method on reported prevalence: PPU rates were 5.2% in the CAPI group versus 13.2% in the CASI group. This effect was most pronounced among women; female PPU prevalence rose from 2.3% in face-to-face interviews to 12.0% in self-administered conditions, effectively closing the gender gap observed in the CAPI group. Furthermore, correlation analysis revealed a negative association between moral disapproval and PPU severity ($\rho = -0.31$, $p < 0.001$), suggesting that strong moral disapproval acts as a protective factor rather than a source of distress-induced reporting (supporting "moral congruence" rather than "moral incongruence" in this context). *Conclusions:* This study provides a robust epidemiological benchmark for PPU in a non-Western setting, challenging prior estimates derived from biased online samples. The findings highlight that the "gender gap" in PPU may be largely a methodological artifact resulting from underreporting in non-private settings. The dramatic increase in disclosure rates via CASI underscores the necessity of privacy-preserving methods for accurate assessment of sexual behaviors in conservative cultures. Additionally, the results support the moral congruence hypothesis, indicating that moral/religious values may curb problematic use in the general population.

Keywords: pornography, compulsive behavior, sexual behavior, problematic pornography use

5G–1

Motivational pathways to work addiction and work engagement across 85 cultures

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Introduction: Self-determination theory (SDT), a leading framework for understanding human motivation, has been applied across various domains, including the workplace. Work addiction and work engagement are two forms of heavy work investment that differ in their motivational underpinnings. This study examined the associations between motivation types, work addiction, and work engagement using data from the Global Research on Work Addiction project. *Methods:* The sample included 32,097 full-time employees (63.4% female) from 85 cultures across six continents. Participants completed the ultra-brief Multidimensional Work Motivation Scale, the International Work Addiction Scale, and the Utrecht Work Engagement Scale (UWES-3). Structural equation models were used to test six motivation types (amotivation, external–social, external–material, introjected, identified, and intrinsic) as predictors of work addiction and work engagement within each culture. *Results:* Controlling for other motivation types, work addiction was positively associated with amotivation (63.5% of cultures), external–social motivation (49.4%), and introjected motivation (56.5%), and negatively associated with intrinsic motivation (47.1%). Few significant associations were found in the opposite directions; the remaining relationships were nonsignificant.
For work engagement, the most consistent associations were negative with amotivation (95.3% of cultures) and positive with identified motivation (48.2%) and intrinsic motivation (100% of cultures). Additional multilevel modeling results, with motivation types specified as Level-1 predictors, will be presented. *Discussion and conclusions:* As the largest cross-cultural study on SDT in terms of cultural coverage, this research reveals distinct motivational patterns underlying work addiction and work engagement. Work addiction was primarily associated with amotivation and introjected regulation, suggesting a maladaptive pattern driven by internal pressure or a lack of purposeful direction. In contrast, work engagement was linked to more autonomous forms of motivation, particularly intrinsic and identified regulation, highlighting a healthier and more self-directed approach to work.

Keywords: motivation, workaholism, work addiction, work engagement

5G–2

Longitudinal associations between work addiction, problematic alcohol use, and rumination across three waves

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Background: Work addiction (WA) is a behavioral addiction characterized by excessive and compulsive work involvement and is associated with chronic overload, elevated stress, unhealthy lifestyle patterns, and more frequent use of psychoactive substances. Individuals with WA also tend to show higher negative affectivity, emotional lability, and insecurities related to low self-esteem. These characteristics suggest potential links between WA, problematic alcohol use (PAU), and rumination. Although pairwise associations have been reported, their reciprocal relationships have not been examined longitudinally, nor have all three constructs been studied simultaneously. *Methods:* Data were drawn from the four-wave Budapest Longitudinal Study (2019–2022), based on a representative sample of Budapest residents aged 18–34 years at Wave 1. Analyses were conducted separately for men (N = 883) and women (N = 877), including participants who completed all three measures across all waves. WA was assessed using the Bergen Work Addiction Scale, PAU with the Alcohol Use Disorder Identification Test, and rumination with the Ruminative Response Scale. Four-wave random intercept cross-lagged models were estimated to demonstrate within-person changes. *Results:* Among men, WA at Wave 1 positively predicted PAU at Wave 2. Between Waves 2 and 3, rumination positively predicted WA, while WA negatively predicted rumination; PAU at Wave 2 positively predicted rumination at Wave 3. Between Waves 3 and 4, WA positively predicted rumination. Among women, WA and rumination at Wave 1 both positively predicted PAU at Wave 2, while WA negatively predicted rumination. Between Waves 2 and 3, rumination positively predicted WA, PAU positively predicted both subsequent PAU and rumination, and rumination negatively predicted itself. Between Waves 3 and 4, WA positively predicted rumination. *Conclusion:* The results demonstrate time-specific, reciprocal longitudinal associations among work addiction, problematic alcohol use, and rumination, reflecting both reinforcing and compensatory processes related to emotional regulation, with notable gender differences.

Keywords: work addiction, rumination, problematic alcohol use

5G–3

The psychometric properties of the International Work Addiction Scale (IWAS) using CTT and IRT in a nationally representative UK sample

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Work addiction is a compulsive drive to work relentlessly and a preoccupation with work activities, often leading to personal harm, distress, and impaired relationships. It is characterised by seven criteria: salience, mood modification, tolerance, withdrawal, conflict, relapse and problems. Despite scholarly attention, it is not formally recognised in diagnostic manuals. This study validated the seven-item (IWAS-7) and five-item (IWAS-5) versions of the International Work Addiction Scale. Data were collected from two UK samples: a non-representative employee sample (n = 245, mean age = 28.93) and a nationally representative sample (n = 1,001). To enhance validity, analyses were conducted on employed individuals (n = 764, mean age = 44.45). Confirmatory Factor Analysis confirmed a single latent factor for both scales, with the IWAS-5 demonstrating superior psychometric properties. Both versions demonstrated internal consistency, convergent validity with the Bergen Work Addiction Scale, and criterion validity with relevant constructs. Scalar measurement invariance was established across genders, with no differences in latent means. Item Response Theory indicated the IWAS-7 performed best at moderate to high levels of work addiction ($\theta \approx 1–3$), particularly items 5-7. The IWAS-5 provides a brief, reliable measure of work addiction in the UK, consistent with the components model of addiction.

Keywords: work addiction, workaholism, international work addiction scale, psychometrics

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5G–4

Analysis of the cognitive profile of students at risk of problematic overstudying

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Compulsive overstudying, also conceptualised as study addiction, is an emerging behavioural addiction, affecting an estimated 10% of students. This pattern is linked with poorer mental and physical health, elevated stress, and lower academic performance despite increased study time. The major negative outcome of study addiction is academic burnout, which may further exacerbate emotional exhaustion. Study addiction is viewed as an early form of work addiction, potentially contributing to long-term dysfunction. Behavioural and substance addictions share common mechanisms, including deficits in executive functions, impulsivity, and maladaptive cognitive patterns. However, no study has directly examined cognitive functioning in relation to study addiction. Premises from work addiction and other behavioural addictions suggest possible distinct cognitive profiles among individuals with study addictive patterns. This is theoretically important given the paradox that studying is generally associated with enhanced cognitive abilities, while excessive, compulsive studying may be linked to less adaptive cognitive functioning. The study aims to examine whether people with a high risk of study addiction exhibit poorer performance in any domain of cognitive functioning. The research addresses a major literature gap by investigating cognitive functioning among students using standard methods, including Go/No-Go, Tower of Hanoi, Wisconsin Card Sorting Test, Digit Span forward/backward, Corsi Block Tapping forward/backward, alongside the measurement of study addiction (BStAS) and psychosocial correlates (i.a., perfectionism, impulsivity, depression, stress, rumination). Data collection will finish in February 2026, and the results of analyses of associations between cognitive and psychosocial functioning and study addiction will be presented during the conference. The study's results may contribute to prevention efforts targeting academic burnout and early work addiction, thereby enhancing students' well-being. Future studies should aim to examine the longitudinal changes in cognitive and psychosocial functioning of people at risk of study addiction.

Keywords: study addiction, compulsive overstudying, cognitive functioning, executive functions, neuropsychological assessment

5G–5

Not all support helps: Work-related social support as a moderator between work addiction and burnout

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Background: Although social support is considered a protective factor in preventing work addiction, far less is known about how it operates once addiction is already present. Does social support attenuate the severity of burnout, which is often associated with work addiction—and does the source of that support matter? To address this question, we examined whether work-related support from supervisors, co-workers, and close others, as well as non-work-related support from close others, moderates the associations between work addiction and burnout, expecting higher levels of support to weaken these links. *Methods:* We conducted an online survey with 1,101 full-time employees (Mean age = 40.33 years, SD = 9.91; 54.4% female) from the Hungarian sample of the Global Research on Work Addiction project. Work addiction was assessed using the Bergen Work Addiction Scale, burnout with four items from the Oldenburg Burnout Inventory, and social support with single items assessing work-related support from close others, supervisors, and co-workers, and non-work-related support from close others. *Results:* Several forms of social support significantly moderated the association between work addiction and burnout, but in the opposite direction of our hypothesis: higher levels of co-worker support and work-related support from close others strengthened this link. Other moderation effects were non-significant. *Conclusion:* The fact that significant effects emerged mainly for work-related support suggests that such support may reinforce work involvement rather than individual well-being. More broadly, these findings may reflect a reverse buffering effect, whereby poorly matched or excessive support can inadvertently intensify stress and difficulties linked to work addiction. Alternatively, individuals with more severe burnout symptoms may seek greater levels of support, contributing to the observed effects. Overall, the findings highlight the importance of differentiating between the types and quality of social support to better understand effective support in the context of work addiction.

Keywords: work addiction, social support, burnout

5G–6

Where is the link between workaholism and personality? Exploring personality facets

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Despite strong indicators that personality is an important predictor of important life outcomes closely related to workaholism, previous studies have failed to find a strong relationship between workaholism and personality. This missing link is likely due to previous studies not accurately measuring personality domains and missing analysis at the facet level. In the present study, we investigated the connection between workaholism and personality by using a complete representation of personality domains, analysing personality at the facet level and testing for potential masking and cancellation effects. To investigate the relation between personality and workaholism, we collected data on workaholism using the Multidimensional Workaholism Scale and personality using the HEXACO from 455 participants in the UK and the USA. We used correlations, linear regressions at the domain and facet level, LASSO regression, and a difference test to examine masking and cancellation effects. Our findings show that previous research might have missed important connections between workaholism and personality by not completely representing personality domains and neglecting facet-level analysis. Especially for the domains Honesty-Humility and Conscientiousness, facet-level analysis is important due to masking and cancellation effects. We discuss how our findings can be interpreted in line with previous research on workaholism and behavioural addictions. Overall, we uncovered the potential of personality to explain a large variance of workaholism with a few selected personality facets.

Keywords: workaholism, work addiction, personality, masking, cancellation

6A–1

10 years “Git good, get real”: Advantages of a partial 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, chief physician, double specialist in adult and child and adolescent psychiatry, himself a video gamer and founder of four 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, social media 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 and which he is been using für 10 years now. It will soon be updated and republished as an English version, including updated data on the effectiveness.

Keywords: gaming disorder, treatment, CBT, help-seeking

6A–2

Common practice elements of cognitive behavior therapy for gaming disorder

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Although there is emerging support for cognitive behavior therapy (CBT) for gaming disorder (GD), few treatment guidelines and practical clinical texts are available. This presentation will report on findings from an international systematic review of CBT treatment studies for GD, which aimed to extract the common practice elements from treatment manuals and protocols of identified CBT interventions. Guided by an international expert panel, this review identified CBT studies and then evaluated their associated treatment manuals, guidelines, handouts, and related resources. A database search yielding 8479 results identified 28

studies from 12 countries reporting on 22 CBT interventions (n=7 individual; n=7 group; n=8 mixed). Study authors were invited to share intervention materials, which were then independently coded and synthesized by two raters and the expert panel. Overall, 14 common practice elements were identified. The most frequent element was emotion regulation (n=21; 95.5%), followed by psychoeducation (n=20; 90.9%) and cognitive restructuring (n=19; 86.4%). Exposure techniques and therapy for self-esteem or self-concept were the least frequent (n=6; 27.3%). All individual CBT interventions used behavioral activation, psychoeducation, and relapse prevention, whereas emotion regulation was the most frequently used element in group CBT. These findings reveal the fundamentals of CBT in the GD evidence base and summarize established and less utilized therapeutic techniques. Shared understanding and standard implementation of CBT is foundational to advancing GD clinical research and a model of best practice.

Keywords: gaming disorder, treatment, CBT, help-seeking

6A–3

Help-seeking and harms across different problem gaming risk profiles

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Gaming disorder (GD) has been linked to impulsivity, emotional dysregulation and internalising symptoms, yet it remains unclear how these risk factors co-occur within gamers or how they relate to help-seeking behaviour. This online cross-sectional study recruited adult gamers via Prolific (N = 1036) who reported playing more than 13 hours per week. Hierarchical and k-means cluster analysis was conducted on impulsivity subtypes, emotional dysregulation, depression, anxiety and GD symptoms, identifying four distinct profiles: impulsive dysregulated gamers, dysregulated gamers, impulsive gamers and low-symptom gamers. These profiles were then compared on gaming hours, gaming-related harms, ADHD symptoms, wellbeing and subtypes of emotional dysregulation. Impulsive dysregulated gamers reported the highest GD symptoms, internalising symptoms, emotional dysregulation difficulties and harms, followed by dysregulated gamers, with impulsive gamers and low-symptom gamers showing progressively lower risk. Past, current and future consideration of help-seeking across professional, self-help, informal and peer-online formats also differed by profile. Overall, the findings indicate that distinct gamer profiles, defined by different constellations of impulsivity, emotional dysregulation and internalising symptoms, differ in terms of harm and help-seeking.

Keywords: gaming disorder, treatment, CBT, help-seeking

6A–4

Normality-disorder boundary issues in gaming disorder research

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A longstanding challenge in the behavioral addictions field has been determining the point at which gaming involvement becomes clinically significant problematic use. Gaming disorder (GD) and hazardous gaming as recent ICD-11 diagnoses have attracted polarized perspectives due in part to the global popularity of recreational gaming and gaming culture. The broad continuum of gaming can often be perceived differently by different parties, including gamers themselves; what might be seen as regular, harmless, and normative to some, may be considered risky and problematic by others. The ICD-11 guidelines provide some clarity by advising that gaming disorder should not be diagnosed based on persistent gaming alone; that gaming as part of a routine, developing skills, changing mood, or relieving boredom, or facilitating social interaction is not sufficient for a diagnosis; and that cultural and peer group norms should be considered in diagnosis. This presentation will draw from recent papers, including critical commentaries and empirical works, to examine gaming normality-disorder boundary issues in the areas of conceptualization, assessment, and interventions.

Keywords: gaming disorder, treatment, CBT, help-seeking

6A–5

Red Box, Green Box for adolescent gaming: Validation and mental health correlates

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In epidemiology and treatment research, quantifying patterns of problematic use is important for monitoring. Conventional frequency measures for gaming (e.g., asking individuals to self-report typical weekly gaming hours) have limitations due to lack of contextual information. A new approach, termed the ‘red box, green box’ method, has had promising initial results in adult samples. The method delineates gaming behaviors into two types: (1) time spent gaming during ‘free’ or leisure time (Green Box), and (2) time spent gaming at times when the respondent should be doing something else. The aim of the present study was to evaluate the measure in a large adolescent sample. We recruited 1897 South Australian adolescents aged 12-18 years (51% female) to evaluate the psychometric properties of the Box

method. This presentation will discuss links between Red Box, Green Box hours and gaming disorder symptoms (10-item Internet Gaming Disorder Test [IGDT-10]), as well as relationships between Red Box, Green Box patterns and the perceived negative impact of gaming. Further analyses examined broader indicators of wellbeing, including anxiety and depression (Revised Child Anxiety and Depression Scale [RCADS-11]), and psychosocial factors such as bullying experiences and school engagement. Study implications for behavioural assessment approaches in youth populations will be discussed.

Keywords: gaming disorder, treatment, CBT, help-seeking

6B–1

From screen to sweat: A study protocol of combined computer-based therapy and HIIT approach for adolescents with Internet Gaming Disorder

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Background: Internet Gaming Disorder (IGD) is an emerging problem especially due to rapid advances in the development of technology and digital platforms, including gaming. Adolescents are particularly vulnerable to IGD due to increased biopsychosocial risk factors associated with their developmental stage (including immature executive control function) which leads to physical, mental, and social impairments. This is a study protocol of a clinical study to examine the effectiveness of computer-based game and high-intensity interval training towards improvement of clinical symptoms and executive function in adolescents with IGD. *Methods:* 27 participants will be recruited from junior high schools in Jakarta to join this study. This is a 8-week longitudinal clinical trial, with a one group pre and post-test design. Assessments will take place at baseline (T0), 4th week (T1) and post-intervention / 8th week (T2). Improvement of clinical symptoms evaluated with Ten-Item Internet Gaming Disorder Test (IGDT-10) questionnaire, and executive function assessed with Behavior Rating Inventory of Executive Function (BRIEF) questionnaire. *Intervention:* Participants will undergo a total of 20 sessions of computer-based game (three times a week) and 16 sessions of High-Intensity Interval Training (HIIT) (two times a week) over the course of 8 weeks. The computer-based game is about delivering fruits as a fruit truck driver and each session will be 30-45 minutes. The HIIT session incorporates 8 moveset and will only take 4-8 minutes, each movement ranging from 20 to 30 s. *Conclusions:* We anticipate that a combined intervention of computer-based game and high-intensity interval training will enhance clinical symptoms improvement and executive function in adolescents with IGD, offering a new modality in IGD management.

Keywords: gaming disorder, behavioral addiction, digital addiction, gambling disorder, adolescent

6B–2

Addressing digital wellness among youth in India: Center for Advanced Research on Addictive Behaviours (CAR-AB)

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India's rapid digital growth, combined with its large youth population, has led to a rise in behavioral addictions, including problematic use of the internet, gaming, smartphones, social media, gambling, and other online activities. These behaviors are closely associated with mental-health concerns such as stress, anxiety, depression, and addiction. Despite their high prevalence and public-health significance, India currently lacks scalable, evidence-based prevention and intervention strategies, standardized digital-wellness curricula, and reliable tools for early risk identification. To address these gaps, the Indian Council of Medical Research established the Centre for Advanced Research on Addictive Behaviours (CAR-AB) as a national, multisectoral initiative. CAR-AB aims to develop AI-driven predictive models to identify youth at risk of excessive or problematic technology use; design and validate prevention-oriented intervention packages for youth, parents, and teachers; develop and evaluate a Screening, Brief Intervention, and Referral to Treatment (SBIRT) model for early detection and harm reduction; create standardized training modules for educators and healthcare professionals to promote digital well-being; and generate evidence-based national recommendations for digital-wellness promotion and behavioral-addiction prevention. The centre comprises five interconnected studies employing cross-sectional surveys, qualitative research, mixed-methods evaluations, quasi-experimental designs, and randomized controlled trials across multiple sites. Data collection includes validated psychological measures, digital-phenotyping indicators, and cognitive tasks. Machine-learning techniques with SHAP and LIME interpretability methods will be used to develop predictive models. Intervention packages will undergo iterative qualitative development, feasibility assessments, and process evaluations using established frameworks, while SBIRT effectiveness will be tested through a randomized controlled trial. Expected outcomes include a validated AI-based risk-prediction algorithm, modular prevention programs for youth, parents, and teachers, a tested SBIRT protocol for technology-related harms, standardized national training resources for educators and health professionals, and policy-relevant recommendations for integrating digital-wellness strategies into mental-health and education systems. CAR-AB represents India's first comprehensive national effort integrating AI, behavioral science, and implementation research to address digital-technology–related addictions. By shifting the focus to scalable, preventive, therapeutic and system-level approaches, the initiative aims to strengthen youth mental health and contribute to global digital-wellness efforts, with a model adaptable to other low- and middle-income settings.

Keywords: gaming disorder, behavioral addiction, digital addiction, gambling disorder, adolescent

6B–3

The efficacy of a early intervention mode for preventing Gaming Disorder in China

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Gaming Disorder (GD) cause severe health problem to Chinese adolescent and young adults. To better prevent GD, we try to build a joint preventive mode for GD among health, educational, community and family department, this preventive mode for GD including the early identification and referral system, school-based intervention system, community support for the family, and comprehensive intervention in health institution. This preventive mode has been tested in two high school (one is control, and the other one is intervention) in Shanghai, China, total of 99 adolescents meet the diagnostic guideline of Hazardous gaming were recruited in the study (50 in intervention school, and 49 in control school). The intervention group recieved 12 sessions psychosocial intervention in half year, and the control group just had regular psycho-education lessons. After intervention, the intervention group showed improvements in Health literacy, mood regulation, and decreasing the frequency and time spending on gaming. The study elucidate the promising future of the preventive mode implementation in preventing the GD. Brief introduction of institution: Shanghai Mental Health Center (Mental Health Center affiliated to Shanghai Jiao Tong University School of Medicine) was founded in 1935, with Mercy Hospital and Shanghai Psychiatric Hospital being its predecessors. The center consists of Xuhui campus and Minhang campus. There are more than 1,100 full-time medical staff and more than 2,100 open beds. The center has a strong technical force in clinical sub-specialties, including general psychiatry, clinical psychology, mood disorder, child and adolescent psychiatry, geriatric psychiatry, rehabilitation center and addiction medicine. It is committed to developing and improving the clinical diagnosis and treatment of mental diseases, and is building a national psychiatric center. The center also undertakes important functions such as WHO Collaborating Center for Research and Training in Mental Health, Shanghai Psychotherapy and Psychological Counseling Center, Shanghai Center for Mental Disease Control and Prevention, Shanghai Mental Health Research Institute, National Clinical Center for Mental Disease, and National Clinical Trial Center on Psychotropics and so on.

Keywords: gaming disorder, behavioral addiction, digital addiction, gambling disorder, adolescent

6B–4

Gambling motivation among adults in Indonesia: Patterns, predictors, and clinical implications

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Background: Despite its illegality, gambling remains prevalent in Indonesia, particularly through online platforms. Understanding gambling motives is essential for identifying individuals at risk of developing gambling disorder and for informing early intervention strategies, tailoring interventions, yet research and validated tools in the Indonesian context are limited. *Methods:* This cross-sectional study was conducted using both online and in-person data collection between March 1 and November 11, 2024. The sample consisted of 302 individuals with current or past gambling experience (mean age = 22 years). Gambling cognitive distortions were assessed using the Gambling-Related Cognitions Scale (GCRS), gambling motives using the Gambling Motives Questionnaire (GMQ), and gambling urges using the Gambling Urge Scale (GUS). Path analysis was employed to examine the relationships between cognitive distortions, gambling motives, and gambling urges. *Results:* The most common types of gambling were online gambling and slot machines. Among the participants, 54.3% met the criteria for gambling disorder, while 46.7% did not. Individuals with gambling disorder consistently reported significantly higher scores across all gambling motives, including coping, enhancement, social, and financial motives, compared to those without gambling disorder. The strongest motive for gambling in Indonesia's samples identified was enhancement and financial. Gambling motives mediated the relationship between cognitive distortions and gambling urges, with enhancement and financial motives demonstrating the strongest associations with urge severity. Gambling motives and urges were also associated with gambling frequency, history of online loans, recent debt, family history of gambling, and level of insight. *Conclusions:* Gambling motivations play an important role in linking cognitive distortions to gambling urges. These findings highlight the importance of integrating cognitive and motivational targets into early screening and intervention strategies, particularly for individuals engaged in online gambling in Indonesia.

Keywords: gaming disorder, behavioral addiction, digital addiction, gambling disorder, adolescent

6C–1

Understanding Chemsex: Epidemiology, definitional challenges, and research priorities

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Context: A recent meta-analysis found a global prevalence of chemsex among men who have sex with men (MSM) of 22%. However, the high heterogentity between studies suggest a complex phenomenon which still needs to be explored. Although chemsex represents a growing public health concern, important gaps persist regarding its determinants, associated variables, and the distinction between problematic and non-problematic patterns of practice. *Objective:* To provide an updated narrative review of the literature on chemsex, focusing on definitional issues, epidemiological data, and associated variables - in order to identify priorities for future research. *Method:* A narrative review of the international literature was conducted using MEDLINE. English- and French-language articles published without date restrictions were included. Studies addressing the definition of chemsex, its prevalence, and associated variables were examined. *Results:* Prevalence estimates of chemsex varied widely across studies, countries, and even cities. No consensual definition of chemsex was identified, with most studies restricting the concept to MSM populations. Problematic chemsex practices were associated with changes in sexual behavior (including substance-driven sexuality), general medical complications, and psychiatric symptoms, including insomnia, suicidal ideation, anxiety, and depressive symptoms. Compulsive sexual behavior has been explored as a potential determinant of problematic patterns of chemsex use. *Perspectives:* The marked heterogeneity of chemsex-related data highlights the need for a consensual definition of chemsex, both as a practice and as a clinical phenomenon. Importantly, such a definition should not be limited to a pathological framework. Exploratory research is needed to better characterize the full spectrum of chemsex practices and their associated variables, including problematic forms. Improved conceptual clarity may support the development of more effective preventive and therapeutic interventions.

Keywords*:* Chemsex, epidemiology, mental health, CBT, sexualised drug use

6C–2

Frequency of sexualized drug use and the association with addiction and mental health in a diverse sample of Canadian adults

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Background: Sexualized drug use (SDU) is the intentional use of psychoactive substances to enhance sexual experiences. SDU has been primarily studied in samples of men who have sex with men (MSM), often referred to as 'chemsex,' with a focus on concerns that substance use (e.g., disinhibition) may lead to excessive risk-taking (e.g., neglecting to use condoms). Research on SDU in samples other than MSM is sparse, even though SDU is prevalent outside of MSM and linked to negative health consequences (e.g., Sexually Transmitted Infections). Method: Using data from a cross-sectional online survey (N = 3636), this study examined the frequency of SDU in Canadians (both students and community adults, of any gender or sexual orientation) and the relationship between SDU and addiction, mental health, and psychological variables. Participants were grouped according to their frequency of SDU in the past 12 months: never (n = 3262), less than half of the time (n =200), and more than half of the time (n = 165). Participants engaged in SDU were primarily heterosexual (n = 236; 60.5%) or bisexual (n = 78; 20.0%) women (n = 274; 70.3%). *Results:* A one-way ANOVA with Tukey's post-hoc tests indicated that participants engaging in SDU more than half of the time scored highest on measures of compulsive sexual behavior, and problematic alcohol, cannabis, and other drug use. This group also reported greater psychological vulnerabilities, such as higher levels of depression, anxiety, stress, and impulsivity compared to those who did not engage in SDU. *Conclusions:* Results indicate that SDU occurs among Canadian adults of varying genders and sexual orientations. We extended previous research focusing on health risks, finding that SDU is also linked to addictive behaviors and psychological vulnerabilities.Because SDU has been primarily attended to in MSM, these results may inform the scope of future research and prevention strategies.

Keywords*:* Chemsex, epidemiology, mental health, CBT, sexualised drug use

6C–3

Sexual motivation in chemsex and sexualized drug use: A pilot clinical study

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Background: In clinical practice, patients engaging in chemsex or sexualized drug use frequently ask whether they are "dependent on sex, substances, or both". Research suggests a likely co-contribution of substance dependence and loss of control in sexuality, making it essential to target the most salient etiology in prevention and treatment. Sexual motivation typology may serve as a relevant indicator of what can be conceptualized as sexual entrapment versus self-determination. *Method:* The primary aim of this study was to examine sexual motivation types in individuals engaging in chemsex or sexualized drug use using standardized measures. Secondary aims were to compare these results with those of individuals with compulsive sexual behavior disorder (CSBD) and to explore differences according to self-identified "dependence" on sex versus substances. Univariate and exploratory factor analyses were conducted. *Results:* In this pilot study, 23 clinical participants were recruited from a specialized hospital setting. Intrinsic motivation was more pronounced than extrinsic motivation or amotivation and did not differ overall from CSBD participants (n=40). Participants identifying as "more dependent on sex" showed significantly higher intrinsic motivation than those identifying as "more substance-dependent". *Conclusion:* These preliminary findings suggest that treatment-seeking individuals integrate sexuality into their identity, particularly when they perceive themselves as "dependent on sex". Assessing sexual motivation may therefore support more tailored therapeutic interventions.

Keywords*:* Chemsex, epidemiology, mental health, CBT, sexualised drug use

6C–4

ChemCBT study: Study protocol of a randomised controlled trial of a group-based cognitive behavioural therapy intervention for the treatment of problematic chemsex practice

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Background: The prevalence of chemsex among men who have sex with men (MSM) ranges from 3% to 29%. Chemsex is associated with multiple health risks, including increased exposure to sexually transmitted infections, depression, anxiety, cognitive impairments and adverse social consequences. Despite being recognized as a public health issue, few validated psychotherapeutic interventions have been specifically developed or rigorously evaluated for individuals seeking treatment for problematic chemsex use. The ChemCBT program is a eight session cognitive-behavioral program specifically designed to address problematic chemsex use. We have established good acceptability and feasibility of the program through prior testing among a sample of 38 chemsex users. *Objective:* Our objective is to evaluate the efficacy of the ChemCBT program to reduce craving frequencyin comparision to a non-directive support group within problematic chemsex users. *Methods:* ChemCBT is a multicenter, randomized controlled trial comparing a manualized group-based cognitive behavioural therapy intervention with a non-directive support group. The intervention consists of eight weekly 90-minute sessions combining relapse prevention strategies and psychoeducation while addressing the sexual context of substance use. Participants are randomly assigned to the intervention or control group and assessed in double-blind conditions at baseline, week 8, and at 3, 6 and 12 months. The primary outcome is the change in craving frequency measured by the Craving Experience Questionnaire (CEQ). Secondary outcomes include craving intensity, substance use patterns, severity of substance use disorder, quality of life, and depressive and anxiety symptoms. *Expected Results:* It is hypothesized that the ChemCBT program is more effective than the control intervention in reducing craving frequency over time. *Conclusion:* This study aims to provide robust scientific evidence on the efficacy of a specific group cognitive behavioural therapy approach for problematic chemsex. Demonstrating its efficacy could support the implementation of adapted treatment programs and improve care for individuals seeking treatment for chemsex.

Keywords*:* Chemsex, epidemiology, mental health, CBT, sexualised drug use

6D–1

Comparison of parents' perceived gaming addiction in their children versus children's actual functionality indicators

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Background: As video gaming becomes increasingly popular among children—often replacing traditional leisure activities such as hanging out with friends outdoors—many parents worry about the impact this may have on their children's mental and physical well-being, fearing they may be addicted to video games. The present study aimed to compare parents' perceived gaming addiction in their children against the children's actual functional indicators as reported by the parents. *Methods:* A purposive online sample of parents with children aged 5–19 who play video games was collected (N = 714; 70.4% female, mean age 44.8 years; 90.2% of the children were boys with a mean age of 11.8 years). Parents' perceived gaming addiction in their children and children's actual functionality indicators were assessed along with demographic, behavioral, and psychological characteristics of the parents, children, and families. *Results:* While 40.3% of the parents perceived that their child was addicted to video games, only 30.1% of these children showed a risk of functional impairment in domains such as sleep and self-care, school functioning, family and social functioning, emotional and psychological well-being, and leisure and lifestyle activities. Both groups of parents were compared to each other and to parents who did not perceive their child as addicted. The quality of the parent-child relationship, parents' self-reported distress levels, and the child's average gaming time when they should be doing something else were the key variables differentiating these groups. *Conclusions:* These results suggest that most children perceived by their parents as addicted to video games actually appear to function well, questioning parents' ability to accurately evaluate the problematic nature of their children's gaming behavior. Furthermore, a poorer parent-child relationship and higher parental distress levels were associated both with false-positive evaluations and with the distinction between families where the child was at risk of functional impairment versus those where they were not.

Keywords: parents, children, gaming disorder, parent-child relationship, parental distress

6D–2

Parental profiles in video game mediation: Links to parent, child, and family variables

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Background: The increasing popularity of video gaming as a recreational activity has set new challenges for families, especially parents who now need to guide their children's gaming behavior as well, which they often perceive as excessive. The study aimed to identify parental profiles in video game mediation and compare these along parent, child, and family variables. *Methods:* A purposive online sample of parents with children aged 5–19 who play video games was collected (N = 714; 70.4% female, mean age 44.8 years; 90.2% of the children were boys with a mean age of 11.8 years). Parents' mediation strategies (restrictive and active mediation, co-playing) along with demographic, behavioral, and psychological characteristics of the parents, children, and families were assessed. Latent profile analysis (LPA) was conducted to identify distinct profiles of parents. *Results:* Four profiles were identified: Disengaged Mediation (43.4%), characterized by below-average engagement across all strategies; Balanced Mediation (25.2%), with average engagement across the three strategies; Instructive Mediation (19.3%), prioritizing shared play and active guidance over restriction; and Highly Active Mediation (12.1%), utilizing all strategies intensely, especially co-playing. The four groups differed considerably across demographic, behavioral, and psychological variables. Parents in the Highly Active Mediation group have significantly fewer arguments with their children about video games and feel that their mediation is successful. *Conclusions:* The findings suggest that co-playing and active mediation are the key variables distinguishing between parents and are the best strategies to successfully mediate children's gaming behavior.

Keywords: parental profiles, children's gaming behavior, parental mediation, co-playing, active mediation, restrictive mediation

6D–3

Escape-motivated gaming and gaming disorder risk in adolescence: Associations with internalizing symptoms and family processes

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Gaming Disorder (GD), as defined in the ICD-11, is characterized by impaired control over gaming, increasing priority given to gaming over other activities, and continuation despite negative consequences. Among proposed psychological mechanisms underlying GD, escape-motivated gaming has emerged as a particularly robust risk factor. However, limited research has examined how escape motives relate to adolescent mental health and family-level processes in non-clinical populations. The present study investigated associations between escape motives for gaming, internalizing and externalizing symptoms, parenting practices, and family climate among Swedish adolescents. Data were drawn from the GAMEPSY project and included 241 upper secondary school students (Mage = 16.9 years) who reported engaging in digital gaming. Gaming motives were assessed using the Motives for Online Gaming Questionnaire, while mental health symptoms, parenting practices (such as parental knowledge, overcontrol, and adolescent secrecy), and family climate (cohesion and conflict) were measured using validated self-report instruments. Descriptive analyses indicated that recreation was the most prevalent gaming motive. Other, less common motives, specifically escape, fantasy, and coping, were significantly associated with internalizing symptoms. Adolescents with high levels of escape-motivated gaming reported significantly higher internalizing problems compared to peers with low escape motivation. In regression analyses, several psychosocial factors initially predicted escape motivation, including parental overcontrol, permissive parental attitudes toward gaming, reduced parental knowledge, and adolescent secrecy. When all variables were entered simultaneously, internalizing problems and adolescent secrecy toward parents emerged as the only unique predictors, accounting for a substantial proportion of explained variance. These findings support ICD-11 conceptualizations of GD by highlighting escape-motivated gaming as a maladaptive coping strategy closely linked to emotional distress and relational processes within the family. Prevention and early intervention efforts may benefit from addressing adolescents' internalizing symptoms and strengthening open parent–child communication, rather than focusing solely on gaming behavior or screen time reduction.

Keywords: gaming problems, escape motives, parenting practices, mental health, adolescents

6D–4

Evaluation of the relationship between family characteristics, psychological problems and gambling severity across different gambling types

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Gambling disorder is a behavioral addiction that is closely associated not only with individual consequences but also with family functioning. The widespread availability of online gambling has enabled gambling behavior to be maintained in a more concealed, accessible, and less controllable manner, which has been reported to negatively affect both gambling severity, mental health and family functioning. However, studies examining family characteristics and gambling severity together across individuals who prefer different types of gambling remain limited. This study was conducted using data from 8,665 individuals who applied to YEDAM and received family counseling. Of the participants, 8,240 preferred online gambling, while 425 preferred non-online (land-based) gambling types. To reduce group imbalance, individuals in the non-online gambling group were matched with those in the online gambling group at a 1:3 ratio based on age and gender variables. Individuals who engaged in online gambling had significantly higher gambling severity scores compared to those who preferred non-online gambling types ($p < 0.01$). In addition, online gamblers exhibited significantly lower scores in several family functioning subdimensions, including responsibility assignment, conflict resolution, rule-setting, family cohesion, and family members' attitudes ($p < 0.01$). Furthermore, internet-based gamblers reported significantly higher levels of depression and anxiety ($p < 0.05$).The findings indicate that online gambling behavior is associated with higher levels of gambling severity and poorer family functioning. Compared to land-based gambling, online gambling can be maintained in a more concealed and less controllable manner, leading to later detection by family members; this delay is associated with greater gambling severity and more pronounced impairments in family functioning . These results highlight the importance of addressing gambling-type-specific risks and family dynamics together within treatment and prevention programs.

Keywords: gambling disorder, online gambling, family functioning

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6D–5

The relationship between childhood experiences, work addiction, and impostor feelings: A pathway analysis through parentification, overparenting, self-esteem, and perfectionism

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Background: While empirical studies have demonstrated the role of low self-esteem and high perfectionism in work addiction, little is known about how these personality factors relate to early childhood experiences such as parental behavior and parentification, or how they are connected to impostor phenomenon. The present study aimed to test whether parentification and overparenting function as antecedent variables predicting work addiction and impostor phenomenon through the mediating roles of self-esteem and perfectionism. *Method:* A large cross-sectional Hungarian adult sample (N = 12,301; 50.3% of males; M_age = 42.45, SD = 12.31) completed standardized self-report measures assessing parenting experiences, self-esteem, perfectionism, work addiction, and impostor phenomenon. Pathway analysis was used to evaluate direct and indirect effects. Gender differences were also tested within the model. *Results:* The pathway model showed acceptable fit. Higher perfectionism predicted greater work addiction and stronger impostor feelings, whereas higher self-esteem predicted lower levels of both outcomes. Parentification and parental overcontrol/overprotection were associated with lower self-esteem and higher perfectionism. Indirect pathway analyses indicated that parentification had substantial indirect effects on impostor phenomenon and work addiction. Parental control also showed significant indirect effects on impostor phenomenon, mainly through reduced self-esteem, and smaller but meaningful indirect effects on work addiction. The model accounted for 15.7% of the variance in self-esteem, 11.0% in perfectionism, 55.6% in impostor phenomenon, and 24.0% in work addiction, suggesting that the included predictors explained substantial portions of variability, particularly for impostor phenomenon. *Conclusions:* Findings indicate that adverse childhood caregiving experiences play a role in the development of personality characteristics – such as low self-esteem and maladaptive perfectionism – that can, in turn, manifest in adulthood as work addiction and impostor feelings.

Keywords: work addiction, impostor phenomenon, parentification

6E–1

Prevalence and co-occurrence of adolescent problematic screen-based behaviours: National school survey

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Background: Problematic digital media use in adolescence represents a growing public health concern (Santos et al., 2023). The exponential rise of digital media consumption has had a profound impact on adolescent lifestyle; physical and mental health risk factors, substance use and behavioural addictions (Pandya & Lodha, 2021; Tang et al., 2021). However, the literature remains limited with respect to prevalence and how these behaviours co-occur, with other risk behaviours, and with established mental health indicators. This study examined this gap within a national school survey exploring prevalence and co-ocurrence of problematic digital media use and pscyhological associations and substance use. *Methods:* A national cross-sectional survey of secondary school students was conducted across students age 11-20 years (N = 2,472). The sample comprised students in school years 10–13 (N = 1,254; mean age = 15.51 years; 47.85% male). Problematic gambling, gaming, and social media use were assessed using the Lie/Bet Questionnaire, an abbreviated IGDT-10, and the Bergen Social Media Addiction Scale. Latent class analysis was conducted in Mplus 8, with classes subsequently compared on psychological characteristics, substance use, and demographic variables. *Results:* Prevalence was 11.08% for problematic gambling, 17.2% for problematic gaming and 12.1% for problematic social media use. Five latent classes were identified: a low problem profile (59.97%), moderate gaming problem profile (24.16%), moderate problem co-occurrence profile (10.64%), and two smaller high-severity classes reflecting dominant social media risk and broad co-occurrence respectively (2.6% each). Higher severity classes demonstrated elevated hyperactivity, loneliness, non-productive thoughts, and substance use compared to the low problem profile. *Conclusions:* Significant heterogeneity exists within problematic digital behaviours found, with a significant minority presenting co-occurring profiles associated with broader psychological and substance use risk. These population-level findings provide improved understanding of patterns and prevalence related to targeting adolescent digital risk. *Keywords:* adolescent, gaming disorder, problematic social media use, problematic gambling, co-occurrence, risk behaviours, latent class analysis.

Keywords: national survey, gambling, gaming, social media

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6E–2

The latent structure of public attitudes towards addictive behaviours: Exploring the distinct representations of substance-related and behavioural addictions

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Background/Aim: Previous Hungarian and international studies have consistently shown that people with substance use disorders belong to the least socially accepted groups. However, much less is known about how the public perceives different addictive behaviours relative to one another and whether these perceptions reflect distinct underlying cognitive representations. Using data from the 2023 Hungarian National Population Survey on Addictive Problems (NSAPH 2023), this study aims to: (1) examine social distance towards 11 groups representing substance-related and behavioural addictions; (2) identify the latent structure underlying these attitudes; and (3) explore the individual and social features associated with the resulting latent dimensions. *Methods:* The analysis is based on a nationally representative sample of the Hungarian population aged 18–64 years (gross sample: 2,200; net sample: 1,800). Social distance was assessed using the friendship item of the Bogardus Social Distance Scale, complemented by a neighbourhood item for substance-related addictions. Factor analysis was performed to identify latent dimensions, and linear regression models were constructed using a 32-item variable set to explain these factors. *Results:* A distinct pattern emerged in the perception of the examined social groups based on social distance. The proportion of respondents unwilling to befriend drug addicts (87.9%) and alcohol addicts (80.6%) was significantly higher than for those unwilling to befriend individuals with behavioural addictions, such as gambling (36.5%) or work addicts (11.2%). Factor analysis identified two well-fitting latent factors encompassing six of the eleven studied groups: one reflecting attitudes toward behavioural addicts (Factor 1) and the other toward substance abusers (Factor 2). Regression models revealed that classical deviance theories (e.g., anomie and social integration) explain Factor 1, while deprivation and cultural status, apart from the previous ones, play significant role in Factor 2. *Conclusions:* The findings suggest that the public does not perceive addictive behaviours as a single homogeneous category. Rather, substance-related and behavioural addictions constitute two distinct dimensions of social representation, characterised by different levels of social rejection and different explanatory

mechanisms. These results contribute to a more differentiated understanding of addiction-related stigma and may inform future public health communication and stigma-reduction strategies. *Funding:* This research was funded by the National Research, Development and Innovation Office (Grant ID: K143732).

Keywords: social attitudes, behavioural addictions, substance based addictions, exploratory models

6E–3

Tabletop Role-Playing Games (TTRPGs) mediated psychological intervention for people with concomitant gaming disorder and social anxiety: A clinical pilot

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Background: There is a paucity of treatment approaches for people with concomitant gaming disorder and social anxiety, despite an increasing number of treatment-seeking case with this specific profile. The present pilot clinical study capitalizes on a structured protocol in which a group of patients with gaming disorder and co-occurring social anxiety were exposed to real-life social interactions while playing an offline tabletop role-playing game (akin to Dungeons and Dragons). *Methods:* A group of five patients with gaming disorder (matching ICD-11 criteria) recruited at the Center for Excessive Gambling (Lausanne University Hospital) participated in a 10-week experiment involving 10 sessions organized in three modules (for a comprehensive program description see: https://doi.org/10.1098/rsos.250273). Each module deployed 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 followed a multiple single-case quasi-experimental design with a 6-week baseline, a 10-week intervention, and a 3-week follow-up (at three months). Primary outcomes were gaming disorder and social anxiety symptoms. *Results:* Four of the five patients completed the study. Single case analyses showed that the intervention was efficient – in terms of symptom reduction – for three patients. Most effects were maintained at follow-up. *Conclusion:* This pilot clinical study paves the way for a new sort of non-medicalized treatment for people with gaming disorder.

Keywords: gaming disorder, treatment, video games

6E–4

How adverse childhood experiences shape problematic social media use in adolescents: The role of depressive symptoms

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Background: Problematic social media use (PSMU) has emerged as a rapidly growing public health concern among adolescents, given its potential impact on emotional, social and academic functioning. Emerging evidence links early adverse childhood experiences (ACEs) and depressive symptoms to the development of PSMU among adolescents. Thus, instead of viewing PSMU as an isolated behavior, there is an increasing need of understanding this phenomenon within a developmental framework for insights on developing effective assessment and intervention approaches. *Objective:* The purpose of the current study was to explore the relationships between Adverse Childhood Experiences, depressive symptoms and PSMU. *Methods:* A total of 592 adolescents aged between 14-18 years from schools of Urban Bengaluru were recruited through convenience sampling. They completed the Adverse Childhood Experiences Questionnaire; Bergen Social Media Addiction Scale and Patient Health Questionnaire. *Results:* The findings revealed that ACEs lead to PSMU directly (0.89. $p<.001$) and also indirectly (0.655, $p<.01$) via depressive symptoms. Adolescents with ACEs tend to perceive the world as unsafe and demonstrate heightened vulnerability to stress, which increases their risk for depressive symptoms. Therefore, they have a high propensity of adopting maladaptive coping strategies such as increased reliance on social media use as a compensatory tool to alleviate depressive symptoms, temporarily fulfilling the needs of belongingness and social support that enhance their low self-esteem making online socialization a better alternative. However, this reliance can increase the risk of developing PSMU. *Conclusion:* This study highlights that ACEs act as a risk factor for developing PSMU In addition, depressive symptoms act as a mediating mechanism between ACEs and development of PSMU. These findings have significant implications for early identification of risk factors and development of healthy use of technology intervention programs among adolescents.

Keywords: adverse childhood experiences, depression, problematic social media use, adolescents, risk factors

6E–5

Longitudinal associations between depressive symptoms and frequency of pornography use across five waves

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Background: Depressive symptoms and pornography use are prevalent in the United States. Previous cross-sectional studies have consistently found positive associations between the two, but longitudinal evidence is still limited and often based on only two measurement waves. *Method:* We conducted a five-wave longitudinal study using a nationally representative sample of American adults (n = 2,806; 53% women). Associations between depressive symptoms and pornography use frequency were examined using partial correlations and a random-intercept cross-lagged panel model (RI-CLPM). All analyses were adjusted for age, gender, and moral disapproval of pornography use. *Results:* Across all five waves, depressive symptoms were positively associated with pornography use frequency, independent of age, gender, and moral disapproval. The RI-CLPM indicated that these associations were stable over time and primarily reflected between-person differences rather than reciprocal within-person effects across six-month intervals. *Conclusions:* In a population sample of American adults, depressive symptoms and pornography use frequency are positively related. This relationship appears to represent a stable between-person association that is not explained by demographics or moral attitudes toward pornography. Future research should employ ecological momentary assessment and multi-wave longitudinal designs with varying assessment intervals to better clarify temporal dynamics.

Keywords: pornography, longitudinal, depression, depressive

6E–6

Investigating the presence of inflammatory marker c-reactive protein amongst a sample of video gamers

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Background and aims: Video games can offer psychological, physical, and emotional benefits. However, as with many activities, excessive or maladaptive gaming may be associated with negative outcomes. Problematic gaming has been linked to clinical conditions such as Gaming Disorder, as recognised in major diagnostic frameworks. While existing research has largely focused on psychological consequences of problematic gaming, (e.g., anxiety, depression), far less is known about its potential links to broader physiological health outcomes. One emerging area of interest is inflammation, a key biological marker associated with both mental and physical health, which may be relevant to understanding the wider health impacts of problematic video game use. *Methods:* Initially 192 participants completed a questionnaire measuring different aspects of lifestyle including sleep quality, sitting and sedentary behaviours, depression, anxiety and stress, physical activity, and Internet Gaming Disorder. Based on the results, 30 participants were invited to a follow -up study. The 30 participants (15female) were asked to keep a food diary for 7 days and then invited to provide a blood sample. Blood samples were then centrifuged to separate plasma from cellular components, and plasma was aliquoted into separate vials for analysis. Samples will be analyses using an ELISA kit to detect the presence of the inflammatory c-reactive protein (CRP). *Expected results and implications:* Building on evidence linking other problematic behaviours to inflammation, this exploratory study tests the hypothesis that problematic video game players will exhibit elevated CRP, even after controlling for mental health, sleep, physical activity, sedentary behaviour, and diet. To our knowledge, this is among the first studies to examine inflammatory markers in problematic gaming.

Keywords: gaming, inflammation, c-reactive protein

6F–1

Can gambling-specific metacognition predict risky loot box buying? Evidence from a two-wave longitudinal study

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Background: Loot boxes refer to items in Internet games that can be bought with real-world or virtual money and provide players with a random and uncertain reward. They are considered a gambling-like product due to their resemblance to gambling, such as the randomized reinforcement process. Previous studies found that individuals' loot box engagement is associated with their gambling behaviors, but there is limited knowledge about its associations with gambling-specific cognitions (e.g., metacognition about gambling). Grounded in the Self-Regulatory Executive Function (S-REF) model, this study aims to examine the longitudinal relationship between metacognition about gambling (MGQ) and risky loot box engagement. *Methods:* A total of 672 Chinese adults with experience of loot box engagement were recruited via a convenience sampling method and completed the baseline survey. Of these, 57% completed the questionnaire in the 6-month follow-up. Validated self-reported assessments were used to measure participants' risky loot box engagement and MGQ. The temporal relationship between risky loot box engagement and MGQ was tested using a cross-lagged panel model. *Results:* The model showed satisfactory model fit. Only positive MGQ significantly predicted more risky loot box engagement, while the prediction of negative MGQ on risky loot box engagement is non-significant. Moreover, risky loot box engagement significantly and positively predicted both dimensions of MGQ. *Conclusions:* This study extended the application of the S-REF model to risky loot box engagement and deepened the understanding of its association with gambling by demonstrating not only the predictive role of gambling-specific metacognition but also the potential prospective effects of risky loot box use on such metacognition. Further research may examine whether and how meta-cognitive techniques can be integrated into related interventions.

Keywords: loot box buying, in-game behavior, gambling, metacognition, cross-lagged panel model

6F–2

Problem gambling and digital loot box, physical blind box, and card pack spending: a Mainland Chinese survey

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Gambling-like products share structural and psychological characteristics with legally regulated traditional gambling (e.g., roulette and slot machines) but are generally not regulated as gambling. Virtual gambling-like products include video game loot boxes. Physical gambling-like products include blind boxes and card packs. These products recently gained significant worldwide popularity. Stakeholders are concerned about potential harms, including overspending and the normalisation of gambling amongst children. The relationship between problem gambling or experiencing gambling harm and spending on virtual gambling-like products (i.e., loot boxes) is well-established and replicated. However, little research has been done in relation to the relationship between problem gambling and spending on physical gambling-like products (i.e., blind boxes and card packs). We propose a survey of Mainland Chinese video game players, which is a demographic that is mostly likely to engage with gambling-like products, to investigate whether (i) spending on various gambling-like products (i.e., loot boxes, blind boxes, and card packs) predict the severity of gambling-related problems and (ii) spending on physical gambling-like products (i.e., blind boxes and card packs) predict the severity of gambling-related problems differently (i.e., to a lesser or greater extent) than spending on digital gambling-like products (i.e., loot boxes) predicts the severity of gambling-related problems. This study is currently under review as a stage 1 registered report. We expect to have the finalised results by the conference dates.

Keywords: loot boxes, video games, card packs, blind boxes

6F–3

Mapping emerging gambling formats and gambling harms among upper secondary school students in Sweden

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Background: Gambling is common among adolescents and individuals below the legal gambling age (18 yrs) is increasingly being exposed to new forms of gambling. This study examined the prevalence of gambling, problem and harms from gambling, among upper secondary school students in Sweden. *Methods:* An online survey was completed by 722 students (62% boys) with a mean age of 17 years. The majority (61%) attended a sports-oriented school program and most lived with their parents. The questionnaire assessed past-year gambling, gambling-related problem (PGSI-4) and harm (GHS-10), gambling formats and mental health. *Results:* Preliminary analysis shows that two out of three boys and nearly half of girls had gambled in the past year. Having any sign of past year problem gambling was reported by 16% of boys and 2% of girls. Gambling-related harm was common; the most frequent consequences were reduced access to spending money (57%), feelings of remorse, and diminished savings. Among boys who gambled, 24% reported some level of problem gambling and 25% experienced at least one gambling-related harm. Older students showed higher risk: 80% of boys aged 18+ had gambled in the past year, with problem gambling three times more frequent than among boys aged 16–17. Girls mainly engaged in bingo and lottery play, while boys gambled more often and riskier formats such as online casino games and sports betting. Loot box spending was reported by 18% of boys and 2% of girls. Students living alone or with a partner, and those active in team sports, showed somewhat higher gambling involvement and harm. *Conclusions:* Gambling and gambling-related harm are common in this adolescent population, particularly among boys and students 18 years or more. The findings also highlight that adolescents access gambling before legal age, and that online gambling opportunities have increased.

Keywords: adolescents, gambling, mental health

6F–4

A multidimensional framework of gambling-related psychological features of loot boxes: Development and empirical test of social comparison

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Background: Loot boxes are randomised in-game monetisation mechanisms sharing structural and psychological similarities with gambling. Previous research examined associations between loot box engagement and problematic gambling, gaming disorder, and gambling-related cognitions. However, the existing frameworks focus on structural aspects of loot box design, neglecting the psychological mechanisms driving players' excessive spending. *Methods:* To address this, we developed a theory-grounded framework identifying 23 gambling-related features across six domains, including monetary manipulation and investment, psychological manipulation, sensory gambling cues, fear-of-missing-out mechanics, reward structure and probability systems, and social dynamics. Social dynamics were then examined through an experimental design, where 90 game players were randomly assigned to three conditions (no comparison, horizontal comparison, and upward comparison) to test the effect social comparison. Loot box purchasing behaviour was recorded, and participants completed measures of gambling-related cognitions (GRCS), problematic gambling severity (PGSI), and gaming disorder (GAS). *Results:* Linear mixed-effects modelling indicated that social comparison did not significantly predict loot box spending (β=.143, p=.182). Spending was significantly correlated with gambling-related cognitions (r=.21, p=.049) and gaming disorder (r=.23, p=.027). Importantly, speed of play measured as time intervals between loot box purchases were found to significantly predict spending proportion (r = -.39, p= .003), reflecting gambling research on play speed. *Conclusion:* This research programme developed a multidimensional framework linking loot box design with gambling psychology theories. Findings demonstrate that social comparison and reward rarity do not significantly boost effects. Additionally, the finding that play speed predicted spending is particularly noteworthy as it mirrors patterns observed in traditional gambling contexts. Future research can test factors identified by the framework through empirical behavioural experiments to examine their influences on loot box purchasing to advance theories of this gambling-like mechanisms in video games and contribute to the broader understanding of behavioural addiction mechanisms.

Keywords: adolescents, gambling, mental health

6F–5

Financial harms of gaming: Cross-national evidence from the International Gaming Survey

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Background: Financial harms arising from intensive monetisation strategies in games, including microtransactions and gacha systems, are increasingly recognised but remain underexamined in relation to gaming disorder (GD). Existing GD screening tools rarely include financial harm items, despite emerging evidence that overspending may be a meaningful impairment domain. *Method:* We analysed cross-sectional data from the 2022 International Gaming Survey across five countries (Australia, United States, China, Indonesia, and the Netherlands). Participants were categorised as at risk of gaming disorder based on ICD-11 criteria. Two outcomes were assessed: self-reported overspending on games and perceived financial burden. Logistic regression models tested the association between GD risk and both financial outcomes, adjusting for age, gender, country, education, partnership, parental status, and work or study status. *Results:* Participants at risk of gaming disorder had more than five times higher odds of reporting game-related overspending (OR=5.36, 99.38% CI: 3.31–8.69) and nearly eight times higher odds of reporting financial burden (OR=7.76, 99.38% CI: 4.88–12.35). Financial harms were concentrated among men, younger adults, and players in China and Indonesia. Associations remained robust across all adjusted models. *Conclusions:* Financial harms are a significant and under-recognised component of problematic gaming. Findings support the routine inclusion of financial harm indicators in GD assessment tools and highlight the need for strengthened consumer protections in heavily monetised gaming environment

Keywords: gaming, financial harm, gacha

6G–1

Problematic social media use, communication quality, and dyadic adjustment: A mediation analysis among romantic partners

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Problematic social media use has increasingly been associated with disruptions in interpersonal communication and relationship functioning. While previous research suggests that excessive social media engagement may undermine relationship satisfaction, the mechanisms through which this effect occurs remain insufficiently understood. The present study examines whether communication quality mediates the association between problematic social media use and dyadic adjustment among married couples. The study will be conducted with formally married adults. Problematic social media use will be assessed using the Problematic Social Media Use Scale (PSMUS), communication quality with the Communication Quality Scale, and dyadic adjustment with the Revised Dyadic Adjustment Scale (RDAS). Correlation analyses will first be applied to explore the relationships among variables. Subsequently, regression analyses will be performed to test the mediating role of communication quality in the relationship between problematic social media use and dyadic adjustment. The proposed model hypothesizes that higher problematic social media use will be associated with lower communication quality, which in turn will predict lower dyadic adjustment. This study aims to provide a deeper understanding of how digital behaviors influence the quality of marital relationships in the contemporary era. The findings are expected to inform clinicians and researchers working to promote relational well-being in the digital age.

Keywords: problematic social media use; communication quality; dyadic adjustment; married couples; mediation; relationship functioning; digital behavior

6G–2

Exploring live-streaming addiction through the lens of self-determination theory: The mediating role of parasocial relationship

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Background: The increasing popularity of live-streaming platforms has coincided with growing concerns regarding potential addiction among users. Such real-time engagement may foster viewers' one-sided emotional bonds with streamers (i.e., parasocial relationship), which may increase the risk of live-streaming addiction. Based on self-determination theory (SDT), this study aims to investigate whether individuals experiencing high frustration of the relatedness need report stronger parasocial relationship (as a mediator), which in turn relates to greater live-streaming addiction. *Methods:* An anonymous online survey with validated scales among about 800 Chinese adults (54% female; Mage=30, SDage=5) was conducted. Bivariate correlations and the mediation model (Model 4; Hayes's PROCESS macro) were tested. *Results:* Significant positive inter-correlations were found among the three variables, except the negative one between relatedness frustration and parasocial relationship. Mediation testing with 10,000 bootstrapped samples revealed a significant total and direct effect of relatedness frustration on life-streaming addiction (0.23, 95%CI[0.12, 0.33] and 0.34, 95%CI[0.26, 0.43] respectively), while its significant and negative indirect effect via parasocial relationship was revealed (95%CI[-0.17,-0.06]), given a negative association between relatedness frustration and parasocial relationships (β = -0.06, 95%CI[-0.09,-0.04]) *Conclusion:* Our findings provide some evidence for SDT explaining new forms of technological addiction. Although both relatedness frustration and parasocial relationship are potential risk factors of life-streaming addiction, further research on how relatedness need links to development of parasocial relationship and/or life-streaming addiction is warranted. The findings also underscore the need for supporting at-risk groups to promote their sense of belonging and healthy two-side online/office social connections.

Keywords: parasocial relationship, live streaming addiction, self-determination theory

6G–3

Impact of social media use on psychological and physical health: A systematic review of meta-analyses

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Background: Over the past decade, social media use has become a pervasive behavior of daily life, leading to growing concern about its consequences on psychological and physical health. A growing number of studies and meta-analyses have examined relationships between social media use and a wide range of health outcomes. However, the overall evidence remains limited and methodologically heterogeneous. The present review provides a systematic overview of meta-analyses investigating the effects of social media use on psychological health, particularly cognitive and affective processes, and physical health outcomes. *Method:* We conducted a systematic review of meta-analyses focusing on the association between social media use or problematic social media use and psychological outcomes (e.g., depression, anxiety, cognitive and affective processes) and/or physical health outcomes (e.g., sleep quality, visual problems, etc.). *Results:* The reviewed meta-analyses generally indicate significant associations between social media use and a range of psychological outcomes, including higher levels of internalizing symptoms and alterations in cognitive and affective-motivational processes. Associations with physical health outcomes, particularly sleep disturbances and other physical complaints, were also frequently reported.*Conclusions:* Both social media use and problematic social media use seem to have a meaningful impact on psychological and physical health. These issues will be discussed in detail, with a focus on their implications for public health and future research.

Keywords: problematic social media use, systematic review, health outcomes

6G–4

Social media and social reward: Evidence and future directions

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Background: Recent research from our lab highlights the utility of conceptualising social media use and overuse as a behaviour driven by social reward (Ihssen & Wadsley, 2021; Wadsley, Covey, Ihssen, 2022). In this presentation we aim to consolidate this perspective by synthesising our recent findings and outlining directions for future research. Furthermore, we will present novel data indicating that social reward seeking represents a critical factor

distinguishing active social media engagement from abstention. *Method:* To examine (social) reward processing in social media use, we adapted well-established paradigms from research on drug and food reward. These included visual cue reactivity, approach-avoidance tasks, choice tasks, and psychophysiological recordings. In our most recent study, we combined self-report measures (Social Reward Questionnaire; Foulkes et al., 2014) with a Social Incentive Delay task (SID) to compare social reward processing in a group of 132 social media users and non-users. *Results:* Across studies we show that social media use is highly rewarding. Compared to control stimuli/activities, social media elicit automatic approach motivation, physiological states of incentive immersion, and a willingness to pay for social rewards. Importantly, use intensity amplifies these effects. Measures of problematic use, however, show only selective associations with reward measures (e.g. cue-elicited desires). Interestingly, in our latest study non-users did not exhibit lower sensitivity to social feedback in the SID, but they showed a lower overall tendency to engage in social reward seeking, compared to active users. *Conclusions:* Our findings suggest that social media tap into human needs for approval and belonging and provide a highly rewarding experience. This may explain their pervasive adoption across and frequent use within individuals. However, high engagement based on gratification of social needs alone does not necessarily lead to problematic behaviour, which may be more closely tied to negative reinforcement and compensatory mechanisms (Brand et al, 2025).

Keywords: social media, social reward, problematic social media use

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7A–1

Mental imagery in addictive behaviors: A special focus on online compulsive buying-shopping disorder

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Background: Across addictive behaviors, mental imagery is considered a transdiagnostic cognitive mechanism that intensifies desire and facilitates behavioral engagement. Online compulsive buying-shopping disorder (OCBSD) is a condition in which imagery-based preoccupations are likely to be salient, and the investigation of their occurrence, predictors, and treatment deserves empirical attention. *Method:* Data from the first assessment period of the FOR2974, a DFG-funded, German-wide, multi-center collaborative research unit, was analyzed to investigate expressions of mental imagery in women with OCBSD (n=56) and non-problematic buying-shopping behaviors (n=56). OCBSD was classified based on a structured diagnostic interview, experiences of gratification and compensation during shopping were assessed in the laboratory, and mental imagery was assessed in a 14-day end-of-day ambulatory assessment. Hierarchical regression analyses were conducted to identify predictors of mental imagery in daily life. *Results:* Women with OCBSD reported markedly higher levels of shopping-specific mental imagery than those with non-problematic buying-shopping behavior. Within the OCBSD group, imagery intensity was uniquely and significantly predicted by compensatory experiences with medium effect sizes. *Discussion:* These findings suggest that in OCBSD, mental imagery may be driven by the anticipation of emotional relief, pointing to its potential function as a maladaptive emotion regulation mechanism. This pattern aligns with theoretical conceptualizations of imagery-based desire thinking and its relevance as an avoidance-oriented learning process. Findings are discussed against the background of theoretical model building and clinical implications.

Keywords*:* addictive behaviors, contextual influences, craving, impulsivity, problematic usage of the internet

7A–2

Behavioral and cognitive impulsivity in at-risk problem gambling and affected other populations: A large citizen study using the Great British Intelligence Test cohort

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Background: Impulsivity is central to neurobiological models of gambling disorder, yet its expression in subsyndromal gambling and affected others remains under-examined. *Method:* Using data from the Great British Intelligence Test cohort (N = 26,392), we classified individuals as "at-risk of problem gambling", "affected others", or "controls", and assessed addictive behaviors, behavioral impulsivity, and cognitive performance. *Results:* At-risk participants exhibited elevated alcohol use, smoking, compulsive buying, problematic internet use, caffeine intake, and drug use versus controls (all $p < .001$). Affected others showed similar patterns excluding smoking. Both groups showed increased behavioral impulsivity, while cognitive deficits were restricted to at-risk individuals ($p < .001$). Machine learning highlighted behavioural impulsivity as a robust differentiator of risk status.

Keywords*:* addictive behaviors, contextual influences, craving, impulsivity, problematic usage of the internet

7A–3

Craving and impulsivity across different types of problematic usage of the internet (PUI): Results from behavioral tasks and self-report measures

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Background: Addictive behaviors are associated with deficits in self-control related to heightened impulsive tendencies especially in the presence of addiction-related stimuli. In the context of problematic usage of the internet (PUI), commonalities as well as differences are assumed across and between different sub-types. *Method:* In our multi-center study in Germany (FOR2974), a large cohort of over 1000 adults has been investigated under laboratory conditions using self-report and behavioral measures. The extensive test battery included a cue-reactivity paradigm, Go/NoGo task, delay discounting task as well as several self-report questionnaires. Participants were recruited for specific target behaviors: gaming, online shopping, online pornography use, and social media use. All participants underwent a telephone screening (in advance) and a standardized diagnostic interview (on-site). Data were analyzed aggregated across all PUI types as well as separately for each sub-type. *Results:* Across PUI types, a higher number of addictive symptoms was associated with heightened levels of cue-induced craving (mean urge and arousal ratings) towards internet-related stimuli, more errors towards internet-related stimuli in the Go/NoGo task, steeper delay discounting, as well as heightened self-reported impulsivity. These tendencies were found consistently across PUI types but with varying effect sizes. *Conclusions:* Individuals with PUI show elevated cue-induced craving, heightened impulsivity, and deficits in stimulus-specific inhibitory control. Accordingly, the combination of strong craving responses, reduced self-control, and impulsive tendencies may contribute particularly to the development of PUI. These processes, however, may also be intensified in the course of PUI, following a bi-directional cascade model. This is consistent with theoretical models on the development and maintenance of behavioral addictions, such as the I-PACE model. Similarities and potential divergencies between different PUI types are discussed.

Keywords*:* addictive behaviors, contextual influences, craving, impulsivity, problematic usage of the internet

7B–1

Risk is not harm: A comparison of two predictive models predicting either risk of gambling problems or gambling-related harm based on online gambling tracking data

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Background: Gambling-related harms represent a major public health issue (Francis et al., 2025; Cowlishaw et al., 2025). Nevertheless, most predictive models focus on the prediction of excessive gambling risk, for example using the Problem Gambling Severity Index (PGSI) (Perrot et al., 2022; Catania et al., 2022), rather than on experienced harm. This study compares two predictive models based on online gambling tracking data: one predicting excessive gambling risk and one predicting gambling-related harm severity. *Method:* Data were drawn from Phase 3 of the EDEIN study (ClinicalTrials.gov NCT02415296), combining online gambling tracking data from all French licensed operators, with sociodemographic and clinical assessments (n=189). Clinical measures included gambling history and activity, PGSI score, self-reported harm severity across five domains, critical life events, DSM-5 gambling disorder criteria, and standardized questionnaires assessing impulsivity, gambling motives, and gambling-related cognitions. Two random forest models were developed using the same set of 30 behavioral gambling indicators: one predicting excessive gambling risk (PGSI ≥8), and one predicting gambling-related harm severity classes, derived from latent class analysis. Classification thresholds were optimized using the Youden index. Model performance was assessed using AUROC, sensitivity, and specificity, and predicted groups were compared on clinical outcomes. *Results:* Both models showed comparable overall performance (AUROC ≈ 0.72–0.73) and consistent clinical patterns, including more intense, frequent, and diversified gambling, higher clinical severity, stronger cognitive distortions, and higher impulsivity. However, these associations were more pronounced in the harm-centered model. Moreover, individuals classified as experiencing high harm exhibited greater difficulties in maintaining control goals and anticipating long-term consequences, as well as more frequent and more diverse major gambling-related critical life events. *Conclusions:* Despite similar predictive accuracy, the two models reflect different conceptual frameworks and identify partially distinct clinical profiles. Risk-based and harm-based predictions may therefore serve different but complementary purposes, depending on whether the focus is on early identification of excessive gambling or on clinical severity and real-world consequences.

Keywords: predictive model, gambling-related harm, excessive gambling

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7B–2

Gambling-related harm experienced by concerned significant others (CSOs) of people with problem gambling: A systematic review

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Background: Problem gambling (PG) not only causes significant problems for individuals with gambling problems but also leads to harmful effects for their concerned significant others (CSOs). Problem gamblers are estimated to have six CSOs (Goodwin et al., 2017), including partners, children, parents, and other relatives. While the adverse impact of PG on individuals with PG is well documented (Dowling et al., 2015), far less attention has been given to its impact on CSOs. Although interest in this topic has grown in recent years, there remains a lack of systematic reviews on gambling-related harm among CSOs (Riley et al., 2021). This review aims to analyze and summarize the scientific literature regarding gambling-related harms experienced by CSOs and their coping strategies. *Methods:* A systematic literature search was carried out using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021), in Scopus, PubMed, Web of Science, and PsycINFO. *Results:* A total of 27 papers met the inclusion criteria. Preliminary findings indicate that CSOs experience harm across multiple domains. Financial harms were common, including debt, loss of savings, and unauthorized use of money. Emotional, psychological, and physical abuse was also reported, alongside distress such as stress, anxiety, depression, guilt, and shame. Health-related harms included poor general health and injury, while relationship harms involved loss of trust, chronic conflict, and breakdown. Functional and occupational disruption also emerged. Coping strategies included taking control of finances, paying debts, shielding children, hiding the gambler's behavior, distancing themselves emotionally or physically, and, in some cases, ending the relationship. CSOs also sought external support from family, peers, professionals, and services, or used strategies such as seeking employment or monitoring gambling activities. *Conclusion:* These findings demonstrate that CSOs experience substantial and multifaceted harms, underscoring the need for targeted support and interventions that address both harm reduction and coping.

Keywords: problem gambling, concerned significant others, harms, coping methods, systematic review

7B–3

Gambling-related harms: Lessons from lived experience

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Gambling-related harms are a serious public health issue impacting millions of people worldwide. Gambling today is fundamentally different from the past: fast-paced, highly addictive electronic products are aggressively promoted by a powerful industry, available 24/7, and normalised through mass advertising. Yet responsibility for harm continues to be placed largely on individuals through "responsible gambling" narratives, obscuring the structural drivers of harm and reinforcing stigma and shame. This reality is not abstract to me. Following a twelve-year gambling addiction, I have spent the past six years leading nationwide campaigns to reform gambling policy in the UK, as well as co-developing and overseeing prevention programmes designed to provide information and support much earlier, with a focus on products and practices and the risks they pose. My role is Director at the charity Gambling with Lives, a charity established by families bereaved by gambling-related suicide. In England alone, hundreds of people die by suicide each year where gambling is a causal or contributing factor. Gambling with Lives supports affected families in their pursuit of accountability, systemic change, and has played a key role in advancing public awareness. They have influenced policy reform, embedding lived experience within prevention and education initiatives and raised the profile of gambling as a suicide risk national and internationally.

This presentation will share insights from our lived experience or frontline support and advocacy of those affected by gambling harm, examining how a public health approach can reduce stigma, challenge harmful narratives, and create more effective prevention and support systems. Reflections from the UK will be offered as lessons of relevance to international researchers, practitioners, policymakers, and advocates working to reduce gambling-related harm.

Keywords: gambling, gambling harms, gambling suicide, prevention, lived experience

7B–4

Gambling and suicide: A quantitative analysis of record and gambling activity data

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This talk presents quantitative analysis of gambling records conducted during a larger psychological autopsy study investigating gambling-related suicide. Record data was requested from the twenty core cases that either died by, or made, a gambling-related suicide attempt. The records primarily consisted of gambling activity records (i.e., gambles, withdrawals, correspondence, responsible gambling flags), bank transaction records (i.e., gambling deposits, financial distress), and medical histories. (i.e., evidence of a gambling disorder diagnosis). The records ranged in coverage from several months to over a decade. Each set of record data was electronically scanned (where not already), tabulated, and transformed into a detailed time series recording gambling-related and gambling-relevant activity. As well as triangulating with the narrative interviews conducted with participants and relatives, bank and gambling activities were compared to assess validity. The records detail extensive corroborating evidence of gambling-related harm in frequency and expenditure, both in aggregate and at the gamble-by-gamble level. This was apparent across the histories of the cases analysed and often in the lead up to the attempt. Levels of expenditure varied between participants, reflecting differences in personal circumstances and the breadth of sociodemographic backgrounds among the cases. The records outline fluctuations in gambling engagement, including periods of intense activity and attempts to avoid or reduce gambling, sometimes for several years.. Although a range of gambling activities were present across the cases, the majority of the cases primarily used online betting or casino/slots games. Evidence of financial distress was widespread, including exhaustion of accounts, savings, and financial assets, use of conventional and payday loan facilities, borrowing from family members and unsuccessful transactions. These findings inform and highlight potential challenges with growing efforts to support real-time monitoring of gambling activity from regulators worldwide. There was limited consistency in data structures and the data recorded between operators. The findings of this study have important implications for the identification of behavioural markers to guide early intervention and prevention of harm.

Keywords: gambling, gambling-related harm, suicide, data donation, longitudinal data

7C–1

Examining health literacy and problematic social media use: The influence of academic achievement

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Background: The relationship between adolescent health literacy (HL) and problematic social media use (PSMU) has been previously analysed, especially in terms of demographic factors and social support. However, the relation between HL and school achievements as predictors of PSMU's been less studied. *Method:* This analysis examines how academic achievements moderate the link between HL and PSMU among 4,809 students aged 13, 15, and 17 surveyed in Poland in 2022. PSMU was assessed using the Social Media Disorder Scale, with a cutoff point of 6 or more out of 9 symptoms indicating problematic use. Individuals who did not use social media were classified as non-problematic users. HL was measured using a 10-item HLSAC scale, with scores divided into three categories (10-25 points indicating low HL). The students were divided into two groups based on their academic achievement, with average and below-average performance considered relatively worse. The relationships were examined using the chi-square test and binary logistic regression. *Results:* 9.7% met the criteria for PSMU, 24.1% had low HL, and 51.8% had relatively worse academic performance. The risk of PSMU decreases with age (OR=1.96; $p<0.001$) and is higher in girls than boys (OR=1.69; $p<0.001$), in students with low HL (OR=1.44; $p=0.042$), and in those with poorer academic achievements (OR=1.25; $p=0.025$). The protective effect of HL increases for students with very good academic achievements (OR=2.91; $p<0.001$) and diminishes in those with poorer academic performance (OR=0.814; $p=0.363$). *Conclusions:* Attention should focus on students with lower academic performance as they are at higher risk of low HL and PSMU, as well as high-performing students with low HL.

Keywords: gambling, gaming, social media, adolescents, health literacy, problematic social media use, academic achievement, problematic gaming, cross-media symptoms

7C–2

Problematic gaming and social media use and their relationship with psychological health: Network analyses across 10 European countries

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Background: Social media use and gaming represent the most important leisure activities, reaching the problematic levels in some of adolescents. However, only a handful of studies focused on the simultaneous association of problematic gaming (PG) and problematic social media use (PSMU) with various psychological health symptoms. Moreover, the research has been predominantly done using summed symptom scores, omitting the various roles symptom play. *Method:* Using nationally representative data from the 2021–2022 Health Behaviour in School-aged Children study (N = 33,586; ages 11–15; 10 European countries), we estimated gender-stratified network models including symptoms of PG (Internet Gaming Disorder Scale), PSMU (Social Media Disorder Scale), psychosomatic complaints, well-being, and loneliness. We examined within-media, cross-media, and psychosocial health associations. *Results:* When both media were modeled jointly, strong cross-media associations were observed primarily among behavioral-consequence symptoms (conflict, deception, problems, displacement), whereas cognitive-emotional symptoms showed moderate associations. Social media escapism emerged as the primary bridge between problematic media use and psychological health, consistently linking media symptoms with loneliness. In girls, social media escapism also connected to lower well-being and anxiety, indicating a broader emotional embedding of PSMU. *Conclusions:* Adolescents dedicate large amount of their time to gaming and social media use. The dyad escapism-loneliness is the main bridge that connects problematic media use with the psychological health. Additionally, behavioral consequences (i.e., conflicts, problems, deceptions) of both PSUM and PG tend to co-occur – e.g., when an adolescent has conflicts with parents due to gaming, they are likely to have them due to social media use as well. This finding supports the perspective that some symptoms of problematic media use in adolescents are interconnected and likely mutually dependent across the media platforms. Adolescence can be a crisis itself, thus a complex approach to and understanding adolescents' health and well-being is necessary.

Keywords: gambling, gaming, social media, adolescents, health literacy, problematic social media use, academic achievement, problematic gaming, cross-media symptoms

7C–3

Gaming and substance use: Evidence from a representative sample of adolescents

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Background: Playing video games is a healthy leisure activity for most adolescents; however, a minority of youth can develop maladaptive gaming patterns that are associated with impairments across multiple domains such as sleep, well-being, unhealthy lifestyles and risk behaviours (Canale et al., 2025; van der Neut et al., 2023). The present study aimed to expand current knowledge by examining the associations between non-gamers, and groups of gamers with different problematic gaming severity, and substance use (alcohol consumption, episodes of drunkenness, cigarette smoking, e-cigarette use, and cannabis use). *Method:* Data were drawn from a nationally representative sample of 65,256 adolescents aged 13–17 years who participated in the 2022 Italian Health Behaviour in School-aged Children study. We compared group of gamers (low risk, high risk and problematic) with non-gamers regarding their substance use. Logistic regressions models, adjusted for gender, age, family affluence, and family structure, were estimated. *Results:* The analyses revealed a U-shaped relationship between gaming group and substance use. Specifically, when compared with non-gamers, low-risk gamers had a lower probability of using any substances, whereas high risk gamers displayed probabilities comparable to non-gamers. Finally, problematic gamers showed the highest likelihood of engaging in substance use. *Conclusions:* Moderate and controlled video game play may be linked to reduced opportunities, time availability, or motivation for alternative activities, such as substance use, among adolescents.

Keywords: gambling, gaming, social media, adolescents, health literacy, problematic social media use, academic achievement, problematic gaming, cross-media symptoms

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7D–1

Stigma, social classes, and the relationship with seeking help: A sociological perspective on gambling behavior

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Background: Gambling disorder is frequently framed through moral judgments and accusatory discourse, which transforms stigma into a social process produced within interpersonal relationships rather than a mere individual emotional state. Stigma functions as a social mechanism that devalues individuals based on specific characteristics or identities. In the context of gambling, this is inextricably linked to practices of shame, concealment, and social withdrawal, all of which complicate the help-seeking process. While existing research indicates that stigma deters treatment engagement, there remains limited sociological understanding of how stigmatization is experienced across different class positions. This study examines how individuals with gambling behavior experience stigmatization, how these experiences vary by social class, and the subsequent impact on help-seeking. *Method:* This study employs a qualitative research design with a heterogeneous sample. Data were collected from patients at a psychiatry department in an Istanbul training and research hospital and clients from Green Crescent Counseling Centers (YEDAM). To ensure class and spatial diversity, the YEDAM sample was drawn from four different socioeconomic strata across Istanbul. Semi-structured in-depth interviews were conducted with 30 participants, focusing on the development of gambling behavior, the impact of addiction on daily life, feelings of shame and guilt, concealment strategies, and experiences with seeking or avoiding help. Data are being analyzed using an inductive and comparative thematic analysis approach. *Results:* Preliminary qualitative analyses suggest that stigmatization is a relational process shaped by social roles and class-based vulnerabilities. Stigma acts as a significant barrier that complicates and delays help-seeking through the mechanisms of shame and concealment. *Conclusions:* This research conceptualizes stigmatization in gambling addiction as a structural process tied to social positions rather than an individual subjective experience. The findings will provide a holistic framework to understand how stigma hinders treatment access and will offer recommendations to minimize its impact.

Keywords: gambling addiction, stigmatization, seeking help

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7D–2

From shame to recovery: exploring stigma in gambling disorder

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Background: Gambling Disorder (GD) is frequently associated with moralizing attitudes and blame, exposing individuals to stigma that may hinder help-seeking, engagement in care, and recovery 1–4. While stigma has been widely documented in substance use and other mental disorders, evidence related to GD remains limited, particularly across different stages of recovery. This study aimed to assess both the extent and lived experience of stigma among people with GD. *Methods:* We used a convergent mixed-methods design. The quantitative component included 50 participants with current or past GD who completed validated measures of self-stigma and perceived stigma. Levels of self-stigma will be described and examined in relation to socio-demographic and clinical characteristics using explanatory statistical models. The qualitative component consisted of semi-structured interviews with 20 participants who self-identified as recovered (n = 10) or currently in recovery (n = 10). Interviews explored experiences of stigma and its perceived impact on recovery. Qualitative data will be analysed using an inductive and comparative approach based on constructivist grounded theory. Quantitative and qualitative findings will be integrated to explore how stigma manifests and evolves across the recovery process. *Results:* Analyses are ongoing. *Conclusions:* This study is expected to contribute to a better understanding of stigma in GD across different stages of recovery and to inform public health and clinical approaches, including stigma reduction strategies and recovery-oriented care.

Keywords: gambling disorder, stigma, self-stigma, access to care, recovery

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7D–3

Coping with guilt and shame after gambling loss: The mediating role of shame in avoidant coping and chasing behavior

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Background: While many gamblers experience difficulty maintaining limits on time and money, the emotional consequences of gambling loss—particularly the distinction between self-conscious emotions like guilt and shame—remain under-researched. Guilt is typically associated with specific, temporary transgressions and a desire to repair harm, whereas shame involves a global devaluation of the self, often leading to withdrawal or defensive behaviors. This study applies psychological theories of these distinct emotions to the context of gambling loss to understand their impact on coping and problem gambling severity. *Method:* A retrospective survey was conducted with 284 participants who had lost at least $80 on a single gambling occasion within the previous three months. Participants completed the Problem Gambling Severity Index (PGSI) and reported the intensity of emotions (guilt, shame, positive affect) felt immediately following their loss. Coping efforts were measured using a 21-item scale specific to gambling loss, covering six factors: seeking social support, planning to make up for financial loss, rationalization, wishful thinking, non-disclosure, and cognitive distortion of loss. *Results:* Path analysis supported the hypothesis that problem gambling severity is more strongly associated with the intensity of shame than the intensity of guilt. While guilt was reported more intensely overall across all groups, it did not significantly correlate with problem gambling severity once shame was controlled for. Crucially, shame was found to positively correlate with avoidant coping strategies—specifically wishful thinking, non-disclosure, and mental distortion—and it significantly mediated the relationship between gambling severity and these avoidant behaviors. Furthermore, "guilt-free shame" was positively associated with chasing-related thoughts, while "shame-free guilt" was negatively associated with chasing. *Conclusions:* The findings suggest that the experience of shame is central to the development and maintenance of problem gambling. Because shame triggers maladaptive avoidant coping and chasing, clinicians are advised to help patients shift from stable, global attributions (shame) to specific, temporary attributions (guilt) following losses.

Keywords: gambling disorder, shame, guilt, avoidant coping, chasing behavior, self-regulation

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7E–1

From screens to self-harm: A longitudinal analysis of risk factors

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Background: Non-suicidal self-injury (NSSI) has emerged as a significant public health concern, particularly among adolescents. Given its multifactorial and complex nature, NSSI requires a comprehensive understanding of its underlying determinants. Longitudinal evidence on problematic technology use and its impact on adolescent mental health remains limited. *Aim:* This study addresses this gap by examining the prospective associations of problematic gaming, problematic use of social media, and (cyber)bullying with adolescent self-harm. Specifically, we aimed to describe the trajectories of these variables over time, their interrelationships, and their contribution to the development of NSSI, while considering sex and school type. *Method:* Problematic gaming was measured using the Internet Gaming Disorder Scale–Short-Form (IGDS9-SF), problematic use of social media was measured using the Bergen Social Media Addiction Scale (BSMAS), face-to-face bullying victimization was measured using the Victim subscale of the Illinois Bully Scale (IBS), online bullying victimization and self-harm were assessed using self-formulated questions. In this longitudinal quantitative study, 1,240 adolescents aged 12–14 years from 45 Czech schools participated in the first wave. Data were collected across three waves at 12-month intervals. *Results:* From a cross-sectional perspective, the results suggest that all selected variables are significant predictors of self-harm. From a longitudinal perspective, problematic use of social media is particularly significant in the first wave, while bullying experiences are the most significant variable in the second wave. *Conclusion:* The observed links between self-harm, problematic digital technology use, and difficulties in social relationships suggest that practitioners should screen these areas in adolescents who engage in self-harm to support a more targeted and effective intervention path to recovery. *Grant affiliation:* This contribution has been produced with the support of the project ReDiKid: Resilient Kid in Digital World, reg. no. CZ.02.01.01/00/23_025/0008686, co-funded by the EU.

Keywords: gaming disorder, problematic use of social media, cyberbullying, bullying, non-suicidal self-injury, adolescence, longitudinal study

7E–2

Sex-specific longitudinal associations between high risk of internet gaming disorder and subsequent suicidality in adolescents

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Objectives: Internet Gaming Disorder (IGD) has become a growing public health concern among adolescents. Although previous cross-sectional studies have linked problematic gaming with suicidality, longitudinal evidence remains limited. This study examined sex-specific associations between IGD risk and subsequent suicidal behaviors among adolescents who were not suicidal at baseline. *Methods:* Data were derived from the iCURE study, a prospective cohort involving 1,874 students (1,082 boys and 792 girls) aged 9–14 years. Participants with baseline suicidality were excluded. The Internet Game Use-Elicited Symptom Screen was used to identify adolescents at high risk of IGD (HRIGD). Suicidality was assessed at two-year follow-up using items adapted from the SCID-I. Relative risks (RRs) and 95% Confidence Intervals (CIs) were estimated using generalized linear models stratified by sex and adjusted for potential confounders. *Results:* At baseline, 8.0% of boys and 3.4% of girls were classified as HRIGD. At the two-year follow-up, boys in the HRIGD group showed significantly higher incidences of suicidality (17.4% vs. 5.0%), suicidal ideation (16.3% vs. 4.7%), and suicide plans or attempts (5.8% vs. 1.0%) than those at lower risk. In fully adjusted models, HRIGD remained associated with suicidality (RR=3.05, 95% CI=1.53–6.07), suicide ideation (RR=2.99, 95% CI=1.48–6.05), and suicide plans and/or attempts (RR=4.03, 95% CI=1.08–15.07) among boys, but not among girls. *Conclusions:* This longitudinal cohort study among adolescents without baseline suicidality indicates that IGD risk is related to subsequent suicidality in boys. Early identification and sex-specific preventive strategies targeting excessive gaming may help mitigate future suicide risk in adolescents. *Acknowledgement:* This research was supported by a grant of the R&D project, funded by the National Center for Mental Health (grant number: MHER25B01)

Keywords: internet gaming disorder, suicidality, longitudinal, adolescents

7E–3

Motivation to change and barriers to treatment seeking in persons with gaming disorder: Findings from the International Gaming Study 2024

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Background: Research on treatment-seeking behavior among individuals with gaming disorder remains limited. We aim to investigate differences in motivation to change and barriers to treatment seeking among individuals who are likely to have gaming disorder in a multi-country study. *Methods:* Data were from the International Gaming Study 2024, a cross-sectional survey of 1,519 adults aged 18-60 years across five countries (Australia, China, Indonesia, Netherlands, USA) who played video games at least 3 hours per week, and recruited by Nielsen Global Insight. There were 248 men and women who were classified as having likely ICD-11 gaming disorder according to the Gaming Disorder Identification Test (GADIT) by scoring 5 or higher. Motivation to change was measured using the transtheoretical stages of change model. Participants were also asked about barriers people may face in seeking treatment for gaming addiction. *Results:* Motivation to change had a mean score of 2.38 (SD=1.25). For treatment seeking barriers, substantial proportions indicated stigma (44.8%), lack of awareness (51.6%), financial constraints (42.7%), and lack of time (32.7%). Overall, no significant gender differences in motivation to change and perceived barriers emerged (all p-values>0.05). Motivation to change was lowest in Indonesian participants (Mean=1.80, SD=1.05) compared to participants from other countries (Means=2.14 [1.16]-2.65 [1.49]). A higher proportion of Indonesian participants reported stigma (74.0%) as a barrier to seeking treatment than those from other countries (34.0%-44.2%). Differences were further examined by sociodemographic characteristics, video gaming type, and mental health. *Conclusion:* Among adults screening positive for ICD-11 gaming disorder, motivation to change their gaming behaviour was generally low, with most participants in early stages of change, and many indicated barriers to treatment seeking. Challenges differed across countries. There is a need for culturally tailored low-threshold public health interventions that increase readiness to change and reduce stigma surrounding gaming disorder.

Keywords: gaming disorder, motivation to change, treatment-seeking barriers

7E–4

Predictive power of clinical characteristics in adolescents seeking treatment for internet gaming disorder

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Background and Aims: While various psychiatric symptoms are frequently linked to Internet Gaming Disorder (IGD), their specific predictive roles within clinical populations remain under-researched. This study aims to evaluate the predictive power of clinical characteristics in identifying high-risk IGD status among treatment-seeking adolescents. *Method:* The sample consisted of 388 adolescents (aged 15–17) who applied to Green Crescent Counseling Centers (YEDAM) between 2020 and 2025 for problematic gaming. Participants were categorized into high-risk (IGDS-9-SF score ≥ 36, n=97) and low-to-moderate risk (n=291) groups using a 1:3 matching design (nearest neighbor method) based on age and gender. Data were collected via the Internet Gaming Disorder Scale (IGDS-9-SF) and Psychological Screening Test for Adolescents (PSTA). Predictors were analyzed using Binary Logistic Regression. *Results:* Univariate analyses indicated significant group differences for depression, self-harm, ADHD, and anxiety. However, in the multivariate binary logistic regression model, only depression and self-harm risk remained significant independent predictors of high-risk IGD status. Adolescents with depression risk were 3.12 times more likely to be in the high-risk IGD group (OR=3.120; 95% CI: 1.071–9.092; p=0.037). Self-harm risk increased high-risk IGD probability by 1.62 times (OR=1.623; 95% CI: 1.012–2.603; p=0.045). ADHD (p=0.110) and anxiety (p=0.196) did not remain significant after controlling for affective symptoms. *Conclusions:* These findings suggest that, in treatment-seeking adolescents, high-risk IGD status is more closely associated with affective distress, particularly depression and self-harm risk, rather than neurodevelopmental or anxiety-related symptoms. Clinical interventions for IGD may benefit from prioritizing the assessment and treatment of underlying depressive symptoms and self-harm tendencies.

Keywords: internet gaming disorder, depression, self-harm, ADHD, adolescents, Turkish Green Crescent Society

7E–5

Problematic use of video games, social media, and alcohol: Exploring reciprocal relations with the big five personality traits in a longitudinal design

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Background: The problematic use of video games (PG), social media (PSMU), and alcohol (PAU) is widespread among young people. According to theoretical models, personality traits may be associated with these problematic behavioral patterns. However, very few longitudinal studies are available. Therefore, this study investigated, for the first time, the associations between the Big Five personality dimensions (BFPD) and the development of PG, PSMU and PAU in a longitudinal design. *Methods:* Surveys were conducted in Germany over three measurement time points (t1 to t3) using standardized instruments on PG, PSMU, PAU, and BFPD. Study participants had a mean age of 16.83 years at t1, 17.93 years at t2 and 20.11 years at t3. Cross-lagged panel analyses over three measurement points (structural equation modeling) were calculated. *Results:* A total of N=492 young people (44.1% female and 55.9% male) were investigated at t1, N=475 (44.8% female, 55.2% male) at t2, and N=443 (45.1% female, 54.9% male) at t3. Lower Conscientiousness and lower Extraversion were predictors of PG, while higher Negative Emotionality (Neuroticism) predicted PSMU and lower Agreeableness was a predictor of PAU. Conversely, PAU was the only predictor of a Big Five dimension (lower Agreeableness). Additionally, associations between the three problematic behavioral patterns were observed across the assessment time points. *Conclusions:* The present study provides novel findings from a longitudinal investigation that contribute to a better understanding of the etiology of problematic use of video games, social media and alcohol in young people. These findings and the observed interactions between the three problematic behavioral patterns should be taken into account in the development and revision of preventive approaches for minors and young adults.

Keywords: gaming disorder, problematic social media use, problematic alcohol use, big five personality dimensions, adolescence

7F–1

Craving as an addictive type symptom across eating disorders: A systematic review

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Background: Craving constitutes a prominent symptom associated with both substance-related and behavioral addictions, and its recognition has been increasingly extended to include eating disorders (ED). Nevertheless, the definition, assessment, and consequences of craving in the ED context stay chaotic. This systematic review seeks to clarify the significance of craving—conceptualized as a motivational state as in addictions—within ED. *Methods:* Comprehensive searches conducted in Embase, PsycInfo, and Web of Science (updated July 2025) identified peer-reviewed studies involving adult individuals with clinically diagnosed ED. Fifty empirical studies paired with fifteen reviews successfully qualified under the eligibility criteria. The narrative synthesis adhered to the PRISMA 2020 guidelines. *Results:* The preponderance of evidence predominantly pertains to bulimia nervosa (BN) and binge-eating disorder (BED), with insufficient data available for anorexia nervosa (AN) and non-food-related targets (e.g., exercise, purging). The definitions of craving displayed notable differences, often merging 'strong desire' with 'loss of control', thereby illustrating the uncertainty found in addiction research. A limited number of studies employed explicit theoretical models, with the majority drawing upon addiction-focused frameworks (conditioning, dual-process, affect-regulation) and demonstrating minimal integration of neurobiological insights. The assessment of craving primarily used visual analogue scales and the Food Cravings Questionnaire. Throughout the spectrum of ED, craving—particularly trait craving—was consistently correlated with binge eating, mirroring its predictive significance in the realm of addictions. Interventions specifically targeting craving are still scarce: cue exposure techniques (including virtual reality) and neurofeedback have shown potential yet inconsistent results, while non-invasive brain stimulation has yielded variable findings. *Conclusions:* Craving emerges as a pivotal, addiction-like construct that remains conceptually ambiguous within the domain of ED. There is an urgent necessity for a consensual transdiagnostic definition and theory-driven assessment tools to facilitate advancements in understanding the underlying mechanisms and the development of effective interventions.

Keywords: craving, eating disorder, anorexia, bulimia, binge eating

7F–2

Stress-enhanced addictive overeating behavior and its neurobiological mechanisms: Evidence from a rat model of addiction

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Overeating beyond individuals' energy homeostatic needs has detrimental effects on doby health. People in the modernized societies are facing more stress in their daily life than ever before. The increased exposure to stress is proposed to be a risk factor promoting addictive overeating behavior. Our research work has investigated the impacts of stress on the motivation for procuring calorie-condensed food reward in satiated subjects and its underlying neurobiological mechanisms. Male Sprague-Dawley rats with ad libitum access to rodent chow in their home cages were trained in daily 1-h sessions to press a lever for the deliveries of high caloric food pellets containing 35% fat contents. Ten min before the test sessions, the animals were subjected to a pharmacological stressor yohimbine or a chronic psychological stressor restraint. A corticotropin-releasing factor (CRF) receptor antagonist NBI, a glucocorticoid receptor antagonist mifepristone or a glucocorticoid synthesis inhibitor metyrapone was administered prior to the stress challenge. Rats willingly made lever-pressing responses for obtaining the calorie-condensed food pellets. Stress challenge increased lever-pressing responses, indicating the enhanced motivation for procuring the high fat food reward. Pretreatment with NBI prior to stress challenge effectively blocked the behavior-motivating effect of stress. However, neither mifepristone nor metyrapone altered the effect of stress challenge. These findings demonstrate that stress challenge enhances the motivation for procuring calorie-condensed food reward beyond energy homeostatic needs. This effect of stress requires activation of the CRF receptors but not activity of the hypothalamic-pituitary-adrenal axis. These data suggest a role of the extrahypothalamic CRF neurotransmission in overeating behavior under stressful situations, which is analogous to drug addiction. Taken together, these findings would shed a light on our understanding of the neurobehavioral mechanisms of overeating and its consequent obesity.

Keywords: addictive, overeating, stress, CRF

7F–3

Real-time assessment of cravings, withdrawal-like symptoms, and positive expectancy after quitting sugar-rich foods

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Aim: Many people struggle to reduce intake of highly palatable foods, which may be driven by cognitive and motivational factors, including craving and positive expectancy, as well as withdrawal-like symptoms that emerge during cessation. However, little is known about how these experiences change over time in daily life. This ecological momentary assessment (EMA) study examined these processes prospectively with a focus on sugar-rich foods, including beverages, as a common target of food addiction. *Methods:* Adults from New Zealand intending to quit free sugars completed baseline assessments on demographics, dietary habits, psychological distress, self-efficacy, and food addiction symptoms. For 14 days, participants received five daily EMAs capturing thoughts, behaviours, and withdrawal-like symptoms related to sugar. Linear mixed-effects models were used to examine within-person changes over time. *Results:* Of 203 participants, nearly one-third (31.0%) remained sugar-free throughout the 14-day period. Sugar consumption occurred in 9% of EMAs, peaking in the evening (11.5%) and primarily consisting of snacks, desserts, or baked goods. In the context of these consumption patterns, participants experienced varying levels of craving, withdrawal-like symptoms, and positive expectancies, illustrating how these experiences evolved over the early period of attempting to quit sugar. *Conclusions:* This study provides insight into the cognitive and motivational patterns associated with reducing sugar-rich foods. By applying intensive EMA methods within a behavioural addiction framework, the findings can inform models of persistent eating behaviours and identify potential targets for intervention. These processes may also be relevant to other highly palatable foods that are commonly implicated in food addiction.

Keywords: ecological momentary assessment, craving, positive expectancy, withdrawal, sugar-rich foods

7F–4

Binge behaviors and their psychological correlates: A comparative analysis of binge drinking, eating, and watching patterns

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Background and aims: Binge behaviors, defined as the propensity to excessively and repeatedly engage in a specific conduct over a short period of time, have long been studied separately, despite their putative shared features. We aimed to determine whether they are characterized by distinct mechanisms, or whether particular underlying psychological processes overlap across binge behaviors. *Methods:* 446 adult French speakers were recruited via an online survey and categorized into three mutually exclusive groups according to the binge behavior they solely engaged in over the past three months: binge eating (BE, N=173), binge drinking (BD, N=44) and binge watching (BW, N=229). Participants completed measures of impulsivity (s-UPPS-P), emotion regulation (DERS) and psychopathological symptoms (BSI-18). ANOVAs were performed to explore differences between the three binge behaviors groups. *Results:* Participants who engage in BE showed greater somatization and anxiety, and higher negative urgency and emotion regulation difficulties than the BW group. BD participants reported lower negative urgency and higher sensation seeking than the BE group. Regarding emotion regulation difficulties, they reported higher levels of awareness compared to BW and of impulse compared to BE, but lower levels of non-acceptance than BE. Interestingly, groups did not differ in depressive symptoms, positive urgency, lack of premeditation and perseverance, nor in the clarity facet of emotion regulation. *Discussion and conclusions:* Although BE, BD and BW are typically conceptualized as distinct behaviors, our results indicate partial overlap in their psychological characteristics alongside behavior-specific features. This suggests that binge behaviors may share common underlying processes, while also differing in key psychological mechanisms (impulsivity domains and specific facets of emotion regulation difficulties) that may shape their specific expressions and consequences. Such an approach moves beyond viewing binge behaviors as fully independent phenomena and has implications for the development of interventions that address both shared and behavior-specific mechanisms.

Keywords: binge watching, binge eating, binge drinking

7F–5

More than a mouthful: The theatre of indian digital dining

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Introduction: Mukbang refers to online broadcasts featuring the consumption of large quantities of food (Oxford Learner's Dictionaries, 2026) and has gained substantial global visibility across social media platforms (YouTube, 2024). In India, expanding internet access, the proliferation of short-form video platforms, and algorithm-driven food content have accelerated the popularity of videos by creators such as Maddy Eats, which have received over 63 million views (2022). International research has increasingly problematised mukbang consumption, identifying addiction-like engagement, the fetishisation of eating, and ethical concerns surrounding digitally mediated food practices (Kağan Kırcaburun et al., 2024). However, empirical research examining mukbang within an Indian cultural context- particularly from viewers' lived experiences- remains limited (Sanskriti et al., 2023). This study addresses this gap by investigating perceptions of fetishisation in mukbang content and examining the relationship between viewing motivations, addictive tendencies, and emotional eating among Indian viewers. *Methods:* A quantitative, cross-sectional survey design is employed using the Mukbang Addiction Scale (Kırcaburun et al., 2021) and the Emotional Appetite Questionnaire (Nolan et al., 2014). Data are being collected from 385 Indian participants, with sample size determined through a priori power analysis. Additional items assess viewing frequency, motivations, vicarious eating experiences, and perceptions of fetishisation. *Results:* Data will be analysed using descriptive statistics, correlational analyses, and regression models to examine patterns of vicarious eating, perceived fetishisation, and their associations with emotional appetite and addictive engagement. *Discussion:* Findings are expected to advance understanding of mukbang within India's rapidly digitising media ecology, foregrounding critical issues of digital ethics, culturally mediated consumption, and emerging public mental health risks.

Keywords: mukbang; vicarious eating; fetishisation; behavioural addictions; digital ethics; Indian viewers

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7G–1

The moderating role of moral incongruence in the relationship between craving and problematic pornography use

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Problematic pornography (PPU) use has been linked to psychological and relational difficulties and shows parallels to other behavioral addictions, particularly in its association with craving and impaired self-regulation. Moral incongruence (MI), the conflict between personal moral values and pornography use, may be relevant to pornography related distress, yet its role in the craving–PPU association has not been examined. This study tested whether MI moderates this association and whether effects differ by PPU severity. Data were drawn from Hands-Off, a large web-based self-help study including a uniquely sizable treatment-seeking sample (N = 1,064). Participants completed validated measures to assess craving, PPU, pornography use frequency, and moral disapproval. MI was operationalized as the interaction between frequency and moral disapproval. Craving showed a strong positive association with PPU (r = .52). MI significantly moderated this association in the full sample (b = 0.003), with stronger relations observed at higher MI levels. The moderation effect appeared only among individuals below the clinical cutoff of PPU (b = 0.006). Pornography use frequency also moderated the craving–PPU association in opposite directions across severity groups. These findings indicate that moral and motivational factors are differentially related to PPU depending on severity and highlight the potential value of considering MI in the assessment of pornography related concerns.

Keywords: problematic pornography use, moral incongruence, pornography use frequency, pornography craving

7G–2

Preventing Problematic Pornography Use (PPU): Introducing the "PPU-PrevFrame" preventive framework

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Background: Only a small proportion of individuals with Problematic Pornography Use (PPU) seek or access treatment, despite the availability of effective therapeutic approaches (López-Pinar et al., 2025). This large treatment gap underscores the need for sound preventive approaches aimed at reducing the risk of PPU before clinically significant impairment emerges. However, prevention efforts in this field remains scarce and has largely focused on educational interventions (i.e., pornography literacy interventions) (Testa et al., 2023), which implemented alone, show limited impact on reducing the risk of PPU. This oral communication introduces the "PPU-PrevFrame" (Castro-Calvo et al., in review), an evidence-based, multi-component framework for the universal, selective, and indicated prevention of PPU. *Method:* The PPU-PrevFrame was developed through an integrative review of literature on PPU, substance use disorders, and behavioral addictions. It adapts empirically supported preventive strategies to the specific etiological mechanisms underlying PPU. The framework distinguishes between three prevention levels (universal, selective, and indicated) and organizes intervention components targeting key vulnerability and protective factors. *Results:* Universal prevention focuses on comprehensive sexual education and pornography literacy, delivered within a sex-positive and developmentally appropriate approach. Selective and indicated prevention incorporate additional components, including awareness of pornography use patterns and social norm interventions, education about the "addictive-by-design" features of online pornography, enhancement of self-control and self-regulation skills, implementation of external control strategies (e.g., filters and time restrictions), promotion of adaptive coping and emotion regulation skills, and short-term abstinence periods ("pornography disconnections"). The PPU-PrevFrame is flexible and can be tailored to individual risk profiles. *Conclusions:* The PPU-PrevFrame offers a theoretically grounded and adaptable structure to guide the design of preventive programs that reduce the risk of PPU while respecting individuals' sexual agency. It moves beyond information-based approaches by integrating behavioral, cognitive, emotional, and contextual strategies, providing a comprehensive roadmap for future prevention initiatives and empirical testing.

Keywords: Problematic Pornography Use, prevention, PPU-PrevFrame

7G–3

Can sexual education prevent problematic pornography use (PPU)? Evidence from a retrospective cross-sectional study

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Background: The few existing studies on PPU prevention have predominantly focused on educational approaches (i.e., "pornography-literacy interventions"), informing individuals about the risks associated with excessive pornography consumption as a means of reducing PPU risk (Testa et al., 2023). While educating individuals about the risks of PPU is an essential first step in prevention, information alone rarely translates into attitudinal changes, and even less into the behavioral changes that requires the prevention of PPU (Vahedi et al., 2018). Consequently, more recent approaches to PPU prevention argue that sexual education is necessary but not sufficient for the prevention of PPU, especially in the context of selected or indicated prevention (Castro-Calvo et al., 2026). The aim of this study was to examine whether having received sexual education and the degree of satisfaction with its quality were associated with current pornography consumption parameters (time invested per week and PPU). *Method:* A total of 339 participants (63.4% men; 35.4% women), aged between 18 and 66 years (M=30.39; SD=9.29), completed an online battery of questionnaires. Participants were asked whether they had received sexual education at any point in their lives ("yes"/"no"), their level of satisfaction with the sexual education received (4-point Likert scale ranging from "not at all satisfied" to "completely satisfied"), the weekly time spent on online sexual activities (in hours), and problematic pornography use (as assessed by the S-IAT-Sex). *Results:* Overall, 62.8% of participants reported having received some form of sexual education. Most participants indicated being either not at all satisfied (16.9%) or only slightly satisfied (55.9%) with its quality. Neither weekly time spent on online sexual activities (t=0.024; p=.493; d=.002) nor PPU (t=0.613; p=.270; d=.081) differed as a function of whether participants had received sexual education. Satisfaction with sexual education moderated the association between weekly time spent on online sexual activities and the risk of PPU (β=.268; p=.04), but in the opposite direction to what was expected: the relationship between pornography use frequency and PPU was stronger among those reporting higher satisfaction with their sexual education. *Conclusions:* These findings support the view that sexual education is a necessary but not sufficient condition for effectively reducing the risk of PPU. Preventive approaches should therefore complement pornography literacy–based interventions with additional techniques and strategies aimed at achieving meaningful behavioral changes.

Keywords: Problematic Pornography Use, prevention, PPU-PrevFrame

7G–4

Mechanisms of cognitive-behavioral-therapy for pornography use disorder: Do cue-reactivity, craving, and attentional bias change as a result of therapy

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Background: Cue-reactivity and craving are essential mechanisms in the development and maintenance of pornography use disorder (PUD; Starcke et al., 2018) as they motivate pornography use and masturbation, which in turn reinforce the stimulus-response associations. In cognitive behavioral therapy, patients learn to manage their emotions, cognitions, and impulses related to pornography use, allowing them to abstain or reduce their use. This, in turn, breaks the reinforcement cycle, leading to reductions in craving and related motivational and attentional processes. Therefore, we expect that undergoing cognitive behavioral therapy leads to reductions in craving, cue-reactivity, and attentional biases towards pornographic stimuli. *Method:* Our sample was recruited from the PornLoS treatment trial (Stark et al., 2024), in which patients with PUD were allocated to cognitive behavioral therapy or a wait-list condition and were probed before and after treatment/waiting period. Neural (BOLD signal) and behavioral (reaction times) cue-reactivity to conditioned stimuli were assessed using a sexual incentive delay task (Markert et al., 2021). Attentional biases were measured via the line-orientation/picture-categorization task, and motivational tendencies by an approach-avoidance task. *Results:* Preliminary analyses suggest alterations in the salience networks (anterior insula) and reward and habit networks (N. accumbens, caudate N., putamen, mOFC) after therapy, but not after a waiting-period. We found no alterations in attentional biases towards sexual rewards as result of therapy. There was a tendency towards reduced approach biases towards sexual images after therapy.*Conclusions:* So far, research on the mechanisms of psychotherapy for behavioral addictions is limited. This work contributes to our understanding of how cognitive behavioral therapy may affect cue-reactivity, craving, and attentional processes in PUD.

Keywords: problematic pornography use, cue-reactivity, CBT

7G–5

Patterns of co-occurring addictive behaviors among treatment-seeking individuals with problematic pornography use

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Background: Addictive behaviors rarely occur in isolation; however, clinical assessment and treatment models typically focus on a single presenting problem. This fragmented institutional focus makes it difficult to identify cross-addiction patterns, particularly those spanning chemical and behavioral addictions. Problematic pornography use (PPU), which is not formally classified as an addiction, is often overlooked in addiction treatment settings. As a result, empirical clinical data examining PPU within a cross-addiction framework remain limited. Although pornography use is highly prevalent among individuals with both substance-related and behavioral addictions, its role within broader addiction profiles among treatment-seeking populations is still poorly understood. The present study uses pornography use as an analytic entry point to examine how addictive behaviors cluster across different addiction treatment groups and to explore associated comorbid psychological difficulties. *Methods*: Data were drawn from a large adult clinical sample (N = 9,583) who applied to Green Crescent Counseling Centers (YEDAM) located in different cities across Türkiye between April and December 2025. Clients who declared pornography use in the last year (N = 1,967) were recruited to the research. Participants were classified according to their primary addiction type (alcohol/substance use (N=875), gambling (N=1029), and internet addictions (N=63). PPU was assessed using the Short Version of the Problematic Pornography Consumption Scale (PPCS-6). Measures of depression, anxiety, anger, impulsivity, excitement seeking, gambling severity, gaming disorder symptoms, and smartphone use were measured

with validated scales. Analyses included descriptive statistics and cross-tabulations, followed by independent-samples t-tests, correlation analyses, and multiple regression analyses based on the research questions. *Results:* PPU was identified using the PPCS-6 cut-off score of ≥20. PPU prevalence differed markedly by addiction type, with the highest rate observed among individuals with internet-related addictions (19.0%; N = 12), compared to those with alcohol/substance use (3.1%; N = 27) and gambling (2.0%; N = 21). Distinct patterns of co-occurring addictive behaviors were observed across primary treatment groups. PPU use was more prevalent among individuals seeking treatment for internet-related problems compared to those treated for alcohol/substance use or gambling. Within the internet addiction cohort, pornography use was frequently identified as one of the earliest behaviors associated with negative life consequences, alongside online gaming and social media use. Participants who screened positive for PPU reported significantly higher levels of depression, anxiety, anger, impulsivity, and sensation seeking, respectively. Furthermore, regression analyses indicated that impulsivity, depression, anxiety, and sensation seeking were significant predictors of PPUseverity among treatment-seeking individuals. *Conclusions:* These findings indicate that addictive behaviors clustered in distinct yet overlapping patterns depending on the primary reason for treatment and PPU may be particularly prevalent among individuals seeking treatment for internet addiction as well as alcohol and substance use disorders, and gambling disorder. Furthermore, our findings suggest that PPU appears to function as an early and often overlooked form of addictive behavior in digital contexts. When it comes to other comorbid pathologies in relation to PPU, particularly anxiety are the highest among individuals screening positive for the PPU. Integrating routine PPU screening into behavioral addiction assessments may improve early detection and support more comprehensive, cross-addiction–informed interventions.

Keywords: problematic pornography use, behavioral addictions, treatment-seeking populations, cross-addiction, internet-related addictions

8A–1

A strengths-based approach to recovery-oriented addiction care: Fostering health, resilience, and flourishing

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The Disease Model has provided the foundation for modern addiction treatment by establishing addiction as a legitimate health condition rather than a moral failing, thereby reducing stigma and expanding access to evidence-based care. While essential for diagnosis and acute intervention, sustainable recovery requires more than symptom reduction and relapse prevention. This presentation proposes a strengths-based approach to recovery-oriented addiction care by integrating Positive Psychotherapy (PPT), and recovery science. Grounded in the concept of recovery capital, this approach emphasizes cultivating the personal, relational, and community resources that sustain recovery. Drawing on research across substance and behavioral addictions, including problematic Internet use, the presentation highlights evidence that character strengths, hope, gratitude, forgiveness, meaning, and supportive relationships enhance resilience, strengthen recovery capital, and improve long-term outcomes. Rather than viewing flourishing as the endpoint of recovery, this presentation argues that flourishing is an active mechanism through which sustainable recovery is achieved, offering a comprehensive, person-centred framework for addiction care.

Keywords: recovery-oriented addiction care, positive psychotherapy

8A–2

Combining CBT and family therapy for gaming disorder: Effectiveness and acceptability of a modular treatment in routine care

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Background: Gaming disorder is a psychiatric diagnosis, yet evidence-based and clinically feasible treatment models remain limited. Prior research suggests that cognitive behavioral therapy (CBT) can be beneficial for gaming disorder and combining it with family therapy may further improve treatment outcome. *Methods:* Patients were recruited from a specialized outpatient clinic for gaming disorder in southern Sweden. The study used a one group design and included both adolescents (from age 13) and adult patients. Participants were offered a module-based psychological treatment combining interventions from CBT and family therapy. Outcomes were assessed at baseline, after treatment, and at three months follow up.

Primary outcomes were gaming disorder symptoms, time spent gaming, and psychological distress. Acceptability was assessed as treatment completion, patient satisfaction, and working alliance. The study is registered at ClinicalTrials.gov, and a protocol has been published. *Results:* A total of 68 patients aged 13 to 42 years were included. Gaming disorder symptoms, gaming time, and psychological distress decreased with large within group effects that were maintained or strengthened at follow up, and 82% of those with gaming disorder at baseline and available post treatment data. Completion, satisfaction, and working alliance were high across age groups, and the effects were comparable to within group effects from efficacy trials. *Conclusions:* Modular treatment integrating CBT and family therapy appears effective and acceptable when delivered in routine specialist care to a broad, comorbid patient group spanning adolescence to adulthood. The presentation will unpack how the modular structure is built and what the findings mean for clinics that are setting up services for gaming disorder.

Keywords: gaming disorder, treatment, CBT, family therapy

8A–3

An evidence-based hierarchical prevention and treatment model for gaming disorder: From mechanisms to real-world implementation

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Background: Gaming Disorder (GD), classified as a behavioral addiction in ICD-11, disproportionately affects adolescents and poses substantial public health challenges. While growing evidence has elucidated GD-related mechanisms, translating these findings into scalable prevention and treatment strategies remains limited. We aimed to develop and implement an evidence-based hierarchical model integrating mechanistic research, standardized assessment, and real-world intervention. *Methods:* Multidisciplinary studies were conducted across three interconnected levels. Etiological investigations employed neuroimaging, behavioral, and hyperscanning paradigms to characterize neural and cognitive mechanisms of GD. At the assessment level, the Gaming Disorder Screening Scale (GDSS) was developed and validated, and applied in a national epidemiological survey and a digital assessment–intervention platform. At the implementation level, a school–family–community–hospital (SFCH) collaborative framework and stepped interventions were established across prevention, treatment, and rehabilitation stages. *Results:* Mechanistic findings revealed abnormalities in default mode and frontoparietal control networks, reduced dopamine transporter availability, disrupted inter-brain synchronization during social interaction, and altered time perception. The GDSS demonstrated high reliability (Cronbach's $\alpha = 0.93$) and supported a national prevalence estimate of 5.2%. The digital platform enabled screening and intervention for over 2,000 individuals. The hierarchical model showed good feasibility and applicability across clinical and community settings. *Conclusions:* This study demonstrates that a hierarchical

prevention and treatment model grounded in mechanistic evidence and standardized assessment can be effectively translated into real-world practice. The model provides a scalable framework for addressing Gaming Disorder and contributes to the advancement of intervention strategies for behavioral addictions.

Keywords: Gaming Disorder, behavioral addiction, hierarchical intervention

8A–4

A data-driven approach to identifying risk behaviors in gambling

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The rapid expansion of internet access and the widespread availability of online gambling products have significantly increased the prevalence of addictive behaviors, creating substantial economic, social, and family-related risks for a growing number of users—particularly among vulnerable groups. In response, Spain's General Directorate for Gambling Regulation (DGOJ), under Royal Decree 176/2023, is mandated to develop a mechanism capable of detecting risky and potentially pathological online gambling behavior. The mechanism uses data from 506 clinically diagnosed gamblers as the target group, along with the online gambling database covering all licensed gambling platforms in Spain, which comprises more than two million gamblers in 2024. This project combines psychiatric expertise with advanced statistical methods to design an algorithm that identifies players exhibiting harmful patterns, distinguishing them from those engaging in responsible gambling. The framework begins by operationalizing DSM-5 criteria, translating clinical concepts into measurable behavioral indicators. These variables are then integrated into a semisupervised learning approach, enabling the model to leverage both clinically validated cases and broader player data to improve detection accuracy.The proposed system successfully differentiates between responsible and high-risk gambling behaviors, enabling early identification of gamblers by exhibiting compulsive patterns. The algorithm demonstrates improved predictive performance compared to traditional rule-based methods, supporting targeted interventions such as limiting promotional incentives and restricting credit card use. The resulting system will be mandatory for all licensed online gambling operators in Spain, positioning the country as a European leader in safeguarding player well-being and promoting responsible gambling environments. This presentation will introduce the tool, its methodological foundations, and its implications for public health and regulatory practice.

Keywords: online gambling, addictive behavior, machine learning

8A–5

An evidence-based AI assistant for professionals working in the field of problematic use of digital technologies

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Background: The growing importance of digital technologies brings new challenges for experts working in prevention, counselling and treatment of risky use of digital media. At the same time, in today's information-overloaded and polarized society, there is a great demand for strengthening the ability to navigate complex topics, make decisions based on quality data, and maintain human oversight over technologies. Objectives: To present the development of a specialized AI assistant designed to support the addictologists, psychologists and other experts working in the field of problematic use of digital technologies. The contribution also aims to present preliminary findings from a user needs assessment, identifying key expectations and information needs that inform the design of the assistant. The assistant aims to facilitate rapid access to evidence-based information, research findings, and practical recommendations. *Methods:* The contribution will show the creation of model scenarios, prompts and reference answers used to test and optimize the functioning of the assistant. The results of a pilot qualitative needs analysis conducted among six addiction specialists and psychologists through semi-structured will also be presented. The data obtained were analyzed using the thematic analysis method and used in the design of the functionalities and content of the AI assistant. *Results:* Preliminary findings indicate a strong demand for rapid access to trusted information in the field of problematic use of digital technologies. The presentation demonstrates the AI assistent architecture, knowledge integration process, and examples of generated responses addressing common professional questions. *Conclusions:* The identified needs of experts indicate that an AI assistant based on verified expert sources has the potential to support evidence-based practice in the area of problematic use of digital technologies. *Dedication:* 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 assistant, artificial intelligence, problematic use of digital technologies, diagnostics, prevention, intervention

8B–1

Does stress affect mechanisms of problematic internet use? Reviewing recent evidence from FOR2974

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Acute stress has been proposed as a factor influencing core mechanisms of problematic usage of the internet (PUI), particularly cue processing, craving, and decision making. Stress promotes habitual over goal-directed behavior and may thereby exacerbate existing executive control deficits, especially in later stages when negative consequences are increasingly experienced. Some evidence additionally suggests attenuated stress responses in individuals with pathological use. Across studies from our collaborative research consortium, we examined how acute stress relates to different forms of PUI, including gaming disorder, online compulsive buying-shopping disorder, and problematic social network use. Overall, no altered stress reactivity was observed for most PUI subtypes, and acute stress did not affect cue processing or executive control across increasing severity levels. However, individuals with more severe PUI showed elevated baseline and chronic stress levels. While acute stress had no effect on cue reactivity or executive control functions in gaming disorder or online compulsive buying-shopping disorder, it enhanced cue reactivity in social network use, albeit independently of symptom severity. Notably, in Gaming disorder, acute stress reliably increased craving, independent of the presence of any game-related cues. These findings suggest that acute stress may act less as a moderator of cue reactivity or decision making and more as a craving-inducing cue itself, likely shaped by learned associations between stress and engagement in digital behaviors across multiple PUI domains.

Keywords: stress, craving, cue reactivity, executive functions, decision making, problematic usage of the internet

8B–2

Gaming motives and impulsivity: Additive risk factors of gaming disorder

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Background: Gaming disorder is characterized by persistent gaming behavior despite negative consequences. Impulsivity represents a robust risk factor, with its distinct facets (attentional, non-planning, motor) potentially linked to motivational drivers like escapism or competition. According to the I-PACE model, these factors interact with situational triggers, cognitive-af-

fective processes, and behavior automatization in the development of the disorder. This study investigates if gaming motives and behavior automatization moderate the relationship between impulsivity and symptom severity, and exploratively identifies gamer profiles via cluster analysis. *Method:* Cross-sectional data from 377 adult gamers were collected at several German sites as part of the DFG-funded research unit FOR2974 (Project No.: 411232260). Impulsivity, gaming motives, behavior automatization, and symptom severity were assessed using questionnaires. Moderation hypotheses were tested using hierarchical multiple regressions, controlling for age, gender, depression, and anxiety. A two-step cluster procedure (hierarchical and k-means analysis) was applied to identify gaming profiles. *Results:* Contrary to the moderation hypotheses, no significant interaction effects were found after Bonferroni-Holm correction. However, the regression models confirmed significant additive main effects: The impulsivity facets explained approximately 20% of the variance in symptom severity, while escapism motive and the behavior automatization served as additional significant predictors. Depression and anxiety consistently showed strong associations with symptom severity. The cluster analysis identified four distinct gaming profiles. *Conclusion:* Findings primarily support an additive model in which risk factors (especially impulsivity, escapism, and behavior automatization) accumulate to increase symptom severity. This pattern is reflected in the four identified gaming profiles: (1) an unproblematic-adaptive, (2) a social-competitive ("low risk"), (3) an emotion-regulative ("high risk"), and (4) a problematic-clinical profile. While most profiles follow this additive logic, the clinical profile converges high levels of all risk factors. This typology provides an empirical basis for risk stratification and targeted intervention design.

Keywords: gaming disorder, impulsivity, gaming motives

8B–3

Personality traits and materialistic values in online compulsive buying-shopping disorder and problematic social network use

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Background: Certain personality traits are risk factors for the development of problematic internet use. Higher neuroticism, impulsivity, and materialism have been linked to problematic online shopping and social network use, whereas lower conscientiousness has been associated with higher engagement in both behaviors. Dark Triad personality traits have also been implicated. However, little is known about personality differences between individuals with online compulsive buying-shopping disorder (CBSD) and those with problematic social network use (p-SNU). This study aimed to compare personality aspects between women with CBSD, p-SNU, and a control group with non-problematic use. *Methods:* Women with CBSD

(n=62), p-SNU (n=74) and a control group (n=132) were screened using a diagnostic interview. The sample represents a subsample of the FOR2974 cohort (2021-2023). Personality traits were assessed with the BFI-2, the Naughty Nine, and the Barratt Impulsiveness Scale. Materialism was measured with the Material Values Scale. *Results:* Participants with CBSD and p-SNU showed higher neuroticism and impulsivity than control participants (medium-large effect sizes). The CBSD group also scored higher on narcissism, Machiavellianism and materialism (medium-large effects) than control participants. Control participants exhibited higher conscientiousness than both groups with problematic use (small-medium effects) and higher openness than the CBSD group (small-medium effects). Compared to p-SNU, the CBSD group showed higher materialism, neuroticism, and Machiavellianism (medium effects). *Discussion and Conclusions:* Neuroticism and impulsivity are related to CBSD and p-SNU, whereas conscientiousness and openness may serve as protective factors. Materialism, neuroticism, and Machiavellianism are particularly elevated in CBSD, which should be considered in prevention and treatment.

Keywords: Big Five, Naughty Nine, Impulsiveness, I-PACE, ACSID-11

8B–4

Inhibitory control in problematic social network use: The interplay with cue-induced craving

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Background: The pervasive integration of social networks (SN) into daily life results in continuous exposure to SN-related cues, which may increase their motivational salience and trigger strong urges to use SN. In individuals with problematic social network use (PSNU), both heightened craving and decreased stimulus-specific inhibitory control are frequently reported. Theoretical models propose that these motivational and control-related factors may interact, with craving potentially challenging stimulus-specific inhibitory control and contributing to dysregulated use. However, empirical findings on inhibitory deficits in PSNU remain inconsistent. Clarifying how craving and cognitive control jointly affect SN use behavior is therefore crucial for understanding mechanisms of PSNU. *Method:* In a multicenter study (FOR2974), 44 individuals with PSNU and 23 individuals with non-problematic use were classified using a structured clinical interview. Participants completed a modified stop-signal task with SN-related stimuli. Additionally, self-reported urges to use SN were assessed before and after a cue-reactivity paradigm to examine cue-induced craving. *Results:* Preliminary analyses revealed no significant differences in stimulus-specific inhibitory control between PSNU and users with non-problematic use. However, individuals with PSNU showed significantly stronger cue-induced craving. Craving did not moderate the relationship between PSNU severity and inhibitory task performance, indicating that heightened motivation to engage with SN does not straightforwardly translate into diminished inhibitory control in the experimental context

assessed. *Conclusion:* These findings suggest that PSNU may be characterized more by altered motivational and attentional processing than by a clear impairment in inhibitory control. The presence of elevated craving alongside functional difficulties highlights the need for continued research. Future work should examine contextual and affective conditions, such as stress or negative mood, under which craving may interfere with cognitive control and everyday functioning, helping determine when and how PSNU results in clinically relevant impairment.

Keywords: cognitive control, social media use, cue-induced craving

8B–5

Development and validation of the emotional working memory training in the context of problematic social networks use

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Background: Explicit cognitions such as working memory performance and emotion regulation abilities are central to goal-directed behavior and assumed within the I-PACE model by Brand and colleagues (2019, 2025), to influence problematic social network use (PSNU). The aim of the study is to examine the convergent validities (e.g., inhibitory control, attention, working memory) of an emotional Working Memory Training (eWMT). In addition, initial associations between the eWMT, emotion regulation, Fear of Missing Out (FoMO), and the tendency toward PSNU will be examined. *Methods:* Within the DFG-founded research unit (FOR2974), the eWMT has been developed based on a dual n-back task in which visual stimuli (neutral/negative faces) and auditory stimuli (neutral/negative words) are presented in parallel. In order to examine potential short-term training effects, participants (N=70) completed the task at two measurement points. In addition, further paradigms measuring working memory capacity (Digit Span) and inhibitory control (Stroop task and Go/No-Go) are used. Difficulties in emotion regulation, FoMO, and symptom severity of PSNU are assessed by self-reports. *Results:* The preliminary data showed that significant correlations between eWMT performance and neurocognitive tasks indicating convergent validity. In addition, the eWMT significantly correlates with FoMO, but not with difficulties in emotion regulation nor symptom severity. Performance in the eWMT improved from the first to the second measurement time point. *Conclusion:* The convergent validity of the task used appears to be given with regard to the data obtained so far. A training effect of the eWMT is evident and underscores the connection between cognitive tasks and the affective working memory task. However, the association with general difficulties in emotion regulation needs to be investigated in more detail. However, it provides an initial insight into the extent to which training cognitive and affective processes may represent an approach for developing interventions for PSNU.

Keywords: problematic social networks use; explicit cognitions; intervention

8C–1

Demographic and psychosocial predictors of DSM-5 gambling disorder among older adults in Hong Kong

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Background: This study examined gambling participation and DSM-5 gambling disorder risk among community-dwelling older adults in Hong Kong, exploring demographic and psychosocial correlates, including elder abuse, depression, social networks, and loneliness. Method: Cross-sectional household survey of 721 community-dwelling Chinese adults aged ≥ 60 years in Hong Kong using stratified random sampling and door-to-door recruitment by trained research assistants. *Results:* 8.7% exhibited gambling disorder risk (DSM-5 scores ≥ 1), with men showing higher participation in HKJC Mark Six lottery (32.4% vs. 18.5%), horse race betting (25.6% vs. 6.8%), and football betting (12.8% vs. 4.5%), all $p < .001$. Due to skewness, log(DSM-5 + 1) transformation was applied for regression analyses. The full model identified elder abuse risk, depressive symptoms, male gender, younger-old age, and higher educational attainment as significant predictors of gambling disorder risk. *Conclusions:* Among Hong Kong elders, gambling disorder risk is highest among men, the younger-old, and those with higher education, while elder abuse risk and depressive symptoms emerged as psychosocial predictors. Lower education showed protective effects, likely reflecting cohort-specific gambling access patterns. Findings support integrated screening for gambling, mental health, and elder abuse in geriatric care, with gender-tailored interventions addressing those at-risk as a public health priority.

Keywords: gambling disorder, elder abuse, depression

8C–2

Patterns of adolescent risk-taking: Co-occurrence and psychosocial predictors of substance use, gambling, and antisocial behaviors

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Background: Adolescence is marked by increased engagement in risk behaviors, including gambling, substance use, and antisocial behaviors. These behaviors frequently co-occur, and are likely driven by shared sociodemographic, familial, early life adversity, and psychological risk factors. Despite the high prevalence of adolescent risk behaviors, the majority of previous research does not adequately address their co-occurrence, instead treating risk-taking as a uniform construct. Person-centered approaches, such as the present study, enable the identification of distinct risk behavior profiles beyond traditional variable-centered and one-size-fits-all approaches. *Methods:* We will implement Latent Class Analysis (LCA) to identify distinct subgroups of adolescents characterized by unique combinations of risk behaviors. Data will be drawn from the Generation R cohort, a multiethnic, population-based longitudinal study in the Netherlands (N ~3,000) following participants from birth into adulthood. Risk behaviors were assessed using self-report questionnaires at age 18, including current alcohol, tobacco and cannabis use, lifetime gambling, past-year gambling, lifetime criminal record, and past-year rule-breaking behavior, which will serve as indicators in the LCA model. Further, we will examine associations between class membership and sociodemographic (i.e., sex, socioeconomic status, migration background, IQ), familial (i.e., parental history, parental divorce), childhood trauma, and psychological (i.e., internalizing and externalizing symptomatology) predictors of risk-taking. *(Expected) Results:* We expect to identify multiple latent classes, including a low-risk group exhibiting little-to-no engagement in risk behaviors, a moderate-risk group characterized by selective engagement (i.e., gambling only, or substance use and gambling), and a high-risk group displaying high engagement across all behaviors. Classes are anticipated to differ meaningfully on sociodemographic, familial, childhood trauma, and psychological functioning predictors. *Conclusions:* This study will elucidate heterogeneity and co-occurrence in adolescent risk-taking, enhancing the understanding of shared and distinct mechanisms underlying behavioral addictions. Findings will inform early identification of at-risk adolescents, and guide the development of tailored prevention strategies.

Keywords: adolescent risk behavior, behavioral addictions, latent class analysis

8C–3

Social identification with online gambling site users as a risk factor for problem gambling: A cross-national study

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Background: The global expansion of online gambling highlights gaps in understanding the social psychological mechanisms in digital environments that may contribute to gambling-related harm. Evidence remains limited on how processes such as social identification and community engagement influence problematic gambling behaviors, and whether these mechanisms operate similarly across cultural contexts. This study examined whether participation in online gambling communities and identification with other online gamblers constitute risk factors for problem gambling. *Method:* Data were collected from 12 countries (Finland, France, Germany, Ireland, Italy, Poland, USA, Australia, Japan, Brazil, Portugal, and South Africa). The analytic sample included respondents who reported online gambling (N = 3,767). Mixed-effects negative binomial regression was used to test direct associations with problem gambling (Problem Gambling Severity Index, PGSI), and structural equation modeling assessed indirect pathways. Models controlled for loneliness (UCLA 3-Item Loneliness Scale), psychological distress (MHI-5), gender, age, and employment status. *Results:* Visiting online gambling communities, stronger identification with other gamblers, higher loneliness, greater psychological distress, and younger age were significant predictors of gambling problems, and these associations were consistent across countries. Identification mediated the relationship between visiting gambling communities and problem gambling severity, suggesting that social identification processes may amplify gambling-related harm. *Conclusions:* Findings underscore the role of online social environments in exacerbating gambling problems and highlight the importance of considering social identity mechanisms in harm-reduction strategies. Cross-national evidence is crucial for understanding these processes and developing culturally sensitive interventions.

Keywords: online gambling, problem gambling, social identification, online communities, cross-national study

8D–1

Aberrant dynamic brain states and network dysfunction in gambling disorder: State-dependent alterations during rest and movie-watching

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Background: Gambling disorder (GD) involves disrupted large-scale brain networks, particularly the default mode (DMN), executive control (ECN), salience, and limbic circuits. However, most studies rely on static resting-state paradigms, overlooking dynamic network alterations under ecologically relevant conditions. This study examined state-dependent alterations in dynamic functional connectivity (dFC) in GD during both resting-state and naturalistic movie-watching. *Methods:* Thirty-six GD patients and 39 healthy controls (HC) underwent fMRI during resting-state and movie-watching. dFC was characterized using sliding-window correlation and k-means clustering. Temporal metrics (fractional occupancy, mean dwell time, transition probabilities) were computed. Group differences were examined using ANCOVA (covariates: age, education). Network-level differences were quantified using normalized network-wise density (Δ_norm) and raw suprathreshold edge count (Δ_raw) to assess concentration and magnitude of alterations. Relationships between dynamic metrics, dFC, and clinical scores were analyzed. *Results:* No significant differences were found in global dynamic metrics. However, GD exhibited distinct state-dependent network alterations. At rest, GD showed selective abnormalities in State 1 (control, salience, DMN, temporoparietal), and persistent temporoparietal/DMN emphasis in State 2 with attenuated control/salience engagement. During movie-watching, GD displayed broadly decentralized abnormalities in State 1 (except focal limbic/temporoparietal dysregulation), collapsing to global hypo-centralization in State 2. Notably, temporoparietal junction and limbic connectivity reversed across paradigms: strengthening from State 1 to State 2 at rest, but weakening during movie-watching. These dysfunctions were systematically encoded in symptom severity and motivational profiles. *Conclusion:* This study delineates a State-Network-Behavior pathological model in GD, characterized by dynamic alterations across DMN, ECN, salience, limbic, and temporoparietal networks, with more pronounced abnormalities emerging during naturalistic stimulation. These changes correlate with impulsivity, cognitive bias, and gambling motivation. Findings highlight the necessity of ecologically valid paradigms for uncovering GD mechanisms and developing intervention targets.

Keywords: gambling disorder, dynamic functional connectivity, brain states, resting-state, naturalistic fMRI

8D–2

Effectiveness of Brain Computer Interface based intervention (BCI) for arousal alteration in gaming disorder

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Introduction: Gaming disorder is characterized by excessive and problematic gaming behaviors, often leading to intense emotional arousal and difficulty in controlling gaming impulses. Understanding and managing emotional arousal during gameplay is crucial for developing effective interventions for this disorder. *Objective:* This study aimed to assess the effectiveness of BCI-based models in managing arousal during gameplay among players without gaming disorder, players with gaming disorder. *Methods:* The study consisted of two main phases. Phase 1) Development of a new task to measure arousal and examine emotions among players without gaming disorder, players with gaming disorder, and players involved in problematic gaming during the emotional arousal task. Phase 2) Assessment of the impact of a BCI-based intervention on reducing arousal in players during the emotional arousal task. Participants, with and without gaming disorder, engaged in gameplay sessions under different conditions (BCI, sham, and silence) in both easy and hard gameplay modes. Arousal levels were measured using the theta/beta ratio (TBR). The performance of the BCI system was evaluated using the EEGNet model and metrics such as mean square error (MSE) and likelihood function similarity. Statistical analyses were conducted to compare emotional arousal levels and gameplay performance across groups. *Results:* The findings showed that the emotional arousal task could generate various levels of valence, arousal, and dominance among players, and the BCI-based intervention led to a significant reduction in emotional arousal during gameplay. The theta-to-beta ratio in the BCI condition was significantly higher than in sham and silence conditions among all participants during hard gameplay, indicating a significant reduction in arousal due to the BCI-based intervention ($p = 0.012$), observed both in TBR and self-reported outcomes. Furthermore, the study's results indicated that reducing emotional arousal through BCI intervention improved gameplay performance in hard gameplay conditions, as evidenced by a decrease in failure rates. Additionally, there was no statistically significant difference between the arousal levels reported by participants and those calculated by the model ($p > 0.05$), indicating the model's high reliability in detecting emotional levels in digital game players during gameplay. *Conclusion:* The present intervention model, with high accuracy and reliability in detecting arousal during digital gameplay from EEG signals, offers a promising tool for BCI-based interventions.

Keywords: Gaming disorder, arousal, BCI, neurofeedback, EEG signals, gameplay performance, emotional regulation

8D–3

Altered orbitofrontal cortex connectivity: A neural basis of Internet Gaming Disorder

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Background: Internet Gaming Disorder (IGD) is closely associated with abnormalities in impulse control and reward processing. Research suggests that functional connectivity (FC) between the orbitofrontal cortex (OFC) and regions like the lateral prefrontal cortex (LPFC) plays a critical regulatory role in addictive behaviors (Huang et al., 2023). However, whether IGD show altered OFC-LPFC functional connectivity remain unclear. This resting-state fMRI (rsfMRI) study compared individuals with IGD and matched controls to characterize functional abnormalities within OFC-LPFC circuits. *Method:* A total of 75 participants were included, comprising an IGD group (PIGD; n=34; male=32; age:15-25years) and a carefully matched control group (control-for-PIGD; n=41; male=33 age:18-25years).Resting-state functional magnetic resonance imaging (fMRI) data were acquired. We evaluated the resting-state functional connectivity (RSFC) between the orbitofrontal cortex (OFC) and key regions of the lateral prefrontal cortex (LPFC), including the superior, middle, and inferior frontal gyri, as well as the pars triangularis. Group differences in RSFC were examined using analysis of covariance (ANCOVA), controlling for age and sex. *Results:* Compared to controls, the PIGD group demonstrated significantly altered RSFC between the OFC and the superior frontal gyrus (p=0.015), middle frontal gyrus (p=0.043), inferior frontal gyrus (p=0.015), pars triangularis (p=0.043), and mid-cingulate cortex (p=0.015). Notably, these RSFC patterns effectively distinguished the PIGD group from the control-for-PIGD group, suggesting a specific association between IGD and functional reorganization of the OFC-prefrontal circuit. *Conclusions:* This study consistently demonstrates that OFC functional abnormalities represent a trans-diagnostic neural marker shared across IGD and other behavioral addictions. The findings indicate that disrupted functional connectivity within the OFC-prefrontal circuit is a potential neural target for developing future addiction interventions.

Keywords: Internet Gaming Disorder, impulsivity, orbitofrontal cortex, functional connectivity

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8D–4

Abnormal functional connectivity of the right inferior frontal gyrus operculum: Exploring the protective neural mechanisms in excessive online gaming

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Background: Internet Gaming Disorder (IGD) is recognized as a behavioral addiction characterized by excessive gaming and impaired control over gaming behavior, posing a significant public health concern. A meta-analysis indicated that individuals with IGD exhibit significant hyperactivation in the right inferior frontal gyrus (IFG) during cue-reactivity tasks, suggesting an association between right IFG hyperactivity and cue-induced gaming craving. The right triangular part of the IFG plays a crucial role in behavioral inhibitory control, a core executive function, and its hyperactivity may reflect a shift in attribution between goal-directed and habitual behavior control in IGD (Zheng et al., 2019). However, whether functional abnormalities exist in the right inferior frontal gyrus operculum (Frontal_Inf_Oper_R) in Excessive Online Gaming , and whether non-impaired but heavy gaming users (NIGP) show similar neural changes, remains unclear. This study aimed to investigate the functional characteristics of the right IFG operculum and its association with gaming behavior across different gaming groups, to reveal its potential protective neural mechanisms in preventing uncontrolled gaming. *Methods:*A total of 59 participants were enrolled, including 32 individuals with excessive online gaming use (NIGP group, aged 21-27 years) and 27 carefully matched non-impaired gaming participation healthy controls (Control for NIGP group, aged 18-28 years). The right inferior frontal gyrus (IFG) operculum (Frontal_Inf_Oper_R) was selected as the core region of interest (ROI). The right mediodorsal thalamus (Thal_MDl_R), right medial orbital frontal gyrus (Frontal_Med_Orb_R), and left precentral gyrus (Precentral_L) were chosen as associated ROIs. Resting-state functional magnetic resonance imaging (rsfMRI) data were processed and analyzed to quantify the resting-state functional connectivity (rsFC) strength between the core ROI and each associated ROI. Statistical analyses were performed to compare rsFC differences between the two groups, aiming to clarify the characteristics of core ROI functional connectivity changes in excessive online gaming use. *Results:* Statistical analyses revealed significant differences in core ROI functional connectivity between the NIGP group and healthy controls. Compared with the Control group, the NIGP group showed significantly abnormal rsFC between the right IFG operculum and the right mediodorsal thalamus, right medial orbital frontal gyrus, and left precentral gyrus (all p=0.0360). The abnormalities were manifested as specific changes in functional connectivity strength, indicating disrupted functional synergy between the right IFG operculum and addiction-related neural circuits in individuals with NIGP. Functional reorganization of the neural network composed of these brain regions may be closely related to the pathophysiological mechanisms of IGD. *Conclusions:*This study confirms that abnormal functional connectivity between the right IFG operculum and multiple addiction-related

brain regions is a key neurobiological feature of Excessive Online Gaming . It also enriches transdiagnostic evidence that IGD and substance use disorders share common neural circuit abnormalities, providing a new direction for the exploration of potential intervention targets for addiction in the future.

Keywords: internet gaming disorder; non-impaired gaming

Reference:

Zheng, Y., Li, X., Liu, Y., et al. (2019). Neural correlates of goal-directed and habitual control in internet gaming disorder. *Journal of Behavioral Addictions, 8*(4), 789-798.

8D–5

Resting-state connectivity alterations in Gambling Disorder: A graph-theoretical approach

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Background: Core dysfunctions in addictive disorders have been conceptualized as imbalances in communication within and between large-scale brain networks. Resting-state functional connectivity (rsFC) has emerged as a valuable tool for investigating such alterations in intrinsic brain activity. However, research on Gambling Disorder (GD) is still in its early stages, and most existing studies have predominantly relied on seed-based connectivity approaches. Therefore, there is a need for more comprehensive, data-driven methods to better capture the complexity of brain network reorganization in GD. *Methods:* This study examined large-scale network properties in 35 treatment-seeking individuals with GD (32 males) and 35 age- and sex-matched healthy controls (HCs), using resting-state fMRI and graph theory analysis. Participants also completed a psychometric assessment targeting impulsivity, alexithymia, sensation seeking, and clinical dimensions of GD, including gambling-related urges, cognitions, and behaviors. *Results:* Behaviorally, individuals with GD showed significantly higher impulsivity and alexithymia, and lower sensation seeking compared to HCs. Graph theory analysis revealed reduced nodal efficiency in the default mode network (DMN) and increased degree centrality in the frontoparietal network (FPN) and precuneus in the GD group. Within the GD sample, altered connectivity in the FPN and enhanced participation of task-positive and sensorimotor networks were positively associated with symptom severity, including urges, gambling-related thoughts and behaviors, and hedonic capacity. *Conclusions:* These findings suggest that GD is characterized by disrupted network topology, particularly in circuits related to cognitive control and self-referential processing. Importantly, the association between network alterations and clinical symptoms highlights the relevance of rsFC as a potential biomarker of disorder severity and treatment targets in GD. This study advances understanding of the neural architecture underlying behavioral addictions.

Keywords: gambling disorder, resting-state fMRI, brain network, graph theory, functional connectivity

8E–1

Results of a 2025 national survey on gaming and internet use behavior in Japan Part 1: Gaming behavior and disorder

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Background: Excessive gaming and gaming disorder (GD) are global health and social concerns. In Japan, a national survey on gaming behavior was conducted in 2019 among subjects, who were representative of both younger age groups and the general population – ages ranging from 10 to 79 years old. A new national survey on gaming behavior was conducted in early 2025 using similar methodologies to the earlier survey, making it possible for us to obtain more recent data and identify national trends in behavior. *Methods:* The subjects were 9,000 Japanese males and females, aged between 10 and 79 years old, who were residing in Japan. These were identified using a two-step random sampling method. The self-reported questionnaire, comprising 50 questions for adults and 41 questions for minors, was mailed to each participant, who were invited to respond either by mail or via a web-based system. Questions incorporated basic information such as age and gender, as well as gaming and internet use behaviors. A valid response was obtained from 4,650 participants with a response rate of 51.7%. To estimate the prevalence of probable GD, the GAMing Engagement Screener Test was used. *Results:* The rate of gaming activity in the preceding year was 66.4% for males and 59.5% for females. Regarding age, the cohort with the greatest level of activity (93.0%) were aged between 10 and 19 years with gaming decreasing with the advancement of age. The estimated prevalence of probable GD among those between 10 and 29 years old was 14.5% for males, 5.8% for females, and 10.3% for total, rates which were higher than in 2019 (7.6%, 2.5%, and 7.1%, respectively). *Conclusions:* Although preliminary, a series of national surveys have suggested an increase in the prevalence of probable gaming disorder in Japan. More detailed analysis will elucidate factors related to changes in gaming behavior including gaming disorder.

Keywords: problematic digital media use, gaming and social media, cross-national comparison, behavioral addiction, mental health

8E–2

Social networking service use and problematic use in the Japanese population: Results from a nationwide survey

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Objective: The extensive use of social networking services (SNS) has given rise to concerns regarding problematic and addictive patterns of use, particularly among younger demographics. The objective of this study was to provide a comprehensive overview of the current state of SNS usage within the Japanese population. It sought to elucidate the patterns of usage and the prevalence of problematic SNS usage, while also exploring its associations with psychosocial factors. *Methods:* A nationwide postal questionnaire survey was conducted between 7 January and 13 February 2025. The study involved a sample of 9,000 Japanese citizens aged 10–80 years, selected using a stratified two-stage random sampling method. The Social Media Disorder Scale (SMDS) was used to assess problematic SNS use, with a total score of 5 or more indicating suspected problematic SNS use. The additional measures included loneliness, assessed by the Three-Item Loneliness Scale (TIL), psychological distress, assessed by the K6 scale, and social withdrawal tendencies, assessed by the HiDE-S. In addition, demographic information and patterns of SNS use over the past 30 days were collected. *Results:* A total of 4,650 valid responses were analysed (909 from minors and 3,741 from adults), yielding an overall valid response rate of 51.7% (57.7% among minors and 50.4% among adults). The most common SNS activities in the past 30 days were viewing posted photos or videos (61.7% overall; 57.5% among men, 65.4% among women), "giving likes" to others' posts (30.3%; men 25.0%, women 35.1%), communication via chat, voice, or video calls (29.5%; men 28.5%, women 30.3%), and sharing posted photos (21.0%; men 18.3%, women 23.4%). Individuals who reported not using SNS accounted for 24.6% of the total sample (27.3% of men and 22.2% of women). According to the SMDS, the overall prevalence of suspected problematic SNS use was 2.2% (2.3% among men and 2.2% among women). When the data is limited to participants aged 10–29 years, the prevalence increases to 6.0% (5.8% among men and 6.2% among women). *Conclusions:* The use of social networking sites is widespread. However, a notable proportion of younger individuals exhibit problematic patterns of use. These findings highlight the need for age-appropriate education on healthy SNS use and the development of preventive intervention frameworks involving families, schools, and community resources. In this symposium, we will further discuss the relationship between SNS use and mental health from a public health perspective.

Keywords: problematic digital media use, gaming and social media, cross-national comparison, behavioral addiction, mental health

8E–3

Gaming disorder in the International Gaming Study

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The International Gaming Study 2024 (IGS24) surveyed adults aged who play video games in Australia, the United States, the Netherlands, China, and Indonesia. The Gaming Disorder Identification Test (GADIT) ICD-11 screening tool was translated and tested in English, Dutch, Indonesian language, and Chinese. We examined the cross-cultural performance of GADIT and factors and profiles of people at risk of gaming disorder. Findings will inform screening and prevention of gaming disorder.

Keywords: problematic digital media use, gaming and social media, cross-national comparison, behavioral addiction, mental health

8E–4

Integrating smartphone logs and neuroimaging in problematic smartphone use: Objective nighttime use and reward-system correlates

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Background: Digital behavior–related addictions (including gaming disorder and problematic smartphone use; PSU) are well-suited to device-based research because core behaviors occur on digital devices. In an industry–academia collaboration framework, we integrate objective smartphone logging with clinical and neurobiological assessments and also work toward scalable support tools such as screening approaches and app-based interventions. In this presentation, we briefly introduce this program and present an illustrative study linking objectively measured nighttime smartphone use with reward-system morphology and attention switching difficulty. *Method:* Fifty-three patients diagnosed with PSU by two psychiatrists completed smartphone logging, psychological assessment, and structural MRI. Nighttime smartphone use duration was objectively recorded from 00:00 to 06:00 using a logging application. Difficulty in attention switching was assessed using an Autism Spectrum Quotient (AQ) subscale. Structural MRI data were processed with CAT12/SPM12 to quantify nucleus accumbens (NAcc) volume. Associations among nighttime use duration, attention switching difficulty, and NAcc volume were examined using age-controlled partial correlations and regression analyses. *Results:* Attention switching difficulty was associated with objectively measured nighttime smartphone use duration and with right NAcc volume. Right NAcc volume was also associated with nighttime use duration, and regression analyses supported an independent association between right NAcc volume and nighttime smartphone use duration.

Conclusions: In PSU patients, right NAcc volume was associated with objectively measured nighttime smartphone use duration and with difficulty in attention switching. These findings suggest that individual differences in reward-system structure may be involved in the difficulty controlling nighttime smartphone use commonly observed in PSU.

Keywords: problematic digital media use, gaming and social media, cross-national comparison, behavioral addiction, mental health

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8E–5

Internet addiction in youth: Mapping the clinical burden, comorbidity and risk architecture behind gaming and social media use

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High internet penetration and massive digitalization worldwide have led to internet addiction (IA) becoming a serious concern among youth. Our studies reported gaming and social media addiction affecting 10.4% and 18% of the young population, respectively. The burden of IA affects quality of life in different ways, ranging from sleep disturbance (31.4%), physical complaints (10.7%), and emotional problems (7.6%). Higher risk of IA was observed in children with other comorbidities such as gastrointestinal symptoms (OR 3.40), peer-friendship conflicts (OR 3.40), and behavioral problems (OR 2.91-2.97). These point to the urgent need for early detection with validated screening tools among high-risk children and adolescents, encourage interprofessional collaboration, and school-based comprehensive interventions capable of addressing IA among youth.

Keywords: problematic digital media use, gaming and social media, cross-national comparison, behavioral addiction, mental health

8F–1

Qualitative analysis of subjective exercise addiction experiences: What the thousands of quantitative studies fail to reveal

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Exercise addiction (EA) is a paradoxical phenomenon in which the health-promoting behavior becomes maladaptive and potentially harmful. This qualitative research adopted Braun and Clarke's six-phase thematic analysis to examine 63 publicly still available self-reported EA cases from an earlier study by the authors. It aimed to explore the mental and social experiences of EA-affected individuals. This analysis yielded nine recurring themes: 1) loss of control, 2) multifaceted exercise engagement, 3) identity fusion with exercise, 4) emotional coping, 5) social disconnection, 6) health denial, 7) gender disparity, 8) compulsive quantification, and 9) severe physical consequences. These themes appear to suggest that EA is a multidimensional condition, which involves dependency, maladaptive coping, and impaired self-regulation rather than merely an exaggerated amount of exercise. Among others, the findings revealed that exercise often serves as an emotional coping mechanism and a core element of personal identity. Digital self-tracking and sociocultural pressures amplify the compulsive tendencies. Women were represented in a higher ratio than men, possibly suggesting gender related factors in motivation and/or self-presentation, and willingness to disclose exercise-induced distress. The results expand the current knowledge beyond symptom-based diagnostic models, such as the component model of addiction, by emphasizing the lived experiences of EA-affected individuals. They also underscore the importance of person-centered, ecologically more valid approaches in the assessment of EA. Therefore, it is essential to recognize identity fusion, emotional regulation deficits, and quantification obsessions as clinically relevant factors that may enhance early detection and guide targeted interventions. In conclusion, the study stresses the importance of qualitative methods in studying EA, to better understand and describe the psychological antecedents and consequences of EA, with a view to its clinical definition and diagnostic criteria.

Keywords: diagnosis, exercise dependence, physical activity, qualitative, sport

8F–2

On the (un)tenability of diagnostic criteria for substance use disorders for conceptualizing and assessing behavioral addictions: evidence from "physical exercise dependence"

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Background and aims: Physical exercise is widely recognized as being beneficial to physical health, mental health, and well-being. Nevertheless, intensive physical exercise can sometimes be harmful. In the field of addictive behaviors, such harmful engagement is often conceptualized by operationalizing diagnostic criteria originally designed for substance use disorders, which is subject to substantial criticism. In this line, the present oral presentation questions the tenability of conceptualizing and assessing physical exercise dependence by operationalizing diagnostic criteria for substance use disorders. *Methods:* Data were extracted from N = 1,295 participants recruited in the context of a large-scale online survey on physical exercise in French-speaking Belgium. Participants completed the revised version of the 21-item Exercise Dependence Scale (EDS-R-21), a self-administered psychometric instrument designed to assess physical exercise dependence by operationalizing diagnostic criteria for substance use disorders. Structural equation modelling analyses were performed to examine whether these diagnostic criteria were genuinely associated with mental health harms. *Results:* Among the "diagnostic criteria of physical exercise dependence", only three (i.e., withdrawal, continuance despite negative consequences, reduction in other activities) showed positive associations with mental health harms (e.g., stress, anxiety, depression). Conversely, one (i.e., time spent engaging in physical exercise) showed positive associations with mental health benefits (e.g., satisfaction of the three basic psychological needs for autonomy, relatedness, and competence). *Discussion and conclusions:* The present results reinforce the notion that operationalizing diagnostic criteria originally designed for substance use disorders to conceptualize and assess behavioral addictions is untenable and fails to distinguish harmful and non-harmful (or beneficial) engagement.

Keywords: EDS-R-21, physical exercise, revised version of the 21-item Exercise Dependence Scale

8F–3

Comprehensive psychometric analyses of exercise dependence scales across sociodemographic populations from three countries

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Background: Exercise dependence is increasingly studied using self-report measures such as the Exercise Dependence Scale and the Exercise Addiction Inventory. However, evidence regarding their measurement invariance across gender, age, and cultural contexts, as well as the validity and comparability of proposed cut-off scores, remains limited. This constrains meaningful inter-group and cross-cultural comparisons and the use of these instruments for screening purposes. The present study aims to address these gaps through comprehensive psychometric analyses across multiple sociodemographic populations from three countries. *Methods:* Five samples from three countries included female and male high-school students (Poland, N = 1087), university students (India, N = 1009 ; Poland: N = 1157), and adults (Poland, N = 655; Norway, N = 770). Exercise dependence was assessed using the Exercise Dependence Scale and the Exercise Addiction Inventory. *Results:* Measurement invariance analyses will be conducted across gender, age groups, and countries. Cut-off scores will be established using latent profile analyses of item-level data and compared across groups and measurement scales. *Conclusions:* Based on the obtained results, conclusions will be drawn regarding: (i) whether exercise dependence scales are invariant across different groups and allow for meaningful comparisons and generalization of results, and (ii) whether cut-off scores established using different scales yield comparable classifications. The findings will inform recommendations for best practices in exercise dependence measurement, particularly for brief, valid, and reliable screening and for studies involving inter-group and cross-cultural comparisons.

Keywords: exercise addiction; exercise dependence; measurement invariance; validity; screening; cut-off scores

8F–4

Stigma, secrecy, and self-management: Trust, disclosure, and prevention-oriented pathways in Türkiye's fitness sector

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Background: Non-medical anabolic-androgenic steroid (AAS) use in fitness and bodybuilding communities is shaped by complex stigma dynamics that profoundly influence disclosure, help-seeking, and health outcomes. International qualitative evidence demonstrates that users experience moral judgment and social condemnation, leading to secrecy, reliance on peer networks rather than healthcare professionals, and delayed intervention when adverse effects occur. In Türkiye, where fitness culture is expanding rapidly alongside social media influence, the intersection of stigma with healthcare access and prevention-oriented public health responses remains under-explored. *Aim:* This qualitative study examines how stigma operates as a barrier to disclosure and help-seeking among AAS users in Türkiye, and explores stakeholder perspectives on creating non-judgmental care pathways. Specifically, we investigate: (1) how users navigate stigma through concealment strategies and selective disclosure; (2) trust dynamics in gym versus healthcare settings; (3) how stigma reinforces "responsible user" narratives and self-management practices; and (4) stakeholder views on reducing stigma-related risks through prevention-focused approaches. *Methods:* We will conduct 50 semi-structured qualitative interviews across four stakeholder groups: AAS users, fitness trainers/coaches, dietitians/nutritionists, and healthcare professionals (psychiatry, psychology, endocrinology, general practice). Interview guides, informed by a systematic qualitative literature review, probe motivations, acquisition networks, risk perception, adverse effects, stigma experiences, disclosure decisions, and healthcare interactions. Thematic analysis will identify stigma mechanisms, trust-building conditions, and intervention opportunities tailored to Türkiye's fitness sector and healthcare system. *Expected Contributions:* This study will illuminate how stigma operates at interpersonal (family, partners), community (gym culture), and institutional (healthcare system) levels to prevent disclosure and delay care. Findings will inform prevention strategies, including early risk communication and education, gym-based awareness and referral pathways, confidential counselling and guidance services, and capacity-building/training for healthcare professionals and fitness sector stakeholders to promote timely help-seeking and reduce initiation and escalation of risky use patterns. *Conclusion/Implications:* By foregrounding stigma as a structural barrier rather than individual failing, this research will contribute evidence-based recommendations for Türkiye's public

health policy, clinical practice guidelines, and fitness industry standards, ultimately reducing AAS-related harms through stigma-sensitive prevention, early identification, and accessible support pathways.

Keywords: stigma, anabolic-androgenic steroids, disclosure, help-seeking behavior, prevention

8F–5

Correlates of compulsive buying from an intergenerational perspective: The case of Poland

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Background: The oral presentation will be based on the results of 7 cross-sectional studies conducted in Poland between 2010 and 2025. The purpose of these studies was to measure the prevalence of compulsive buying (CB) and psychological, socio-cultural, behavioural factors differentiating susceptibility to such behaviour (e.g. self-esteem, materialism, value orientations, online shopping). Special focus will be placed on the 2025 study devoted to the prediction of compulsive buying by propensity to risk, time perspectives, value orientations, self-assessment of life quality, and digital technology competences. *Method:* All presented studies are based on statistically representative samples of at least 1,000 respondents aged 18+ drawing from online panels or from the Identity Personal Number Database. In each case, susceptibility to compulsive buying was measured by the German Compulsive Buying Indicator. In the 2025 study, the predictors of compulsive buying were measured based on General Risk Propensity Scale, Zimbardo Time Perspective Inventory, and Schwartz's Twenty Items Values Inventory. *Results:* Although the prevalence of CB in the general population in Poland remains relatively stable between 2010 and 2025 (2-5%), it looks different when analysing particular subsamples. E.g., the 2022 and 2025 studies showed a double share of compensative buyers (pre-stage of CB) in Gen Z compared to the pre-pandemic period (36%/29% vs 16%). The 2025 results showed clearly that the Past-Negative time perspective and propensity to risk are strong predictors of CB. The risk-oriented individuals who asses their past negatively display above-average susceptibility to CB: 8% of them are compulsive buyers, and 30% are compensative buyers (vs. the 3%/16% share of the subgroups in the general population). *Conclusions:* Increasing prevalence of CB in certain subgroups might be an indicator of spreading CB in future. A factor accelerating this effect may be the development of a consumer society and its materialistic and risk orientation.

Keywords: compulsive buying, rational choice theory, time perspectives, propensity to risk, value orientation

8G–1

Clinical and sociocultural characterization of women with Pathological Love, Food Addiction, and Gambling Disorder in Brazil: Transdiagnostic convergences and implications for gender-sensitive care

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Background: Women presenting with behavioral addictions and affective dependence often access specialized care late, with substantial comorbidity and functional impairment. Although Pathological Love (PL), Food Addiction (FA), and Gambling Disorder (GD) are distinct conditions, they may converge on transdiagnostic processes such as urgency-related impulsivity, emotion dysregulation, heightened reward-cue reactivity, and the use of behaviors to alleviate negative affect. In Brazil, these presentations are also shaped by sociocultural determinants, including gender-related stigma, body-ideal pressures, relational coercion, and socioeconomic inequities. Objectives: To characterize the sociocultural and clinical profiles of women seeking treatment for PL, FA, and GD in Brazil, identifying convergences and disorder-specific patterns with implications for screening and gender-sensitive care. Methods: Clinical samples of women completed standardized self-report measures and structured items assessing sociodemographics and clinical correlates. The PL group completed measures of impulsivity, temperament/character traits, love styles, relationship satisfaction, and attachment. The GD group provided sociodemographic data and self-reported indicators of suicidality and related risk behaviors. The FA group comprised treatment-seeking patients from a specialized university outpatient clinic in São Paulo and was characterized by YFAS 2.0 severity and psychiatric comorbidity indicators. Results: Across groups, participants were adult women (mean ages ~39–44) with a predominance of White ethnicity (PL 70.3%; GD 61.5%; FA 78.3%), while GD showed greater racial diversity (Parda 24.0%; Black 13.5%). PL was characterized by elevated impulsivity, predominantly anxious-ambivalent attachment (56.8%), and moderate/low relationship satisfaction (9.95±4.65), alongside distinct love-style patterns. In GD, acute clinical risk was prominent: 43.8% reported lifetime suicide attempts and 55.2% endorsed "facilitating death" behaviors. FA showed severe symptom burden (YFAS 2.0 mean=9.12) and high psychiatric comorbidity (83.3%; anxiety 61.9%; depressive episodes 47.6%), compounded by stigma and body-ideal pressure. Conclusions: PL, GD, and FA share a transdiagnostic vulnerability profile in women but differ in their dominant clinical expressions—relational dysregulation in PL, acute suicidality risk in GD, and severe addiction-like eating with high comorbidity in FA. These findings support integrated screening (urgency-related impulsivity, attachment/relational functioning, suicidality, comorbidity) and gender-sensitive interventions that address stigma and sociocultural stressors in Brazilian clinical settings.

Keywords: women, pathological love, food addiction, gambling disorder, transdiagnostic, gender-sensitive care

8G–2

When screens swallow our pain

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We are living in the 21st century, the digital age, a world that has changed faster than we can metabolize. In our clinical work with women in Argentina, this accelerated transformation deeply affects also how female suffering is expressed and treated. Traditional reference points regarding love, parenting, work and care have weakened, while the digital world has become a dominant space for connection, regulation and escape. After COVID, social media has reshaped how women relate to others and to themselves. Social bonds have become more fragile, loneliness has increased, and time is experienced as an enemy: everything is expected to happen immediately, leaving little room for doubt, absence or discomfort. In this context, many women turn to screens —particularly social media and online shopping— as ways of managing psychic pain that cannot find words. The pain of human existence remains, but contemporary society offers little space to acknowledge it, especially for women, who are often expected to remain functional, available and emotionally responsive. Screens swallow this pain for them. They numb fear, uncertainty and lack, flooding psychic life with images, offers and stimuli that pull subjects away from their own speech and from the silences necessary for elaboration. Grounded in psychoanalytic clinical practice with women and illustrated by a clinical vignette, this presentation reflects on behavioral addictions as gendered expressions of suffering. By situating these phenomena within the Argentine context, the work seeks to contribute to a women-centered clinical understanding of behavioral addictions in the digital era.

Keywords: women, mobile phone addiction, social media addiction, buying-shopping addiction (compulsive buying), gambling disorder

8G–3

New Life Psychiatric Rehabilitation Association-HK-China

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In recent years, the growing popularity of artificial intelligence recreational chatbots has drawn increasing attention to potential risks associated with excessive use. Much of the prior research conceptualizes conversational agents as neutral communication tools or situates their overuse within broader frameworks of technological dependence, with limited exploration of lived experiences of females. This study adopted a qualitative grounded theory approach to examine how sociocultural factors, including gender norms, stigma around mental health, and social expectations, shape women's reliance on chatbot platforms and influence their psychological well-being and interpersonal functioning. Twenty adult women (n = 20) from Hong Kong, Macau, and mainland China who reported intense engagement with chatbots, and associated distress participated in semi-structured online interviews. Transcripts were analyzed through iterative coding and constant comparative methods using NVivo software. The analysis indicated that psychological distress across familial, occupational, and relational domains, and a persistent inability to express emotions, contributed to the development of parasocial attachments as alternative spaces for validation and emotional regulation. The study identifies the ambivalent functions that chatbot companionship provides. While participants valued the accessibility and non-judgemental qualities of chatbot interaction, many described compulsive use, emotional preoccupation, and social withdrawal. The findings discuss the cultural, psychological, and relational factors that drive dependence an d highlight the importance of gender-sensitive interventions and ethical design strategies.

Keywords: AI chatbot dependency, parasocial relationships, gendered technology use, compulsive digital behavior, psychological distress, emotional regulation, sociocultural stigma, Asian mental health

MINI TALKS

MINI–1A–1

Misleading omissions of loot box presence disclosures: Widespread unfair commercial practices in video game advertising on social media in Ireland and the EU

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Loot boxes, gacha, and other gambling-like in-game purchases offer random rewards for money and may cause consumer harm, especially to children. Stakeholders are concerned about gambling-related and unique behavioural addiction harms associated with these products. Interpreting and strictly enforcing pre-existing consumer law to require companies to disclose loot box presence in all advertising may address some concerns. The European Commission requires such disclosures in the EU, including Ireland. We replicated prior research conducted in other jurisdictions and assessed compliance with EU consumer law in Ireland using Meta's ad library (for Facebook and Instagram) enabled by the EU Digital Services Act (DSA), which now requires large social media platforms to publish information about advertising shown on their services. After assessing the recent advertising of 147 different popular games with loot boxes (N = 1,417), we found that in practice, this rule of disclosing loot box presence is not complied with nor enforced. Only 2.4% of Irish social media ads for popular games containing loot boxes were compliant with EU consumer law: 88.6% failed to disclose at all, and 9.0% disclosed without sufficient visual prominence. We also collected 'targeting' and 'reach' data associated with those ads. Targeting refers to which age groups and genders the ad was intended by the advertiser to be shown to. 'Reach' is defined by Meta as the number of unique accounts that saw the ads at least once, meaning that actual 'impression' number may be higher as the same account may have seen the same ad multiple times. Such detailed contextual data were not published by Meta for South Korea and the UK when prior studies were conducted. Combining our disclosure compliance results with the reach data provided for Ireland by Meta as mandated by the DSA, amongst the 676,126 reach (this number is low because the most recently published adverts we collected sometimes had very few views) gained by the 1,417 ads studied, only 7,199 of the reach (1.1%) was achieved by ads compliant with consumer law. We thus discredit the industry narrative that only a small minority of bad actors are harming EU consumers. Contrarily, leading companies hide important information from consumers. Policymakers should cautiously approach the forthcoming Digital Fairness Act: (i) properly enforcing pre-existing law could already achieve some proposed aims of reducing behavioural addiction concerns, and (ii) its enforcement is unlikely to be effective.

Keywords: loot boxes and gacha, gambling, video games law and regulation, social media advertising regulation, EU Digital Services Act

MINI–1A–2

Research trend analysis and quality assessment of longitudinal studies on Gaming Disorder among children and adolescents

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Background: Since 2000, numerous epidemiological studies have examined Gaming Disorder (GD) in children and adolescents to understand its bio-psycho-social antecedents and consequences. However, most employed cross-sectional designs. Given the high prevalence of gaming and problematic gaming's salient impacts on children and adolescents during critical developmental stages, longitudinal evidence is essential. Aiming to identify strengths, weaknesses, and recommendations for future longitudinal research, we conducted research trends analysis and quality assessment of published longitudinal studies on youth GD. *Method:* Following PRISMA guidelines (Moher et al., 2015), we identified 51 longitudinal studies on GD among children and adolescents, published between 2011-2023. Research trends were analyzed across thirteen study characteristics. Quality assessment employed a modified Newcastle-Ottawa Scale (Well et al., 2020), evaluating three domains – sampling, measurement, and data/analysis – with fifteen criteria. *Results:* Most studies used convenience samples with lower than 20% attrition, employed DSM-style GD measures, analyzed only 2 waves of data, examined antecedents of GD (predominantly mental health correlates), and used Structural Equation Modeling (SEM). Quality assessment scores were highest for measurement and lowest for sampling. Major limitations included convenience samples from one or two schools with insufficient sampling strategies, unreported attrition bias analyses, no report on treatment of missing data and inadequate goodness-of-fit indices in some SEM studies. *Conclusion:* To enhance longitudinal research quality, we recommend probability or rigorous non-probability sampling, strategies to address attrition biases, collecting more than 2 data waves at yearly intervals, proper treatment of missing data, examining GD growth trajectories, and investigating GD's social variables beyond mental health correlates. These improvements will strengthen causal inference and deepen understanding of GD development during childhood and adolescence.

Keywords: youth Gaming Disorder, GD longitudinal research, research trend analysis, quality assessment

MINI–1A–3

The tangled ways to classify games: A systematic review of video game genre classification in psychological research

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The rapid evolution of the gaming market and the increasing overlap between video game genres pose significant challenges for consistent classification in psychological research. This issue is particularly relevant for studies on gaming behaviour and gaming disorder, where genre-based categorizations are commonly used. The aim of this systematic review was to examine how video game genres are classified in psychological research and to identify challenges associated with creating consistent and meaningful genre classifications. Following PRISMA guidelines, we reviewed 96 full-text articles encompassing a total sample of 49,909 participants. Our findings demonstrate substantial heterogeneity in genre classification practices across studies, reflecting ongoing difficulties in capturing the complexity of contemporary video games. Researchers employ diverse and often inconsistent strategies to define genres, which may limit the comparability and interpretability of findings related to gaming behaviour and addiction. In response to these challenges, we propose two alternative approaches to video game classification. First, we introduce a revised genre classification informed by the reviewed literature. Second, we advocate moving beyond traditional genre labels by focusing on specific gaming mechanics. In this context, we propose the use of community-based tags (e.g., Steam tags) as a flexible and ecologically valid way to capture specific game mechanics, offering an alternative to traditional genre-based classifications. These approaches may improve the precision of psychological research on gaming behaviour and contribute to more nuanced assessments of gaming disorder and related behavioural addictions.

Keywords: gaming disorder, video game genres, classification, internet gaming disorder

MINI–1A–4

Unraveling the psychosocial pathways of adolescent internet gaming disorder in Türkiye: A meta-analysis and meta-analytic SEM

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Background: Research on Internet Gaming Disorder (IGD) among Turkish adolescents has expanded, yet findings remain fragmented across studies and largely confined to simple correlations. This study synthesizes the evidence and empirically tests psychosocial mechanisms underlying IGD through Meta-Analytic Structural Equation Modeling (MASEM). *Method:* Following PRISMA guidelines, a systematic search across international databases and grey literature identified 20 independent studies (N = 12,264). Random-effects meta-analyses estimated pooled associations, and Two-Stage Structural Equation Modeling (TSSEM) was applied to pooled correlation matrices to explore mediating pathways linking externalizing problems with IGD. *Results:* Academic achievement emerged as a robust protective correlate (r = −.42), whereas externalizing problems (r = .40) and problematic technology use (r = .39) were major risk correlates. MASEM demonstrated significant indirect effects from externalizing problems to IGD via diminished academic achievement (β_ind = .09, 95% CI [.05, .12]) and heightened psychosocial distress (β_ind = .07, 95% CI [.04, .11]), alongside a remaining direct pathway. *Conclusions:* Among Turkish adolescents, externalizing behaviors elevate IGD vulnerability through both academic and psychosocial impairment. These findings suggest that preventive interventions should target externalizing symptoms and enhance academic engagement rather than focusing solely on gaming restriction.

Keywords: internet gaming disorder, adolescents, meta-analytic structural equation modeling

MINI–1A–5

Violent video games and aggressive behavior: A narrative review of impulsivity, desensitization, and environmental moderators

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Background: The relationship between violent video game (VVG) exposure and aggressive behavior has remained a highly contested issue across psychiatry, psychology, and public policy. Public discourse often attributes extreme violent acts to videogame use; however, contemporary evidence indicates that aggression emerges from complex interactions among biological vulnerability, personality traits, emotional regulation, and social environment. Theoretical frameworks such as the General Aggression Model, Social Learning Theory, normative belief systems, and desensitization models provide a multidimensional basis for understanding how violent digital content may modulate, rather than directly cause, aggressive responses.*Method:* A narrative review was conducted of experimental, longitudinal, psychometric, and neurobiological studies examining associations between VVG exposure, impulsivity, and aggressive behavior in children, adolescents, and adults. The review also incorporated large-scale meta-analyses and the most recent reports from the American Psychological Association Task Forces on Violent Media. *Results:* Across methodologies, VVG exposure shows small but consistent associations with non-lethal aggressive outcomes, particularly increases in hostile cognition, verbal aggression, and impulsive responding. Experimental studies demonstrate short-term elevations in aggressive behavior and risky imitation, especially in children, supporting social learning mechanisms. However, longitudinal and neurobiological evidence indicates that these effects are modest, transient, and strongly moderated by family environment, personality traits (e.g., narcissism, low self-esteem), normative beliefs, and broader exposure to violent media. Neurophysiological findings suggest desensitization to violent stimuli, yet these neural markers do not reliably translate into enduring behavioral violence. Importantly, no robust evidence supports a causal link between VVGs and severe criminal or mass-violence outcomes.*Conclusions:* Violent video games should be conceptualized as contextual risk modulators embedded within broader psychosocial and developmental systems, rather than as primary causes of aggression. Prevention strategies should emphasize family supervision, mental health screening, and digital media literacy rather than prohibitive approaches.

Keywords: violent video games, aggression, impulsivity

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MINI–1B–1

Psilocybin AsSisted pSychotherapy for the treatmENt of Gambling disorder (PASSENGER): A pilot study

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Background: Gambling disorder (GD) is a behavioral addiction for which current evidence-based treatments show modest effect sizes. Psilocybin-assisted psychotherapy (PAP) has shown promising safety and therapeutic potential in substance use disorders, but has never been evaluated in behavioral addictions. PASSENGER is the first randomized clinical trial designed to examine whether PAP can be feasibly and safely implemented in individuals with GD. *Method:* PASSENGER is a single-center, double-blind, randomized pilot trial conducted at Nantes University Hospital. Participants with GD are randomized to receive either 25 mg psilocybin as PEX010 (with the option of a second administration at 40 mg if the first exposure is judged insufficient), or 1 mg as an active control. The intervention includes: standard PAP sessions (preparation, supervised psilocybin administration, integration) and a structured program of CBT sessions inspired by Acceptance and Commitment Therapy (ACT), delivered separately from PAP sessions. These ACT modules target GD-specific processes such as values clarification, cognitive defusion, experiential avoidance, emotional acceptance and commitment to behavioral change. The primary outcome is feasibility, assessed through the full completion of the protocol, including all PAP/control sessions and follow-up visits. Secondary outcomes include acceptability, recruitment feasibility, safety, preliminary efficacy, exploratory clinical changes associated with the intensity of the psychedelic experience. *Results:* As a study protocol, no results are yet available. *Conclusions:* PASSENGER will deliver the first feasibility, acceptability, and safety data on PAP for GD, paving the way for future large-scale clinical trials in behavioral addictions.

Keywords: psilocybin, psychedelic, gambling disorder

MINI–1B–2

Evaluating an educational intervention on sports betting among young adults

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Background: Rates of sports betting have substantially increased in Canada and around the world (Williams et al., 2021; Ipsos, 2023). Given the risks associated with sports betting (Kim et al., 2023; Avenyo et al., 2024), particularly among young adults, there is a need for prevention programs that promote risk awareness and informed engagement with sports betting. In response, the YMCA's Youth Gambling Awareness Program developed a workshop, Sports Betting: Separating Skill from Illusion of Control, to educate young adults about sports betting. The present study examined the impacts of the workshop. Method: While data collection is ongoing, a total of 21 undergraduate students from Canada participated in a 60-minute workshop and completed self-report measures before and after. Paired-samples t tests were conducted to examine the impact of the workshop on gambling misconceptions, awareness of risks, recall of low-risk gambling guidelines, and likelihood of using harm reduction strategies. *Results:* Participants had a mean age of 20.76 years (SD = 5.45) and were predominantly women (90.5%). Gambling misconceptions were significantly reduced following the workshop (d = 1.06). Awareness of sports betting risks significantly increased (d = 1.10). Recall of lower risk gambling guidelines significantly improved (d = 1.01). Participants also reported improved knowledge of available gambling services (d = 1.49) and a greater likelihood of using gambling harm reduction strategies following the workshop (d = 0.86). Participants reported being extremely satisfied with the content and quality of the workshop. *Conclusion:* These preliminary findings suggest that this preventive workshop may effectively improve sports betting knowledge, risk awareness, and the likelihood of adopting safer gambling practices.

Keywords: Sports betting, risk awareness, responsible gambling

MINI–1B–3

From voluntary to enforced tracking: What happened after mandatory carded play entered Australian casinos?

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Background: Unlike online settings, much of the gambling occurring in land-based venues like casinos is not tracked or recorded in a way that can link a customer to their play and expenditure over time. This represents a missed opportunity for risk detection, as well as personalised and timely interventions; although some consumers may oppose carded play for privacy reasons. *Method:* This project uses behavioural tracking data from over 70,000 individuals across casino venues in two Australian states to study the impact of a major regulatory change in the state of New South Wales in 2024 that required all casino customers to record their gambling activity using a unique ID card. This created a natural experiment that allows us to compare gambling behaviour [1] before vs after the policy in the regulated state, and [2] between states with and without the mandate. *Results:* We explore the characteristics of customers who were not previously using cards voluntarily—meaning their behaviour was not recorded prior to the mandate—and the estimated volume of previously unmonitored gambling. To assess possible unintended effects, we also analyse state gambling machine revenue from clubs and hotels located near the casino sites. This enables us to test for "spillover" or "displacement" effects—specifically, whether gambling spending increased in nearby venues that do *not* require cards, which could indicate a shift toward less-regulated gambling environments. *Conclusions:* By examining both venue and state-level datasets, this research evaluates both the intended and broader impacts of gambling tracking policies and provides recommendations for ongoing and future regulations in other regions internationally.

Keywords: gambling disorder, risk detection, regulation, policy, systemic

MINI–1B–4

Assessing the impact of the Lower-Risk Gambling Guidelines

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A set of workable, evidence-based quantitative limits on gambling behaviour associated with low risk of harm were published in 2021. This international collaboration included analysis of epidemiological data from over 60,000 people who gamble from 8 different countries. The Lower Risk Gambling Guidelines (LRGGs) recommend that individuals spend no more than 1% of household income (before tax) per month on gambling, gamble no more than 4 days per month, and not regularly gamble on more than two different types of gambling. Evidence shows that the guidelines generally have been viewed positively and are seen as helpful by both the public and policymakers. They also align well with the steps people take naturally to limit their gambling involvement. As a result, the LRGGs have been adopted or promoted in many jurisdictions in Canada and internationally. However, measurement of impact is rare and challenging. This presentation will: (1) provide a brief overview of the research developing and validating the LRGGs; (2) review the various jurisdictions around the world that have adopted the LRGGs in their public health efforts to reduce gambling-related harm; and (3) discuss barriers to implementation, and efforts underway to evaluate their effectiveness, including an emerging evaluation framework.

Keywords: public health guidelines, harm reduction, gambling-related harm, safer gambling

MINI–1B–5

Gambling venues and their association with incidence of help-seeking gambling disorder: A Bayesian spatial analysis

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Gambling disorder is increasingly recognised as a major public health concern, yet there remains limited empirical evidence on how the physical gambling environment shapes real-world help-seeking behaviour within publicly funded healthcare systems. While international studies have linked gambling availability to population-level harm, far fewer have examined whether environmental exposure is associated with clinically ascertained demand for treatment. In this study, we examined the relationship between neighbourhood-level gambling accessibility and referrals to a specialist NHS gambling treatment service in England. We analysed routinely collected referral data from the NHS Southern Gambling Service, (approved as Service Evaluation by the Hampshire and Isle of Wight Healthcare NHS Trust Clinical Effectiveness Committee (SE-0567).) covering all new referrals over the study period (Sept 2022 - Sept 2025). Referrals were geocoded to Lower Super Output Area (LSOA) level and linked to national datasets capturing the number, type, and geographic distribution of licensed gambling venues. Two primary exposure measures were derived: gambling venue density within local areas and estimated travel time to the nearest venue. Area-level sociodemographic covariates were included to account for population structure and deprivation. Given the spatial nature of the data, we employed spatially informed Bayesian regression models (Integrated Nested Laplace Approximation, INLA) to examine associations between gambling accessibility and referral incidence, while adjusting for spatial autocorrelation. The spatial random effects were specified using the BYM2 model. We observed substantial geographic heterogeneity in referral rates across neighbourhoods. Higher gambling venue density was consistently associated with increased referral incidence to specialist NHS care. Specifically, each additional gambling venue within an area was associated with a significant increase in referral rates, indicating a dose–response relationship between environmental exposure and help-seeking. Shorter travel time to the nearest gambling venue was also associated with higher referral incidence, suggesting that proximity itself may play a role in facilitating gambling-related harm that ultimately leads individuals to seek treatment. These associations remained robust after accounting for spatial clustering and area-level covariates, supporting the independent contribution of gambling accessibility beyond broader sociodemographic context. Importantly, our findings suggest that the gambling environment is not only associated with increased risk or prevalence of gambling disorder, but also with

measurable demand for specialist treatment within the NHS. This distinction is clinically and policy relevant, as it links environmental exposure directly to service utilisation rather than self-reported harm alone. The results are consistent with theories of environmental risk amplification, whereby increased availability and ease of access lower barriers to excessive gambling and accelerate harm trajectories. We conclude that neighbourhood-level gambling accessibility is meaningfully associated with real-world help-seeking for gambling disorder. These findings have implications for public health prevention, service planning, and regulatory policy, particularly in the context of ongoing reforms to gambling legislation and the expansion of NHS-commissioned gambling treatment services. Understanding how environmental exposure translates into clinical demand is essential for aligning harm reduction strategies with healthcare provision.

Keywords: gambling, INLA, geography

MINI–1B–6

Reasoned intentions and reactive willingness: Responsible gambling among tourist gamblers in Macau

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Background: As the only jurisdiction in China with legal casino gambling, Macau presents a highly contextual environment for tourists' gambling-related behaviors. Although rational decision-making accounts for some of these behaviors, incorporating contextual social reaction mechanisms provides a more comprehensive explanation. Applying the Prototype Willingness Model (PWM) to capture both reasoned and social reaction pathways, this study investigates responsible gambling (RG) practices among Chinese gambling tourists. *Methods:* The final sample included 257 participants (56.03% aged 18–39) who gambled during their trip and were aware of RG. Participants completed an anonymous street questionnaire survey measuring demographics, RG awareness and familiarity, and key PWM constructs: RG behaviors, intentions, and willingness; perceived benefits, vulnerability, and behavioral control; subjective norms; and prototype favorability and similarity. *Results:* Path analyses supported the hypothesized dual-process structure. Reasoned path variables, specifically perceived behavioral control and perceived benefits, significantly predicted RG intention ($\beta = .13$ to $.32$, $p < .05$). Social reaction path variables, including prototype favorability, prototype similarity, and perceived behavioral control, were positively associated with RG willingness ($\beta = .14$ to $.41$, $p < .05$). Both intention and willingness, in turn, significantly predicted RG behaviors ($\beta = .22$ to $.42$, $p < .01$). The final model accounted for 35% of the variance in RG behavior, 50% in intention, and 39% in willingness. *Conclusions:* These findings underscore the value of integrating both reasoned and social reaction pathways to

understand RG behaviors. Incorporating the social reaction path offers a critical additional perspective for intervention development, suggesting that effective strategies should target not only rational decision-making but also prototype-based processes that influence willingness to adopt RG behaviors.

Keywords: safer gambling, casino, tourists, prototype willingness model, theory of planned behavior

MINI–1C–1

Beyond world avoidance: Baumeister's escape-from-self framework applied to gaming-related escapism

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Escapism is one of the most consistent psychological correlates of Gaming Disorder (GD), yet it is often treated as a unitary tendency to withdraw from external pressures. Drawing on Baumeister's escape-from-self framework (1990), which posits that individuals may seek to avoid aversive self-awareness rather than the external environment, we differentiate escapism from the world (EW) from escapism from the self (ES). EW reflects attempts to distance oneself from situational demands, whereas ES captures efforts to attenuate negative self-focused thoughts, emotions, or self-evaluations. In a sample of 142 emerging adults, we examined how these two motives relate to IGD symptoms, stress, well-being, and vitality. ES uniquely predicted IGD and fully mediated the association between EW and IGD, indicating that withdrawal from the world becomes maladaptive primarily when it expresses deeper self-avoidance. ES also mediated the relationship between stress and IGD, consistent with the notion that stress triggers problematic gaming largely when it heightens aversive self-awareness. Furthermore, ES was negatively associated with well-being and vitality, whereas EW showed no meaningful associations. These findings align with Baumeister's theorizing that maladaptive escape emerges not from avoidance of the world but from attempts to disengage from the self. Conceptualizing escapism as heterogeneous clarifies why prior research has produced inconsistent results and highlights the need for interventions that directly target self-related avoidance rather than treating escapism as a single global motive.

Keywords: gaming disorder, escapism, escape, Self, vitality, well-being

Reference:

Baumeister, R. F. (1990). Suicide as escape from self. *Psychological Review, 97*(1), 90–113. https://doi.org/10.1037//0033-295x.97.1.90

MINI–1C–2

Trapped in play: Motivation, gaming rage, and gaming disorder in adolescents

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Although Gaming Disorder has been formally recognized in the ICD-11, the mechanisms through which gaming becomes problematic remain poorly understood, particularly in adolescence, a developmental period marked by heightened emotional reactivity and still-maturing cognitive control. This study explores the possibility that problematic gaming arises not only from excessive engagement, but from persistent cognitive and emotional involvement that extends beyond the gaming episode. Focusing on adolescents, we examined how different forms of gaming motivation relate to gaming disorder symptoms through gaming rage and impaired return to everyday functioning after gameplay. Data were collected through a cross-sectional survey conducted among 260 students from a public high school in Poland. The findings indicate that gaming rage plays a central role in this process: intense emotional arousal during gameplay is associated with difficulties mentally and emotionally "leaving the game," even after play has stopped. This lingering involvement appears to link amotivation and other maladaptive motivational patterns with symptoms of gaming disorder. Overall, the results indicate that difficulties in disengaging from gaming may be relevant to problematic gaming in adolescents. These findings deepen understanding of mechanisms underlying problematic gaming in adolescents and underscore the importance of preventive interventions focused on post-gaming emotion regulation and adaptive disengagement.

Keywords: rage, tilt, gaming motivation, gaming disorder, adolescents

MINI–1C–3

When games crowd out life: Motivational imbalance as a core mechanism in gaming disorder

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Background: Research on gaming disorder has identified key diagnostic features such as impaired control, prioritization of gaming over other activities, and persistence despite harm. However, these features are often described rather than explained at the level of motivational processes. Most models emphasize risk factors, traits, or reinforcement histories, leaving open the question of how gaming goals come to dominate behavior in real time. Goal Systems Theory (GST) offers a process-level account centered on goal shielding, the inhibition

of competing goals when a focal goal becomes highly activated. *Method:* This mini talk advances a theory-driven analysis grounded in Goal Systems Theory. Drawing on established findings from gaming and addiction research, we conceptually apply the GST mechanism of goal shielding to digital games, focusing on structural features such as continuous goal provision, immediate feedback, escalating stakes, and persistent cues. We examine how these features foster sustained activation of gaming goals while suppressing competing offline goals. *Results:* From a GST perspective, core symptoms of gaming disorder can be reinterpreted as consequences of chronic goal shielding. Impaired control reflects weakened access to alternative goals, prioritization reflects excessive shielding of gaming-related goals, and persistence despite negative consequences reflects counterfinal goal pursuit. This mechanism explains why disengagement failures can occur even in the absence of strong craving or withdrawal, and why gaming can progressively crowd out health, work, and social goals. *Conclusions:* Reframing gaming disorder through goal shielding shifts the focus from excessive play to motivational imbalance within a broader goal system. This perspective bridges behavioral addiction research with mainstream motivational psychology and highlights games as environments that amplify otherwise normal self-regulatory mechanisms. Goal Systems Theory thus provides a unifying, process-oriented framework for understanding both the emergence and maintenance of gaming disorder.

Keywords: gaming disorder, goal shielding, goal systems theory

MINI–1C–4

Digital escapism as a stress-related coping behavior

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The relevance of this study is determined by the contradiction between the growing tendency of young people toward media escapism and the need to develop effective stress management strategies. Research indicates that the constant consumption of negative content on the internet exacerbates symptoms of depression and anxiety, creating a vicious cycle in which deteriorating mental health leads to further seeking of negative information (Sharot et al., 2024). This study aims to examine the relationship between chronic stress and digital escapism as a coping strategy in the digital environment. The research highlights the psychological and practical significance of understanding digital escapism as a coping mechanism. By identifying the extent to which stress influences media consumption patterns, this study contributes to the broader discussion on mental health and digital behavior. The methodology

includes a quantitative approach, utilizing validated psychological scales to assess stress levels and media escapism tendencies among participants. A quantitative cross-sectional study was conducted among 90 undergraduate students aged 17–20 years. Participants completed the Perceived Stress Scale (PSS-10) to assess chronic stress and an adapted Escapism Scale measuring cognitive and behavioral aspects of media escapism related to streaming services. Statistical analyses included descriptive statistics, Pearson correlation analysis, linear regression modeling, and one-way ANOVA to examine differences in escapism across stress-level groups. The findings revealed a statistically significant moderate positive correlation between chronic stress and digital escapism ($r = 0.52$, $p < 0.001$). Regression analysis demonstrated that stress significantly predicted escapist behavior ($B = 0.53$, $p < 0.001$), explaining 27% of the variance in media escapism. ANOVA results indicated that participants with high stress levels reported significantly higher escapism scores compared to those with low and moderate stress levels. The results of the study confirmed the existence of a significant relationship between the level of chronic stress and a tendency to media escapism. It was found that with increasing stress levels, the frequency of using digital content as a mechanism of psychological relaxation increases. This indicates that digital escapism performs the function of emotional regulation, helping to temporarily reduce subjective feelings of tension and anxiety. The findings expand existing scientific understanding in the field of digital psychology, deepening understanding of how stress affects media consumption. On the one hand, the results highlight the adaptive aspect of media escapism, which is its ability to provide temporary emotional relief. On the other hand, the revealed patterns indicate the potential risks associated with excessive digital withdrawal as a way to avoid real stressful situations. These findings emphasize the need for further study of this phenomenon, as well as the development of strategies for the conscious and balanced use of digital media in stressful conditions. The practical implications of this study lie in its relevance for psychologists, educators, and policymakers seeking to develop strategies for healthier digital consumption habits. Understanding the role of digital escapism in stress regulation can inform interventions aimed at promoting psychological well-being in the digital era.

Keywords: digital escapism, stress management, coping behaviour, behavioural addictions

MINI–1C–5

Exploring the lived experience of gaming: A thematic analysis across four psychological gamer profiles

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Understanding how gaming intersects with motivation, emotional regulation, social connectedness and attachment is essential for advancing person-centred models of behavioural addictions. Building on prior work identifying four psychological profiles of gamers, Avoidant, Engaged, Relational, and Dysregulated (Castro & Neto, 2025), this study provides a qualitative, in-depth exploration of how players across these profiles describe the role of gaming in their lives. Thirty-six semi-structured interviews were conducted with international players (7 per profile), examining motivations, emotional processes, social contexts, family background, and perceived barriers and facilitators to healthy or problematic gaming. Interviews were analysed using reflexive thematic analysis, generating three overarching themes: (1) (re)discovering the self, capturing identity exploration, avatar-based self-expression, and personal reflection through narrative and moral decision-making; (2) being connected in this world, highlighting meaningful friendships, community belonging, emotional support, but also experiences of hostility, gender-based harassment and online toxicity; and (3) finding a point of balance, reflecting the use of gaming for stress relief, emotional regulation, routine, and well-being. Profile comparisons revealed patterned differences: Avoidant players emphasised introspection and identity reflection; Engaged players described balanced, multifaceted benefits; Relational players highlighted social validation and belonging; and Dysregulated players reported intense emotional coping, greater vulnerability to problematic use, and higher exposure to negative online interactions. Together, these findings deepen understanding of how psychological profiles map onto lived gaming experiences, offering clinically relevant insights for personalised prevention and intervention strategies in Gaming Disorder.

Keywords: gaming disorder, qualitative research, motivation, emotional regulation, gamer profiles, thematic analysis, online communities, behavioural addictions.

MINI–1D–1

Personality and Instagram use motives with problematic Instagram use among adolescents: A cross-sectional study

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Contemporary research studies indicate that individuals' personality traits and motivations for using an online activity (e.g., social media) can be related to elevated problematic and addictive use of that activity. Although there are now many studies examining problematic Facebook use and problematic social media use more generally, problematic Instagram use (PIU) has been much less studied. The purpose of the present study was to examine the relationship between personality traits and Instagram use motives in relation to PIU. A total of 358 adolescent Instagram users completed a survey that included assessment tools for the aforementioned variables. Hierarchical regression analyses indicated that different personality traits were related to different Instagram use motives among males and females. More specifically, lower extraversion, meeting new people and socializing, passing time, and using Instagram less for information and education purposes were positively associated with higher PIU among female adolescents. Among male adolescents, only using Instagram for making, expressing, or presenting a more popular self (e.g., online self-presentation) was positively associated with higher PIU. Findings of the present study suggest that in order to better understand problematic Instagram use, personality, motivations, and gender differences should be considered simultaneously.

Keywords: problematic Instagram use, Instagram use motives, personality, internet addiction

MINI–1D–2

Psychological distress and adolescent problematic smartphone use: The mediating role of metacognitions

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The role of metacognitions in the development and maintenance of addictive behaviors is well documented both for substance and behavioral addictions. Recently, support has been provided for applying metacognitive theory to the understanding of Problematic Smartphone Use (PSU). However, although PSU is increasing globally among adolescents, with younger individuals reporting higher levels, there is a lack of studies exploring the role of metacognitions in PSU among adolescents. The current study aimed to clarify the contribution of positive metacognitions (regarding both emotional and cognitive regulation and the social advantages of smartphone use) and negative metacognitions (regarding the uncontrollability and cognitive harm of excessive smartphone use) in the relationship between psychological distress and PSU among adolescents. To that aim, the psychometric properties of the Metacognitions about Smartphone Use Questionnaire (MSUQ) among adolescents were preliminarily evaluated and confirmed. The participants were 508 adolescents (%F=40; Mage = 15.07, SD = .70) attending high school in Tuscany (Italy). Results showed that the relationship between psychological distress and PSU was fully mediated by both positive and negative metacognitions about smartphone use. These findings support the distinct contribution of metacognitions in explaining PSU among adolescents and highlight their relevance for interventions.

Keywords: problematic smartphone use, adolescents, psychological distress, metacognitions, mediation

MINI–1D–3

Why smartphones are not addictive: Distinguishing rewards from reward delivery vehicles

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Smartphone addiction is widely studied and discussed in both academic research and public discourse. Researchers have created almost 80 different scales to assess it (Harris et al., 2020), and a substantial literature has developed around its prevalence, correlates, and potential health consequences (e.g., Meng et al., 2022; Yang et al., 2020). Despite this extensive body of work, we argue that the construct of smartphone addiction is conceptually flawed. Specifically, all addictive disorders arise from engagement with rewards, which are substances or behaviors that activate the brain's reward system (Volkow et al., 2016). Each disorder, as described in the DSM-5-TR, involves a single dominant reward and is named after the behavior that provides access to that reward (e.g., "opioid use" in opioid use disorder, or "gambling" for money in gambling disorder). In contrast, the smartphone does not constitute a reward in itself, but instead serves as a vehicle through which myriad reward types may be delivered. For example, alcohol is consumed via delivery vehicles such as bottles and glasses, yet clinicians do not diagnose individuals with "bottle and glass disorder" when pathology arises. Framed this way, the inconsistency underlying smartphone addiction becomes clear, though this has not, to our knowledge, been previously addressed in the existing literature. Accordingly, we propose two shifts for the field. First, researchers should abandon the construct of smartphone addiction and instead focus on specific reward-based behaviors, such as problematic social media use or gambling disorder. Second, smartphones and similar technologies may be more productively conceptualized as environmental cues that signal reward availability, rather than as addictive agents themselves.
Overall, adopting this framework has important implications for research, clinical practice, policy, and public discourse, and would likely lead to more accurate theories and interventions.

Keywords: smartphone addiction, problematic smartphone use, mobile phone addiction, problematic mobile phone use

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MINI–1D–4

Beyond average effects: Profiles of vulnerability and resilience in adolescents' appearance-focused social media use

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Background: Research on the impact of social media on adolescents' well-being has produced mixed findings, with meta-analyses indicating small to moderate average effects that conceal substantial individual variability. Evidence suggests that image-based and appearance-oriented activities are particularly relevant, yet most studies rely on variable-centred approaches that overlook heterogeneous patterns of risk and resilience. *Method:* The present study used hierarchical cluster analysis to identify distinct profiles of appearance-focused social media engagement in a sample of 1,220 Italian adolescents (11–19 years). Sixteen indicators were included, covering problematic internet use, social appearance anxiety, facial satisfaction, and digital self-presentation practices such as photo editing and appearance-related posting. Resulting clusters were validated using measures of depression, anxiety, self-concept clarity, social functioning, and behavioural indices not used in the clustering procedure. *Results:* Four profiles emerged: Well-Adjusted Minimal Users (33.0%), Digital Entertainment Moderate Users (17.9%), Appearance-Aware Strategic Users (24.8%), and High-Risk Appearance-Focused Users (24.3%). These groups differed significantly across all validation variables. Notably, approximately one third of adolescents showed good psychological adjustment despite active social media use, whereas maladjustment arose through both appearance-driven and appearance-independent pathways. *Conclusions:* Social media effects on adolescent well-being are best understood as profile-specific rather than universal. Interventions should therefore target distinct vulnerability configurations and strengthen the protective factors that support healthy engagement.

Keywords: adolescents, social media, appearance anxiety

MINI–1D–5

Are social media users with social media addiction more prone to mental health problems? Findings from a national survey in Slovenia

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Background: The rapid expansion of social media use has raised concerns about its association with mental health problems. While social media addiction has received increasing attention in the literature, population-based evidence remains limited. The aim of the study was to examine whether social media users with social media addiction report more mental health problems than other social media users in Slovenia. *Methods:* Data were obtained from the 2023 National survey on the use of tobacco, alcohol and other drugs, a mixed-mode (CAWI, CAPI) survey conducted on a nationally representative probability sample of 16,000 residents of Slovenia aged 15–74 years, with a 61% response rate (final sample: n = 8,937). Analyses focused on respondents who reported using social media in the past 12 months (n = 6,068). Social media addiction was assessed using the Bergen social media addiction scale (BSMAS; cut-off ≥24). Mental health indicators included anxiety, depression, eating disorders, ADHD, suicidal ideation, suicidal intent, suicide attempt, and psychological distress. Estimates were based on a small number of units, but were reliable for depressive symptoms and eating disorders; all other estimates were partially less reliable or unreliable, and interpreted with caution. *Results:* Approximately 0.6% of social media users met the criteria for social media addiction. Compared to non-addicted users, they reported a higher burden of mental health problems. Depression was reported by 6.9% of addicted users versus 3.9% of non-addicted users, and eating disorders by 1.5% versus 0.5%, respectively. Results indicated higher levels of psychological distress among addicted users, with 32.0% classified as having a high probability and 41.5% as having a possible presence of mental health problems, compared to 4.4% and 21.6% among non-addicted users, respectively; however, these estimates were less reliable. Higher prevalence of anxiety, ADHD, and suicidal behaviour was also observed among addicted users, but these estimates should be interpreted with caution. *Conclusions:* Although social media addiction affects a small proportion of users, it is associated with a markedly higher prevalence of mental health problems, particularly depression and eating disorders. This highlights the potential relevance of social media addiction as a marker of psychological vulnerability, and importance of integrated public health approaches addressing digital behaviors and mental health.

Keywords: social media addiction, addictive behavior, mental health, Slovenia

MINI–1E–1

Methodological challenges in exercise addiction research

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Background: Regular physical activity is widely recognized for its many health benefits, yet exercise can become harmful when performed excessively, beyond one's control. This condition is most accurately described as 'exercise addiction' (EA) because it captures both dependence and compulsive engagement. Despite decades of research, EA lacks diagnostic status, largely due to conceptual ambiguity and persistent methodological inconsistencies. Most research on EA is cross-sectional and relies heavily on screening instruments that measure the risk of exercise addiction. *Objectives:* This review aims to critically appraise the longstanding methodological limitations in EA assessment and the resulting confusion in its epidemiology. *Methods:* This evaluation-driven narrative review incorporates findings from empirical studies, review papers, and position statements that address the assessment of EA. It critically analyzes the methodological issues and interpretation of elevated risk scores in nomothetic EA research. *Results:* Existing EA measurement tools, though psychometrically acceptable, are unable to differentiate pathological exercise from passionate and high devotion involvement. Because these instruments measure risk, elevated scores often reflect underlying motivational and personality characteristics. Consequently, studies yield inflated and incongruent prevalence estimates, driven by methodological artefacts than by morbidity. None of the screening tools employed in the EA research have diagnostic value and the high risk may not necessarily materialize into clinical dysfunction. The nomothetic approach offers limited potential for advancing knowledge and contributes to the over-pathologization of EA. *Conclusions:* High scores should be followed up with deep clinical interviews, as formalized in the pyramid approach, where researcher-clinician collaboration is integral to deriving inductive evidence. This would further clarify if EA merits future diagnostic recognition. As a matter of fact, research should focus on studying exercise addiction itself, rather than relying on the uninformative metric of risk.

Keywords: assessment, epidemiology, exercise dependence

MINI–1E–2

Is online body shaming just cyberaggression? Problematic social media use and appearance-based interactions in youth

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Social media environments represent an important social context for children and adolescents, in which appearance-related interactions increasingly take place. Online body shaming is often discussed as a form of cyberaggression; however, its specific role within problematic social media use remains insufficiently explored. The present research examines the relationships between online and offline body shaming, cyberaggression, problematic social media use in a sample of Czech youth.

Data were collected through self-reported questionnaires administered in lower secondary schools (ISCED 2). The total sample consisted of 435 respondents, including 227 girls and 204 boys, with a mean age of 14.03 years (SD = ±0.75). The study focuses on assessing experiences of online and offline body shaming and exposure to cyberaggression, problematic social media use measured by the Bergen Social Media Addiction Scale (BSMAS) and Social Digital Media Scale (SDMS).

By examining multiple forms of appearance-related and online social interactions simultaneously, this study aims to contribute to a more nuanced understanding of whether online body shaming represents merely a subtype of cyberaggression or a distinct phenomenon more closely embedded in social media-related processes. Understanding these associations may help to better conceptualize social media-related risks in children and adolescents and support prevention efforts targeting problematic social media use. *Funding:* The funding for the present contribution/presentation was provided by the Czech Ministry of Education, Youth and Sports for specific research (Development of a Psychodiagnostic Screening Tool for Risky Consumption of Online Content Related to Diet, Exercise, and Appearance among Czech Adolescents and Young Adults, IGA_FF_2025_038). The authors declare that they have no conflict of interest.

Keywords: body shaming, cyberaggression, problematic social media use

MINI–1E–3

Predictors of impulsive behavior among the modern generation in online shopping

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Amidst the digitalization of society and the growth of online shopping behavior, impulsive buying behavior has become increasingly prevalent, affecting both financial and mental well-being. In recent years, the global shift towards digital commerce has been accompanied by a rise in maladaptive consumer behaviors. Impulsive online shopping, characterized by repetitive, difficult-to-control urges to buy items over the internet, has become a significant psychological and social issue. This behavior leads to negative consequences, including financial debt, interpersonal conflict, and increased anxiety. The relevance of this topic is particularly high in regions experiencing rapid digitalization, where online marketplaces are becoming the primary mode of consumption. Understanding the psychological mechanisms behind this behavior is crucial for developing effective preventive measures. Therefore, the study was conducted on young adults aged 18-25 who are exposed to various digital and social influences and actively engaged in digital environments. The study aimed to investigate the relationship between impulsive buying behavior (as measured by the RCBS) and psychological factors, including general impulsivity (BIS-11), social media dependency (FoMO), as well as levels of clinical stress and anxiety (DASS-21), among young adults. The study employed questionnaires such as the Richmond Compulsive Buying Scale (RCBS; Ridgway et al., 2008), the Barratt Impulsiveness Scale (BIS-11; Barratt, 1959, 1995), the Depression Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995), and the Online Fear of Missing Out Inventory (ON-FoMO; Sette et al., 2020). The results of the study revealed that, among a substantial proportion of participants, anxiety levels exceeded clinical norms, with increased indicators of general impulsivity (BIS) and social media dependence (FoMO), forming a psychological risk profile for the development of impulsive buying behavior. Before performing the regression analysis, the key assumptions of linear regression were tested. Graphical analysis of the residuals (Q-Q plot, graph of residuals from predicted values) revealed no significant violations of assumptions about linearity, normality, and homoscedasticity. Regression analysis showed that a model including core impulsivity (BIS), social media dependence (FoMO), clinical anxiety, and stress significantly predicted RCBS scores, $F(4, 45) = 4.33$, $p = .005$. This model accounted for 27.8% of the variance ($R^2 = 0.278$) in RCBS. Analysis of standardized coefficients (β) revealed that only two predictors contributed significantly: total impulsivity (BIS; $\beta = 0.320$, $p = .029$) and social media dependence (FoMO; $\beta = 0.290$,

p = .046), whereas clinical stress (β = 0.110, p = .505) and anxiety (β = -0.057, p = .734) were not statistically significant in this model. This suggests that online activity (in the form of fear of missing out on important things) and individual impulsivity traits do play a more important and independent role in shaping impulsive buying behavior than the overall level of stress or anxiety in the sample studied.

Keywords: impulsive buying behavior, impulsiveness, stress, anxiety, FoMO, social media dependence

MINI–1E–4

The use of pornographic content and related addictive and psychological aspects in the Czech adult population

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The use of online pornography, including platforms based on a subscription model with exclusive sexual content, has been a growing phenomenon in recent years, with potentially addictive and psychological implications. Despite increasing attention to online sexual behaviors, empirical data focusing on users of these platforms remain limited, particularly in Czech Republic. This contribution presents a quantitative cross-sectional study conducted on a unrepresentative sample of university students aged 18–35 in the Czech Republic. The study aims to map the prevalence of the use of platforms with exclusive sexual content and to examine the occurrence of problematic and compulsive sexual behavior. Furthermore, associations between problematic use and selected psychological variables, including anxiety, loneliness, and self-efficacy, are explored using standardized self-report measures administered via an online questionnaire. The results are expected to contribute to ongoing discussions on prevention strategies and clinical implications related to problematic online sexual behaviors. This contribution was supported by the Charles University Grant Agency (GA UK) project “The use of pornographic content and related addictive and psychological aspects in the adult population” and by the Charles University institutional support programme Cooperatio, research area HEAS.

Keywords: online pornography, exclusive sexual content, problematic pornography use, compulsive sexual behavior, young adults

MINI–1E–5

Exploring speed-watching through motives and self-control: A cluster analysis

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Background: The term binge-watching refers to the phenomenon of watching several episodes of a TV series in a row. Nowadays, most major streaming platforms offer a speed-control feature that lets viewers adjust the playback speed, enabling them to consume content even faster. This new functionality led to the emergence of speed-watching, a practice in which individuals accelerate audiovisual content to watch more episodes during a single session. As this behavior becomes increasingly popular among TV series viewers, concerns have emerged regarding potential negative consequences, such as insomnia, fatigue, and attention difficulties. This study aims to identify distinct groups of speed-watchers based on their self-control and motivational profiles. *Method:* 245 participants, composed of a majority of women (n=188, 76.7%), aged between 18 and 63 years old (M=26.15, SD=10.01), completed an online survey. A K-means cluster analysis was conducted using 4 motives (i.e., coping-escapism, enrichment, emotional enhancement, and social) assessed by the Watching TV Series Motives Questionnaire (WTSMQ), and self-control assessed by the Brief Self-Control Scale (BSCS). The groups were then compared regarding their age, fear of missing out, binge-watching engagement, and symptoms. *Results:* Four distinct clusters were identified, including poorly motivated, highly motivated, socially motivated, and self-controlled speed-watchers. A significant age difference was observed between the socially motivated and self-controlled groups, with the latter being the oldest. The self-controlled group also reported significantly less fear of missing out than the other groups. Highly motivated and socially motivated groups presented higher levels of binge-watching symptoms and engagement. *Conclusion:* Our findings support the relevance of motives and self-control in understanding different profiles of speed-watchers. More broadly, they suggest that individual differences in motives and self-control may be important variables to consider when observing problematic engagement in a specific behavior. However, further research is needed to expand in this direction.

Keywords: speed-watching, binge-watching, motives, self-control

MINI–1E–6

Psychometric validation of CIUS-14, GAD-7, and BSMAS-6 for assessing problematic internet use among Georgian and foreign students in Tbilisi

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Background: Problematic Internet Use (PUI) affects 6–14% of the global population and approximately 11% of young adults according to recent meta-analyses. In Georgia, no study to date has assessed PUI using standardised, validated instruments. Reliable, concise screening tools are essential for cross-cultural comparison and longitudinal research. This study assesses the reliability and preliminary psychometric evidence of the Compulsive Internet Use Scale (CIUS-14 vs CIUS-9), the Generalized Anxiety Disorder scale (GAD-7), and the Bergen Social Media Addiction Scale (BSMAS-6) in a Georgian setting. *Method:* A computer-based anonymised cross-sectional survey was conducted in Tbilisi and analysed during 2024–25. The sample comprised 215 students (F = 114), aged 18–25 (M = 20.1, SD = 1.68): 112 Georgians and 103 foreigners (73 Indians; others from African and Asian countries). Participants completed CIUS-14 (from which CIUS-9 was derived), BSMAS-6, GAD-7, IGDT-10, Lie-Bet-2, JSS-4, and WHO-5. The instruments were translated and back-translated according to standard procedures. Reliability (Cronbach's α), validity (Pearson correlation, factor structure), agreement (Cohen's κ), and discriminatory power (item-level ANOVA) were analysed in SPSS. *Results:* 37.2% of all students presented significantly elevated levels of CIUS-14 sum-scores (≥28), while 8.8% reached severely elevated levels (≥42). Among Georgian students, 28.3% had significant/severe elevations, compared with 48.4% of foreign students ($p=0.008$). CIUS-14 ($\alpha=0.884$) and CIUS-9 ($\alpha=0.88$) showed excellent internal consistency, with a very strong inter-scale correlation ($r=0.964$, $p<0.001$) and near-perfect agreement ($\kappa=0.876$). GAD-7 demonstrated excellent reliability ($\alpha=0.932$); BSMAS-6 was satisfactory ($\alpha=0.743$). ANOVA confirmed that all items significantly differentiated severity groups ($p<0.01$); BSMAS item 1 was the weakest contributor. *Conclusion:* This is the first study to assess PUI among Georgian young adults using internationally validated instruments. CIUS-14 and its shortened nine-item version (CIUS-9) demonstrated strong psychometric properties, alongside excellent reliability of GAD-7 and satisfactory performance of BSMAS-6 (item 1 may warrant refinement). Further research is needed to establish cultural equivalence in the Georgian context. Validation of additional behavioural instruments is on-

going, with more clinical data collection planned within a Georgian NSF grant project to support broader epidemiological and clinical research of PUI in Georgia. *Acknowledgement:* This study was supported by Shota Rustaveli NSF of Georgia (Grant #FR-25-463)

Keywords: psychometric validation, pui, georgia, cius, young adults

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MINI–2A–1

Investigating the relationship between problematic gambling and problematic social media use

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Background: Problematic social media use (PSMU) and problem gambling (PG) both have been associated with significant psychological and functional impairment. Emerging evidence suggests that these behaviours may co-occur within broader behavioural addiction profiles, potentially driven by shared transdiagnostic mechanisms. However, to date, limited research has examined their relationship using a structural equation modelling (SEM) framework. The present study investigated the relationship between PSMU and PG, focusing on the role of psychological distress, impulsivity, and emotion dysregulation. *Methods:* This study involved a secondary analysis of data from a UK adult sample of (N= 793) participants who have fully completed the Problem Gambling Severity Index measure (PGSI). PSMU was assessed using the Bergen Social Media Addiction Scale (BSMAS), PG severity with the PGSI, impulsivity with the Barratt Impulsiveness Scale (BIS), psychological distress with the Depression Anxiety Stress Scale (DASS-9), and emotion dysregulation with the Difficulties in Emotion Regulation Scale (DERS-18). Descriptive statistics, Spearman correlations, and SEM were conducted to examine direct and indirect associations among variables. *Results:* It was hypothesized that problematic social media use (PSMU) and problem gambling (PG) would be positively associated and jointly linked to higher levels of psychological distress, impulsivity, and emotion dysregulation. Preliminary analyses supported these assumptions, showing that PSMU and PG were moderately and positively related. Both behaviours were also consistently associated with greater psychological distress, higher levels of emotion dysregulation, and increased impulsivity. Structural equation modelling (SEM) analyses are currently underway to examine the extent to which these psychological factors account for the association between PSMU and PG through direct and indirect pathways. *Conclusions:* This study aims to advance understanding of the co-occurrence of PSMU and PG by identifying shared psychological mechanisms. Findings may inform the development of prevention and intervention strategies targeting transdiagnostic risk factors across behavioural addictions.

Keywords: problematic social media use, problematic gambling, psychological distress, impulsivity, emotional dysregulation

MINI–2A–2

Does persistence in gambling depends on impulsivity, critical thinking and near-miss frequency?

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Introduction: Problem gaming is associated with various psychological factors that influence players' decision-making processes in games of chance. Impulsivity, as a primary characteristic, contributes to prolonged persistence in gambling, representing a potential risk factor for behavioral addiction. On the other hand, critical thinking may act as a protective mechanism against cognitive biases and errors that arise during such activities. Decision-making in this context is further modulated by specific game-related features, such as the frequency of "near misses" in slot machines, which can lead to prolonged play by creating the illusion of imminent success. In this study we wanted to examine the interaction of impulsivity, critical thinking, and persistence in a gambling task with varying frequencies of "near-miss" situations. *Method:* The experiment involved 62 participants who played a virtual slot machine programmed with a high frequency of "near misses" (19%) or low frequency of "near misses" (2%). To ensure a reliable analysis, the participants' level of gambling addiction (assessed with Problematic Gambling Severity Index), gender, and age was controlled. Impulsivity and critical thinking were measured using established psychological measures (SUPPS-P and CRT MCQ-4 respectively), while persistence was quantified by the duration and number of games played on the slot machine. *Results:* The results showed a significant interaction between impulsivity and critical thinking on persistence in play on the slot machine. Specifically, among participants with high impulsivity, increased critical thinking was associated with increased persistence in gambling. No significant interaction was found between impulsivity and the near-miss frequency condition.

Keywords: gambling, near-miss, near-win, impulsivity, critical thinking

MINI–2A–3

Examining the relationship between gambling disorder and values-based living in young adults

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Background: Gambling behavior has become a public health issue affecting the entire society due to its prevalence and potential to develop into an addiction. The persistence of problematic gambling behavior is associated with individuals continuing to gamble despite their losses and prioritizing short-term gains and relief over long-term life goals and values. Identifying protective factors or risk factors for gambling disorder has become crucial for treatment. It is believed that this study will contribute to a better understanding of the relationship between gambling disorder and values-based living and will provide theoretical and practical insights for developing values-based living interventions. *Method:* Data were collected from a total of 310 individuals aged 18–30 for this study. Data were collected via a sociodemographic questionnaire, the South Oaks Gambling Screen, and the Engaged Living Scale. Descriptive statistics were used to determine the participants' demographic characteristics. Correlation analysis was used to determine the direction and strength of the relationship between gambling behavior and a values-based life. *Results:* The analysis revealed a negative, moderate, and statistically significant relationship between the level of gambling and a values-based life ($r = -.45$, $p < .001$). When examined at the subscale level, a negative and statistically significant relationship was observed between the level of gambling and both the life satisfaction subscale ($r = -.35$, $p < .001$) and the value-oriented life subscale ($r = -.48$, $p < .001$). These findings indicate that as individuals' value-oriented behaviors, perceptions of a meaningful life, and life satisfaction increase, their levels of gambling addiction decrease. *Conclusions:* In conclusion, as individuals' levels of value-oriented living and life satisfaction increase, their tendencies to gamble decrease significantly. This underscores the importance of value-based clinical interventions in the psychological treatment of gambling disorder—interventions that focus not only on symptom reduction but also on helping individuals build a lifestyle aligned with their values.

Keywords: gambling disorder, values, young adult

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MINI–2A–4

Cross-cultural adaptation and validation of the European Portuguese version of the Problem Gambling Severity Index

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The Problem Gambling Severity Index (PGSI) is widely used to assess the severity of gambling behaviour in the general population. No cultural adaptation or psychometric validation of the instrument has been conducted for European Portuguese. Initial translation and back-translation of the original scale into European Portuguese were performed by two authors and verified by a third author. Internal consistency was assessed using Cronbach's alpha, convergent validity with the South Oaks Gambling Screen (SOGS), and construct validity with the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR). Lastly, the unidimensional structure of the PGSI was assessed through confirmatory factor analysis (CFA). The sample comprised 158 community-dwelling adults (87 women), with ages ranging from 18 to 75 years old. The Portuguese version of the PGSI has excellent internal consistency ($\alpha = .94$). Convergent validity was established through a significant positive correlation with the SOGS ($r(156) = .923$, $p \leq .001$), and construct validity was established through a significant positive correlation with the DSM-5-TR criteria ($r(156) = .769$, $p \leq .001$). CFA results confirm the one-factor solution as the best fit for the Portuguese version of the PGSI ($CFI = .99$). Our data suggest that the European Portuguese version of the PGSI is a reliable tool for assessing gambling severity in the general population. We aim to further evaluate the PGSI properties by increasing the number of participants with high gambling severity scores.

Keywords: gambling disorder, assessment, psychometry

MINI–2B–1

The association between sexual minority stress and problematic pornography use in an international sexual minority sample

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Background: Sexual minority individuals are exposed to minority stress (MS), both on a proximal level (e.g., identity concealment) and on a distal level (e.g., discriminating legislation). MS has been linked to various mental health problems, including out-of-control sexual behaviors. Based on the Minority Stress Emotion Regulation Model, maladaptive coping strategies may arise in response to MS, with problematic pornography use (PPU) being one possible outcome.*Aims* This study investigated whether self-reported and country-level proximal and distal MS processes were associated with PPU among sexual minority individuals.*Method:* Data is drawn from the International Sex Survey. The analyses are based on sexual minority respondents (N = 22,183, Mage = 29.41 years, SDage = 10.73) across 42 countries. Using structural equation modeling, we tested the associations between proximal and distal MS and PPU and compared them across sexual orientations groups, while controlling for gender identity. *Results:* Distal and proximal MS were weakly, but positively associated with PPU (Distal MS: $\beta = .01$, $p = .08$; Proximal MS: $\beta = .07$, $p < .001$). The association between distal and proximal MS was negligible and positive as well ($r = .05$, $p < .001$). Model comparisons showed significant differences in the associations between MS and PPU between sexual orientation groups, however, these differences were small in size, indicating that across sexual minority orientations, the link between sexual MS and PPU seems to be of little to no relevance. *Conclusion:* Overall, the present findings provide weak evidence that PPU might arise as a result of a maladaptive coping strategy for MS, contrary

to assumptions based on the Minority Stress Emotion Regulation Model. Other factors beside PPU may be of more relevance and should be considered in interventions targeted at sexual minority individuals.

Keywords: problematic pornography use, sexual minority stress, protective legislation, structural equation modelling

MINI–2B–2

Problematic pornography use in the Middle East: A scoping review

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Background: Problematic pornography use (PPU) is increasingly recognized as a mental health concern worldwide. However, empirical work remains concentrated in Western and East Asian settings. The Middle East, where cultural and sexual norms may shape PPU in distinct ways, has received comparatively little systematic attention. *Methods:* We conducted a comprehensive scoping review of the full empirical literature on PPU in the Middle East, searching international and regional databases (PubMed, MEDLINE, Index Islamicus, Index Medicus for the Eastern Mediterranean Region, PSYNDEX, PsycArticles, PsycInfo, SocIndex, and Scopus). Study selection followed an independent dual-review procedure. *Results:* Of 216 records screened, 39 studies met the inclusion criteria. Most research originated from Israel and Iran, whereas Arab countries were markedly underrepresented. Across eligible studies, PPU emerged as a meaningful regional issue and was linked to adverse mental health outcomes, though substantial methodological limitations were evident. *Conclusions:* The evidence base on PPU in the Middle East remains uneven and methodologically constrained, underscoring an urgent need for more rigorous research, especially in Arab countries. Priorities include scale validation, census-matched sampling, clinical investigations, and longitudinal designs to better capture the complexity of PPU in this region. We also encourage stronger international collaboration and express our support for researchers seeking to advance this field.

Keywords: Middle East, pornography, problematic pornography use, PPU, pornography addiction

MINI–2B–3

Excessive online pornography use and mental health difficulties: Evidence from a national survey in Slovenia

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Background: Behavioral addictions are on the rise in contemporary society. Among other behavioral addictions, problematic or excessive pornography use - particularly in online and digitally mediated contexts - has become increasingly prevalent, and is associated with numerous negative consequences. The aim of this study was to examine the prevalence of excessive online pornography use in a nationally representative sample of Slovenian residents and its association with mental health difficulties. *Method:* The study was conducted using data from the 2023 National Survey on the Use of Tobacco, Alcohol and Other Drugs, based on a nationally representative sample of 16,000 individuals aged 15 to 74 years, with a 61% response rate (final sample: n = 8,937). The analysis was conducted among individuals who responded to questions about pornography use (n = 7,165). Participants were classified as exhibiting excessive online pornography use if they reported using pornography daily or more frequently. Indicators of mental health included depression and anxiety, measured as the presence of symptoms in the past 12 months, as well as suicidal ideation and past suicide attempts, measured as their occurrence at any point in life. *Results:* 2.6% of internet users reported daily or more frequent online pornography use, with higher rates among men (4.7%; vs. 0.3% among women) and those aged 25–29 years (6.4%). Excessive pornography use was more common among participants with anxiety (3.2% vs. 2.5% without anxiety), although the difference was not statistically significant. Excessive pornography use was significantly more common among participants with depression (3.4% vs. 2.5% without depression), as well as among those reporting suicidal ideation (8.6% vs. 2.0% without suicidal ideation) and past suicide attempts (11.6% vs. 2.4% without past suicide attempts). *Conclusions:* Excessive online pornography use is more common among men and young adults. It is also associated with several mental health difficulties, particularly suicidal ideation and a history of suicide attempts. These findings underscore the need to consider mental health problems when assessing and treating excessive pornography use.

Keywords: excessive pornography use, mental health, suicidal ideation, suicide attempts

MINI–2B–4

Indicators that contribute to the escalation in pornographic content: Insights from a latent profile analysis

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Escalation in pornographic material, defined as the progression toward more extreme or even illegal content, occurs among a subset of individuals who consume pornography. Yet the psychological factors contributing to such escalation are rarely examined simultaneously. This cross-sectional study aims to identify latent psychological profiles associated with escalation and to explore whether these profiles differ between males and females, thereby improving our understanding of the context of problematic pornography use. A community sample (N = 500; M age = 23.3 years; 67% female) completed an online questionnaire including self-report measures of frequency of (illegal) pornography content, obsessive–compulsive behavior, emotion regulation difficulties, pornography craving, mental health, and dark personality traits. Using Mplus 8.2, we will conduct latent profile analysis (LPA) to estimate models with increasing numbers of profiles. Gender and escalation are included as covariates predicting profile membership, and pornography consumption is examined as a distal outcome using the Bolck–Croon–Hagenaars (BCH) method to account for classification uncertainty. We hypothesize that the resulting profiles will differ in levels of pornography consumption and be characterized by patterns such as high compulsivity and craving combined with poor emotion regulation, and that these profiles may be distinct for males and females. This study contributes to ongoing discussions about the psychological drivers of escalation in pornography use, including habituation, desensitization, and individual traits, and highlights the value of person-centered approaches in understanding problematic pornography involvement.

Keywords: pornography escalation, latent profile analysis, emotion regulation, compulsivity, gender differences

MINI–2B–5

Moral injury as a risk factor and self-compassion as a buffer in the link between problematic pornography use and mental health

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*Background:*It is well-documented that problematic pornography use (PPU) is negatively associated with mental health. However, previous studies have rarely examined the underlying mechanisms of this association. Therefore, the present study examined the relationship between PPU and mental health by examining the serial mediating roles of moral injury and self-compassion in separate models considering gender differences. *Methods:* A cross-sectional design was employed with a sample of 1,139 adults (M_age = 23 years, SD = 8.00). Participants completed measures assessing PPU, pornography use frequency (PUF), moral injury, self-compassion, and mental health indicators. Serial mediation analyses were conducted separately for men and women. *Results:* The findings indicated that neither PPU nor pornography use frequency (PUF) was directly associated with mental health when moral injury and self-compassion were included as mediators. However, the total indirect effect was significant, indicating an indirect-only mediation. Specifically, among men, moral injury significantly and negatively mediated the association between PPU and mental health, and self-compassion played a buffering role in the association between PPU and mental health. Among women, similar to men, neither PPU nor PUF was significantly associated with mental health. However, this association was fully mediated by moral injury and self-compassion. Specifically, PPU increased moral injury, which undermined self-compassion and was associated with poorer mental health outcomes, while self-compassion also independently functioned as a protective mediator. *Conclusions:* Overall, these findings suggest that moral injury functions as a key risk factor in the association between PPU and mental health for both men and women, whereas self-compassion appears to play a buffering role by promoting positive mental health outcomes in relation to PPU. Clinically, these results suggest that interventions for individuals with PPU-related mental health concerns may benefit from addressing moral injury and incorporating self-compassion-based therapeutic strategies.

Keywords: problematic pornography use, moral injury, self-compassion, mental health, pornography use frequency

MINI–2C–1

Prevalence and correlates of Gaming Disorder in Brazil: Findings from a nationally representative survey

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Background: Gaming Disorder (GD) has been recognized as a mental health condition in ICD-11, yet population-based evidence from low- and middle-income countries remains limited. This study aimed to estimate the prevalence of Gaming Disorder in Brazil and to examine its sociodemographic and mental health correlates. *Methods:* Data were drawn from the third edition of the Brazilian National Survey on Alcohol and Drugs, a household-based survey representative of the Brazilian population aged 14 years and older. Gaming Disorder was assessed using the Internet Gaming Disorder Test-10 (IGDT-10) among respondents reporting video game use in the previous month. Prevalence estimates were calculated among past-month gamers and in the general population. Associations with sociodemographic and mental health variables were examined using weighted chi-square tests and effect size measures. *Results:* Overall, 22.3% of the Brazilian population reported video game use in the previous month. Among past-month gamers, the weighted prevalence of problem gaming was 3.5%, corresponding to an estimated population prevalence of approximately 0.8%. No significant associations were observed with sex or educational level. Problem gaming was concentrated among individuals in the lowest income category. Adolescents and young adults showed higher prevalence of low-risk and at-risk gaming, while nonproblem gaming predominated in older age groups. Greater gaming severity was strongly associated with depressive symptoms, anxiety, and frequent bullying (all $p < 0.01$). *Conclusions:* Gaming Disorder affects an estimated 4.6 million adolescents and adults in Brazil, representing a substantial population-level burden, particularly among younger and socioeconomically vulnerable groups. From a public health perspective, Brazil may be inadequately prepared to identify and manage Gaming Disorder, highlighting the need for professional training, standardized protocols, and structured care pathways within the public health network.

Keywords: gaming disorder, prevalence, risk factors, mental disorders, public health

MINI–2C–2

Characterizing gaming disorder and associated factors in a Polish sample

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Background: Gaming disorder (GD) is discussed as a behavioral addiction, yet evidence from Polish samples remains limited regarding which individual differences and gaming-context factors are most strongly linked to GD symptoms. Beyond general gaming intensity, GD may be related to personality dispositions, motivational and emotion-related vulnerabilities, as well as engagement with gambling and gambling-like elements embedded in contemporary video games. *Methods:* Using a self-report online surveys, including a survey based on a proportional sample of Polish adults, we examined GD symptom severity alongside a profile of gaming behavior patterns (e.g., intensity and patterns of play), personality-related factors (e.g., impulsivity, compulsivity) as well as other variables like gaming motivations. To explore convergence with gambling, we additionally test associations between GD symptoms and gambling involvement/characteristics and exposure to or engagement with gambling-like video game features (e.g., randomized rewards such as loot boxes, pay-to-open mechanics, wagering-like skin/virtual item markets). *Results (analytic focus):* Multivariable models estimate the contribution of gaming-behavior indicators, personality-related factors, and motivational factors to GD symptoms, and quantify the overlap between GD and gambling involvement. *Conclusions:* This study aims to clarify how behavioral, personality, and emotion-related correlates jointly relate to GD symptomatology, while also evaluating whether gambling involvement - and gambling-like characteristics of video games - helps explain variability in GD risk.

Keywords: gaming disorder, problematic video gaming, prevalence, gambling features in video gaming

MINI–2C–3

Development and psychometric validation of the Gaming Withdrawal Symptoms Questionnaire (GWSQ)

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Withdrawal symptoms are increasingly recognized as a core feature of gaming disorder (GD), yet their assessment remains limited by narrow conceptualizations that primarily emphasize affective distress. The present study aimed to develop and validate the Gaming Withdrawal Symptoms Questionnaire (GWSQ), the first comprehensive instrument specifically designed to capture the multidimensional nature of withdrawal in GD. Item generation was informed by a scoping review identifying a broad range of withdrawal symptoms across affective, cognitive, motivational, and physiological domains. The validation process comprised two cross-sectional studies conducted in non-clinical samples of gamers. In Study 1 (N = 480), exploratory factor analysis supported a three-factor structure and demonstrated good internal consistency. In Study 2 (N = 565), confirmatory factor analysis confirmed the proposed structure and provided evidence for convergent and divergent validity. The results support the GWSQ as a reliable and valid patient-reported outcome measure for assessing withdrawal symptoms in GD. The GWSQ offers a novel measurement framework that advances theoretical models of withdrawal and has clear practical relevance for research, clinical assessment, and intervention trials targeting gaming disorder. Future research should extend these findings by examining the GWSQ in clinical samples and across diverse cultural contexts.

Keywords: gaming disorder; withdrawal symptoms; psychometric validation

MINI–2C–4

The multi-component structure of digital gaming behaviors: An Investigation based on CATPCA, regression, and demographic group comparisons

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Introduction: The behavioral addictions literature indicates that risky behaviors such as digital gaming and gambling often emerge within interrelated, multi-categorical patterns. This study aims to examine the multi-categorical structure of digital gaming behaviors using Categorical Principal Components Analysis (CATPCA), to reveal how composite scores are predicted by gambling behaviors and demographic variables, and to evaluate whether these scores differ across demographic groups. *Method:* This empirical study used cross-sectional survey data from 35,292 individuals aged 15 and older across Türkiye, drawn from the Yeşilay Health Behavior Survey conducted in 2025. The analysis focused on 9,203 participants who reported playing games via digital platforms (mobile phone, tablet, computer, game console, etc.) in the past year. CATPCA-derived composite scores were analyzed using multiple linear regression and demographic comparisons via t-tests and ANOVA. *Results:* CATPCA revealed two main components: (1) problematic gaming behavior (loss of control, increased gaming time, negative consequences; $\alpha = .734$) and (2) gaming context (online/face-to-face gaming, social interaction; $\alpha = .565$). The solution explained 44.10% of total variance. The strongest predictor of problematic gaming behavior was post-gambling guilt ($\beta = -1.044$). Betting beyond financial means ($\beta = 0.736$), preference for adventure ($\beta = 0.724$) and war ($\beta = 0.624$) genres, and weekly gaming frequency ($\beta = 0.226$) increased problematic gaming, while age showed negative association ($\beta = -0.197$). Post-gambling guilt was also the strongest predictor for gaming context scores ($\beta = 0.843$). Male participants had significantly higher scores on both measures compared to females ($p < .001$; Cohen's $d = 0.245–0.412$). Significant differences emerged across marital status and employment status groups.*Conclusion:* Digital gaming and gambling behaviors should be addressed through distinct components of problematic use and gaming context. Emotional processes, particularly post-gambling guilt, reveal that these behaviors form an interactive risk pattern. The CATPCA-based component approach and regression analysis provide a more holistic and discriminative understanding of these behaviors.

Keywords: digital gaming behavior, CATPCA, multiple linear regression, behavioral addictions

MINI–2D–1

The association between gaming disorder and nicotine use: A systematic review

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Background: The problematic use of video games was recently recognized as a formal diagnosis by the World Health Organization (WHO) under the designation of Gaming Disorder. This inclusion has enabled the development of additional studies aimed at characterizing, preventing, and addressing this condition. Such research is essential for assessing both the global landscape and the Brazilian context, thereby informing the formulation of effective public policies. With the aim of better understanding this phenomenon, the present review examines the occurrence of comorbidity between Gaming Disorder (GD) and the various forms of Nicotine Use (NU), including vaping, given its strong appeal among young people – an age group that continues to be a primary target for both the gaming industry and the nicotine industry. *Methods:* We searched the PubMed, Web of Science, Embase, PsycNet, and Scopus databases to screen articles. Studies were included in which participants presented comorbidity between gambling disorder and nicotine use. Studies were excluded in which participants presented cognitive mental sequelae, congenital and/or acquired. *Results:* The initial search resulted in a total of 818 articles, of which 37 met the eligibility criteria and were included in this review. Among them, eighteen studies suggest a positive association between GD and NU, five suggest a negative association (protective factor), and fourteen found no association. *Conclusions:* There are divergences regarding the association between GD and NU, as the existing studies are heterogeneous in both methodology and findings. Evidence has been reported for the presence and absence of a positive association, and, to a lesser extent, for a negative association (protective factor). A deeper understanding of these disorders and their interaction with other domains of mental and clinical health will enable the development of appropriate therapeutic interventions, as well as specific public policies aimed at the prevention and treatment of both conditions.

Keywords: gaming disorder, internet gaming disorder, nicotine use

MINI–2D–2

Video game addiction in university students: Health status and related unhealthy behaviors

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Background: Video games constitute a major cultural and economic phenomenon, with Spain ranking among the leading European countries in gaming consumption. Nevertheless, the impact of excessive gaming on health-related behaviors remains a subject of debate. This study aims to analyze the relationship between video game consumption time, Internet Gaming Disorder (IGD), and health-promoting lifestyle behaviors among university students. *Methods:* A cross-sectional study was conducted at the University of Seville involving students aged 18–30 years through an anonymous online questionnaire. Gaming addiction was assessed using the Internet Gaming Disorder Scale–Short Form (IGDS9-SF). Health-related behaviors were evaluated using an adapted version of the Health-Promoting Lifestyle Profile II (HPLP-II), focusing on five domains: smoking, alcohol consumption, sleep, physical activity, and eating behaviors. Participants were classified as addicted based on validated cut-off scores (Sánchez-Iglesias et al., 2020). Statistical analyses included Spearman's rho correlations and Mann–Whitney U tests for bivariate comparisons (SPSS v.31). *Results:* The sample consisted of 440 university students (56.1% male; median age: 21 years). Median daily gaming time was 4 hours (IQR: 4–7; 95% CI: 4.0–5.0). IGDS9-SF scores showed a significant positive correlation with daily gaming time ($\rho = 0.467$, $p < 0.001$). The prevalence of students classified as addicted was 12.9% ($n = 57$). While no significant differences were observed in the overall HPLP-II score between addicted and non-addicted students ($p = 0.434$), specific lifestyle domains differed. Addicted students scored significantly lower in alcohol-related responsibility compared to non-addicted peers (median: 8 vs. 11; $p = 0.013$). Additionally, borderline trends were observed toward poorer self-perceived physical health ($p = 0.051$) and lower physical activity levels ($p = 0.054$) among addicted students. *Conclusions:* The prevalence of gaming addiction in this university population is considerable (12.9%). Although IGD does not appear to negatively affect the overall lifestyle profile, it is associated with riskier alcohol-related behaviors and a tendency toward reduced physical activity. Preventive and intervention strategies should therefore prioritize these specific comorbid behaviors rather than general health promotion approaches.

Keywords: internet gaming disorder, university students, alcohol consumption

MINI–2D–3

Cannabis use and problematic Internet use in Quebec (Canada): A qualitative study

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Background: Existing literature has indicated an association between cannabis use and problematic Internet use (PIU) [1]. Adolescent cannabis users, in particular, have previously been identified as a group showing increased risk for PIU [2]. However, knowledge about the adult population remains limited. Given emerging evidence showing that cannabis use is often accompanied by increased screen-based behaviors such as recreational Internet or media use among youth [2], the present study aims to understand the motives and impacts underlying the co-occurrence of cannabis consumption and screen use among adult. *Methods:* This study is a descriptive qualitative study. Semi-structured interviews were conducted with cannabis users with PIU (according to a score ≥ 50 on the Internet Addiction Test) living in the province of Quebec (Canada). Open-ended questions were used to gain a better understanding of participants' consumption patterns, and to understand how the simultaneous use of Internet and cannabis impacted their daily lives (interpersonal relationships, work, study, etc.). An inductive and deductive thematic analysis [3] was carried out using NVivo software, to draw a portrait of users' experiences. *Results:* The sample included 32 participants (16 men, 16 women; mean age = 42). During the semi-structured interviews, participants reported consuming cannabis while engaging in a variety of online activities (e.g., watching short videos, streaming, gaming, listening to music, shopping). They described using cannabis alongside online activities to relax, enhance the experience, pass the time, or withdraw emotionally or socially. They also reported various physical, cognitive, and psychological effects, such as reduced sleep, perceived improved focus, or anxiety. Some participants also reported regret about time spent online and about impulsive or problematic behaviors while under the influence of cannabis. *Conclusions:* To our knowledge, this is the first study to specifically explore the lived experience of cannabis users with PIU. The qualitative design helps us to better understand the experience of cannabis users affected by PIU, which is essential for clarifying the mechanism linking these two addictions, and for developing harm reduction measures tailored to the adult population.

Keywords: Problematic Internet Use, cannabis, adults, qualitative

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MINI–2D–4

Association between problematic energy drink use and addictive behaviours

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Background: Previous studies have shown connections between substance use disorder (e.g. alcohol use disorder) and addictive behaviours such as gaming disorders and problematic use of social media. However, in recent years, there has been an increase in the consumption of energy drinks (carbonated non-alcoholic drinks that have a stimulating effect) among adolescents and young adults, which is also associated with the addictive use of these drinks. Consequently, the study aimed to examine the relationship between energy drink consumption and addictive behaviours such as gaming disorders and problematic use of social media. *Method:* The survey involved 585 young adults (413 females; M = 21.73 years; SD = 2.65; age range: 18-31). The instruments used in the study included the Gaming Disorder Test to assess gaming disorder symptoms and the Bergen Social Media Addiction Scale to assess problematic social media use. Additionally, the study included questions about problematic energy drink use, which were associated with symptoms of addiction such as loss of control, use despite health consequences, urge to drink, health problems and prioritising drinking energy drinks over other activities. *Results:* The results showed no difference between young adults who used energy drinks (n = 431) and those who did not use energy drinks in the last 12 months (n = 154) in gaming disorder or problematic social media use. However, in young adults who use energy drinks (n = 431), there was a positive relationship between problematic energy drink use symptoms (loss of control, use despite health consequences, urge to drink) and gaming disorder and problematic social media use symptoms. *Conclusions:* The study's find-

ings may support the hypothesis concerning common mechanisms associated with addictive behaviours and problematic energy drink consumption. However, further research is needed on the relationship between addictive behaviours and the consumption of psychoactive substances.

Keywords: problematic energy drink use, gaming disorder, problematic social media use

MINI–2D–5

Exploring emotional dependence and its relationship with drug abuse in Latin American women

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Emotional dependence is a pathological, one-directional need for affection and validation from another person, often stemming from low self-esteem and fear of abandonment. Frequently related to anxiety disorders, depression, drug abuse and gender violence. (Behavioral Psychology). Women make up approximately a quarter of all people with serious drug problems and around one-fifth of all entrants to drug treatment programs in Europe. Including pregnant and parenting women, women involved in sex trade, LGBTQIA + WOMEN, women from migrant or ethnic minority backgrounds, and women in prison. (EUDA). The aim of this study is to determine the prevalence of emotional dependence and drug abuse in women hospitalized at the Gynecology area of the Hospital Guasmo Sur- Guayaquil. This research is a descriptive, transversal study, the total sample will be collected in three months. We will used a short clinical history, the L. Camarillo 2020 Scale to rate the Emotional Dependence. AUDIT and DUDIT Tests will be included in this research, for alcohol and drugs evaluations. Prior to beginning the study patients will be informed of the confidentiality of this research. We strongly believe the Hospital s Gynecology area is a quiet place where women will feel more comfortable to cooperate with this study. Also, it is important to establish that the Guasmo Sur Hospital is located in a vulnerable area of Guayaquil city, therefore the sample will bring us a variety of information, from urban and rural patients.

Keywords: women, LGBTQIA, emotional dependence, gender violence, Camarillo 2020 Scale, AUDIT, DUDIT

MINI–2E–1

Attachment styles and potentially addictive behaviours: A systematic review and meta-analysis

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Attachment theory is increasingly used to explain vulnerability to potentially addictive behaviours, yet it remains unclear whether attachment styles relate similarly across different types of behaviours (substance vs behavioural, online vs offline). We conducted a systematic review and meta-analysis of studies published up to July 2025 examining associations between attachment styles and a wide range of behaviours described as addictive or addiction-like. In total, 198 studies were included, with 154 contributing to meta-analyses. Across 46 attachment–behaviour combinations, associations were consistently small to moderate. Anxious attachment emerged as the most robust correlate. Secure attachment was generally protective, while avoidant and fearful attachment showed more variable patterns. Overall heterogeneity was low. These findings suggest shared attachment-related vulnerabilities across problematic behaviours, but also point to partially distinct pathways between different types of potentially addictive behaviours. This presentation will also include results from an updated search conducted in January 2026.

Keywords: attachment styles, addictive behaviours, systematic review, meta-analysis

MINI–2E–2

Psychological predictors of mania love style in patients seeking treatment for pathological jealousy

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Background: Mania love style is characterized by emotional intensity, possessiveness, dependency, and anxiety about romantic relationships and represents a clinically relevant relational pattern. This style has been associated with emotional vulnerability and difficulties in maintaining stable romantic bonds. In clinical settings, mania love style is frequently observed among individuals who seek treatment for pathological jealousy (PJ), a condition marked by persistent emotional, cognitive, and behavioral disturbances related to fears of real or imag-

ined infidelity. Despite its relevance, limited evidence exists regarding which psychological variables independently predict the severity of mania love style in treatment-seeking samples. *Method:* This cross-sectional study included 90 patients who sought treatment for PJ at a specialized outpatient clinic. Participants completed standardized self-report measures assessing love styles, trait anxiety, and aggressiveness. Non-parametric correlations were conducted, followed by a multiple linear regression analysis to identify independent predictors of mania love style. The model was estimated using a stepwise selection procedure (entry $p \leq .05$; removal $p \geq .10$). All analyses adopted a two-tailed significance level of $p < .05$. *Results:* The final regression model was statistically significant ($F(3,86) = 19.86$, $p < .001$) and explained 40.9% of the variance in mania love style ($R^2 = .409$). Trait anxiety ($\beta = -0.349$, $p < .001$) and indirect hostility ($\beta = -0.403$, $p < .001$) emerged as independent predictors. *Conclusion:* In this clinical sample, mania love style was associated with trait anxiety and indirect hostility. Its romantic and passionate presentation appears to conceal an anxious and insecure relational structure, marked by emotional dependence and fear of losing the bond. Indirect hostility may function as a covert strategy to preserve proximity and commitment, undermining pleasure and emotional reciprocity. These findings highlight the importance of addressing anxious dependence and indirect hostile strategies in clinical interventions for individuals with PJ and impulsive passionality.

Keywords: mania love style, pathological jealousy, trait anxiety

MINI–2E–3

Evolution of behavioral addiction research: Insights from ten ICBA conferences (2013–2025)

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The International Conference on Behavioral Addictions (ICBA) has been a leading global event in the field since its inception in 2013. Over the past 13 years, ten successful conferences have been held across various international locations. These conferences have featured a mix of plenary sessions, oral presentations, mini-talks, and poster sessions, reflecting the evolving nature of the event. The scale and scope of ICBA have changed significantly, particularly when comparing the first conference to the most recent. Topics have expanded to encompass a broader range of behavioral addictions, driven by shifts in terminology and the growing recognition of diverse addictive behaviors. This evolution raises an important question: what has changed at ICBA over the last 13 years, and what research has been presented? In this review, we examine trends across the ten conferences, focusing on the number of presentations, diversity of topics, and shifting research priorities. We also consider the impact of global events—such as the COVID-19 pandemic and the inclusion of gaming disorder in ICD-11—on the trajectory of research, as such milestones can influence the field both positively and negatively.

Keywords: review, trends

MINI–2E–4

Assessment of child and adolescent mental health professionals' knowledge, skills, and attitudes toward behavioral addictions

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Background: Although behavioral addictions are increasingly recognized, they may remain under-detected in routine psychiatric practice. Professionals' illness perceptions and attitudes can influence identification, referral, and engagement in treatment in healthcare settings. However, research specifically examining child and adolescent mental health professionals' knowledge and attitudes toward behavioral addictions remains limited. *Method:* This cross-sectional online survey included 195 child and adolescent mental health professionals (72.8% female; mean age = 32.5 years). Participants completed a Likert-type instrument assessing knowledge, skills, and attitudes related to behavioral addictions across multiple domains. Group differences were examined according to prior training in behavioral addictions (trained vs. untrained), professional group, and years of experience. Associations between domains were tested using correlation analyses. *Results:* Compared with untrained participants, trained clinicians reported significantly higher perceived seriousness/impact ($p = .007$) and lower predictability/variability ($p = .007$). Perceptions of illness course differed across professional groups ($p < .001$). Differences by experience duration emerged for seriousness/impact, understanding, and predictability/variability (all $p < .05$). Correlation analyses showed a positive association between patient control and treatment belief ($\rho = .438$) and a negative association between understanding and predictability/variability ($\rho = -.329$). *Conclusions:* Training on behavioral addictions is associated with higher perceived clinical severity and lower perceived unpredictability. Professional role and experience also contribute to differences in specific domains. Brief training alone may be insufficient; case-based education, supervision, and structured institutional service models are recommended.

Keywords: behavioral addictions, mental health professionals, child psychiatry

POSTER PRESENTATIONS

P–1

Ambulatory assessment of cue-reactivity during naturalistic cue exposure in problem gambling

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Problem gambling involves increased cue-reactivity, reflected in increased gambling urges and affective and physiological responses when encountering gambling-related stimuli. Although these processes are well established in laboratory settings, much less is known about how they manifest under naturalistic conditions. In this study, individuals exhibiting problem gambling symptoms (N = 38; DSM-5: M = 4.84, SD = 1.99; age: M = 31.9; female = 7) and matched controls (N = 48; DSM-5: M = 0, SD = 0; age: M = 33.9; female = 6) completed two urban walking routes on separate days. Routes were based on participant's regular gambling venues in Cologne, Germany. During each route, participants were exposed to either two previously frequently visited gambling venues (familiar condition) or to two venues they had not encountered before (novel condition). Smartphone-based ecological momentary assessment (EMA) at eight time points per route captured craving, stress, physical exertion, and positive affect. GPS tracking (M = 54.1 min, SD = 8.98) verified route adherence and enabled precise temporal alignment between cue exposure and subjective responses. Psychophysiological and eye-tracking measures were also recorded but are not reported here. Across both conditions, individuals with problem gambling reported higher craving, stress, and physical exertion, and lower positive affect than controls. Repeated-measures ANOVAs revealed significant group effects for craving ($F(1, 70) = 66.44$, $p < .001$), stress ($F(1, 70) = 41.01$, $p < .001$), physical exertion ($F(1, 70) = 19.84$, $p < .001$), and positive affect ($F(1, 70) = 32.73$, $p < .001$). A Group × Condition interaction for craving ($F(1, 70) = 7.51$, $p = .008$) showed higher craving in familiar versus novel cues. Findings demonstrate that cue-reactivity in problem gambling generalizes beyond personally meaningful gambling environments and emerges reliably under ecologically valid conditions. Our results underscore the need for interventions that target cue-elicited craving and affective disruption in real-world settings.

Keywords: ambulatory assessment, real-world, ecological momentary assessment, gambling, craving

P–2

Repetitive transcranial magnetic stimulation in severe refractory gambling disorder: A case report

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Background: Gambling disorder is a chronic and disabling behavioral addiction. A substantial proportion of patients remain symptomatic despite psychotherapy and pharmacotherapy. Repetitive transcranial magnetic stimulation (rTMS) has emerged as a promising neuromodulatory intervention for addictive disorders. *Objectives:* To describe the clinical course, safety profile and follow-up of high frequency rTMS over the left dorsolateral prefrontal cortex (DLPFC), combined with naltrexone, in a patient with severe refractory gambling disorder. *Methods:* This case report was conducted in a specialized outpatient clinic for gambling and impulse control disorders at a tertiary university hospital. A 69-year-old man with a 27-year history of gambling disorder and multiple prior treatment failures received 30 sessions of high-frequency rTMS (10 Hz, 2,400 pulses per session) over the left DLPFC, delivered 4–5 times per week for seven weeks, in combination with naltrexone 50 mg/day and cognitive-behavioral psychotherapy. Gambling severity was assessed with the Gambling Follow-Up Scale (GFS), and depressive symptoms with the Beck Depression Inventory (BDI). *Results:* At baseline, the patient gambled daily with high financial losses and severe depressive symptoms (GFS = 16.3). After the rTMS course, he achieved complete gambling abstinence, which was maintained throughout 12 and 13 months of follow-up, with marked functional recovery and reduction in depressive symptoms. GFS scores improved to 40.5 at 12 months and 44.2 at 13 months. A probable rTMS-associated hypomanic episode, characterized mainly by mood lability and atypical generosity, was successfully managed with valproate, without loss of anti-gambling benefits. *Discussion:* High frequency rTMS over the left DLPFC, combined with naltrexone and psychotherapy, was associated with robust and sustained improvements in a case of severe refractory gambling disorder. The results support the need for further controlled neuromodulation studies in gambling disorder and highlight the benefit of rTMS in patients with severe refractory gambling disorder.

Keywords: gambling disorder, pathological gambling, neuromodulation, repetitive transcranial magnetic stimulation, impulse control disorders.

P–3

Identification of central symptoms in the PGSI: A network analysis of gambling disorder

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By conceptualizing each PGSI item as node within a symptom network, we examined the interrelations among individual symptoms and identify the most central components of the network. Clarifying these central symptoms may help specify intervention targets for the treatment and prevention of gambling disorder. The present study aims to identify key intervention targets by analyzing an item-level network estimated from a sample of 4,000 gamblers aged 18 and older (excluding high school students). In this study, we conducted two rounds of online surveys to assess gambling behavior. The first survey was administered between January and February 2021 in collaboration with Rakuten Insight, Inc., and the second survey was conducted in November 2025 in collaboration ASMARQ Inc. Japanese research firms. Both surveys recruited 2,000 gamblers aged 20 years or older, excluding high school students. We used the Problem Gambling Severity Index (PGSI) to assess symptoms of gambling disorder. The PGSI consists of items such as “How often have you bet more than you could really afford to lose?” and “How often have you needed to gamble with larger amounts of money in order to achieve the same feeling of excitement?” among others. In the analysis, we conducted a network analysis to examine the association among PGSI items. Among all items, PGSI 8 and PGSI 9 emerged as the most central nodes within the network. With respect to the centrality indices, Strength was highest for PGSI 9 (Strength = 5.58), indicating that this item presented a core symptom with strong connections to multiple other items. This finding suggests that the symptoms represented by PGSI 8 and PGSI 9 may activate or reinforce other gambling related behaviors and could contribute to the escalation of gambling disorder. For both prevention and treatment, it is therefore crucial to prioritize interventions that target these two central symptoms, as doing so may help disrupt broader patterns of problematic gambling behavior.

Keywords: PGSI, network, strength, gambling disorder, central symptoms

P–4

Pathways Model as a predictor of treatment retention and recovery in gambling disorder: A six-month prospective study

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Background: Although predictors of treatment outcomes in gambling disorder have been widely studied, little is known about whether the Pathways Model provides additional explanatory power for treatment engagement and recovery. This study examined whether subtyping gamblers according to the Pathways Model predicts treatment retention and clinical improvement. *Method:* The sample consisted of 175 patients (93% male; M_age = 33.9, SD = 8.8) entering specialized treatment for gambling disorder who attended at least two treatment sessions. During three initial assessment sessions, participants completed measures of gambling severity (PGSI), alcohol use (AUDIT), depression (BDI-II), and gambling pathways (GPQ). They subsequently attended weekly group psychotherapy. Recovery was evaluated using the RIGD at baseline and after 6 months. Retention was defined as the number of days between the first and last treatment visit. Multiple linear regression models examined associations between 12 baseline predictors (nine GPQ subscales, PGSI, AUDIT, BDI-II) and retention and recovery. *Results:* A total of 91 patients remained in treatment for 6 months. Median retention was 149 days, and recovery significantly improved over time ($p < .001$, $d = .95$). The retention model was statistically significant ($F(12,136) = 1.911$, $p = .038$) and explained 14.4% of the variance ($R^2 = .144$). Among all predictors, only antisocial traits were associated with lower retention ($B = –3.47$, $SE = 1.36$, $p = .012$). The recovery model ($F(12,43) = 1.989$, $p = .050$) explained 35.7% of the variance ($R^2 = .357$). Poorer recovery was predicted by higher levels of childhood maltreatment ($B = –.68$, $SE = .19$, $p = .001$), whereas higher risk-taking traits were associated with better recovery ($B = .97$, $SE = .37$, $p = .012$). *Conclusions:* Subtyping gamblers according to the Pathways Model offers meaningful predictive value for treatment outcomes. Antisocial traits substantially reduce treatment retention, while childhood maltreatment represents a strong risk factor for poorer clinical improvement. Surprisingly, higher risk-taking tendencies may facilitate treatment progress. These findings underscore the importance of tailoring interventions to individual psychological profiles—not only symptom severity—to enhance outcomes in gambling disorder treatment.

Keywords: gambling disorder, treatment outcomes, Pathways Model

P–5

The relationship between late-stage big-bet behavior and PGSI scores among Japanese gamblers: A scenario-based experimental study

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Chasing losses, continuing gamble in an effort to recover previous losses. This pattern is considered a core symptom of gambling disorder. Takaoka (2021) reported that losing gamblers tend to place large, high-risk bets near the end of a gambling session. In the present study, we refer to this phenomenon as late-stage big-bet behavior. This study aimed to (1) examine the presence of late-stage big-bet behavior using a scenario-based experiment and (2) assess its association with the severity of gambling problems. An online survey was conducted from November 20 to 26, 2025, involving 2,000 Japanese adults (aged 20 and over) with prior gambling experience. Participants responded to eight last-stage gambling scenarios (e.g., "You have 10,000 JPY [approximately €60, 1€ ≈ 182 JPY] before payday, play roulette, lose 8,000 JPY and have 2,000 JPY remaining. What would you do from this point?"). For each scenario, participants indicated their preferred bet from several options from stopping to placing high-risk bets. Responses to these scenarios were used as an index of late-stage big-bet behavior, which was then analyzed in relation to the total scores on the Problem Gambling Severity Index (PGSI). In total, 1,208 participants (60.4%) selected an option of 3 or higher in at least one scenario. Correlations between PGSI total scores and responses across scenarios ranged from r = .33 to .36 (all p- < .01), indicating that greater gambling severity was associated with a higher tendency to choose risky late-stage options. This study demonstrated that late-stage big-bet behavior can be captured in a scenario-based experiment and that individuals with higher PGSI scores are more likely to make reckless endgame bets, a tendency that may extend to real-world gambling contexts. Future research should incorporate diverse situational scenarios and gambling formats familiar to Japanese gamblers.

Keywords: PGSI, gambling, high-risk betting, scenario-based experiment

P–6

Illusion of control among aging players: Results from a sample of french gamblers

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This study seeks to characterize the specific relationships between certain dimensions of illusion of control and different types of games within the aging population. Three questionnaires were submitted: the Multi-Dimensional Rating Scale for Illusion of Control in Gambling (EEMDIC), the Problem Gambling Severity Index (PGSI), and a sociodemographic questionnaire requesting gambling practices. Participants aged 40 to 75 who had gambled at least once in the past 12 months were selected for inclusion. The sample was drawn from a panel specifically designed to be representative of the population adults aged 40–75 residing in France who had engaged in gambling activities within the past year. A total of 1,311 participants completed all measures an online survey. Cluster analysis was used to identify gambling profiles, and Mann-Whitney U tests compared IoC scores across game categories. Three gambling profiles emerged: (1) occasional gamblers, (2) lottery gamblers (favoring non-strategic games, such as lotteries and scratch cards), and (3) betting gamblers (engaging in such strategic games as sports betting). Strategic gamblers exhibited higher IoC scores, particularly in primary control dimensions (skill, strategy), whereas their non-strategic counterparts showed a stronger reliance on secondary control (luck, superstition). By characterizing the multidimensional aspects of illusion of control and their links to gambling profiles, this study lays the groundwork for more targeted prevention strategies, focused on gambling motivations and cognitive distorsions. Understanding the interplay between cognitive distortions and game types is crucial for addressing the challenges posed by gambling behaviors in this population.

Keywords: illusion of control, measurement scale, gambling, aging

P–7

Identifying suicide risk in the context of gambling problems: Patterns of service use and end-of-life healthcare contacts

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Background: Gambling problems are associated with an elevated risk of suicidal thoughts and suicide mortality. Individuals harmed by problem gambling often present with complex psychosocial and health-related needs, making social and health care services crucial for early identification and support. *Methods:* The study combines evidence from two national data sources. First, population-based data from the Healthy Finland Survey 2022 (n=28,154) were used to examine associations between gambling, suicidal thoughts, and use of health and social services. Second, nationwide register data from 1996–2023 were used to identify all deceased individuals aged 18+ with a diagnosis of gambling disorder (ICD-10: F63.0) and to examine their final healthcare contacts preceding suicide death. *Results:* Among individuals harmed by problem gambling, 31% reported suicidal thoughts. Individuals harmed by problem gambling and suicidal thoughts used health and social services more often than non-gamblers with suicidal thoughts. In the register-based sample, 26% of deceased individuals with gambling disorder had died by suicide. All had at least one comorbid mental or behavioral disorder, most commonly mood disorders. Over half had a history of self-harm. Of those who died by suicide, 63% had a healthcare contact within 30 days before death, 36% within a week, and 13% on the day of death. *Conclusions:* Suicidal thoughts and suicide mortality are highly prevalent among persons harmed by gambling or diagnosed gambling disorder. The findings highlight significant unmet needs and the under-recognition of gambling problems within health care, despite frequent service contacts. Integrating gambling-related risk factors into suicide risk assessment, strengthening collaboration between social and health services, and improving access to targeted, coordinated treatment are essential steps to better identify and support individuals affected by gambling problems and suicidality.

Keywords: gambling problems, utilization of health care and social services, suicide

P–8

Loss-chasing motives and situational pressures underlying risk escalation in the final phase of gambling

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Background: The present study investigates the psychological and situational determinants of end-phase high-stakes betting, a risky pattern in which gamblers place disproportionately large wagers near the end of a gambling session. Although irrational processes such as loss chasing and illusion of control are well documented, the escalation of risk specifically in the final phase remains insufficiently understood. To address this gap, an online survey was conducted to identify the motivational factors and situational cues that best predict engagement in this behavior. The study aims to clarify the mechanisms underlying end-phase high-stakes betting and contribute to future theoretical and preventive frameworks. *Methods:* An online survey conducted from November 20–26, 2025, with Asmark Inc. recruited 2,000 adult gamblers. Participants rated 15 motivational and 14 situational items related to end-phase high-stakes betting on a 7-point Likert scale. For each item, the proportion of respondents scoring 5 or higher was calculated to identify the factors most strongly associated with this behavior. *Results:* Motivational analyses showed the strongest endorsement for "wanting to make a comeback and cancel out losses" (28.45%), followed by adhering to a bankroll rule (22.65%) and attempting to recover accumulated losses with a large bet (21.10%). Situationally, endorsement was highest when the gambling event was nearing its end (18.80%), when time felt limited (17.15%), and when few attempts remained (15.85%). *Conclusion:* The results suggest that end-phase high-stakes betting is largely driven by loss-chasing motives, reflecting gamblers' tendency to escalate risk in an effort to recover prior losses. Situational factors—such as time pressure, limited remaining opportunities, and end-phase cues—further intensify this behavior by heightening urgency and narrowing perceived options. Overall, both psychological and contextual factors substantively shape risky end-phase decisions, underscoring the value of understanding these mechanisms for developing interventions to reduce harmful late-stage escalation.

Keywords: gambling, end-phase high-stakes betting, motivation, situation

P–9

Problem gambling and wellbeing: A moderating role of problematic alcohol use

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Problem gambling has been linked to numerous harmful outcomes, including lower subjective well-being, and is frequently associated with substance use, particularly alcohol consumption. This study aimed to assess the moderating role of problematic alcohol use in the relationship between problem gambling and subjective wellbeing. Subsample of 1,622 participants (61.4% males; Mage=40.78, SDage=13.67) who reported participating in games of chance in the last year was drawn from the nationally representative sample of Croatian residents aged 15-64 (N=4988). Data were collected through a face-to-face survey, conducted in private households. Problem gambling was assessed using Problem Gambling Severity Index, Severity of Dependence Scale was used to assess problematic alcohol use, while subjective wellbeing was assessed using Personal Wellbeing Index. Most participants who reported participating in games of chance in the last year also reported alcohol use in the last year (87%). Results of the moderation analysis showed that, after controlling for sex and age, significant interaction term was observed between problem gambling and problematic alcohol use, indicating that problematic alcohol use amplifies the harmful effect of problem gambling on subjective wellbeing. These findings highlight the need for targeted interventions in prevention of adverse outcomes, addressing the co-occurrence of problem gambling and problematic alcohol use.

Keywords: problem gambling, problematic alcohol use, wellbeing

P–10

Decoding reward anticipation in a slot machine task: An EEG study using the stimulus-preceding negativity

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Anticipating rewards is a key process driving motivation in gambling-like situations. In slot machine paradigms, anticipatory processes occur before the outcome is revealed and the expectation of reward keeps players engaged. Event-related potentials (ERPs), and in particular the stimulus-preceding negativity (SPN), have been consistently associated with anticipatory processing, motivational relevance, and subjective value. However, it remains unexplored whether this anticipatory brain activity can be reliably decoded at the single-trial level in gambling-like tasks. In the present study, we evaluated the performance of a support vector machine (SVM) classifier in discriminating high- versus low-craving conditions at the single-trial level during an ecologically valid three-reel slot-machine task. Twenty-two university students (mean age = 22.64, SD = 4.26) performed the task while EEG data were recorded. The SPN was analysed during the anticipation phase between Reel 2 and Reel 3, when the player already knew whether they had lost (low-craving) or still had a chance to win (high-craving). This phase corresponds to maximal subjective expectancy in high-craving trials. The results showed that anticipatory neural activity could be reliably differentiated between low- and high-craving conditions. Classification accuracy exceeded chance level from 100 ms after the onset of the second reel and remained above chance throughout the 600 ms preceding the onset of the third reel, a time window corresponding to the SPN. Machine learning discrimination was driven by differences in SPN magnitude and scalp distribution, indicating sensitivity to motivational relevance during reward anticipation. These findings demonstrate that anticipatory neural dynamics in a slot machine task can be decoded from EEG signals at the single-trial level, highlighting a detectable motivational signature during reward anticipation. This approach offers a novel way to investigate the neural mechanisms of reward anticipation and could provide an objective measure of motivational states, including those associated with gambling-related craving.

Keywords: gambling behavior, Slot machine, EEG decoding and machine learning, reward anticipation, craving

P–11

Gambling disorder in older adults: A descriptive study of treatment-seeking individuals aged 60 and older in Türkiye

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Background: Gambling disorder in older adults remains underexplored despite increasing accessibility and age-specific psychosocial vulnerabilities (Fontaine et al., 2023; Subramaniam et al., 2015). This study aims to describe the demographic and clinical characteristics of individuals aged 60 and older seeking treatment for gambling disorder in Türkiye. *Method:* This retrospective descriptive study included data from 129 individuals aged 60 years and older who sought treatment for gambling disorder at the Green Crescent Counseling Center (YEDAM) in Türkiye between 2022 and 2025. Demographic characteristics, gambling history, and clinical features were assessed using the Gambling Risk Screening Scale (GRSS) and subscales of the Addiction Profile Index (BAPI-K). Data were analyzed using descriptive statistics. *Results:* The sample was predominantly male (89.1%), mostly married (86.0%) and unemployed (65.1%), with a moderate educational level (53.5% middle or high school). The mean age of gambling onset was 33.25 ± 17.94 years. Sports betting (27.1%), casino games (18.6%), and horse race betting (15.5%) were the most common gambling types. While 69.8% had attempted to quit gambling, only 19.4% had received prior treatment. The mean GRSS score was 13.95 ± 4.20, with 83.7% classified as high risk. On the BAPI-K, high risk levels were identified in anger management problems (42.6%), lack of assertiveness (25.6%), depression (41.9%), and anxiety (33.3%).All participants reported trauma history; 25.6% suicidal ideation, and 28.7% comorbid alcohol or substance use. The mean number of sessions attended was 6.75 ± 6.39, and early dropout after the first session was 13.2%. *Conclusions:* This study indicates that gambling disorder among older adults is predominantly male and characterized by a heterogeneous, high-risk clinical profile. Trauma experiences, impulsivity, lack of assertiveness, and mood symptoms are prominent but do not form a single explanatory model. Given limited research on older adults, multivariate and longitudinal studies are warranted.

Keywords: gambling disorder, older adults, Türkiye

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P–12

Delay in help-seeking in gambling disorder: Findings from YEDAM data

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Only a limited proportion of individuals with gambling disorder seek specialized treatment services, and help-seeking often occurs only after many years of severe gambling-related problems. Delays in help-seeking are considered a major risk factor affecting both the progression of the disorder and treatment adherence. Previous studies have shown that psychological symptoms such as depression and anxiety play an important role in treatment motivation and continuity . However, empirical evidence examining the relationship between help-seeking delay, gambling severity, and psychological symptoms remains limited. This study aimed to investigate the association between the duration from gambling onset to first admission to YEDAM and levels of gambling severity and psychological symptoms. The study included 3,010 individuals who applied to YEDAM for gambling disorder during the last six months of 2025. Participants' age at gambling onset, age at treatment admission, and the duration between these two time points were calculated. Gambling severity was assessed using the KURT scale, while psychological symptoms and behavioral characteristics were evaluated through the BAPI-K subscales. Pearson correlation analyses were conducted.

Results indicated a positive, very weak but statistically significant association between the duration from gambling onset to treatment admission and gambling severity ($r = 0.057$; $p < 0.01$). In contrast, longer delays were weakly and negatively associated with excitement-seeking behavior, impulsivity, depression, and anxiety ($p < 0.05$). These findings suggest that prolonged help-seeking delay is associated with increased gambling severity, whereas reported levels of depression and anxiety may be lower at treatment entry. Overall, help-seeking appears to be postponed until gambling-related problems escalate. This pattern may reflect individuals' attempts to recover losses independently before seeking professional support . Consistent with previous research, the findings highlight the importance of early identification and low-threshold interventions.

Keywords: help-seeking delay, gambling disorder, gambling severity, psychological symptoms

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P–13

Clinical social work in gambling disorder treatment: A comparative study

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Background: Social work plays an active role in mitigating social risks by identifying gambling disorder-related risks, providing social support, and conducting clinical interventions. The effectiveness of clinical social work practices is evaluated based on treatment adherence of individuals and variations in their clinical characteristics. *Method:* The research sample comprises 6,243 individuals who sought treatment at YEDAM for gambling disorder between 2021 and 2025, with a three-month follow-up period. Within this cohort, 2,813 participants received clinical social work support. Statistical analyses were performed via the SPSS 29.0 software suite. Data collection was facilitated through the BAPI-K and KURT-I assessment scales, the results of which are documented in the following tables. *Results:* Table 1 compares the baseline clinical characteristics of individuals with gambling disorder who received social work interventions (n=2,813) and those who did not (n=3,430) over a three-month follow-up period. The findings indicate that the group receiving social work interventions had statistically significantly higher scores in both the KURT total scores and all BAPI-K total and subscale scores compared to the non-intervention group ($p < 0.01$). In Table 2, the time-dependent changes in KURT-I scores during the three-month follow-up were compared between the groups with and without social work interventions. A gradual and significant decrease was observed in KURT-I scores over time ($p < 0.01$). *Conclusions*: Findings reveal that the social work cohort comprised high-need cases with more severe psychological challenges. The study demonstrates that these interventions are accurately targeted. Notably, the achievement of similar improvement levels in both groups validates the transformative impact of social work on individuals at greater risk.

Keywords: clinical social work, gambling, comparative study

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P–14

Beyond gender differences in gambling disorder: Transdiagnostic predictors of craving and severity in treatment-seeking patients

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Gender differences in gambling disorder have been reported, with women often showing greater affective symptom burden. We tested whether sex differences in craving and gambling-related/global severity persist after accounting for depression, anxiety, and impulsivity facets in a treatment-seeking clinical sample. Methods: We recruited 306 adult outpatients who sought treatment for gambling disorder at the Gambling Outpatient Unit. Participants completed the Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Barratt Impulsiveness Scale–11 (BIS-11), Gambling Symptom Assessment Scale—craving factor (GSAS-FISS), and Gambling Follow-up Scale (GFS; higher total scores indicate lower severity). Gender differences were tested using independent-samples tests. Pearson correlations and multiple linear regressions (Enter method) examined associations with GSAS-FISS and GFS total (α=0.05, two-tailed). Results: Women reported higher depression (d=0.45), anxiety (d=0.58), impulsivity (d=0.32), and craving (d=0.27) than men (ps≤0.006 for BDI/BAI/BIS; craving p=0.018). GFS total was inversely correlated with GSAS-FISS (r=−0.599), BDI (r=−0.465), and BAI (r=−0.335) (all p<0.001), indicating greater severity (lower GFS) among participants with higher craving and affective symptoms. In adjusted models, craving was independently predicted by BDI ($\beta\approx0.365$; p<0.001) and BIS-Attentional ($\beta\approx0.169$; p=0.009), whereas sex and BAI were not significant (R^2=0.184; p<0.001). In the severity model, only GSAS-FISS ($\beta\approx-0.502$; p<0.001) and BDI ($\beta\approx-0.256$; p<0.001) independently predicted lower GFS (greater severity; R^2=0.431; p<0.001). Conclusion: Despite higher symptom burden in women, sex was not independently associated with craving or gambling severity after accounting for transdiagnostic variables. Craving and depressive symptoms were the most robust correlates of greater severity, suggesting that the observed sex differences are better explained by symptom profiles rather than sex per se.

Keywords: gender, gambling, severity, craving, depression

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P–15

Decision-making under uncertainty and probability perception: Insights from a coin toss experiment

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Individuals with gambling disorder face significant difficulties in decision-making under uncertainty, often favoring high-risk options with short-term rewards (Bechara, 2003). Problematic gambling behavior is linked to irrational motivations and cognitive biases (Ladouceur et al., 2004), such as selective memory, where wins are recalled more vividly than losses (Scoboria & Wilson, 2011). To investigate these biases, we developed an experimental coin-toss task where participants predict outcomes under varying gain probabilities (50%, 20–30%, 60–70%). Participants predicted "heads" or "tails" and stopped a spinning coin animation. Wins triggered green-screen feedback and losses red-screen feedback. The task included 90 trials across three conditions: fair (50%), low (20–30%), and high (60–70%) probability of gains, with order counterbalanced. Each condition followed predefined sequences based on probabilistic models to examine decision-making patterns and perceived probabilities. During and after the task, participants reported perceived probabilities, recall of wins/losses, perceived influence, and fairness judgments, allowing assessment of distortions such as probability misestimation, selective memory, and illusions of control. They also completed validated measures: Canadian Problem Gambling Index, Gambling-Related Cognitions Scale, Big Five Inventory-10, and UPPS-P Impulsivity Scale, capturing gambling severity, beliefs, personality traits, and impulsivity. An a priori power analysis (G*Power 3.1) for a mixed-design repeated-measures ANOVA with one within-subject factor (Probability: low, medium, high) and one between-subject factor (Order: low→high vs. high→low) indicated 60 participants for medium effect size ($f = 0.25$, $\alpha = .05$, power = .99). To ensure robustness, 102 participants were recruited; two were excluded, resulting in a final sample of 100 participants. Data processing and analyses are ongoing. Results will address cognitive biases, decision-making strategies, reaction-time dynamics, and associations with gambling-related traits.

Keywords: gambling, cognitive biases, probability perception, selective memory, perceived control

P–16

Craving as a mediator between depressive symptoms and gambling severity in treatment-seeking individuals

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Background: Depressive and impulsive symptoms are frequently observed among individuals with Gambling Disorder (GD) and have been associated with poorer clinical outcomes. However, the psychological mechanisms linking depressive symptoms to gambling severity remain insufficiently understood. Craving, a central component of addictive behaviors, has been proposed as a possible mediator in this relationship. This study aimed to test whether craving mediates the association between depressive symptoms and gambling severity and to examine the role of impulsivity domains as predictors of craving intensity. *Methods:* A clinical sample of 306 treatment-seeking individuals diagnosed with GD was recruited from the Gambling Disorder Treatment Program at Hospital das Clínicas, University of São Paulo (São Paulo, Brazil). Participants completed the Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and the Barratt Impulsiveness Scale (BIS-11), encompassing attentional, non-planning, and motor impulsivity factors. Gambling-related outcomes included the Gambling Symptom Assessment Scale – craving factor (GSAS-FISS) and the Gambling Follow-up Scale (GFS; lower scores indicate greater gambling severity). Correlation analyses, multivariable linear regressions, and a bootstrapped mediation model (5,000 resamples) were conducted to evaluate direct and indirect effects. *Results:* Depression was positively correlated with craving (BDI × GSAS-FISS: $r = .398$, $p < .001$). Craving was strongly associated with gambling severity (GFS × GSAS-FISS: $r = -.599$, $p < .001$). In a regression model predicting craving, depressive symptoms ($b = 0.238$, $p < .001$) and attentional impulsivity (BIS-11 attentional factor; $b = 0.393$, $p = .008$) were significant predictors ($R^2 = .183$). In the model predicting gambling severity, both craving ($b = -0.540$, $p < .001$) and depression ($b = -0.178$, $p < .001$) were significant predictors ($R^2 = .428$). Bootstrapped mediation revealed a significant indirect effect of depression on gambling severity through craving (indirect effect = −0.137, 95% CI [−0.184, −0.094], $p < .001$), along with significant direct (−0.189, $p < .001$) and total effects (−0.326, $p < .001$). Anxiety and other impulsivity domains were tested but were not significant in the final model. *Conclusions:* Higher depressive symptoms were associated with higher levels of craving, and craving accounted for a significant indirect pathway linking depression to gambling severity. These findings support the role of craving as a central psychological mechanism connecting mood symptoms and gambling outcomes. Clinically, integrated interventions addressing both affective symptoms and craving may enhance treatment effectiveness in individuals with GD. Furthermore, attentional impulsivity emerged as an independent correlate of craving, suggesting that difficulties in focusing attention may exacerbate the experience of gambling-related urges.

Keywords: gambling disorder, craving, depressive symptoms, mediation analysis, impulsivity

P–17

Mapping harmful gambling product design through lived experience: Protocol for a user-led taxonomy and harm-pathway map

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Background: Persuasive and deceptive gambling-product design features may amplify craving, undermine deliberation, and accelerate gambling-related harm. Despite growing calls for "responsible-by-design" approaches, the lived experience of people harmed by these features remains underrepresented in the evidence base. This protocol outlines a study to identify the specific structural features that individuals who gamble intensively recognize as drivers of compulsive gambling. *Method:* We will conduct in-person focus groups with two cohorts: (a) individuals in recovery or treatment for gambling-related problems recruited via specialized non-profit gambling rehabilitation associations, and (b) people with subclinical levels of gambling-related problems of undiagnosed gambling disorder recruited from the general community. Sampling will follow a saturation-based approach (min. 6 groups). Sessions will use a participant-led, semi-structured script to explore design-induced craving, with a strict safety protocol (clinician oversight, pre/post distress monitoring). Data will be analyzed using inductive reflexive thematic analysis, supported by reflexivity journaling, peer debriefing, and an audit of early coding decisions by international qualitative advisors. *Results:* Primary outputs will be (i) a user-led taxonomy of harmful design elements and (ii) a harm-pathway map linking features to perceived mechanisms and harms. Preliminary themes and a draft taxonomy/map are expected to be presented at the conference. *Conclusions:* This protocol establishes a rigorous, safety-informed qualitative foundation to inform responsible-by-design recommendations and seed a subsequent quantitative program estimating exposure and harm magnitude in real-world gambling.

Keywords: gambling, structural features, harmful design

P–18

Client re-engagement interventions delivered via a counseling hotline: An analysis of the impact of post–dropout recontact on return to treatment

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Background: A major challenge in treating gambling disorder is clients' premature discontinuation of therapy. Drop-out occurs at high rates, weakens the therapeutic alliance, and negatively affects outcomes. Low treatment adherence increases symptom severity and relapse risk. Re-contacting clients after drop-out is a clinically important intervention that may support re-engagement. This study examined the effect of re-contacting clients via a counseling hotline on their return to treatment and evaluated the relationship between pre-drop-out treatment participation and likelihood of re-engagement. *Method:* The study was conducted on 174 clients who applied to YEDAM for gambling disorder and dropped out within the past year (2025). Of these 174 clients, 51 were scheduled for a new appointment following a drop-out call, while 123 were not. The number of follow-up sessions attended by clients prior to dropping out was evaluated according to whether a new appointment had been scheduled. Variables were analyzed using the Student's t-test, with a significance level of $p<0.01$. *Results:* Among 174 clients re-contacted via the counseling hotline after drop-out, 51 clients scheduled a new appointment. Of the 123 clients who did not schedule an appointment, 32 reported during the call that they had already stopped gambling. Thus, following post–drop-out contact, 51 clients requested a return to treatment, while 32 indicated that they had ceased gambling behavior. Examination of the number of follow-up sessions prior to drop-out revealed that the group who did not schedule an appointment had a mean of 4.80 ± 7.76 sessions, whereas the group who scheduled an appointment had a mean of 7.36 ± 7.23 sessions. This difference was found to be statistically significant ($p = 0.047$). *Conclusions:* This study demonstrates the clinical importance of re-engaging clients after drop-out in the treatment of gambling disorder. Literature shows that individuals who complete treatment experience significant reductions in gambling behavior and psychosocial problems, whereas those who discontinue early tend to continue facing these difficulties. Research also indicates that post–drop-out motivational interventions can increase the likelihood of clients returning to treatment. In this context, re-contacting clients after drop-out should be considered a complementary intervention to facilitate treatment re-engagement, and treatment programs should focus not only on preventing drop-out but also on structuring re-engagement processes.

Keywords: gambling disorder, treatment re-engagement, drop-out

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P–19

The impact of cash-out availability on online betting behavior

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Background: The rise of online sports betting, facilitated by technological innovations such as the cash-out feature, has transformed the gambling landscape. While cash-outs have been suggested to intensify problematic gambling behaviors, empirical studies to date have been correlational, leaving a gap in determining causal evidence. *Method:* We conducted an online experiment among Hungarian adults with a history of online gambling (N = 963; analytic sample n = 631 after preregistered exclusions). Participants first completed a task to earn a monetary bonus, and they were then informed that they could wager their bonus on upcoming sports events. They were randomly assigned to either a cash-out or a no-cash-out condition. In the cash-out condition, participants received a detailed description of the cash-out feature, explaining that bets could be settled before or during the event. When redirected to the simulated betting platform, they also saw a salient red text explicitly informing them that cash-out was available. The no cash-out condition received identical procedures without any mention of a cash-out option. Primary outcomes included the proportion of participants placing a bet, bet size, and risk level of the selected wager. *Conclusions:* These findings provide experimental evidence regarding the behavioral impact of cash-out features in online sports betting. Results contribute to a clearer understanding of how structural platform characteristics may influence gambling intensity and risk-taking, informing regulatory policy and harm-reduction strategies in digital gambling environments.

Keywords: sports betting, cash-out, online experiment, risky gambling, problem gambling, gambling disorder

P–20

Internet based treatment for gambling disorder to increase access to care: Is internet delivered treatment as effective as traditional face to face therapy for gambling disorder?

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More than 300 000 individuals in Sweden are estimated to have some degree of gambling problems, with over 40 000 fulfilling criteria for gambling disorder (GD). Gambling disorder is associated with severe consequences for both affected individuals, their relatives and society at large. In addition to economic problems and other social problems, it is also associated with other types of psychiatric problems, including a significantly heightened risk for suicide. Despite this widespread problem, only a minority of those affected seek and receive help (Bijker et al., 2022), partly due to a lack of treatment availability (Gainsbury et al., 2014; Khayyat-Abuaita et al., 2015). Internetbased cognitive behavioral therapy (iCBT) is a cost-effective method for delivering psychotherapeutic treatment, although it still requires time and engagement from both patients and clinicians. This pilot randomized controlled trial (RCT) aims to compare an iCBT for GD with face-to-face treatment and with a waitlist control group. If iCBT demonstrates outcomes comparable to those of face-to-face treatment, it may enable clinics to treat more patients using the same resources, hence increasing the availability of treatment for GD. Therefore, we aim to study, in a study including long-term follow-up at 3 and 6 months after treatment, the effects of an iCBT treatment delivered over internet for patients with GD. We hypothesize that the treatment effects after iCBT are equal to the effect of face-to-face treatment, and that treatment effects are retained over time, in which case, this study will show that CBT delivered over the internet is an effective and sustainable treatment for GD.

Keywords: gambling disorder, iCBT, face-to-face, RCT

P–21

Altered executive functioning, maladaptive metacognitions, and psychopathology in gambling disorder

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Background: Gambling disorder (GD) is linked to disrupted cognitive functioning and maladaptive neural alterations, particularly in the prefrontal cortex. However, findings on executive function are mixed, partly because of the diverse task paradigms used. This study aimed to assess executive functioning in GD using both simpler and more cognitively demanding tasks while analysing vulnerabilities such as psychopathology and maladaptive metacognition, side-by-side. *Methods:* A cross-sectional online study was conducted in a UK community sample recruited via Prolific (N = 219). Participants were classified into healthy control (HCG), low risk (LRG), high risk (HRG), and GD groups (GD) based on PGSI scores. Self-report measures assessed impulsivity (BIS-R-21-SF), psychopathology (DASS-21), compulsivity (DSM-5 OCPD criteria-based items), and gambling-related metacognitions (MGQ). Executive functions were evaluated using domain-specific tasks: working memory (2-back, 3-back, and digit span), cognitive control (Go/No-Go), and cognitive flexibility (Wisconsin Card Sorting Task). *Results:* Higher gambling severity was associated with poorer cognitive flexibility and reduced high-load working memory performance, with individuals in the HCG outperforming those in the HRG and GDG. Compulsivity and psychopathology increased with GD severity. Positive and negative metacognitions were higher in HRG and GDG than in HCG and LRG, and correlated with PGSI scores. However, no between-group differences were observed for cognitive control or impulsivity. *Conclusion:* Gambling disorder reflects a convergence of vulnerabilities: disrupted high-load WM, decreased cognitive flexibility, elevated compulsivity, and maladaptive metacognitions.

Keywords: executive functioning, gambling disorder, psychopathology

P–22

Decision-making in addictive behaviors: Delay discounting and risk across gambling, gaming, and social media use

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Steeper discounting of delayed rewards has been documented in substance use disorders and gambling disorder, and may represent a transdiagnostic feature of addiction (Amlung et al., 2017). In gambling disorder, impairments in both delay discounting and risk taking have been consistently observed, although associations with symptom severity remain inconclusive (Wiehler & Peters, 2015). Beyond gambling, individuals with internet gaming disorder show deficits in risky and reward-based decision-making but these alterations are not closely linked to symptom severity (Yao et al., 2022). Evidence regarding delay discounting and risk-taking in problematic social media use is limited, with some studies suggesting changes (e.g., Meshi et al., 2021) but without a consistent pattern across constructs.

In a cross-sectional online study, we recruited participants with gambling, gaming, and/or social media use experience (N = 680). Participants completed the Kirby Delay Discounting Task and the Holt–Laury Risk Task and provided self-reported symptom severity via the Problem Gambling Severity Index (PGSI), the Internet Gaming Disorder Scale (IGD), and the Bergen Social Media Addiction Scale (BSMAS), in addition to further questionnaires not reported here. Data collection has just been completed, and statistical analyses will be finalized before the conference. We will examine whether distinct patterns of delay discounting and risk-taking relate to variation in symptom severity, and whether these patterns differ between gambling, gaming, and social media subgroups. This study aims to clarify whether valuation of delayed and risky rewards reflects a shared transdiagnostic process across symptom domains, or distinct decision-making profiles across gambling, gaming, and problematic social media use.

Keywords: delay discounting, risky decision-making, behavioral addictions, gambling disorder, internet gaming disorder, problematic social media use

P–23

The relationship between gambling, gaming and physical health conditions: A systematic review

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Gambling and gaming are conditions increasingly seen as public health concerns due to their impacts on mental health, relationships, finances, work, and social well-being. Because they do not involve ingestion of a substance, less attention has been paid to the physical health effects. By contrast, substance use disorders are known to affect a range of conditions including cardiovascular and immune health. This systematic review examines predictors of physical health conditions among adults with gambling or gaming problems. Physical health conditions were defined as diseases, disorders or conditions that affect bodily systems and are included in Chapters 01 to 21 from the ICD-11 (e.g., nutritional and metabolic, endocrine, and sleep-wake disorders). Chapter 6, mental, behavioural or neurodevelopmental disorders were excluded. Searches were conducted in PsycInfo, MedLine, PubMed, and CINAHL, with additional reference list checks. Data analysis examined the nature and direction of the relationships. Recognising the presence of physical health conditions can help shape screening efforts for gambling and gaming problems and suggests more work is needed to equip medical professionals with knowledge and support on how to respond to gambling and gaming problems.

Keywords: gambling, gaming, physical health conditions, ICD-11

P–24

Experience with gambling-like activities in digital games among Czech adolescents

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Background: Digital games are an integral part of adolescents' everyday lives. While gaming can offer a range of benefits, some game features may pose risks for children and adolescents, including gambling-like activities (GLAs).

Aim: This study aimed to examine the frequency of loot box purchases, adolescents' experiences with skin betting, and patterns of in-game microtransactions. It also examined the relationship between engagement in GLAs and disordered gaming. *Method:* GLAs were measured using the Risky Loot Box Index (RLI), the Reasons and Facilitators for Loot Box Engagement (RAFFLE), and additional self-formulated items. Problematic gaming was measured using the Gaming Disorder Test (GDT). The study was conducted with a sample of 300 adolescents aged 11–15 in the Czech Republic. *Results:* This poster presents pilot data on adolescents' involvement in GLAs. A higher incidence of GLAs and higher spending associated with GLAs are expected to significantly predict problematic digital gaming. *Conclusion:* Overall, the findings underscore the need for targeted prevention efforts and legislative or regulatory measures that address risky game features for children and adolescents.

Grant affiliation: This contribution has been produced with the support of the project ReDiKid: Resilient Kid in Digital World, reg. no. CZ.02.01.01/00/23_025/0008686, co-funded by the EU.

Keywords: gambling-like activities, loot boxes, skin betting, gaming disorder, gaming, prevention, adolescence

P–25

Study protocol: Creation and validation of a momentary ecological assessment tool for video gamers

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Scientific Context: Video games are among the most popular recreational activities worldwide. Their inclusion in the DSM-5 as a provisional condition and subsequent recognition as a disorder in the ICD-11 remain controversial, particularly concerning over-pathologisation and the stigmatisation of players. With the growing professionalisation of gaming (e.g., esports, streaming), distinguishing between non-problematic and problematic gaming cannot rely solely on play duration, frequency, or diagnostic criteria. Experimental research grounded in theoretical models highlights the significant influence of individual (e.g., gaming motivations) and contextual factors (e.g., timing and environment) on gaming outcomes. In recent years, ecological momentary assessment (EMA) has emerged in psychology and psychiatry as an effective method for analysing such dynamic interactions, providing insights into the mechanisms underlying psychiatric disorders. However, despite existing methodological recommendations, no longitudinal study in gaming addiction has utilised validated EMA tools in ecological settings. *Objectives:* This 24-month study aims to develop, test, and validate an EMA application (GameLab) tailored to diverse gamer profiles (intensive, professional, and clinical populations). *Methods:* Population: Sixty participants will be recruited via specialised networks and two addiction clinics in Paris and Nantes and divided into three groups: 20 intensive gamers, 20 professional gamers, and 20 patients with gaming addiction. *Procedure:* Phase 1: Develop the application through 1 qualitative interview, 3 cognitive interviews (to assess the relevance and understanding of the items) and 3 pre-tests of the EMA app in real conditions over seven days with 15 participants (5 per group). This will design the EMA survey (e.g., duration, questionnaire frequency) and formulate items based on standardised scales and personal experiences of the participants. Phase 2: Test the application with 45 participants (15 per group) over 10–30 days, with 3–6 daily assessments collecting behavioural, psychological, and contextual data. *Statistical analyses:* Acceptance and compliance will be evaluated using non-parametric tests. Hierarchical linear and non-linear models will assess fatigue effects, time effects, and item variability. Factor analyses will examine the structure of EMA scales. Internal consistency (alpha and omega coefficients) and validity (correlations with standardised scales and HLM models) will be evaluated. *Conclusion:* GameLab will be the first validated tool for examining video gaming behaviours in ecological contexts. It will enable researchers and clinicians to better understand the dynamic factors underlying gaming behaviours and improve therapeutic strategies.

Keywords: ecological momentary assessment, psychometry, mixed method

P–26

The relationship between future time perception and impulsivity in individuals with gaming disorder

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Background: Impaired control over gaming behavior is a core feature of gaming disorder, though its underlying mechanisms remain unclear. Abnormalities in time perception may lead impulsive individuals to overestimate the cost of waiting, resulting in a preference for immediate gratification. This study aimed to compare future time perception abilities between individuals with gaming disorder and non-problematic gamers, and to examine the influence of time perception on impulsivity. *Methods:* The study included 41 non-problematic gamers and 32 individuals with gaming disorder. Future time perception was measured using a line production task, in which participants subjectively estimated the length of seven future intervals (2 days to 2 years) by drawing lines. Impulsivity was assessed using a delay discounting task, where participants made choices between a smaller immediate reward and a larger delayed reward (¥5,000) across the same seven delay intervals. Key measures included line length, absolute time estimation error, subjective value, and area under the curve (AUC). *Results:* The gaming disorder group perceived future intervals as longer, producing significantly longer lines than the control group ($t = -2.25$, $p = 0.029$). They also exhibited greater impulsivity, with a smaller AUC ($t = 2.09$, $p = 0.041$) and lower subjective value ($t = 2.13$, $p = 0.037$). A significant negative correlation was found between time estimation accuracy and subjective value ($r = -0.25$, $p = 0.034$), indicating that more accurate time perception was associated with greater delay of gratification. *Conclusion:* Individuals with gaming disorder demonstrate prolonged future time perception and higher impulsivity. Time perception accuracy may help explain their "myopic" decision-making, providing new evidence for understanding the cognitive mechanisms of behavioral addiction.

Keywords: gaming disorder, future time perception, delay discounting

P–27

Effects and mechanism of high-intensity transcranial alternating current stimulation for social interaction and cravings in gaming disorder: A randomized controlled trial

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Background: Gaming disorder (GD) is characterized by impaired social function and heightened gaming cravings. Interpersonal brain synchronization (IBS) has been implicated in social interaction difficulties, but it remains unknown whether high-intensity transcranial alternating current stimulation (HI-tACS) can modulate these abnormalities in GD. This study examined the effects of gamma-frequency HI-tACS on gaming cravings and social interaction-related IBS in individuals with GD. *Methods:* In this randomized, double-blind, sham-controlled trial, 60 men with GD were recruited in Hunan, China. They were randomly assigned to an active HI-tACS group (n = 30; 15 dyads) or a sham group (n = 30; 15 dyads). Participants in the active group received 10 sessions of HI-tACS over 2 weeks, and those in the sham group received the sham intervention. Primary outcomes included gaming cravings and functional near-infrared spectroscopy-based IBS in competition and cooperation. The effects of the intervention were measured using linear mixed models. *Results:* For gaming cravings, linear mixed models revealed a significant Time*Group interaction effect ($F(1, 52.5) = 4.95$, $p = 0.03$), with no significant post-hoc results. IBS in competition showed significant interaction effects in the right temporoparietal junction ($F(1, 50) = 10.56$, $p = 0.04$) and in the left ventrolateral prefrontal cortex ($F(1, 37) = 11.50$, $p = 0.03$): after intervention, IBS decreased in the active group and increased in the sham group, respectively. Reduced IBS in the right temporoparietal junction was associated with the participants' increased perceived social support. *Conclusions:* The current study revealed the effects of HI-tACS on reducing competitive IBS in individuals with GD. These findings offered initial neurophysiological evidence for further research aiming to evaluate the therapeutic efficacy and deeper mechanisms of tACS in alleviating GD severity and restoring social function.

Keywords: Gaming Disorder, hyperscanning, temporoparietal junction

P–28

Modeling daily sleep–gaming processes in high-risk gamers: A dynamic structural equation approach combining wearable tracking and self-report data

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Objective: This study examined the dynamic associations between sleep and gaming duration among Chinese university students with high-risk gaming behaviors, and tested the mediating role of daily physical activity. *Methods:* 40 participants (92.5% for male; Mean age= 18.43, SD = 1.30) who met criteria for high-risk gaming behavior completed a 28 day daily diary protocol. Using a combination of self report and wearable data, participants reported daily gaming duration and subjective sleep quality, while objective sleep duration and daily step counts were captured via Huawei wearable devices. Dynamic structural equation modeling was used to separate within person and between person variance and to estimate lagged day to day effects. *Results:* Better subjective sleep quality predicted longer gaming time on the following day, whereas objective sleep duration was not associated with next day gaming duration. Neither subjective sleep quality nor objective sleep duration predicted subsequent physical activity. In contrast, higher levels of objective physical activity were associated with shorter gaming duration. Daily gaming duration also showed strong temporal stability, with longer gaming on one day reliably predicting longer gaming on the following day. *Conclusions:* These findings suggest that sleep quality, rather than sleep duration, is more relevant for understanding gaming behavior among high risk gamers. When designing sleep based interventions for this population, clinicians should consider individuals' behavioral habits and may need to combine sleep focused strategies with guidance that promotes engagement in alternative activities such as physical exercise.

Keywords: physical activity, sleep, game duration, dynamic structural equation modeling, wearable devices

P–29

Random reward mechanisms in loot boxes increase risk of excessive gaming

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Background: Loot boxes, in-game items obtained through purchasing or completing tasks, have drawn increasing attention due to their structural similarities to gambling and potential links to problematic gaming. Previous research suggests that random reward mechanisms accelerate loot box purchasing and researchers found that rare rewards would trigger greater arousal and urge to continue. Therefore, this study aimed to examine whether the presence of loot boxes increases gaming duration and transactions compared to direct purchase, and whether reward rarity further boosts these effects. *Methods:* This study employed a single-factor between-subjects design to disentangle these effects. A total of 85 adult participants were randomly assigned to one of three conditions: (1) direct purchase with fixed prices, (2) standard loot boxes with uniform reward probability, and (3) loot boxes with tiered rarity including rare items. Participants completed a driving game task where they acquired collectible items through their assigned mechanism, followed by validated measures of game addiction, risky loot box use, and gambling cognitions. *Results:* Results showed that participants in both loot box conditions spent significantly more time playing ($p < .001$) and made more transactions ($p < .001$) compared to direct purchase. However, the presence of rare rewards did not significantly increase engagement beyond standard loot boxes ($p = .14$ for time, $p = .26$ for transactions). *Conclusion:* These findings suggest that the random reward mechanism itself, rather than reward rarity, drives problematic engagement. Future research should explore the psychological processes underlying randomness-driven gaming behaviour.

Keywords: loot boxes, random reward mechanisms, rarity

P–30

A flexible module-based cognitive behavioral therapy for gaming disorder: An ongoing randomized control trial

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Background: Knowledge about gaming disorder has increased in recent years. However, more research is needed regarding treatment options for gaming disorder. The most studied treatment option today is cognitive behavioral therapy (CBT). However, due to the low number of high-quality trials, the certainty in the evidence is low. Only a handful of previous studies are randomized controlled trials, further affecting the evidence level. Many previously studied treatments are also resource-intensive, making it difficult to implement in routine care. In addition, few treatment studies so far include adults. Therefore, we aim to evaluate a flexible manual-based CBT-program for gaming disorder in a randomized controlled trial, including both adults and adolescents. *Methods:* A total of 160 patients will be recruited. Participants will be randomized to an intervention group receiving CBT treatment for approximately 12 weeks or to a waitlist control group. In an additional study, all participants will be followed up until 24 months after treatment. Inclusion started in August 2025 and is ongoing. *Discussion:* This trial will evaluate the effects of a flexible manualbased CBT-treatment for patients with gaming disorder, compared to no treatment. Increasing the knowledge of the effectiveness of CBT for gaming disorder will improve the ability to offer evidence-based care for this group of patients.

Keywords: gaming disorder (GD); adolescents; adults; cognitive behavioral therapy (CBT); randomized controlled trial (RCT)

P–31

Understanding Gaming Disorder in treatment-seeking individuals: A mixed-methods clinical investigation

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Gaming Disorder is recognised in the ICD-11 as a pattern of persistent gaming behaviour characterised by impaired control, increasing priority given to gaming, and continued use despite negative consequences. While research on GD is growing, most relies on sub-clinical, samples, meaning less is known about how it presents in individuals actively seeking treatment. Clinical research is therefore essential, as findings from community samples may not fully translate to individuals experiencing significant impairment, while treatment-seeking samples allow for more objective examination of GD. This study addresses this gap by examining a clinical GD sample, integrating standardised assessment with patients' own written reflections. Participants were 128 individuals referred to a rehabilitation facility in America for their GD. They were predominantly male (94.5%), with a mean age of 22.5 years (SD = 4.3; range 13-35). Surveys assessed patients' gaming severity, depression, anxiety, stress, addiction co-morbidities (e.g., gambling), adverse childhood experiences, autistic traits, empathy, and technology usage. In addition, this study included 78 qualitative 'impact letters' written by patients as part of a therapeutic reflection exercise, which will be analysed using thematic analysis to explore how patients perceived the effects of GD on their own lives and those around them. Structural equation modelling will test a conceptual model in which psychological distress, adverse childhood experiences, autistic traits, empathy, co-occurring addictive behaviours, and technology usage are positively associated with gaming severity. It is hypothesised that higher levels of distress and greater exposure to adversity will relate to increased GD severity. Thematic analysis is expected to identify themes relating to disruption to daily functioning, loss of control, escapism, and emotion management. Together, these findings aim to clarify the clinical profile and lived impact of GD, thereby informing assessment and treatment approaches.

Keywords: Gaming Disorder, clinical sample, mixed-methods

P–32

Co-occurring mental health and substance use problems with gaming disorder: Findings from The International Gaming Study

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Background: Gaming Disorder (GD) may co-occur with mental health problems and substance use, but evidence remain limited. We examined the association between GD risk and mental health, and substance use indicators in a multi-country sample of gamers. *Methods:* Data were from the International Gaming Study 2024, a cross-sectional online survey across Australia, China, Indonesia, Netherlands, USA of N=1524 adults (48.6% women; mean age 34.8 years) who played video games. Gaming disorder was measured using the GADIT scale (16.3% scored >=5, classified as higher risk). Mental health indicators included depression (PHQ-2), anxiety (GAD-2), and ADHD (ASRS-5). Substance use indicators included daily or near daily use of alcohol, cannabis, prescription stimulants, other stimulants, benzodiazepines, caffeine and nicotine products. *Results:* Compared with the no/low-risk GD group, those in the higher-risk GD group had significantly higher odds of depression (OR=4.44, 95%CI [3.35-5.89]), anxiety (OR=3.33 [2.51-4.40]), and ADHD (OR=6.58 [4.89-8.87]). The higher-risk GD group had increased odds of substance use for alcohol (OR=3.19 [2.41-4.22]), nicotine products (OR=3.25 [2.44-4.31]), cannabis (OR=4.47 [3.29-6.07]), benzodiazepines (OR=9.80 [6.99-13.74]), caffeine (OR=2.47 [1.83-3.34]), prescription stimulants (OR=6.55 [4.83-8.89]), and other stimulants (OR=7.64 [5.52-10.59]). *Conclusions:* In this multi-country sample of video gamers, individuals with higher GD risk had substantially higher odds of co-occurring mental health problems and substance use. These findings support routine screening for mental health and substance use among individuals at risk of GD and highlight the need for integrated prevention and intervention strategies addressing multiple risk behaviours.

Keywords: gaming disorder, mental health, substance use

P–33

Beyond total gaming time: Evaluating the ‘Red Box, Green Box’ method from the International Gaming Study

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Background: Total gaming time does not distinguish between gaming that is recreational and gaming that disrupts responsibilities. Using two gaming time values based on function known as the ‘Red Box, Green Box’ method may be a better indicator of gaming disorder (GD) risk. Red Box hours are time spent gaming instead of fulfilling responsibilities and Green Box hours is time spent gaming during free or leisure time. However, the ‘Red Box, Green Box’ method has not been evaluated with the Gaming Disorder Identification Test (GADIT). We examined the ‘Red Box, Green Box’ method for screening gaming disorder risk according to the GADIT scale. *Methods:* Data were from the International Gaming Study 2024, a cross-sectional online survey across Australia, China, Indonesia, Netherlands, USA of N=1524 adults (48.6% women; mean age 34.8 years) who played video games. Gaming disorder was measured using the GADIT scale (16.3% scored >=5, screened high risk GD). Gaming time was measured using conventional weekly total hours, Red Box hours and Green Box hours. Receiver operating characteristic (ROC) analyses were conducted to compare screening performance. *Results:* The analysis included 1481 from the total sample that answered the total weekly hours, Red Box and Green Box hours questions. People with high GD risk reported significantly higher Red Box hours (Mean=13.64, SD=16.49) than those with low GD risk (Mean=6.10, SD=11.46, p<.001). Red Box hours demonstrated superior discriminant ability for GD risk (AUC=0.72, 95% CI [0.69-0.76]) compared to both Green Box hours (AUC=0.57 [0.53-0.61]) and weekly total hours (AUC=0.59 [0.54-0.63]). *Conclusion:* The Red Box hours measure demonstrated a moderate discriminant ability for identifying individuals at high risk of GD and outperformed both total gaming time and Green Box hours. These findings suggest that incorporating functional context into gaming behaviour research can be a useful tool, particularly screening for GD risk.

Keywords: gaming disorder, gaming time, red box green box

P–34

The role of gambling-like video game features, offline leisure and help seeking behaviour in problematic gaming among Flemish adolescents: A three-wave annual longitudinal design

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Background: Problematic gaming (PG) is increasingly linked to gambling-like features (Hing et al., 2023). While cross-sectional work robustly associates these features with PG, longitudinal evidence remains scarce, limiting our understanding of symptom escalation (Montiel et al., 2022). Furthermore, the assumed protective role of offline leisure and the clinical pathways to support are poorly understood. Drawing on Zinberg's (1984) agent–set–setting framework, we situate gambling-like game features as the agent, offline leisure resources as the setting, and adjust for set using available person-level characteristics (age, gender), while examining symptom trajectories and help-seeking over time. *Method:* We followed a Flemish (northern part of Belgium) school cohort (N=1863; M age=14.0) over three annual waves using self-report survey questionnaires. Using the GADIS-A (Paschke et al., 2020), we performed cross-lagged regressions to predict PG changes. Predictors included baseline engagement with gambling-like features, microtransactions, offline hobby breadth, and perceived extracurricular competence, while controlling for baseline PG and demographics. *Results:* PG prevalence was low and transient (1.5%–1.9%). Addressing the longitudinal gap, we found that baseline engagement with gambling-like features significantly predicted symptom escalation after one year (β=.10, $p < .05$), even when controlling for general microtransaction spending. Strikingly, neither offline hobby participation nor perceived competence provided protective effects against symptom growth. Regarding help-seeking, a profound "recognition-action gap" emerged: 53.4% of adolescents knew help-seeking pathways, yet only 3.5% sought help. Crucially, baseline symptom severity failed to prospectively predict help-seeking behavior. *Conclusions:* Our findings provide much-needed longitudinal evidence that gambling-adjacent design acts as a primary driver of short-term harm, while challenging the "displacement hypothesis" that simple hobby-promotion is protective. Prevention should pivot toward ecosystem-level design safeguards and proactive, adult-mediated screening to bridge the help-seeking gap.

Keywords: problematic gaming, gambling-like features, adolescence, help-seeking gap, offline hobbies

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P–35

Effectiveness of a "Change Diary" intervention in adolescents seeking treatment for gaming/smart phone use: A multicenter retrospective cohort study

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Background: This multicenter study aims to evaluate the added efficacy of the structured "Change Diary" as an adjunct tool within standardized Cognitive Behavioral Therapy (CBT) protocols on the addiction severity of adolescents (aged 15–17) seeking support for problematic gaming and smart phone use. *Method:* The research was conducted as a multicenter, quasi-experimental, retrospective cohort study with a non-randomized comparison group design. The study included 236 clients who applied for support and were monitored for 3 months at Green Crescent Counseling Centers (YEDAM), where all psychologists are trained in CBT protocols. All psychologists also received specific training for the uniform application of the "Change Diary." Participants were divided into two groups: the intervention group (n = 56), who received 6 sessions integrating the "Change Diary" into their CBT, and the comparison group (n = 165), who received standard CBT without the diary. Data was extracted from the YEDAM digital recording system. Addiction severity was measured using the Addiction Profile Index – Internet Form (BAPINT) at baseline and at multiple follow-up intervals. *Results:* Intra-group Improvement: Significant clinical improvement was observed in both groups at the end of the 3-month period. BAPINT scores decreased by -1,53±1,90 in the standard care group ($p < 0,01$) and by -1,75 ± 2,32 in the Change Diary group ($p < 0,01$). *Inter-group Comparison:* The group using the Change Diary demonstrated statistically significantly lower BAPINT scores at the 1st, 2nd, 3rd, and 4th follow-up points and at the 3-month final evaluation compared to those receiving standard support without the diary ($p < 0,05$). *Conclusions:* Findings from data, multicenter evaluation indicate that while specialized CBT-based counseling at YEDAM effectively reduces addiction scores, the structured integration of the "Change Diary" as a self-monitoring tool provides a significant incremental benefit to treatment outcomes. This suggests that adjunctive structured self-monitoring tools are valuable components in the clinical management of adolescent internet use disorder.

Keywords: adolescence, Turkish green crescent society, change diary, clinical intervention, gaming, smart phone

P–36

Time perception in different contexts among healthy and problematic mobile gamers

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Background: Problematic use of mobile gaming has been linked to time distortions and may lead to tolerance and loss of control. However, it is uncertain to what extent time perception impairment and the relationship with multitasking differ when individuals with problematic mobile gaming (PMG) are compared with non-problematic mobile gamers (nPMG). *Objective:* This study aimed to examine differences in time perception between a control group and a group with problematic gaming across different contexts and interval lengths, and to investigate the effects of gaming conditions on time perception. *Methods:* A total of 124 participants were recruited and divided into the nPMG and the PMG group using the Problematic Mobile Gaming Questionnaire (PMGQ). All participants were required to complete a standardized, computerized time-perception task. These stages were designed in the experimental procedure as follows: 1) an initial time perception task under a non-gaming context (10 s and 180 s), followed by a 600-second mobile gaming task serving as the gaming-context manipulation and the first long-interval estimation, and finally a second time perception task and long-interval estimation under a non-gaming context. Time perception was calculated as (subjective time − objective time) / objective time. Mixed-design repeated-measures ANOVAs were conducted to test the main and interaction effects of group, game phase, and to further compare time estimations between gaming and non-gaming contexts. *Results:* Overall, the PMG showed numerically lower (i.e., more negative, indicating greater underestimation) time-perception ratios than the nPMG across all conditions (10s: −.044 vs .076; 180s: −.071 vs −.033; long interval: −.085 vs .016; gaming 600s: .043 vs .101) , although the overall group main effect was not significant [$F(1,122) = 3.665$, $p = .058$]. In addition, the results showed a significant main effect of context (gaming 600s vs non-gaming overall) [$F(1,122) = 4.013$, $p = .047$], while the group × context interaction was non-significant [($F(1,122) = 2.007$, $p = .159$)]. In addition, considering about the non-gaming context, a mixed-design repeated-measures ANOVA showed a significant main effect of group [$F(1,122) = 5.518$, $p = .020$], but not of time interval [$F(1,122) = 0.923$, $p = .339$] nor the group × interval interaction [$F(1,122) = 0.036$, $p = .850$]. Overall, a significant context effect was observed. *Conclusion:* In summary, the findings suggest that measuring time perception may help elucidate how gamers become dependent and even addicted to gaming. In addition, the underestimation of long durations observed among problematic gamers may reflect differences in

attentional resource allocation and the subjective experience of time passing quickly, providing important clues for understanding difficulties in time control among individuals with behavioral addictions.

Keywords: problematic mobile gaming, time perception, gaming conditions

P–37

Differential predictors of problematic gaming and problematic social media use in a nationally representative sample

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Although problematic gaming (PG) and problematic social media use (PSMU) share similar behavioral and psychological characteristics, research suggests they may have distinct risk profiles. Understanding these differences can inform targeted prevention and intervention strategies. This study compared socio-demographic variables, weekday and weekend hours of gaming or social media use, and symptoms of anxiety and depression as predictors of PG or PSMU. The research was conducted on a nationally representative sample of Croatian residents aged 15 to 64 (N=4,988). Separate analyses were conducted on subsamples of participants who reported playing videogames and on those who reported using social media in the past month. Data were collected through face-to-face surveys in private households. Gaming Disorder Test, Social Media Disorder Test, and Patient Health Questionnaire (PHQ-4) were used. Hierarchical linear regressions conducted separately for PG and PSMU showed that PG was significantly predicted by male sex, younger age, higher weekday and weekend gaming hours, and higher depressive symptoms, while anxiety was not a significant predictor. In contrast, PSMU was predicted by younger age, female sex, higher weekday and weekend social media use, as well as both depression and anxiety. Weekend use was the strongest predictor for both behaviors. Although both PG and PSMU are associated with usage intensity and depressive symptoms, they exhibit differential patterns regarding sex and anxiety. These findings suggest that prevention strategies should consider the unique psychological profiles associated with each behavior.

Keywords: problematic gaming, problematic social media use, anxiety, depression, general population

P–38

Neurocognitive functioning in individuals with problematic internet use

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Problematic Internet Use (PIU) comprises a range of maladaptive online behaviors, including gaming, gambling, social networking, and streaming, which frequently co-occur in daily life. PIU is characterized by tolerance development, withdrawal symptoms, loss of control, and continued use despite negative consequences. At the neurocognitive level, these maladaptive behavioral features are accompanied by dysfunctions in cognitive control, including inhibition and error processing, as well as in reward processing mechanisms. To date, these mechanisms have rarely been examined within an integrated framework. Accordingly, the present study investigates how neurocognitive mechanisms varies with the severity of internet use and examines the association to internalizing and externalizing symptom dimensions. Participants with non-problematic, subclinical, and problematic internet use completed self-report measures of internalizing (e.g., anxiety, depression, worry) and externalizing (e.g., impulsivity, sensation seeking) symptoms as well as experimental tasks, including a Flanker task assessing error processing (ERN), a Stop-Signal task assessing inhibitory control (N2, P3), and a Doors task assessing feedback-based reward processing (FRN). This allows for the examination of both categorical group differences and dimensional associations between PIU, neurocognitive processes and clinical symptom dimensions.

Keywords: problematic internet use, error processing, inhibition, reward processing

P–39

Adult age differences in problematic internet use: Profiles based on anxiety, depression, and life quality

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Background. Problematic Internet use (PIU) has been defined as an umbrella concept encompassing various problematic online activities, such as excessive gaming, gambling, online shopping, pornography viewing, social networking, and other online behaviors (Burkauskas et al., 2020; Fineberg et al., 2018). Internet use is generally considered problematic when excessive engagement leads to psychological, social, educational, and/or occupational difficulties (Brand et al., 2025). Age may influence vulnerability to PIU as well as its associated psychopathological outcomes, yet comparative evidence across the lifespan remains limited (Gecaite-Stonciene et al., 2021). The aim of this study was to examine PIU profiles based on anxiety, depression, and life quality across different age groups. *Methods.* In total, 800 adults participated in a cross-sectional online survey and completed the 9-item Problematic Internet Use Questionnaire, the Patient Health Questionnaire, the Generalized Anxiety Disorder Scale, the World Health Organization-Five Well-Being Index. Participants were categorized into three age groups: young adults (18–35 years), middle-aged adults (36–64 years), and older adults (≥65 years). *Results.* Young adults showed significantly higher levels of PIU ($\eta^2 = 0.073$, $p < 0.001$), depression ($\eta^2 = 0.093$, $p < 0.001$), and anxiety ($\eta^2 = 0.091$, $p < 0.001$), and lower psychological well-being ($\eta^2 = 0.032$, $p < 0.001$) compared to the two older age groups. Significant positive correlations were also observed between PIU and distress symptoms, with the strongest associations observed among young adults (depression $\rho = 0.487$, $p<0.001$; anxiety $\rho = 0.457$, $p < 0.001$), followed by middle-aged adults (depression $\rho = 0.449$, $p<0.001$; anxiety $\rho = 0.374$, $p < 0.001$). *Conclusions.* Young adults exhibited the highest risk of PIU and the greatest burden of anxiety, depression, and reduced psy-

chological well-being. Associations between PIU and distress symptoms weaken with age. These findings highlight age-related differences and vulnerability to PIU. Prevention and intervention strategies for PIU management should be age-tailored.

Keywords: Problematic internet use, depression, anxiety

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P–40

Parental psychoeducation for managing problematic internet use in adolescents: Clinical experience from PRO-AMITI - IPq-HCFMUSP

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Background: Problematic Internet Use (PIU) among adolescents is associated with impairments in cognitive and socioemotional development. In response to this challenge, the parental care service of PRO-AMITI/IPq-HCFMUSP has structured an evidence-based intervention focused on parental empowerment for mediating technological use and reorganizing family dynamics. Parental psychoeducation is a central component of this proposal, grounded in neuropsychological principles including executive functions, self-regulation, and environmental management. *Method:* This study describes the structure and functioning of the psychoeducation and support service for parents of adolescents with excessive use of digital games and social media. The intervention is based on theoretical models that position caregivers as central to modulating impulsive behaviors, considering the impact of the family environment. The program comprises 15 sessions organized in thematic modules addressing impulsivity, inhibition, routine, attachment, and digital literacy. Participants are guided to reflect on communication patterns, rules, boundaries, and strategies to promote autonomy in adolescents. *Results:* Clinical experience accumulated by PRO-AMITI demonstrates the effectiveness of parental psychoeducation as an intervention strategy in PIU contexts. The intervention program contributes to reducing risks associated with dysfunctional technology use and promotes significant changes in the family environment. Participants report increased confidence in managing digital conflicts and strengthened family relationships. *Conclusions:* Parental psychoeducation is an evidence-based and clinically effective approach for addressing adolescent PIU. The PRO-AMITI program strengthens the support network for adolescents and generates positive impacts on family dynamics and adolescent mental health. Ongoing clinical experience supports the need for scaling and disseminating parental intervention programs in digital health contexts.

Keywords: psychoeducation, problematic internet use, family intervention

P–41

Structured group intervention for problematic internet use behaviors in a public academic setting: Integrated outpatient program for impulse disorders (Pro Amiti IPqHCFMUSP)

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Introduction: Problematic internet use behaviors represent an emerging public mental health concern, associated with functional impairment, emotional dysregulation, and psychosocial difficulties. These behaviors frequently co-occur with attention-deficit/hyperactivity disorder (ADHD), mood and anxiety disorders, and personality traits related to impulsivity and compulsivity. Despite increasing clinical recognition, treatment engagement and long-term adherence remain significant challenges. *Methods:* This poster presents the structure, clinical rationale, and implementation of the Pro-Amiti Adult Program for Problematic Internet Use, developed and implemented since 2017 at the Institute of Psychiatry of the Faculty of Medicine, University of São Paulo (IPq–FMUSP), a public academic and clinical institution. The program targets maladaptive and addictive patterns related to problematic use of digital technologies, including online platforms, social media, and gaming-related behaviors, through a structured group-based outpatient intervention. The intervention comprises 15 weekly group sessions of approximately 90 minutes, facilitated by trained psychologists. Core components include psychoeducation on mechanisms of problematic internet use, motivational interviewing strategies, behavioral self-monitoring of online activities, emotional regulation skills, mindfulness-based practices, self-compassion exercises, values clarification, and relapse prevention planning. Standardized psychometric instruments are administered at multiple assessment points to monitor symptom severity, functional impairment, and therapeutic progress. *Results:* Group processes are central to the intervention, fostering normalization of experiences, reduction of social isolation, and development of adaptive coping strategies. Behavioral change is supported through structured homework, planned digital detox experiences, and individualized relapse prevention plans, with follow-up assessments to evaluate maintenance of treatment gains. *Conclusion:* Pro-Amiti represents a scalable, publicly accessible, and clinically grounded intervention model for problematic internet use behaviors within an academic mental health service. The program contributes to the development of structured, evidence-informed treatment.

Keywords: problematic internet use, behavioral addictions, group intervention

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P–42

Perceived parenting styles and internet addiction: Exploring the mediating role of cognitive flexibility

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Internet addiction among young adults is widely being acknowledged as a major behavioral health concern, which is characterized by impaired regulatory control, and functional impairment across social, academic and emotional domains. With digital engagement being a central anchor in developmental contexts, identifying the psychosocial mechanisms that contribute to problematic internet use among youth has gained increasing research relevance (Griffiths, 2005; Brand et al., 2019). Amid multiple contextual determinants including environmental factors, family dynamics etc, particularly perceived parenting styles have consistent implication as a key contributor in the young adult behavioral and emotional outcomes. Authoritative parenting style or the parenting style consisting of warmth and responsiveness function as a protective factor while Authoritarian parenting characterized by overcontrol and disengagement may heighten vulnerability to maladaptive coping behaviors such as internet usage in excess (Baumrind, 1967, 1991; Maccoby & Martin, 1983).

Despite increasing research evidence shedding light on the linkage between parenting style and internet addiction mediating psychological mechanisms require further empirical exploration. Cognitive flexibility refers to an individual's ability to update strategies, shift perspectives and respond with adaptive behavioral outcomes may represent a critical intermediary variable. Young adults raised in autonomy promoting and supportive environment possess better executive functions which includes enhanced Cognitive Flexibility. On the other hand, young adults raised in authoritarian parental environments may limit the cognitive flexibility of the individual (Diamond, 2013; Miyake et al., 2000). The study adopts a cross-sectional quantitative research design to explore this intermediary process. The sample consist of young adults aged between 18-25 years old for the study drawn from varying socio-economic and educational settings. To assess Perceived parenting style, internet addiction and cognitive flexibility standardized psychometric instruments are used. To characterize the sample and study variables descriptive statistics was used while Pearson correlation was used to examine bivariate associations. Mediation Analysis was done using regression-based mediation framework. Moderate levels of internet addiction were revealed in the sample through Descriptive statistics with variability across parenting dimensions. Correlational analysis demonstrated that Authoritarian parenting led to higher levels of internet addiction and lower levels of Cognitive Flexibility, and authoritative parenting led to lower levels of internet addiction and higher levels of Cognitive Flexibility. The partial mediation suggested that parenting styles had both direct and indirect effects on internet addiction levels. The study offers string evidence suggesting cognitive flexibility to be a pivotal intermediary connecting parenting style and internet addiction severity among young adults. The results also imply interventions aimed at improving cognitive flexibility and encouraging adaptive parenting can decrease the risk of internet addition.

Keywords: perceived parenting styles, internet addiction, cognitive flexibility, young adulthood, mediation

P–43

Association between behavioural addictions and headache: A systematic review

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Background: Previous studies have demonstrated associations between behavioural addictions and somatic problems, including various types of headaches. However, findings in this area are inconsistent and do not allow for clear conclusions. Consequently, there is a need to systematise the existing knowledge and assess the strength of the associations between behavioural addictions and headaches. Accordingly, the present study aimed to collect and organise previous research on behavioural addictions in relation to the type, frequency, and severity of headaches, as well as headache-related disability. *Method:* The databases PubMed, PsycInfo, Scopus, and Web of Science were searched using predefined keywords to identify relevant studies published in peer-reviewed journals. The database search focused on the following behavioural addictions: internet addiction, gaming disorder, gambling disorder, social media addiction, work addiction, and sex addiction. Data selection and extraction were conducted in accordance with PRISMA guidelines. *Results:* The findings indicate mixed results regarding the relationship between behavioural addiction and headaches. Some studies show a positive correlation between the intensity of headaches and the severity of addiction symptoms associated with gambling disorder, internet addiction, smartphone addiction, social media addiction, work addiction, and sex addiction. Approximately half of individuals with a gambling disorder experience chronic headaches. However, there are also studies suggesting that behavioural addictions are associated with lower headache severity. *Conclusions:* The results point to interesting and inconclusive relationships between behavioural addictions and headaches. Future research should pay close attention to different types of headaches, ensure reliable headache diagnosis, and examine the associations between the severity of addiction, coping strategies, and headaches. In interpreting research findings, it is very important to distinguish between tension-type headaches, migraines, and cluster headaches, as each of these types of pain is associated with different underlying mechanisms and triggers. Further studies should place greater emphasis on the mechanisms linking behavioural addictions and headaches. Randomised controlled trials examining the impact of headaches on addiction severity and coping strategies would also be highly valuable. *Funding:* The study was supported by the grant 2023/49/B/HS6/03227, Opus 25 from the National Science Centre (Poland).

Keywords: behavioural addictions, internet addiction, headache, migraine

P–44

ChatCBT? Delivering an evidence-based CBT intervention for problematic internet use via ChatGPT

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Background: Problematic Internet Use (PIU) is a growing concern among young people, affecting daily functioning, social relationships, and well-being. Concurrently, digital innovations such as generative AI tools like ChatGPT are increasingly integrated into everyday life, enabling interventions that combine the scalability and cost-efficiency of online programs with the interactivity of face-to-face approaches. We therefore developed PROTECT-Tai, a ChatGPT adaptation of the evidence-based CBT program PROTECT, and evaluated its feasibility and preliminary efficacy in reducing PIU among youth. *Method:* Seventy-seven university students with elevated PIU (Compulsive Internet Use Scale (CIUS) sum score ≥ 24) were randomly assigned to the intervention group (n = 39) or an assessment-only control group (n = 38). Participants in the intervention group completed three structured AI-guided chat coaching sessions over three weeks. Before each session, ChatGPT-4o (OpenAI, 2025) was calibrated using predefined prompts specifying session structure, therapeutic procedures, and coaching behavior. Outcomes were assessed at baseline, post-intervention, and 12-week follow-up. *Results:* Both groups showed decreased CIUS scores post-intervention, with larger reductions in the intervention group that persisted at 12-week follow-up. Mixed models for repeated measures indicated a post-intervention trend for a group × time interaction, not observed at follow-up. Effect size estimates suggested a small benefit of the intervention over the control group. *Conclusion:* This pilot study provides preliminary evidence that PROTECT-Tai, a ChatGPT adaptation of the evidence-based CBT program PROTECT, is feasible and may lead to short-term reductions in PIU among young people. Larger trials are required to confirm efficacy, investigate underlying mechanisms, and examine long-term outcomes.

Keywords: problematic internet use, AI-based intervention, young people

P–45

When machines become attachment figures: Development of a bilingual (Turkish–English) scale of emotional attachment and dependency in conversational AI use

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Background and aims: Generative AI and conversational agents are increasingly experienced not only as productivity tools but also as emotionally responsive companions. Users often report perceived closeness, intimacy, and relationship meaning in everyday interactions with AI. Accumulating evidence suggests that anthropomorphism and emotional bonding may heighten vulnerability to problematic use patterns, including compulsive engagement and difficulty disengaging. Despite this, behavioral addiction research lacks validated instruments that jointly assess relational attachment dynamics and dependency-like patterns specific to AI use. This study aims to develop and validate the Emotional Attachment and AI Dependency Scale (EAADS), a bilingual (Turkish–English) self-report measure designed to operationalize attachment-related processes alongside dependency-like engagement within a single psychometric framework. *Methods:* The study follows a three-phase scale development protocol. (1) A comprehensive item pool was generated by integrating human–AI relationship scholarship with behavioral addiction models, covering emotional closeness, idealization, perceived reciprocity, separation difficulty, and compulsive engagement. (2) Content validity is assessed through expert review of item relevance and clarity, complemented by cognitive interviews to evaluate comprehension and cultural appropriateness, followed by item refinement and pilot testing. (3) In the psychometric validation phase, the target population is university students in Türkiye. Factor structure will be examined using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Internal consistency will be evaluated using Cronbach's alpha and McDonald's omega coefficients. Construct validity will be tested via associations with attachment anxiety, anthropomorphic tendencies, loneliness, and problematic internet use. *Results/Expected outcomes:* Analyses are expected to support a robust factor structure reflecting core dimensions of emotional attachment and dependency-like use, such as emotional closeness, idealization, perceived reciprocity, separation difficulty, and compulsive engagement. The EAADS is expected to demonstrate strong reliability and validity evidence and to function as a usable bilingual instrument. *Conclusions:* The EAADS aims to provide a culturally grounded and psychometrically sound tool to quantify

the intersection of emotional attachment to AI and dependency-like engagement patterns. By enabling systematic assessment of emerging relational and behavioral risks in conversational AI use, the scale can support empirical research and prevention-oriented efforts.

Keywords: emotional attachment, AI dependency, conversational AI, anthropomorphism, scale development

P–46

Changing connections between problematic internet use, social media use, and cyberbullying: A symptom-level network study of Hungarian adults

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Background: Several studies suggest that problematic engagement with online activities and involvement in cyberbullying co-occur, but it is unclear whether the way these phenomena are interrelated has changed in recent years. This study compared the pattern of associations between indicators of problematic internet use (PIU) and problematic social media use (PSMU) and self-reported cyberbullying victimization and perpetration four years apart, before and after the COVID-19 pandemic. Using a symptom-level network approach, we modelled how individual indicators of problematic use and bullying involvement were connected within each sample. *Method:* Data were drawn from two cross-sectional, nationally representative samples of the Hungarian general population aged 18–64 years. Two cross-sectional samples were collected four years apart with computer-assisted personal interviewing (CAPI): one before the COVID-19 outbreak (2019: N = 1,691; 849 males) and one after (2023: N = 2,000; 1,010 males). *Results and conclusion:* The prevalence of cyberbullying and victimization increased in the Hungarian population during this time. At both time points, bullying victimization and perpetration were closely intertwined with PIU and PSMU indicators. In the earlier assessment, bullying involvement appeared to be more strongly linked to experiences reflecting acute distress and immediate negative consequences of online use. In the later assessment, the pattern shifted toward stronger connections with indicators of ongoing preoccupation with online activities, difficulties in limiting use, and tensions around online behavior in everyday life. Overall, the findings suggest that while bullying involvement remains embedded in problematic online behavior, the specific aspects of problematic use most closely tied to bullying may have changed over time, underscoring the need to consider the evolving digital context when examining these links.

Keywords: cyberbullying

P–47

Perceptual curiosity and decision-making in social media contexts: A behavioral study using Instagram and TikTok content

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Social media is now central to daily life, but concerns about its addictive nature make understanding what drives engagement increasingly important. One key motivator for engaging with digital content is curiosity, which drives people to seek new information and rewarding experiences. However, how curiosity toward social media content interacts with other motivational factors, such as external reinforcers and punishments, remains poorly understood. The present study investigated how social media video content, specifically from Instagram and TikTok, influences perceptual curiosity and how curiosity competes with other motivational factors when rewarding information is expected. Forty participants completed a decision-making task in which they viewed 50 short video previews, rated their curiosity, and decided whether to access the full video at a cost or skip it. Depending on condition, the cost involved either spending limited tokens or waiting an unknown delay. Participants were randomly assigned to either a token condition (n = 20; 8 females; mean age = 26.1 ± 4.26 years) or a waiting-time condition (n = 20; 9 females; mean age = 25.5 ± 4.01 years). They also completed self-report measures of curiosity, social media use, emotional well-being, reward and punishment sensitivity, and impulsivity. Results showed that higher curiosity increased the likelihood of investing resources to access content, confirming that curiosity strongly motivates engagement. Sensitivity to punishment reduced this effect, suggesting that fear of negative outcomes can partially override curiosity. Other factors, including general social media use, emotional well-being, reward sensitivity, and impulsivity, were not significantly linked to resource spending. Overall, these findings highlight the complex role of curiosity in social media use and its relevance in shaping digital behavior. Moreover, individual differences in how curiosity is experienced and regulated may help to partially explain vulnerability to developing compulsive or potentially addictive patterns of social media use.

Keywords: curiosity, social media use, decision making, motivational factors, social media addiction

P–48

On loneliness and addictive social media use considering also specific platforms

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Loneliness has repeatedly been linked to maladaptive patterns of social media use, yet evidence on how these associations manifest across different indicators of addictive behavior and platform-specific usage must be better understood. The present self-report study examined the relationships between loneliness and (addictive) social media use in a non-clinical sample of N = 332 participants (148 males, 184 females). Results indicated a positive association between loneliness and addictive social media use tendencies ($r = .225$, $p < .001$), which is consistent with a previous meta-analytic finding (Huang, 2020). Extending prior research, the present study further examined platform-specific associations by analyzing average daily usage durations across several social media platforms by also considering male and female subgroups. Overall, the findings suggest that loneliness is associated with addictive social media use in general, while also highlighting that platform-specific usage patterns provide important complementary insights into this relationship.

Keywords: social media addiction, loneliness

P–49

The mediating role of emotion regulation difficulties in the relationship between depression, anxiety, and problematic social media use among university students

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Background: This study aims to test, using structural equation modeling, the extent to which depression and anxiety predict PSMU through emotion regulation difficulties. *Method:* Data were collected in October 2023 at the University of Toledo through the PsychData web survey platform. The study included 339 university students (223 male, 115 female). Bergen Social Media Addiction Scale (BSNAS), The Depression, Anxiety and Stress Scale (DASS-21) and Difficulties in Emotion Regulation Scale (DERS) were used for data collection. The awareness subscale of DERS was excluded from the model due to low factor loadings and correlations, and the remaining five subscale scores were used as observed indicators. The mediation model was tested in Mplus 8.3 using the WLSMV estimation method, controlling gender as a covariate. *Results:* Structural equation modeling showed acceptable fit values (CFI = .953, TLI = .948, RMSEA = .050 [.043–.056], SRMR = .084). Depression was found to be a robust predictor of emotion regulation difficulties ($\beta = .722$, $p < .001$). The predictive effect of anxiety was also found to be significant but weak ($\beta = .151$, $p = .040$). Emotion regulation difficulties significantly predicted PSMU ($\beta = .516$, $p < .001$). Mediation analyses supported a significant indirect effect of depression on PSMU through DERS ($\beta = .373$, $p < .001$). The indirect effect of anxiety was found to be slightly significant ($\beta = .078$, $p = .049$). Gender effect was not significant ($p > .05$). Depression and anxiety explained 69.5% of the DERS variance and the model explained 26.7% of the PSMU variance. *Conclusion:* The findings suggest that emotion regulation difficulties are an important mediating variable in the relationship between depression and anxiety and PSMU. In particular, the robust predictive effect of depression on DERS suggests that depressive symptoms significantly weaken emotion regulation skills, which in turn leads to PSMU.

Keywords: depression, anxiety, problematic social media use, emotion regulation

P–50

Autonomy, competence, and relatedness need satisfaction as protective factors against adolescent social media addiction

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The pervasive use of social media among adolescents has raised significant public health concerns regarding addiction. Grounded in Self-Determination Theory, the satisfaction of three basic psychological needs, i.e., autonomy, competence, and relatedness, is fundamental to healthy development and may serve as key protective factors against maladaptive behaviors. This study aimed to investigate the protective roles of adolescents' satisfaction of autonomy, competence, and relatedness needs against social media addiction. A cross-sectional survey was administered to 330 adolescents (52.40% male; Mage = 12.51, SD = 1.59, age ranged from 10 to 16 years). Hierarchical multiple regression analyses were performed after controlling for gender and age. Bivariate correlations revealed that all the three needs satisfaction were significantly and negatively correlated with social media addiction ($r = -0.16$ to -0.21, $p < 0.001$-0.01). When entered separately into regression models after controlling for demographics, all the three predictors were significantly and negatively associated with social media addiction ($\beta = -0.14$ to -0.19, $p < 0.001$-0.05). However, when all three need satisfactions were entered simultaneously into the regression model, only autonomy need satisfaction remained a significant negative predictor ($\beta = -0.13$, $p < 0.05$). The findings support Self-Determination Theory by indicating that the satisfaction of basic psychological needs, particularly autonomy, is associated with lower levels of social media addiction. Interventions aimed at reducing adolescent social media addiction should prioritize fostering environments and skills that enhance youths' sense of autonomy.

Keywords: social media addiction, self-determination theory, autonomy

P–51

East Asian sexually-oriented fandom addiction among Russian females

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Background and aims: The Asian culture of BL (boys' love) fans has a large female base all over the world (Demetrovics, McLelland, Liu, Prasannam), including Russia. The previously Japanese genre appears in anime, manga, video games, textual and visual pieces created by fans. The fandom described refers to a subculture as a community united by its norms and values, but also thereby isolated from society as a whole (Riesman et al.). Its members belong to a minority who share similar values and interests. Thus, we define the membership of a given category of individuals in a single subculture based on the presence of common interests specific to the majority of members; the tendency to unite in communities to distribute, discuss, and recreate content related to their area of interest; the "isolation" of this group, revealing the subject of their interest only among like-minded individuals. The pilot study shows markers indicating both fan members` addictive and coping behavior. *Method:* The sample is 512 members of online communities dedicated to BL topics who answered 13 closed-type online questions (Liu, 2020) for 10-12 minutes. 98% of respondents were women, 2% men. Their average age is 27 yrs old (SD=2.8). *Results:* the majority of respondents (90.2%) have been in the fandom for more than 3 years, while every year expanding the list of forms of consumed BL content and increasing the time spent on consumption. More than half of women indicated that the main reason for their interest in BL was demonstrated "pure love", which provides escaping from harsh reality and manifested kind of legalization of their sexual desires. Voyeuristic enjoyment of sex scenes is among the chief motives for BL consumption, letting indirectly enjoy sexual contact without unpleasant consequences and experiences. Distancing from the unsatisfactory reality based on traditional gender roles and an associated social expectation was also of great importance for female fans. They stressed that BL characters had equal rights in relationships and did not demand that each other fulfill a specific role. Other Motives mentioned were: satisfying the internal need for monogamy, partner fidelity, and "eternal" love. More than 70% of users visit thematic groups at least once an hour to check for updates; half of women are ready to postpone sleep waiting for the release of the translation of new BL series to see it sooner. Limitations: qualitative analyses must have been more intensively used to investigate the hidden respondents` feelings. *Conclusion:* following BL fan culture is a coping – strategy (distraction), getting rid of an oppressive gender role, insecurity of romantic and sexual relationships; and at the same time it may be and is an addiction. Part of fandom shows signs of behavioral addiction through craving for frequent consumption of BL content, constant checking of information, withdrawal syndrome.

Keywords: Eastern culture fans, coping, distraction, addiction

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P–52

The relationship between work addiction, problematic social media use, and personality organisation among young adults

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Background: Work addiction (WA) and problematic social media use (PSMU) are widely studied phenomena that share several core features. Technological advances may amplify the relationship between them particularly in organisational environments where constant availability is expected. However, the relationship between them, especially in the context of personality organisation (PO), has not yet been thoroughly examined. Investigating this relationship may provide valuable insights into the nature of informal behavioral addictions within the broader spectrum of mental disorders. Therefore, our aim was to examine the relationship between WA, PSMU and PO. *Method:* The study was conducted on a representative sample of young adults (aged 18-34) residing in Budapest, questioned using a mixed-method interviewing technique. The final sample size was N = 3,026 (50.7% females, M_age = 28 years). Measures included the Bergen Work Addiction Scale, the Bergen Social Media Addiction Scale, and the short version of the Inventory of Personality Organization. Linear regression analysis and mediation analyses were conducted. *Results:* Linear regression analysis showed that WA significantly predicted PSMU (B = 0.24), and the model demonstrated good fit. In the mediation model, PO significantly predicted WA (B = 0.44), which in turn significantly predicted PSMU (B = 0.24). The full model explained 28% of the variance in PSMU (R^2 = 0.28). The indirect effect was significant (B = 0.10), and the direct effect remained significant (B = 0.37), indicating partial mediation. *Conclusion:* Results showed significant relationships between PO, WA and PSMU, with WA mediating the PO-PSMU relationship. This suggests similar underlying mechanisms between these behavioural addictions and that PO predisposing individuals to WA may also contribute to PSMU. Results indicate that personality deficits may underlie both conditions. Further research should explore additional associations and establish causality. These findings underscore the importance of early personality assessment and targeted interventions to prevent problematic digital and work-related behaviours.

Keywords: work addiction, problematic social media use, personality organization

P–53

Early childhood excessive screen time and later mental health outcomes: Evidence from a nationwide longitudinal cohort

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Introduction With the rapid proliferation of digital media use among children, concerns have grown regarding the potential harms of excessive exposure during early childhood. This study aimed to investigate the association between excessive screen use and the subsequent risk of mental disorders. *Methods* Using data from the Korean National Health Insurance Service, we identified 935,910 children born between 2013 and 2017. Excessive screen use was defined as more than 2 hours of daily screen time at age 3, assessed through a parent-reported questionnaire. The primary outcome was any physician-diagnosed mental disorder (ICD-10 codes F00–F99), ascertained from insurance claims records. We employed Cox proportional hazards models to estimate hazard ratios (HRs) and 95% confidence intervals (CIs), using the PHREG procedure in SAS 9.4, with adjustment for potential confounders. *Results* Among the 935,910 participants, 300,087 children (32.1%) were classified as excessive- user group at age 3. The incidence rate of mental disorders was higher in the excessive-use group (105.9 per 10,000 person-years) compared with the normal-use group (92.6 per 10,000 person-years). After adjustment for potential confounders, excessive screen use was associated with an elevated risk of developing mental disorders (adjusted HR, 1.11; 95% CI, 1.08–1.13). *Conclusions* Excessive screen use during early childhood was associated with a modest but significant increase in the risk of subsequent mental health problems at the population level. These findings underscore the importance of adhering to recommended screen time guidelines and limiting excessive exposure during early developmental periods. Early mental health monitoring and proactive assessment of children with high screen exposure may be warranted as they enter school age. *Acknowledgement:* This research was supported by a grant of the R&D project, funded by the National Center for Mental Health (grant number: MHER25B01)

Keywords: screen time, mental disorders, longitudinal, children

P–54

Longitudinal patterns of children's digital media use identified by joint latent profile analysis

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Background: Children's screen time has increased substantially over the past decade, with the COVID-19 pandemic serving as a major catalyst for accelerated digital device use. The rapid expansion of digital learning platforms, social connectivity through screens, and entertainment media has fundamentally altered children's daily routines and developmental environments. Understanding heterogeneous developmental trajectories of screen use and their predictors is critical for recognizing at-risk populations and developing targeted interventions. Despite growing concerns about excessive screen exposure and its potential developmental consequences, limited longitudinal research has examined how screen time patterns evolve over extended periods or how different subgroups of children follow distinct trajectories. The identification of such trajectories and their sociodemographic and behavioral predictors can inform more nuanced public health approaches that move beyond universal recommendations toward personalized prevention strategies. *Methods:* We analyzed data from a prospective South Korean cohort comprising 313 school-aged children followed annually over six years (2018–2023). This study period uniquely captured both pre-pandemic baseline patterns and pandemic-era changes in screen use behaviors. Caregivers reported children's weekday and weekend screen time across three primary device types: smartphones, tablets, and personal computers. We employed joint latent class profile analysis (JLCPA) to identify longitudinal screen-time profiles, allowing for the detection of heterogeneous trajectories rather than assuming uniform developmental patterns. Multinomial logistic regression was used to examine predictors of trajectory membership, including child gender, age, parental education levels, household income, and Child Behavior Checklist (CBCL) scores measuring internalizing and externalizing behavioral problems. *Results:* We identified four distinct screen-time trajectories characterized by different baseline levels and rates of change: Low-risk (27.2%), Mid-risk (38.4%), Risk-increasing (15.3%), and High-risk (19.1%). Screen time increased across all devices throughout the study period, with smartphones showing the most pronounced rise, particularly among older children. A notable shift toward higher-risk profiles occurred during and following the COVID-19 period, with many children transitioning to more intensive screen use patterns. Lower maternal education emerged as the strongest predictor of high-risk trajectories (odds ratio up to 6.15), followed by male gender, older age, and elevated CBCL scores. The socioeconomic gradient was particularly striking, suggesting that maternal education may influence parenting practices, digital literacy, or resource availability for alternative activities. *Conclusions:* Children's screen time trajectories are heterogeneous and influenced by developmental, behavioral, and socioeconomic factors. Pandemic-related increases appear to persist beyond the period of acute restrictions, highlighting

the necessity for sustained, family-centered prevention strategies that acknowledge varying family contexts and resources. Maternal education represents a critical leverage point for early intervention and health equity considerations.

Keywords: screen time, latent class analysis children

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P–55

Examining the role of global self-control and its sub-dimensions in protecting against problematic smartphone use among university students

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Problematic smartphone use is highly prevalent in the university student population. While general self-control is recognized as a protective factor, its specific sub-dimensions may contribute differently to mitigating risk. Identifying the most salient components is key for designing targeted interventions. This study aimed to investigate the protective role of overall self-control and its five sub-dimensions against problematic smartphone use among university students. A cross-sectional survey was conducted among 734 university students (53.00% male; Mage = 19.80, SD = 0.98, age ranged from 17 to 24 years). Bivariate correlations showed that overall self-control and all five sub-dimensions (i.e., impulse control, healthy habits, resisting temptation, focus, and moderation in entertainment) were significantly and negatively correlated with problematic smartphone use ($r = -0.33$ to -0.58, $p < 0.001$). Hierarchical multiple regression analyses were performed after controlling for gender and age. When entered separately into regression models, overall self-control and its sub-dimensions were significantly and negatively associated with problematic smartphone use ($\beta = -0.32$ to -0.56 , $p < 0.001$). However, when all five sub-dimensions were entered simultaneously, most dimensions remained significant predictors ($\beta = -0.08$ to -0.28, $p < 0.001$-0.05) but not resisting temptation ($\beta = -0.008$, $p = 0.836$). The results reveal the global protective role of self-control and further pinpoint the specific components (primarily focus and moderation in entertainment) that are most critically associated with lower problematic smartphone use. This finding suggests that intervention programs could move beyond general self-regulation training and focus more intensively on cultivating these specific skills to effectively prevent and reduce problematic smartphone use.

Keywords: problematic smartphone use, self-control

P–56

Operational definition and validation of key behavioral indicators for 'Daily Media Binge' based on smartphone passive data

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Unlike 'Binge Drinking,' which has a commonly accepted definition in alcohol studies, the field of digital media lacks a clear, consensual definition for 'Binge' referring to excessive immersion or problematic use. Existing studies have primarily relied on self-reported surveys, making it difficult to capture the real-time context of media overuse. This study aims to reconceptualize 'Binge' in digital media use not as a static outcome variable or group trait, but as a repetitive behavioral state occurring in daily life, and to newly define it based on behavioral indicators using smartphone passive data.

To this end, smartphone usage logs were collected over a three-week period from 57 adults exhibiting problematic digital media use. Passively collected app usage logs were structured on a daily basis, and 'Binge-related behaviors' were operationally defined by focusing on app usage for leisure and entertainment purposes. Based on a review of prior research and theoretical frameworks, key behavioral indicators reflecting multidimensional characteristics beyond simple usage duration were derived. Through a combination of these indicators, a rule-based algorithm was designed to identify the state of 'Daily Media Binge.' The results of this study hold significant academic value in that they concretize the abstract phenomenon of digital media over-immersion into a data-driven 'Daily Binge.' This provides an objective evaluation criterion with reduced reliance on self-reports, enables the detection of risk states on a daily basis, and can be utilized as a core trigger concept determining "en to intervene" in future real-time intervention or early intervention models.

Keywords: daily media binge, passive data, behavioral indicators, digital phenotyping, problematic digital media use

P–57

Distinct digital signatures of problematic digital media use and high-risk alcohol use from passive multimodal data

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Passive sensing using smartphones and smartwatches has emerged as a promising approach to capture real-life behavioral and physiological patterns. However, few studies have directly compared passive data characteristics across distinct risk behavior groups using the same sensing platform. This study aimed to identify unique digital signatures that differentiate adults with problematic digital media use from those with high-risk alcohol consumption, using multimodal passive data. A total of 118 adults (57 with problematic digital media use, 61 with high-risk alcohol use) were monitored over three weeks via smartphones and smartwatches. We collected data on sleep (duration and variability), physical activity, heart rate indices, and app usage logs. Group differences were analyzed using t-tests, MANOVA, and linear mixed-effects models, and additional comparisons were made for app category and diurnal usage patterns. Based on these analyses, we discuss the potential utility of multimodal passive data as digital biomarkers for differentiating risk behavior profiles. These results provide preliminary evidence for future machine learning studies aimed at developing predictive algorithms for problematic digital media use and high-risk alcohol use. *Funding:* This research was supported by a grant of the Korea Health Technology R&D Project through the Korea Health Industry Development Institute (KHIDI), funded by the Ministry of Health & Welfare, Republic of Korea [grant number : RS-2022-KH125882].

Keywords: behavioral addiction, passive sensing, digital biomarkers, smartphone monitoring, wearable devices

P–58

"Ghosting" in romantic relationships: On the birth of behavioral addiction

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Ghosting has been only recently conceptualized and identified. Online dating prevalence is transforming ghosting (sudden refusal of communication with no explanation) from just a case of interpersonal behavior into a socio-psychological phenomenon (Schokkenbroek, 2025; Timmermans, 2021). The ceasing communication without providing any meaningful explanation has emerged as an unpleasant and even repulsive form of relationship dissolution. Types of relationships in which ghosting occurs are connected with dissolution dynamics, different across romantic partnerships, friendships, or professional relationships. Studies focus on ghosting emotional outcomes for a left partner; fewer examine ghosting as coping. J. Powell mentions that this kind of avoidant coping is aimed at minimizing discomfort and confrontation. Ghosting seems to be particularly widespread in some contexts like dating apps, where it is often considered to be a normative way to terminate a relationship (Powell et al., 2022). The experience is often marked by different emotions for ghosters (comfort, lack of interest or attraction) and ghostees (confusion and hurt). They also interpret the relations` termination contrary: ghosters mention unfavorable behaviors by a ghostee as motivations for the decision to ghost. Ghostees more often interpret ghosting behaviors as a sign of fear of commitment, etc. (Timmermans et al., 2020). Frequent ghosting can be interpreted as behavioral addiction, to our mind. Our aim was to study the interplay between ghosting participants: coping ways and attachment styles in men and women who experienced ghosting in romantic relationships. Method: Two groups of men and women volunteers (n1 = 28, n2 = 32), aged 18 to 30, were diagnosed using WCQ by Lazarus, Folkman, and ASQ (Attachment Style Quiz) by Gibson. Results: Men were more prone to avoid problem solving, antisocial behavior, and confrontation than women. They also had a predominant avoidant-dismissing attachment style. Men ghost women more often than vv. Women were more susceptible to stress, inclined to cautious and manipulative actions, self-control, had more often anxious attachment style than men ($p<0.01$). Avoidant-dismissing attachment style in men did not facilitate active coping in ghosting situations. More so it opened the door to ghosting toward another person, developing a form of addiction. Women who experienced ghosting from their partners were intensely striving to maintain the relationships. They were initiative and more focused on discussing, clarifying the situation, being less likely to ghost. Conclusion: those who experienced ghosting may begin to use it intensively toward others if they had an avoidant-dismissing attachment style, avoidance and confrontation as primary coping strategy. Ghosting must be studied within various relationship contexts.

Keywords: ghosting, relationships, coping, addiction

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P–59

Exercise patterns and smartphone addiction: A cross-sectional analysis of hedonic and utilitarian use pathways

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Background: Hedonic smartphone use i.e. engagement driven by pleasure, distraction, or entertainment, is closely linked to problematic smartphone use (PSU). While prior studies suggest that regular exercise may relate to healthier digital behaviors, it remains unclear which aspects of exercise (frequency, duration, or intensity) shape smartphone use patterns. Furthermore, the interplay between utilitarian sports-related smartphone use and hedonic use has not been systematically examined in regular exercisers. *Method:* A cross-sectional sample of regularly exercising adults (n = 360; 132 males; M_age =39.0 ± 9.8) reported their exercise habits and smartphone use. Weekly exercise frequency, workout duration, perceived intensity, and proportions of utilitarian and hedonic smartphone use were assessed. Data were analyzed using Pearson correlations, MANOVA, and regression-based mediation models controlling for age and gender. *Results:* All exercise parameters significantly mediated total daily smartphone use. Higher perceived exercise intensity predicted lower overall use. Exercise frequency and duration positively predicted sports-related utilitarian smartphone use, which in turn was associated with reduced hedonic smartphone use. *Conclusions:* Exercise behaviors appear to influence smartphone addiction-related patterns by fostering utilitarian, sports-oriented use that offsets hedonic engagement. This pathway may help explain the frequently observed protective role of regular exercise against PSU.

Keywords: mobile phone addiction, physical activity, problematic smartphone use, dependence, internet

P–60

Establishing expert consensus on clinical features of exercise addiction: A Delphi study

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Background: Exercise addiction is widely investigated but remains diagnostically undefined and is not recognized in current classification systems. Unlike gambling and gaming disorder, exercise addiction lacks formal diagnostic recognition, and available research remains fragmented and largely screening instrument-driven. Furthermore, the boundary between pathological exercise and high athletic commitment remains particularly difficult to delineate. Existing research relies primarily on self-report screening instruments adapted from substance addiction models, resulting in conceptual heterogeneity and limited clinical guidance. There is currently no agreed-upon set of clinically grounded diagnostic criteria. This study aims to establish expert consensus on the core clinical features of exercise addiction. *Methods:* A three-round international Delphi study is conducted with experts in exercise addiction and related fields . In Round 1, experts provide qualitative input on candidate clinical features, including loss of control, continuation despite harm, exercise as coping, withdrawal-like symptoms, rigidity, and salience . In Round 2, identified features are quantitatively evaluated regarding clinical validity, clinical utility, and prognostic value. In Round 3, experts determine final criterion inclusion, core versus supportive classification, minimum diagnostic thresholds, and the role of clinically significant distress and functional impairment. Consensus is defined a priori as ≥70% agreement. *Expected Outcomes:* The study will generate a consensus-based set of clinically relevant criteria and define a preliminary diagnostic architecture for exercise addiction, providing the foundation for the development of a structured clinical interview. *Conclusions:*By moving beyond screening-based research toward clinically anchored criteria, this study aims to reduce conceptual ambiguity and advance diagnostic clarity in the field of problematic exercise.

Keywords: exercise addiction, Delphi method, clinical features

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P–61

Hypersexuality, addictive sexuality and Compulsive Sexual Behavior Disorder: Conceptualization, psychological mechanisms and experienced sexual behaviors

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Background: Sexual health is considered as a public health issue and recognized through new conditions such as the Compulsive Sexual Behavior Disorder (CSBD) often cited as hypersexuality or sexual addiction. However, its comorbidity with substance use disorder (Chemsex) or association with new technologies (Cybersexuality), in addition of fast-sex or offline masturbation, must obtained more definition points in order to gain a clearer vision of this general condition needing to be apprehended depending on its form and severity. Furthermore, being part of the LGBTQIA+ community has also shown an impact on its experience through stigmatization and discrimination process. *Method:* Participants will need to be at least 18 years old and having an active sexuality. Moreover, the study focusing on the impact of discrimination will be proposed only to persons being part of the LGBTQIA+ community. Around 500 participations are expected for the quantitative study to represent the different groups (fast-sex, cybersexuality, chemsex, masturbation, control group) and 15 to 20 participations for the qualitative study focusing on discrimination process. More precisely, the quantitative study will be composed of six psychometric scales: the French versions of the Sexual Addiction Screening Test, the Sexual Compulsivity Scale, the Brief COPE, the impulsive behavior scale, the emotional regulation scale and a translation of the Sexual Motivation Scale. Whereas, the qualitative study is organized around semi-directive interviews.*Expected results:* Obtained results from the quantitative study will propose a more precise clinical overview of the connection between sexual obsessions and compulsions, impulsivity, coping strategies, emotional regulation and sexual motivations in CSBD depending on its form and severity. Meanwhile, the qualitative study will display clarifications on the participants' experiences and representations of problematic sexual behaviors but also their interpretations of stigmatization and discrimination on such matter.

Keywords: Compulsive Sexual Behavior Disorder, addictive sexuality, prevention

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P–62

Swedish women with self-identified compulsive sexual behavior; Mental health, paraphilic interests and sexual violence

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Introduction: Compulsive Sexual Behavior Disorder (CSBD) is included in the 11th Revision of the International Classification of Diseases (ICD-11). CSBD is defined by a persistent pattern of preoccupation with sexual impulses and behaviors, associated with impaired control and resulting in marked distress or functional impairment. Although research on CSBD has increased in recent years, the literature has predominantly focused on men. In contrast, CSBD in women — including its clinical presentation and associated factors — remains largely understudied. *Objective* To examine socio-demographic characteristics, self-reported mental health, paraphilic interests, and experiences of sexually related violence among help-seeking Swedish women with self-identified compulsive sexual behavior. *Method:* This cross-sectional study was part of a larger research project investigating cognitive-behavioral therapy for Compulsive Sexual Behavior Disorder. Women aged 18 years or older who sought treatment for self-perceived "out-of-control" sexual behavior were recruited between 2010 and 2018 through advertisements and clinical referrals. Participants completed comprehensive assessments covering sociodemographic characteristics, psychiatric symptoms, substance use, compulsive sexual behavior, paraphilic interests, and experiences of sexual violence. Measures of CSBD included the Hypersexual Disorder Screening Inventory (HDSI), the Compulsive Sexual Behavior Inventory (CSBI) and the Sexual Compulsivity Scale (SCS). *Results:* A total of 109 women were included. The mean age was 31 years (SD = 9.2, range 19-54), 57% lived alone and 53% were unmarried. Most participants (57-96%, depending on the questionnaire) met the cut-off values for CSBD. Ninety percent reported having at least one problematic sexual behavior on the hypersexual disorder screening inventory (HDSI), the most frequently being interpersonal sex with consenting adults (82%). Approximately half of the participants completed a questionnaire on paraphilic interest and negative consequences. Among these, 88% showed some indication of paraphilic interests; the most common was masochism (73%) followed by voyeurism (48%). A sexual interest in minor children was indicated by 13% of respondents. Eighty-one percent reported occupational problems related to their sexual behaviors, and in 92% of cases, colleges, family, or friends expressed concern or disapproval regarding the participant's sexual behavior. The CSBI was completed by 82 participants (75%). Among these, 9% had been subject to legal proceedings, and 18% reported having forced a partner to engage in sex against their will. Seventy-nine percent reported having been sexually abused in some form. Thirty-one (37% of the responding women) reported having experienced being forced to have sex by an intimate partner. Further, the study participants reported a high rate of depressive symptoms and psychologi-

cal distress. Risk consumption of alcohol and illicit drugs were reported by 52% and 36% of women, respectively. *Conclusion:* Women seeking treatment for compulsive sexual behavior exhibit high levels of psychological distress, substance use, paraphilic interests, and negative life consequences, including illegal behaviors and experiences of sexual violence. These findings underscore the importance of comprehensive psychiatric assessment and tailored interventions when women present with compulsive sexual behavior.

Keywords: Compulsive sexual behavior disorder, paraphilic interest, sexual violence

P–63

Behind the mask: Authenticity, social anxiety, and compulsive sexual behavior

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Background: Compulsive sexual behavior (CSB) causes substantial distress and functional impairment and is associated with co-occurring mental health concerns and relationship and attachment difficulties. Factors such as feeling inauthentic with one's self or in relationships and social anxiety may contribute to CSB-related concerns (e.g., due to secrecy, shame, and hiding behavior), and these associations may vary by gender. This study examined the relationships between multidimensional authenticity, social anxiety, and CSB severity, as well as the moderating role of gender. *Method:* A community sample of 912 adults completed the Compulsive Sexual Behavior Inventory-13 (CSBI-13), multidimensional Authenticity Inventory-3 (AI-3), and Social Interaction Anxiety Scale (SIAS). Gender differences were examined with one-way ANOVAs. Hierarchical linear regression tested the incremental contribution of authenticity dimensions and social interaction anxiety to CSB, controlling for gender and sexual orientation, and included gender interaction terms to assess moderation. *Results:* CSBI-13 scores did not differ by gender. Men reported higher authenticity (AI-3 Unbiased Processing subscale and total scores) and lower SIAS scores than women. Across the full sample and within gender groups, CSB correlated negatively with authenticity subscales (moderate-to-strong) and positively with social interaction anxiety (moderate). In regression analyses, authenticity, particularly pertaining to objective assessment of one's strengths and weaknesses (i.e., Unbiased Processing), was the strongest negative predictor of CSB, and SIAS independently predicted higher CSB. Together, predictors explained ~39% of variance. Gender moderated effects for Unbiased Processing and SIAS, with stronger associations among men. *Conclusions:* Lower authenticity and elevated social interaction anxiety are reliable correlates of higher CSB, especially for men. Targeting reductions in social anxiety and enhancements in authenticity may constitute clinically meaningful intervention strategies.

Keywords: compulsive sexual behavior; authenticity; social interaction anxiety

P–64

Impulse control disorder and addictive behaviors in compulsive buying disorder patients within and without the obsessive-compulsive disorder

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*Background:*Compulsive Buying Disorder (CBD) is conceptualized as a behavioral addiction characterized by a persistent and uncontrolled pattern of acquiring goods. This pattern is marked by repeated unsuccessful attempts to reduce or control buying behavior,accompanied by intense urges or cravings to purchase products. Individuals with CBD commonly experience persistent preoccupation with shopping-related thoughts and repeatedly give in to buying impulses, resulting in significant impairments across social, occupational, family, and financial domains. Because of the frequent presence of recurrent thoughts centered on the desire to buy, CBD has often been associated with obsessive-compulsive disorder (OCD), as both conditions share the psychopathological feature of intrusive, repetitive thoughts. However, a fundamental distinction lies in the nature of resistance and the function of compulsive behavior. In OCD, compulsive acts are typically performed to neutralize or prevent a perceived threat arising from obsessive thoughts. In contrast, in CBD, buying behavior reflects a failure to resist anticipated pleasure elicited by thoughts related to purchasing. Thus, while obsessions in OCD and desire-driven cognitions in CBD may appear phenomenologically similar, they represent distinct mental phenomena that lead to behavioral responses consistent with the underlying psychopathology of each disorder. In light of these considerations, the present study aimed to compare individuals with CBD with and without comorbid OCD in terms of clinical characteristics and psychiatric comorbidities. *Method:* Among 416 patients diagnosed with CBD, 51 (12.26%) also met diagnostic criteria for OCD, whereas 365 (87.74%) did not. The sample was predominantly female (87.5%), with a mean age of 39 years, mostly Caucasian (72.6%), with higher education, and nearly half reporting a steady partner (47.3%). Psychiatric comorbidities were more prevalent among patients with comorbid CBD and OCD. These included current or lifetime major depressive episodes (92.1%), current major depressive episode with melancholic features (64.7%), bipolar disorder type I or II, current or past (62.7%), lifetime panic disorder (52.9%), current panic disorder with agoraphobia (23.5%), agoraphobia (52.9%), social phobia (51.0%), post-traumatic stress disorder (25.5%), lifetime mood disorder with psychotic features (21.6%), and generalized anxiety disorder (86.3%). Comorbidity between CBD and OCD was also associated with increased suicide risk (72.6%) and a personal history of trauma (60.8%). *Conclusion:* These findings highlight the importance of personalized diagnostic approaches in the assessment and management of CBD, with careful consideration of comorbid psychiatric conditions that may influence its clinical course and treatment response. Further research is warranted to determine whether CBD represents an independent diagnostic entity or a specific variant within the obsessive-compulsive spectrum.

Keywords: compulsive buying disorder, obsessive-compulsive disorder, impulsive control disorder

P–65

Who seeks help for what? Associations between ten addictive behaviours and help-seeking

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Help-seeking among individuals experiencing problems from behavioural or substance-related addictions remains poorly understood. Using data from 6,173 Canadian adults who completed the Screener for Substance and Behavioural Addictions, we examined whether the number and type of flagged behaviours were associated with help-seeking for each of ten addictive behaviours. The likelihood of being flagged for different behaviours varied across age, gender, and ethnic groups. Multiple logistic regressions controlling for age, gender, and ethnicity showed that the number of flagged behaviours was significantly associated with help-seeking. Behaviour-specific analyses revealed that help-seeking was primarily driven by severity within the same domain, while cross-behavioural associations were less consistent. Contrary to expectations, being flagged for an addictive behaviour not currently recognised in diagnostic classifications was not associated with reduced odds of help-seeking. This finding challenges the argument that officially recognizing certain behaviours as addictions would increase treatment accessibility. Overall, the results suggest that broader addictive involvement, not only the severity of a single problem, plays a key role in prompting help-seeking behaviours. Notably, some behaviours tended to co-occur, possibly reinforcing each other's harmful effects, whereas in other cases one behaviour appeared to reduce the likelihood of seeking help for another (e.g., overworking was negatively associated with help-seeking for cocaine-related problems).

Keywords: addictive behaviours, help-seeking, treatment, gender, substance use

P–66

Emotion regulation strategies among relatives of individuals with addictive disorders: A systematic review

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Background: Despite the expansive research on addiction and its impact on the individual, relatively little attention has been given to the relatives affected by it as well. Thus, the present review aims to synthesize existing findings on individuals who have a close relative struggling with addictive disorders, with a focus on their emotion regulation strategies, potentially exploring differences between substance use disorders and addictive behaviors defined by formal diagnosis. *Methods:* The systematic review was conducted using PubMed, Scopus, Web of Science, EBSCO, ScienceDirect, and PsycINFO. We included quantitative studies written in English focusing on emotion regulation in individuals who have an adult relative (e.g. parent, sibling partner) with any addictive disorder listed in DSM or ICD, namely substance use disorders (SUD), gambling disorder, or internet gaming disorder. *Results:* The initial search identified 2,575 records. After applying exclusion criteria, data were extracted from sixteen studies, representing 5,623 individuals. Out of the sixteen studies, eleven explored relatives of individuals with SUD, three explored relatives of individuals with a type of behavioural addiction, and two explored both SUD and behavioural addiction affected relatives. Seven studies compared groups of affected relatives with control groups, six studies explored correlations between relatives' emotion regulation and other constructs (e.g. relatives' own substance use, psychiatric symptomatology, addicted individuals' addiction severity), and three studies compared intervention methods among affected relatives targeting emotion regulation strategies. In four studies, relatives' maladaptive emotion regulation strategies were significantly associated with poorer addiction-related outcomes in the addicted individual. From the group comparison studies, four found significantly higher maladaptive emotion regulation strategies in the affected relative group than the control group. *Conclusions:* Results from previous studies suggest that relatives tend to use more maladaptive emotion regulation strategies. However, the limited number of studies indicate a gap in the field, emphasizing the need for future studies on the topic.

Keywords: addiction, addictive disorder, emotion regulation, relatives, family members

P–67

Development and psychometric evaluation of a new codependency questionnaire

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Background: Codependency lacks a widely accepted definition, and measures inconsistently capture its core characteristics. Moreover, current instruments primarily assess behavioral patterns but often overlook whether individuals have close relatives with addiction or mental health problems, which is a critical contextual factor. To address this gap, a new questionnaire was developed to capture components of codependency. *Method:* We analyzed data from an online convenience sample of 4,233 adults (42.1% male, 57.6% female, 0.3% other; M_age=42 (SD=11,8). Based on theoretical models of codependency, we developed new items organized around three thematic domains: (1) screening questions assessing the presence, type, and perceived impact of a relative's addictive disorder or other mental disorder, which also served to ensure that only eligible respondents completed the subsequent sections; (2) ten items measuring behavioral aspects; and (3) 13 items assessing affective aspects of codependency. We applied the Short Multidimensional Perfectionism Scale, Brief Symptom Inventory and the Rosenberg Self-Esteem Scale. *Results:* Exploratory factor analyses in two samples (N=1,429; N=1,413) supported a one-factor structure for both scales. Model fit was good for the Behavioral Scale and acceptable for the Affective Scale. Confirmatory factor analysis in a third sample (N=1,391) supported the one-factor models (adequate fit for the behavioral; acceptable for the affective). Internal consistency was good to excellent. The scales were moderately positively correlated and showed small positive associations with perfectionism, moderate positive with anxiety, and moderate negative with self-esteem. Results showed that codependency levels were higher among participants whose relatives had mental disorders or substance-related problems compared to other disorder types. Overall, the type, combination, and number of the relatives' disorders were significantly related to elevated codependency scores. *Conclusion:* Findings support the questionnaire's reliability and construct validity, offering a comprehensive measure of behavioral, affective, and contextual aspects of codependency.

Keywords: codependency, exploratory and confirmatory factor analysis, psychometric validation

P–68

Do positive and negative urgency share a common core? Examination of a general urgency construct

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Background and aims. Impulsivity is a multifaceted construct that has been extensively explored in relation to behavioral addictions. Among impulsivity facets, positive and negative urgency, defined respectively as the tendency to act rashly in response to negative or positive emotional states, have shown consistent association with various behaviors, including problematic gaming, problematic gambling, or compulsive sexual behaviors. However, recent psychometric work suggests that the two urgency facets may converge into a unitary, coherent general urgency construct regardless of emotional valence, with important implications for the conceptualization and assessment of impulsivity. The present study aims to examine whether a general urgency construct is tenable empirically. *Methods*. A total of 523 participants completed pilot items designed to assess general urgency, along with psychometric instruments assessing other impulsivity facets (UPPS-P-20), emotion regulation (ERQ-10), self-control (BSCS-13), and symptoms of anxiety (GAD-7) and depression (PHQ-9). *Results.* Factor analyses suggested that a one-factor model of general urgency is tenable. Network analyses revealed strong interconnections among the general urgency pilot items and close associations with negative and positive urgency. Correlation analyses showed moderate to strong associations with lack of premeditation (UPPS-P-20), self-control (BSCS-13), anxiety (GAD-7), and depression (PHQ-9), as well as negative correlations with adaptive emotion regulation strategies (ERQ-10), supporting convergent and criterion validity. *Discussion and conclusions.* Our findings support the tenability of a unidimensional general urgency construct, distinct from yet significantly related to other UPPS-P traits. The present results support the relevance of developing a scale to measure general urgency and of exploring its relations with behavioral addictions.

Keywords: general urgency, impulsivity, UPPS-P