



UNIVERSITY OF
GIBRALTAR

**CENTRE OF EXCELLENCE
IN RESPONSIBLE GAMING**

EASAR

European Association of Substance Abuse Research

BOOK OF ABSTRACTS

25th EASAR CONFERENCE

Gibraltar 2022
MAY 12th - 15th

ORGANISERS

Ludwig Kraus (IFT Institut für Therapieforschung, München, Germany)

Zsolt Demetrovics (Centre of Excellence in Responsible Gaming, University of Gibraltar)

Andrea Czakó (Centre of Excellence in Responsible Gaming, University of Gibraltar)

'Written in stone in my DNA' or 'I could quit anytime'? The genetic background of addictions Csaba Barta, MD, PhD¹	4
The impact of social support on gambling in young males: A longitudinal study Andreas M. Bickl¹, Ludwig Kraus^{1,2,3}, Johanna K. Loy¹, Peter Kriwy⁴, Pawel Slecza⁵ & Larissa Schwarzkopf¹	5
Digital interventions for adult drug users: a systematic review and meta-analysis Nikolaos Boumparis¹, Michael Schaub¹	6
Association between problematic internet use and mental distress in students during COVID-19: The importance of impulsivity. Julija Gecaite-Stonciene¹, Ausra Saudargiene^{2, 3}, Aiste Pranckeviciene¹, Vilma Liaugaudaite¹, Inga Griskova-Bulanova⁴, Dovile Simkute⁴, Rima Naginiene⁵, Laurynas-Linas Dainauskas², Gintare Ceidaite³, Julius Burkauskas¹	7
Co-occurrence in videogame players: Do videogames increase risk or improve resilience? Tyrone L. Burleigh^{1,2}, Mark D. Griffiths², Alex Sumich², Grace Y Wang³, Daria J. Kuss²	8
Effectiveness of the German Quitline for smoking cessation: Study protocol of a randomized controlled trial Simone Delle¹, Ludwig Kraus^{1,2,3}, Simona Maspero¹, Oliver Pogarell⁴, Eva Hoch^{1,4} and Kirsten Lochbühler¹	9
Addressing adherence and success rates of a digital self-help intervention for alcohol and substance use with machine learning Marloes Derksen^{1, 2, 3, 4}, Lucas Ramos^{1, 2}, Matthijs Blankers^{1, 2, 3, 5}, Guido van Wingen^{1, 2}, Tamara de Bruijn⁶, Steffen Pauws^{7, 8}, Anneke Goudriaan^{1, 2, 3, 4}	10
Food addiction and lifetime alcohol and illicit drugs use in specific eating disorders Fernando Fernandez-Aranda^{1,2}, Romina Miranda-Olivos¹, Zaida Agüera², Roser Granero³, Susana Jiménez-Murcia¹	11
Hepatitis C and attention-deficit hyperactivity disorder in a high-risk group of opioid-maintained prisoners Gabriele Fischer¹	12
Introducing a free association network-based approach in addiction research Domonkos File³, Bálint File¹, Beáta Bóthe², Zsolt Demetrovics^{3,4}	13
Assessing the responsible gambling research, education, and service needs of the Gibraltar gambling industry Judith Glynn¹, Zsolt Demetrovics^{1,2}, Andrea Czakó^{1,2}	14
Self-reported alcohol consumption and ethyl glucuronide in hair Dorthe Grüner Nielsen¹, Kjeld Andersen^{1,2, 3}, Professor^{1,2,3}, Anette Sjøgaard Nielsen^{1, 2}, Flemming Nielsen⁴, Silke Behrendt^{1, 5}, Randi Bilberg¹, Michael Bogenschütz^{6, 7}, Gerhard Bühringer^{1,8,9}, Angelina Isabella Mellentin^{1, 2, 10}	15
Results from a cluster randomized controlled trial on Community Reinforcement and Family Training (CRAFT) - comparing individual, group and self-help interventions Rikke Hellum^{1,2,3}, Randi Bilberg^{1,2,3}, Gallus Bischof⁶, Kjeld Andersen^{1,2}, Morten Hesse⁵, Anette Sjøgaard Nielsen^{1,2,3}	16
The relationship between problem gambling and suicidality: An overview of the field Joakim H. Kristensen^{1,2}, Ståle Pallesen^{1,2}, Mark D. Griffiths³, Eilin K. Erevik^{1,2}	17
The effect of gambling marketing articles, gambling ads, and gambling warning message on the intention to gamble: results from an online study Adam Hörömpöli^{1,2}, Gyöngyi Kökönyei², Zsolt Demetrovics^{3,2}	18

Anger rumination and harmful cannabis use: a bifactor model of the Anger Rumination Scale (ARS) and the mediating role of coping motives	
Zsolt Horváth ¹ , Gyöngyi Kökönyei ¹ , Péter Sárosi ^{1,2} , Mónika Koós ^{1,2} , Zsolt Demetrovics ^{1,3} , Róbert Urbán ¹ ...	19
Interrelations of ethno-cultural and socio-economic risk factors with alcohol use in an urban environment	
Karoline Huth ^{1,2} , Judy Luigjes ¹ , Maarten Marsman ² , Anneke Goudriaan ^{1,3} , Ruth van Holst ¹	20
Neurobiological, endocrine and clinical associated factors in gambling addiction	
Susana Jimenez-Murcia ^{1,2,3,4} , Roser Granero ^{3,4,5} , Isabel Baenas ^{1,3,4} , Bernat Mora-Maltas ¹ , Amparo del Pino-Gutierrez ^{1,3,4,6} , Mikel Etxandi ^{1,7} , Sulay Tovar ^{4,8} , Carlos Diéguez ^{4,8} , Neus Solé-Morata ^{1,3} , Mónica Gómez-Peña ^{1,3} , Laura Moragas ^{1,3} , Fernando Fernández-Aranda ^{1,2,3,4}	21
Religiosity, psychological proneness and the occurrence of addictive behaviours	
Bettina Kata Kádár ¹ , Lea Péter ¹ , Bálint Andó ¹ , Borbála Paksi ^{2,+} , Zsolt Demetrovics ^{3,4,+}	22
Comparing casual gamers, highly engaged gamers, e-sports players and gamers at risk of gaming disorder	
Orsolya Király ¹ , Fanni Bányai ¹ , Zsolt Demetrovics ^{2,1}	23
The role of trait rumination and gender in the association between trait impulsivity and problematic gambling	
Natália Kocsel ¹ , Borbála Paksi ² , Gyöngyi Kökönyei ^{1,3} , Zsolt Demetrovics ^{1,4}	24
Rumination is more strongly associated with problematic social media use than worry: a representative study in young adults	
Gyöngyi Kökönyei ^{1,2} , Borbála Paksi ³ , Zsolt Demetrovics ^{1,4}	25
The effects of Tik-Tok videos on body image and the problematic use of TikTok: an experimental study	
Beatrix Koronczai ¹ , Zsolt Horváth ¹	26
Emotional coping mediates the relationship between COVID-related distress and compulsive buying	
Lilla Nora Kovacs ⁴ , Eva Katzinger ¹ , Sunghwan Yi ² , Zsolt Demetrovics ^{3,4} , Aniko Maraz ¹ , Gyöngyi Kökönyei ^{4,5}	27
Therapists' adherence to Community Reinforcement Approach	
Anneleen Kraan ^{1,2}	28
The prevalence and risk factors of work addiction in Hungary	
Bernadette Kun ¹ , Zsolt Demetrovics ^{1,2} , Katalin Felvinczi ¹ , Borbála Paksi ³	29
A comparative review of negative reinforcement motives in problematic gambling and videogaming behaviour	
Chanel Larche ^{1,2} , Candice Muir ¹ , Hyacinth Raymundo ¹ , Heather McCormick Jankowski ¹ , Mike Dixon ¹	30
Alcohol withdrawal-related seizures and delirium tremens: A clinical epidemiological study	
Ildikó Katalin Pribék ¹ , Ildikó Kovács ² , Bettina Kata Kádár ¹ , Bálint Andó ¹ , Bence András Lázár ¹	31
Increased alcohol-specific mortality in Germany during COVID-19: State-level trends from 2010 to 2020	
Carolin Kilian ¹ , Sinclair Carr ^{2,3} , Bernd Schulte ^{2,3} , Jakob Manthey ^{2,3}	32
A double-blinded randomized controlled trial of attentional control training for treating alcohol use disorder	
Angelina Isabella Mellentin ^{1,2,3} , Miles Cox ⁴ , Javad S Fadardi ⁵ , Nicolaj Mistarz ¹ , Lotte Skøt ¹ , Kristine Rømer, Thomsen ⁶ , Kim Mathiasen ³ , Mia Lichtenstein ³ , Anette Søgaa Nielsen ¹	33
Prevalence estimation of alcohol-related disorders and treatment rates using a data linkage of routine data in Bremen 2016/2017	
Justin Möckl ¹ , Christina Lindemann ² , Jakob Manthey ^{2,3,4} , Bernd Schulte ² , Jens Reimer ^{2,5} , Oliver Pogarell ⁶ , Ludwig Kraus ^{1,7,8}	34
Regional variations in density of alcohol outlets and consumption	
Jacek Moskalewicz ¹ , Jakub Stokwiszewski ¹ , Łukasz Wieczorek ¹	35
A guided digital intervention to reduce cannabis use: the ICan randomized controlled trial.	
Marleen I.A. Olthof ^{1,2} , Anna E. Goudriaan ^{2,3,4} , Margriet W. van Laar ¹ , Matthijs Blankers ^{1,2,3}	37

One size does not fit all. Loss limits should be adjusted for income.	
Ståle Pallesen ^{1,2,3} , Eilin Kristine Erevik ^{1,2} , Jakob Jonsson ⁴ , Arne Magnus Morken ¹ , Elias Langeland ¹ , Ingvild Faxvaag Johnsen ¹ , Kaja Kastrup Strømme ¹ , Rune Mentzoni ^{1,2}	38
Abuse of non-opioid analgesics in Germany: Prevalence and associations among self-medicated users	
Christian Rauschert ¹ , Nicki-Nils Seitz ¹ , Sally Olderbak ^{1,2} , Oliver Pogarell ³ , Tobias Dreischulte ⁴ , Ludwig Kraus ^{1,5,6}	39
Implementing Methamphetamine Prevention Strategies into Action (IMPRESA): Design and first results of an ongoing project in five European countries	
Moritz Rosenkranz ^{1,2} , Marcus-Sebastian Martens ^{1,2} , Harald Lahusen ^{1,2} , Dr. Heike Zurhold ^{1,2} , PD Dr. Uwe Verthein ^{1,2}	40
Drug use in German Prisons – An area of conflict for inmates and staff?	
Franziska Schneider ^{1,2}	41
Effectiveness of a digital alcohol moderation intervention as an add-on to depression treatment for young adults: preliminary findings of a pragmatic randomized controlled trial	
Maria Schouten ¹ , Jack Dekker ¹ , Anneke Goudriaan ¹ , Matthijs Blankers ¹	42
Individual differences that characterize skill in poker	
Carrie Shaw ¹ and Robert Williams ²	43
Adaptation and validation of four gambling disorder-screening tests	
Janusz Sierosławski ¹ , Katarzyna Dąbrowska ¹ , Łukasz Wieczorek ¹	44
Can yoga be addictive? A study on the risk of addiction in experienced female yogis	
Attila Szabo ¹	45
Gender differences in a clinical sample of 60+ year old patients receiving treatment for alcohol use disorder	
Jeppe Tryggedsson ^{1,2} , Kjeld Andersen ^{1,2} , Michael P. Bogenschutz ³ , Angelina I. Mellentin ^{1,2} , Anette Søgaaard Nielsen ^{1,2}	46
Gaming in young elementary school-aged children	
Anna Urešová ¹ , Kateřina Lukavská ^{1,2} , Roman Gabrhelík ¹	47
Psychedelics in the treatment of addictive disorders	
Wim van den Brink ¹	48
Addictive behaviors including internet addiction, gaming disorder, exercise addiction and alcohol consumption were associated with genetic variants of the Forkhead box protein N3 (FOXN3)	
Andrea Vereczkei ¹ , Eszter Kotyuk ² , Andrea Belik ¹ , Rajendra D. Badgaiyan ³ , Kenneth Blum ^{2,4} , Zsolt Demetrovics ^{2,5} , Csaba Barta ¹	49
Public stigma and treatment preferences for alcohol use disorders	
Sara Wallhed Finn ^{1,2} , Anna Mejldal ¹ , Anette Søgaaard Nielsen ^{1,3}	51
Fear of missing out and gaming disorder among Chinese students: The mediating role of maladaptive metacognition and depression	
Shu M. YU ¹ , Anise M. S. WU ^{2,3} , Meng Xuan Zhang ^{*4}	52
Further participants.....	53

'Written in stone in my DNA' or 'I could quit anytime'? The genetic background of addictions

Csaba Barta, MD, PhD¹

¹ Department of Molecular Biology, Institute of Biochemistry and Molecular Biology, Semmelweis University, Budapest, Hungary

Keywords: genetics, epigenetics, risk factors, candidate genes, addictions

Abstract

Similarly to many aspects of normal human behaviour, psychological disorders or psychiatric disease are influenced partly by genetic, and partly by environmental factors. The individual effect of these risk or protective factors is minute, however, their combined effect and their interplay may lead to manifestation of brain disorders or mental disease. Adaptation to environmental changes is often mediated by epigenetic alterations and processes.

Addiction is a good example of the above complex interplay of genetics and environment. Family and twin studies estimate the heritability of different forms of addiction to be around 60%. Most addiction studies in the literature focus on one specific substance (or sometimes an addictive behaviour), however, in this talk I aim to present an integrative approach to understand the complex etiology of addictions in general. Through some examples of literature data, as well as our own research in this field, I will present the possible association of several candidate gene variants and a range of related psychological dimensions with Substance Use Disorders (SUD) and behavioural addictions.

Funding sources: CB was supported by the Merit-prize fellowship of Semmelweis University, the Bolyai János research fellowship of the Hungarian Academy of Sciences BO/00987/16/5, the ÚNKP-18-4 of the new National Excellence Program of the Ministry of Human Capacities, and the Baron Munchausen Program of the Institute of Medical Chemistry, Molecular Biology and Pathobiochemistry, Semmelweis University.

Conflict of interest: none

Corresponding author: Csaba Barta

Email: barta.csaba@med.semmelweis-univ.hu

Biography: Csaba Barta, is an Associate Professor at the Department of Molecular Biology at Semmelweis University, Budapest, Hungary. He obtained his degree as a Medical Doctor in 1999, and his PhD in molecular genetics in 2002 at Semmelweis University. As a scientist specializing in the field of psychiatric genetics his main research interests are genetic and epigenetic risk factors of substance use disorders and behavioral addictions, ADHD and Tourette disorder. He participates in a number of large international collaborations, eg. TS-Eurotrain: Interdisciplinary training network for Tourette Syndrome, the International Consortium on ADHD and Substance Abuse (ICASA), as well as the Horizon2020 project: Prevention and Remediation of Insulin Multimorbidity in Europe (PRIME).



The impact of social support on gambling in young males: A longitudinal study

Andreas M. Bickl¹, Ludwig Kraus^{1,2,3}, Johanna K. Loy¹, Peter Kriwy⁴, Pawel Slecicka⁵ & Larissa Schwarzkopf¹

1 IFT Institut für Therapieforschung, München, Germany.

2 Institute of Psychology, ELTE, Eötvös Loránd University, Budapest, Hungary.

3 Department of Public Health Sciences, Centre for Social Research on Alcohol and Drugs, Stockholm University, Stockholm, Sweden

4 Institute of Sociology, Chemnitz University of Technology, Chemnitz, Germany.

5 German University of Health and Sport, Ismaning, Germany.

Keywords: Gambling disorder, social support, longitudinal study, young adults

Abstract

Background: Young adult men, who gamble frequently, have an elevated risk for developing gambling-related problems. So far, little is known how changing levels of perceived social support interact with the development of gambling patterns and gambling-related problems in this population.

Methods: Data came from the Munich Leisure-time Study (MLS). We applied hierarchical linear models to investigate the longitudinal association of changes in perceived social support (operationalized via the ENRICH social support inventory) with gambling intensity, gambling frequency, and gambling-related problems. Pooling data from three assessments (baseline, 12-months & 24-months follow up) into two one-year intervals these models disentangle the associations of a) “level of perceived social support” (cross-sectional between subjects) and b) “changes in individual perceived social support” (longitudinal within-subjects).

Results: The analytical sample consisted of 169 subjects. Higher levels of social support were associated with less severe gambling problems (total score -0.12 units; $p < 0.014$). Furthermore, increasing individual social support was significantly associated with lower gambling frequency (-0.25 gambling days; $p < 0.06$) and intensity (-0.11 gambling hours; $p < 0.006$) and fewer gambling-related problems (total score -0.19 units; $p < 0.001$).

Discussion & Conclusion: The results suggest that social support has a mitigating effect on the course of problem gambling and gambling behaviour among young males. Moreover, our findings indicate that change in individual social support is more crucial to a gambler’s career than the initial level of social support. Treatment and prevention strategies that activate and reinforce beneficial social resources in people with gambling-related problems hence appear promising.

Funding sources: Funding was provided as an unrestricted grant by the Bavarian State Ministry of Finance, Regional Development and Regional Identity via the Bavarian State Ministry of Public Health and Care Services in the context of the Bavarian Coordination Centre for Gambling Issues (LSG Bayern).

Conflict of interest: The State of Bavaria provides gambling services (lotteries, sports betting, and casino games) within the State gambling monopoly via the State Lottery Administration and provides funding of the Bavarian Coordination Centre for Gambling Issues (LSG Bayern) as an unrestricted grant.

Ethical statement: The study was approved by the Ethical Board of the German Psychological Society (LK-102013). All participants were informed about the study and provided informed consent.

Corresponding author: Andreas M. Bickl

Email: bickl@ift.de

Biography: Andreas M. Bickl is a doctoral researcher in behavioural addiction at the IFT (IFT - Institut für Therapieforschung gemeinnützige Gesellschaft mbH) in Munich. His work focuses on socially relevant factors in the context of pathological gambling and its prevention. Prior to his current position, Andreas worked at the Catholic University of Eichstätt-Ingolstadt as a research assistant and lecturer in the Department of Empirical Social Research and Process-oriented Sociology.



Digital interventions for adult drug users: a systematic review and meta-analysis

Nikolaos Boumparis¹, Michael Schaub¹

¹ Swiss Research Institute for Public Health and Addiction, University of Zurich, Zurich, Switzerland

Keywords: digital; internet; intervention; meta-analysis; opioid; stimulant; cannabis; substance use

Abstract

Background: Drug use and drug use disorders (DUDs) constitute a public health, developmental, and security problem worldwide. About 5.5% of the population aged between 15 and 64 years have used drugs in the past year, while approximately 0.5 million deaths are annually attributable to drug use. Effective interventions for the treatment of DUDs exist. However, treatment coverage is extremely low, with only 7.1% of those with past-year DUDs receiving adequate treatment. Digital interventions have shown promising results for a variety of conditions. Digital interventions can remove barriers and therefore improve access to treatments.

Methods: In January 2022, we conducted a systematic literature search in the databases of PubMed, PsycINFO, Embase, and CENTRAL to identify randomized controlled trials examining the effectiveness of digital interventions in reducing drug use in adults. The quality of the included studies will be examined according to the GRADE approach. The primary outcome will be drug use reduction at post-treatment and follow-up. A systematic review with separate substance-specific meta-analyses will be conducted.

Results: We will present the available evidence, quality, and substance-specific drug use reduction effect sizes via Hedges' g.

Discussion & Conclusion: Strengthening treatment for people with DUDs is an essential public health importance, which is a cornerstone of the 2016 United Nations General Assembly Special Session on the World Drug Problem outcome document and has been specifically set as Target 3.5 of Goal 3, under the 2030 Agenda for Sustainable Development Goals. Therefore, it is of critical importance to disseminate the latest evidence for digital interventions targeting DUDs.

Funding sources: WHO

Conflict of interest: None

Ethical statement: Not applicable

Corresponding author: Nikolaos Boumparis

Email: niko.boumparis@isgf.uzh.ch

Biography: Nikolaos Boumparis has been working since 2021 as a postdoctoral researcher at the Swiss Research Institute for Public Health and Addiction at the University of Zurich. Nikolaos specializes in conducting randomized controlled trials and meta-analyses on technology-based psychological treatments for substance use and post-traumatic stress disorders.



Association between problematic internet use and mental distress in students during COVID-19: The importance of impulsivity.

Juliija Gecaite-Stonciene¹, Ausra Saudargiene^{2, 3}, Aiste Pranckeviciene¹, Vilma Liaugaudaite¹, Inga Griskova-Bulanova⁴, Dovile Simkute⁴, Rima Naginiene⁵, Laurynas-Linas Dainauskas², Gintare Ceidaite³, Julius Burkauskas¹

1 Laboratory of Behavioral Medicine, Neuroscience Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania.

2 Laboratory of Biophysics and Bioinformatics, Neuroscience Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania.

3 Department of Informatics, Vytautas Magnus University, Kaunas, Lithuania.

4 Department of Neurobiology and Biophysics, Institute of Biosciences, Vilnius University, Vilnius, Lithuania.

5 Laboratory of Toxicology, Neuroscience Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania.

Keywords: problematic internet use, anxiety, depression, impulsivity, COVID-19.

Abstract

Background: Engagement in a problematic internet use (PIU) as an impulsive coping with mental distress caused by the Coronavirus disease (COVID-19) pandemic may pose a long-lasting threat of developing anxiety and depressive disorders. The first aim of our study was to investigate mental distress symptoms prevalence during the COVID-19 pandemic in university students in Lithuania. The second aim was to test the hypothesis that PIU affects anxiety and depressive symptoms through the mediating role of impulsivity.

Methods: The cross-sectional study comprised 619 students (92.9 % females and 7.1% males) with a mean age of 22±3 years from the universities in Lithuania, who participated in an online survey from May to November, 2020. Participants completed scales including the Problematic Internet Use Questionnaire, the Generalized Anxiety Disorder Questionnaire, the Patient Health Questionnaire, and the Barrat Impulsiveness Scale. Structural equation modelling (SEM) was applied to examine the mediating effect of impulsivity in associations between PIU, anxiety and depression while controlling for age.

Results: 38.1 % of included participants reported markedly expressed symptoms of anxiety, while 43.6 % of students reported significant depressive symptoms. During the COVID-19 pandemic 40.9 % of students reported at least moderate increase in their time using the internet. The results of the SEM analysis showed a statistically significant effect of PIU on subjective anxiety symptoms and the statistically significant effect of PIU on subjective depression symptoms, mediated via impulsivity.

Conclusions: During the COVID-19 pandemic more than a third of students experienced anxiety or depression symptoms. Findings also suggest that the relationships between PIU, anxiety and depressive symptoms are mediated by impulsivity. These results underscore the importance of the inclusion of impulsivity factor in the studies analysing longitudinal effects of PIU on mental distress during COVID-19.

Funding sources: This project has received funding from the Research Council of Lithuania (LMTLT), agreement No S-GEV-20-5. We would like to express our deepest gratitude to the students who completed our survey. We thank the COST Action CA16207 European Network for Problematic Usage of the Internet, supported by COST (European Cooperation in Science and Technology: www.cost.eu) for the inspiration to explore this topic.

Conflict of interest: JG-S serves as a consultant at FACITtrans. In the past several years JB has been serving as a consultant to Cogstate, Ltd. The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Ethical Statement: The studies involving human participants were reviewed and approved by The Bioethics Center at Lithuanian University of Health Sciences. The participants provided their online consent to participate in this study.

Corresponding author: Julius Burkauskas

Email: julius.burkauskas@ismuni.lt

Biography: Dr Julius Burkauskas is a researcher, clinical psychologist leading the laboratory of Behavioral Medicine at Lithuanian University of Health Sciences Neuroscience Institute. He is currently appointed as Honorary Lecturer (Clinical) at the Department of Clinical & Pharmaceutical Sciences (CAPS) at Hertfordshire (UK) University. Julius has published 40 scientific publications in journals indexed by CA database, 5 book chapters and received numerous national and international awards: IBRO Travel award (2015, 2017), AACN Edith Kaplan Award (2015), WFSBP Young Investigator Award (2017), and Lithuanian Science Academy scholarship for young researchers (2021).



Co-occurrence in videogame players: Do videogames increase risk or improve resilience?

Tyrone L. Burleigh^{1,2}, Mark D. Griffiths², Alex Sumich², Grace Y Wang³, Daria J. Kuss²

1 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar

2 International Gaming Research Unit, Nottingham Trent University, Nottingham, UK

3 Auckland University of Technology, Auckland, New Zealand

Keywords: Gaming Disorder; Problematic Gaming; Co-Occurrence; Behavioral Disorder; Substance Use

Abstract

Background: Problematic gaming has been shown to co-occur with various other problematic behavioural and substance related behaviour, such as social media use and alcohol use. There is currently little research which considers the impact of co-occurring behaviour or substance use and the way in which they influence the development and maintenance of problematic or disordered gaming in the wider population

Methods: A survey was conducted to explore pattern of gaming and a variety of addictive behaviours, including sex, shopping, social media, internet use and gambling, and coping strategies among a sample of adults in the United Kingdom.

Results: Preliminary results reveal disordered gaming to be significantly correlated with game related contextual factors, sex addiction, internet addiction, shopping addiction, and problematic gambling. Gaming was also significantly correlated with avoidant coping strategies. Different coping strategies were found between gamers and non-gamers. Results also suggest that co-occurring behaviours exacerbate disordered gaming scores.

Discussion & Conclusion: Developing an understanding of the potential co-occurring behaviours within problematic and disordered gaming is needed. Furthermore, understanding coping style may better inform the risks of the development and maintenance of co-occurrence in problematic and disordered gaming.

Funding sources: None

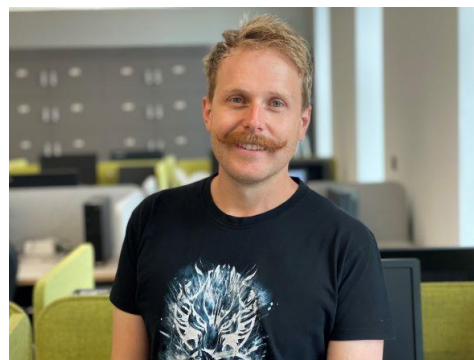
Conflict of interest: None

Ethical Statement: The authors declare that all procedures followed the ethical standards of the Declarations of Helsinki. Informed consent was obtained from all the participants for being included in the study. The study protocol has been approved by the Research Ethics Committee at Nottingham Trent University, United Kingdom.

Corresponding author: Tyrone L. Burleigh

Email: tyrone.burleigh@unigib.edu.gi

Biography: Tyrone L. Burleigh is an early career researcher that has just recently relocated to Gibraltar. Tyrone's work broadly focuses on the co-occurrence of various disordered behaviours (such as gambling behaviours and gambling disorder) and substance use and their manifestation within gaming disorder. He has used a number of methodologies including EEG and the use of the Spiking Neural Network (machine learning) architecture NeuCube. He also has a strong interest in the way gamers identify with the gaming avatar and its impact in offline and online contexts.



Effectiveness of the German Quitline for smoking cessation: Study protocol of a randomized controlled trial

Simone Delle ¹, Ludwig Kraus ^{1,2,3}, Simona Maspero ¹, Oliver Pogarell ⁴, Eva Hoch ^{1,4} and Kirsten Lochbühler ¹

1 IFT Institut für Therapieforschung, Munich, Germany

2 Department of Public Health Science, Centre for Social Research on Alcohol and Drugs, Stockholm University, Stockholm, Sweden

3 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

4 Department of Psychiatry, University of Munich, Munich, Germany, Munich, Germany

Keywords: smoking cessation, telephone counselling, randomized controlled trial, Quitline, tobacco smoking

Abstract

Background: Despite the decline in tobacco smoking exposure by more than one percent per year between 2010 and 2019, tobacco remains the second leading risk factor globally for premature deaths. To accelerate the reduction in tobacco smoking prevalence, innovative approaches are needed.

Objectives: This study aims to evaluate the effectiveness of telephone counselling in reaching abstinence in adult smokers.

Methods: A two-arm randomized controlled trial will be conducted among daily smokers. A total sample of at least 910 participants will be randomly assigned to either telephone counselling or the control group. In the telephone condition, participants will receive up to six proactive phone calls during an intervention period of three months. The principles of telephone counselling are built upon the theory of social learning. The control group will receive a self-help brochure on smoking cessation. Data collection will take place at baseline, and three and twelve months after the start of the intervention. Primary outcome measures will include the seven-day prevalence of abstinence at follow-ups and prolonged abstinence between three and twelve months follow-up. Secondary outcome measures will include quit attempts, nicotine dependence, and self-efficacy. Several covariates such as socio-demographic characteristics, craving, smoking and cue coping methods will be assessed.

Results & discussion: The results will provide insights into the effectiveness of proactive telephone counselling and the characteristics of participants with successful smoking cessation. It is expected that after both three and twelve months follow-up participation in the intervention group will lead to higher smoking cessation rates than in the control condition.

Funding sources: The trial is funded by the Federal Centre for Health Education (BZgA) on behalf of the German Ministry of Health (Z2/21.21.11/20). The funding source has no role in the design of the study and collection, in the analysis, in the interpretation of the data and in writing the manuscript.

Conflict of interest: The authors declare that they have no competing interests

Ethical Statement: This study has been approved by the Ethics Committee of the German Psychological Society (DGPs).

Corresponding author: Simone Delle

Email: delle@ift.de

Biography: Simone Delle is a researcher in the field of smoking prevention at the IFT Institute for Therapy Research Munich in Germany and a doctoral researcher at the faculty of medicine of the Ludwig-Maximilians-University Munich. She holds a Master's degree in Clinical Gerontopsychology from the Technical University in Chemnitz, Germany. In her dissertation she focuses on smoking cessation methods.



Addressing adherence and success rates of a digital self-help intervention for alcohol and substance use with machine learning

Marloes Derksen^{1, 2, 3, 4} Lucas Ramos^{1, 2} Matthijs Blankers^{1, 2, 3, 5} Guido van Wingen^{1, 2} Tamara de Bruijn⁶, Steffen Pauws^{7, 8} Anneke Goudriaan^{1, 2, 3, 4}

1 Department of Psychiatry, Amsterdam UMC, the Netherlands

2 Amsterdam Institute for Addiction Research, University of Amsterdam, Amsterdam, the Netherlands

3 Arkin Mental Health Care, Amsterdam, the Netherlands

4 Amsterdam Public Health Research Institute, Amsterdam, the Netherlands

5 Trimbos Institute, The Netherlands Institute of Mental Health and Addiction, Utrecht, the Netherlands

6 Jellinek Prevention, Amsterdam, the Netherlands

7 Department of Communication and Cognition, Tilburg University, Tilburg, the Netherlands

8 Department of Remote Patient Management and Chronic Care, Philips Research, Eindhoven, the Netherlands

Keywords: eHealth; machine learning; qualitative research; substance use

Abstract

Background: Digital self-help interventions for reducing the use of alcohol, tobacco and other drugs (ATOD) have low adherence and mixed results in (prolonged) participation and outcome.

Objectives: We aimed to 1) predict intervention adherence and success, 2) determine possible solutions to improve these rates, and 3) explore acceptability and ethical issues around application of machine learning in eHealth.

Methods: To identify predictors, we included participants from a Dutch evidence-based ATOD intervention (Jellinek Digital Self-help). Machine learning models were trained, validated, and tested using a nested k-fold cross-validation strategy. Subsequently, we held focus groups among intervention researchers and clinicians (n=5) to determine possible solutions to improve adherence and success rates, and among participants (n=10) to explore opinions around application of machine learning in eHealth.

Results: From the >32K participants, around 20% completed the first module. Success rates (i.e., completing all modules and reaching substance use goals) were 30% for alcohol, 22% for cannabis, and 24% for tobacco. Quitting substance use instead of moderation as a goal, initial daily consumption, no drinking on the weekends as a goal, and intervention engagement were strong predictors of success. Focus group results led to implementation of changes involving 1) promoting stopping rather than reducing, 2) sending daily emails, and 3) abandoning the minimal 5 days of practice in a module before continuation. Further focus group results will be presented.

Discussion & Conclusion: Machine learning models better predicted drop-out than that they predicted success rates, which had consequences for solutions discussed in the focus groups and following implementation.

Funding sources: This work was supported by ZonMw, project number 555003024.

Conflict of interest: None

Ethical Statement: Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

Corresponding author: Marloes Derksen

Email: Marloes.Derksen@arkin.nl

Biography: Marloes Derksen has an educational background in Health and Society (BSc) and Health Education and Promotion (MSc). Pursuing her research ambitions, Marloes obtained her doctorate degree at Amsterdam UMC/University of Amsterdam. Her PhD thesis was titled: mHealth with game elements to support smoking cessation among disadvantaged women during and after pregnancy. Marloes continued her career as a research coordinator and senior researcher at the Academic Workplace Addiction of Jellinek/Arkin.



Food addiction and lifetime alcohol and illicit drugs use in specific eating disorders

Fernando Fernandez-Aranda ^{1,2}, Romina Miranda-Olivos ¹, Zaida Agüera ², Roser Granero ³, Susana Jiménez-Murcia ¹

1 University Hospital Bellvitge-IDIBELL, Barcelona, Spain

2 University of Barcelona-IDIBELL, Barcelona, Spain

3 University Autònoma Barcelona-IDIBELL, Barcelona, Spain

Abstract

Background: Food addiction (FA) and substance use (SU) have frequently been reported in patients with eating disorders (EDs). Our study aimed to assess the prevalence rates of FA and/or lifetime problematic alcohol and illicit drug use among patients with specific ED, such as bulimia nervosa (BN), binge eating disorder (BED), and other specified feeding and eating disorder (OSFED).

Objectives: We sought to identify clinical, psychopathological, and personality profiles involved in these addictive behavior-based phenotypes.

Methods: The total sample was 527 patients (176 BN, 115 BED, and 236 OSFED). FA was assessed through the Yale Food Addiction Scale 2.0. To determine lifetime SU, a semi-structured clinical interview was carried out.

Results: Patients with BN had the highest rates of FA both with and without SU. No gender differences were obtained for the prevalence of current FA and/or lifetime SU. Patients reporting at least one addictive-related behavior exhibited increased clinical severity compared to those who reported none. Increased impulsivity (such as high lack of premeditation, sensation seeking, and positive urgency) and low self-directedness were differentiating factors for presenting one or two addictive behaviors.

Discussion & Conclusion: Overall, patients presenting with at least one addictive-like behavior reported a poorer clinical status than those without. Also, patients with FA and SU exhibited a more dysfunctional profile characterized by high impulsivity and low self-directedness. These findings would support the need for targeted treatments to reduce impulsivity and increase self-directedness, especially in patients with any addictive-related behavior, as a step towards improving their treatment outcome.

Funding sources: PI17/1667

Conflict of interest: FFA received consultancy honoraria from Novo Nordisk and editorial honoraria as EIC from Wiley. The rest of the authors declare no conflict of interest.

Ethical Statement: The study procedures were carried out in accordance with the Declaration of Helsinki. The Clinical Research Ethics Committee of Bellvitge University Hospital approved the study. Written informed consent was obtained from all participants before taking part in the study.

Corresponding author: Fernando Fernandez-Aranda

Email: ffernandez@bellvitgehospital.cat

Biography: Fernando Fernandez-Aranda is a distinguished Professor of the School of Medicine and Health Sciences at the University of Barcelona, specialist in Clinical Psychology. He has been the director of the Eating Disorders (ED) Unit at the Department of Psychiatry at the University Hospital Bellvitge, Barcelona, Spain). He is currently the Scientific Director of the Research Institute IDIBELL, co-Head of Research Group CIBERObn (Excellent Spanish Research Network for Obesity and Nutrition) and co-Head of Group Psychoneurobiology of Eating and Addictive Behaviours (IDIBELL). He is past-president of the Eating Disorders Research Society (EDRS) and Co-Chair of the ED Section of the World Psychiatric Association (2018-2023).



Hepatitis C and attention-deficit hyperactivity disorder in a high-risk group of opioid-maintained prisoners

Gabriele Fischer¹

¹ Center of Public Health, Medical University, Vienna, Austria

Abstract

Background: The somatic and psychiatric burden in people suffering from substance use disorder (SUD), especially in prisoners, is high. However, standardized data in inmates are rare.

Objectives: The study aimed in providing structured data on two highly prevalent conditions in this target group: Hepatitis C (HCV) and Attention-deficit hyperactivity disorder (ADHD), next to psychiatric and delinquency screening.

Methods: In the cross-sectional study standardized procedures (Mini International Neuropsychiatric Interview, European Addiction Severity Index including crime module, Adult ADHD self-report scale, Wender Utah rating scale) were applied to assess ADHD, psychiatric comorbidities and substance use in four Austrian prisons. Medical data were retrieved from inmates' files Information. Blood analyses were used for verification of HCV-antibodies, HCV-RNA and genotype.

Results: Of 133 opioid-maintained inmates (mean age 35.7 years; 21.8% female) the majority received methadone (41.4%; mean dose 44.8mg/d), followed by levomethadone (25.6%; 15.0mg/d), SROM (18%; 656.7mg/d) and Buprenorphine (15%; 6.3mg/d). Among all participants 49% reported symptoms of childhood ADHD and 17% screened positive for current ADHD. Psychiatric disorders were highly prevalent among the total sample, with 58.6% suffering from at least one AXIS I disorder and even higher scoring in participants with ADHD (86.4%), with 50% showing current major depression and suicidal risk. Symptom specific medication was rare (3.1% for ADHD medication), whereas 85% received benzodiazepines. Regarding HCV, as many as 74% tested positive for HCV-antibodies and an active virus was confirmed in 45%. Although the majority was aware of their HCV status prior investigation (89%), none of the inmates received treatment for HCV at the time of investigation.

Discussion & Conclusion: The first study in this cohort showed high morbidity patterns with insufficient treatment coverage. In HCV, from a public health standpoint, treatment would reduce infection risk in the population, as well as effective pharmacologic ADHD treatment reduces crime rates and individual suffering. Not only psychiatric standards have to be met, but also the Convention on the Rights of Persons with Disabilities (CRPD) and the Optional Protocol to the Convention against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment (OPCAT).

Funding sources: shire & MSD - educational grant to university

Conflict of interest: None

Ethical statement: Done under IB confirmation

Corresponding author: Gabriele Fischer

Email: gabriele.fischer@meduniwien.ac.at

Biography: Prof. Dr. Gabriele Fischer is a psychiatrist with double affiliation to both, Department of Psychiatry & Psychotherapy and Institute at Public Health at Medical University Vienna. She has served since 2008 as medical director of the Addiction clinic next to her appointment as chairwoman of a national prevention mechanism (NPM) commission in Austria, where she was responsible together with her commission members to monitor human rights. During her long career she has published > 150 scientific papers with > 400 presentations. For decades she has engaged as a consultant for UN, WHO and other international organizations on psychiatry & human rights. In addition, she serves as member of the scientific board of EMCDDA, Lisbon.



Introducing a free association network-based approach in addiction research

Domonkos File³, Bálint File¹, Beáta Bóthe², Zolt Demetrovics^{3,4}

1 Wigner Research Centre for Physics, Eötvös Loránd Research Network, Budapest, Hungary

2 Département de Psychologie, Université de Montréal, Montreal, Canada

3 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

4 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: free word association, mental representation, problematic behaviour, substance misuse

Abstract

Background: Despite the great interest in combining qualitative and quantitative methods, relatively few studies did so.

Objectives: Here we present a free association network-based approach, which handles qualitative data in a semi-structured way, suitable for traditional quantitative statistical analyses.

Methods: An online survey was used with 661 participants. The respondent's task was to write five words or expressions that comes into their mind regarding the sentence "Imagine you are doing the excessive activity that bothers you the most". After that, they had to provide two emotional labels for each and indicate the substance/behavior they did think of. We then constructed a co-occurring opinion network, in which associations were considered to reflect opinions and associations, connected based on their statistical co-occurrences. Chi-square tests of independence were performed to examine the relation between (1) misuse type (substance or behavioral) or (2) problem severity (low or high) and the corresponding representations and emotions.

Results: The network analyses identified four distinct association modules; guilt, addiction, relaxation and time wasting. For substance-misuses, 'addiction', while for problem-behaviors 'time wasting' module were more frequent. For intense substance-misuses, the dominant module was 'guilt', while for intense problem-behaviors it was 'time wasting'. Associations related to joy and relaxation were more frequent for substance-misuses, while interest were more frequent for problem-behaviors. There was no difference regarding positive and negative affects between substance-misuses and problem-behaviors.

Discussion & Conclusion: These results show that the free association method can provide meaningful data in addiction research, which can overcome the predefined scope of questionnaires.

Funding sources (if applicable): National Research, Development and Innovation Office (K126835, K131635, NKFI-138976, NKFIH-1157-8/2019-DT)

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The study was conducted following the Declaration of Helsinki and was approved by the institutional ethical review board (2020/258).

Corresponding author: Domonkos File

Email: domonkos.file@gmail.com

Biography: Domonkos File is an assistant professor at Eötvös Loránd University, Budapest, Hungary. Domonkos is interested in cognitive theories explaining addictive behaviors, such as the Incentive Sensitization Theory or Construal-Level Theory. Prior to joining ELTE, Domonkos was doing EEG research focusing on attentional mechanisms.



Assessing the responsible gambling research, education, and service needs of the Gibraltar gambling industry

Judith Glynn¹, Zsolt Demetrovics^{1,2}, Andrea Czako^{1,2}

1 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

2 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

Keywords: needs assessment; gambling industry; gaming industry; responsible gambling/gaming

Abstract

Background: Needs assessment in the *problem gambling* literature has exclusively focused on informing health and social services to address or reduce gambling harm. In the *broader gambling* literature, needs assessment is used primarily by colleges to develop specialized curriculum in hospitality, tourism and business for gambling industry employees and managers. Two studies examined industry consumption of research focused on consumer behaviour, marketing, human resources, business, and the impact of regulatory changes on revenue and growth. There is a lack of needs assessment of the gambling industry to serve responsible gambling goals.

Objectives: To address the gap in understanding the knowledge-related needs of the gambling industry to serve harm reduction goals, including on-the-job training and professional development; employee experiences and needs; research topics; ways to receive/consume research; and shared services to support customers.

Methods: We will administer an online survey, followed by semi-structured interviews, developed based on the survey results. Sampling will include all gambling companies licensed in Gibraltar, targeting senior managers in responsible gambling, safer gambling and compliance. The survey has been piloted with subject matter experts.

Research plan: The research plan, including an overview of the survey, will be presented for discussion and input with EASAR conference attendees.

Funding sources: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Conflict of interest: In her capacity as President of PRET Solutions Judith Glynn has received funding for responsible gambling research services from gambling operators in Canada, the UK, Australia and Italy. Zsolt Demetrovics has been involved in research on responsible gambling funded by Szerencsejáték Ltd. and the Gambling Supervision Board and provided educational materials for the Szerencsejáték Ltd's responsible gambling program. The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The study has been submitted to the ethics review committee, University of Gibraltar

Corresponding author: Judith Glynn

Email: Judith.glynn@unigib.edu.gi

Biography: Judith Glynn is a PhD student at the Centre of Excellence in Responsible Gaming, University of Gibraltar. She holds a Masters of Science in Consumer Behaviour from University of Guelph. Her work focuses on the role of gambling in society, legal frameworks and the legitimization of gambling policy through dedication of resources to responsible gambling. In the 1990s, Judith was a senior civil servant in the Gaming Secretariat which managed the expansion of legal gambling in Ontario, Canada. She was Director and later CEO of the Ontario Problem Gambling Research Centre. Judith has been compensated for responsible gambling research services to government, regulatory bodies, public health agencies and gambling operators.



Self-reported alcohol consumption and ethyl glucuronide in hair

Dorthe Grüner Nielsen¹, Kjeld Andersen^{1,2,3}, Professor^{1,2,3}, Anette Søgaa Nielsen^{1,2}, Flemming Nielsen⁴, Silke Behrendt^{1,5}, Randi Bilberg¹, Michael Bogenschütz^{6,7}, Gerhard Bühringer^{1,8,9}, Angelina Isabella Mellentin^{1,2,10}

1 Unit for Clinical Alcohol Research, Department of Clinical Research, University of Southern Denmark, Odense, Denmark

2 BRIDGE, Brain Research, Inter-Disciplinary Guided Excellence, Department of Clinical Research, University of Southern Denmark, Odense, Denmark;

3 Open, Odense Patient data Explorative Network, Odense University Hospital, Odense, Denmark

4 Environmental Medicine, Department of Public Health, University of Southern Denmark, Odense, Denmark

5 Institute for Psychology, University of Southern Denmark, Odense, Denmark

6 NYU Grossman School of Medicine, New York, NY, USA

7 Health Sciences Center, University of New Mexico, Albuquerque, New Mexico, USA

8 Institute of Clinical Psychology and Psychotherapy, Technische Universität Dresden, Dresden, Germany

9 IFT Institut für Therapieforchung, Munich, Germany

10 Tele-Psychiatric Center, Region of Southern Denmark, Odense, Denmark

Keywords: Aged, Alcohol Drinking, Biomarkers, Hair, Outcome assessment, Self Report

Abstract

Background: There is a lack of evidence for the consistency between self-reported alcohol consumption (SRAC) and concentrations of ethyl glucuronide in hair (hEtG) among elderly patients treated for alcohol use disorder (AUD)

Objective: This study assessed the consistency between SRAC and HETG in this section of patients.

Methods: A total of 201 patients with AUD were assessed for SRAC using FORM 90, and hEtG, 14 or 22 weeks after treatment conclusion. Patients were grouped according to SRAC (g/day) and corresponding hEtG concentrations: (pg/mg): 0 & < 5 (abstinence); 0.1 - 14.3 & 5.0 – 9.9 (low consumption); 14.4 - 21.4 & 10.0 - 15.9 (moderate consumption); 21.5 - 59.9 & 16.0 – 30 (high consumption); and ≥ 60 & > 30 (excessive consumption). The extent of under- and over-reporting was examined by crosstabulations and inter-rater reliability was reported by kappa correlations. Associations and effect modification were examined by conditional logistic regression. Due to multi-testing, p-values ≤ 0.01 were considered significant.

Results: Under-reporting was found in 100 patients (49.8%) and over-reporting in 43 patients (21.4%). The kappa coefficients varied between 0.19 and 0.39. HETG was more likely to detect low-, moderate-, and high alcohol consumption compared to SRAC (ORs between 4.8 – 13.1, all p-values < 0.01), but SRAC and hEtG did not differ significantly with respect to identification of abstinence (OR = 1.9, p = 0.04).

Discussion & Conclusion: Inconsistency between SRAC and hEtG was found in a considerable number of the patients. More studies examining the consistency between SRAC and alcohol biomarkers in this population seem warranted.

Funding sources: The study was unconditionally funded by the Lundbeck Foundation (grant ID: R155-2012-11282) and Region of Southern Denmark (grant ID: D.NielsenA2716 1.r.18).

Conflict of interest: None

Ethical Statement: Ethics approval and consent to participate All patients provided informed consent and had to pass an informed consent quiz. The study was approved by local ethical committees. In Denmark by The Regional Scientific Ethical Committees for Southern Denmark, (project-ID S-2013138); In Germany by the Ethics Committee, Technische Universität, Dresden, (project-ID EK 389102013) and Ethical Board of the German Society of Psychology (DGPs, Reg.-No. EKANtrag Pfeiffer-Gerschel / Bühringer 12/2013, Munich); and USA, New Mexico (project-ID University of New Mexico HRRC #13-580).

Corresponding author: Dorthe Grüner Nielsen

Email: dgnielsen@health.sdu.dk

Biography: Dorthe Grüner Nielsen is a PhD student at the Unit for Clinical Alcohol Research, Institute of Clinical Research, University of Southern Denmark. She is studying consistency between self-reported alcohol consumption and concentrations of ethyl glucuronide in hair and potential predictors of inconsistency. She has a background in medical science and her areas of interest are addiction disorders, psychotic disorders, and patient safety.



Results from a cluster randomized controlled trial on Community Reinforcement and Family Training (CRAFT) - comparing individual, group and self-help interventions

Rikke Hellum^{1,2,3}, Randi Bilberg^{1,2,3}, Gallus Bischof⁶, Kjeld Andersen^{1,2}, Morten Hesse⁵, Anette Sjøgaard Nielsen^{1,2,3}

1 Unit of Clinical Alcohol Research, Clinical Institute, University of Southern Denmark, Odense, Denmark

2 Psychiatric Department, Odense University Hospital, Odense, Denmark

3 Odense Patient Data Explorative Network (OPEN), Odense University Hospital, Odense, Denmark

5 Centre for Alcohol and Drug Research, Department of Psychological and Behavioral Sciences, Aarhus University, Aarhus, Denmark

6 Department of Psychiatry and Psychotherapy, University of Lübeck, Lübeck, Germany.

Keywords: Alcohol, Alcohol Use disorder, Alcohol treatment, Concerned Significant others, Relatives

Abstract

Background: Around 585,000 people in Denmark engage in harmful use of alcohol with 140,000 suffering from alcohol dependence. The concerned significant others (CSOs) are often suffering almost as much as the person with alcohol use disorder. Community Reinforcement and Family Training (CRAFT) is an intervention to help CSOs of treatment-reluctant people with alcohol problems.

Objectives: The aim of the present study was to compare in real-life settings the efficiency of three formats for delivery of CRAFT: group sessions, individual sessions, and written material only.

Methods: The study was a three-arm, cluster Randomized Control Trial. 18 public treatment centers for alcohol use disorders were randomly assigned to deliver one of the three treatment conditions (individual, group, or self-help intervention). The CSOs filled out a questionnaire at baseline and after 3 and 6 months.

Results: A total of 249 CSOs were included. The follow-up rate at three months was 60%. At three months follow-up 29% (n=32) of the CSOs from the group, and individual intervention reported that their IP had engaged in treatment. From the self-administered CRAFT (control group) 15% (n=5) CSOs engaged their IP to treatment. The difference between the intervention for individual/group vs. control group was not statistically significant (Odds ratio (OR) = 2.27 (95% CI: 0.80, 6.41)).

Discussion & Conclusion: We hypothesized that CSOs receiving CRAFT in a group format would improve the most, but although our findings pointed in this direction, the differences were not statistically significant.

Funding sources: Trygffonden, University of Southern Denmark, The Region of Southern Denmark.

Conflict of interest: The authors declare no conflict of interest.

Ethical statement: The Study is approved by the Danish Data Protection Agency (Region of Southern Denmark 2008-58-0035 project no. 17/46074). The study has been submitted for approval at the Danish Ethical Committee (Project-ID: S-20170148) but was excluded for approval on account of it being a questionnaire survey only.

Corresponding author: Rikke Hellum

Email: rhellum@health.sdu.dk

Biography: Rikke Hellum has a Master's degree in Public Health and works as a Ph.D. student at the Unit of Clinical Alcohol Research (UCAR), University of Southern Denmark. Her interest in addiction research started when she wrote her master thesis at UCAR regarding how nurses talk with somatic in-patients about alcohol. Next, she worked as a research assistant on different projects, including a project about creative writing as an additional offer for AUD patients in alcohol treatment. In her Ph.D. thesis, she studies the effectiveness and degree of acceptance of Community Reinforcement and Family Training (CRAFT) in Danish Alcohol Treatment. The thesis is going to be handed-in in ultimo June 2022.



The relationship between problem gambling and suicidality: An overview of the field

Joakim H. Kristensen^{1,2}, Ståle Pallesen^{1,2}, Mark D. Griffiths³, Eilin K. Erevik^{1,2}

1 Department of psychosocial science, University of Bergen, Norway, Bergen

2 Norwegian Competence Center for Gambling and Gaming Research, University of Bergen, Norway, Bergen

3 International Gaming Research Unit, Psychology Department, Nottingham Trent University, UK, Nottingham

Keywords: Problem gambling, gambling disorder, pathological gambling, suicide, meta-analysis

Abstract

Background: Problem gambling has been linked to suicidality - including suicidal ideation, suicide attempts, and death by suicide. However, the prevalence rate of suicidality among problem gamblers, and the relative likelihood of suicidality among problem gamblers compared to non-problematic gamblers have varied significantly across studies. There is currently no available meta-analysis specifically investigating and consolidating the literature on problem gambling and suicidality quantitatively.

Methods: We conducted a meta-analytic literature review to synthesize overall prevalence rates and effect sizes across studies and explore sources of between-study variance. Literature searches without time constraints were conducted in January 2022 in ISI Web of Science, APA PsycINFO, APA PsycNet, Medline, CINAHL, ProQuest, Embase, and google scholar electronic databases. Papers will be included if they contained original empirical data on the prevalence rate of suicidality among problem gamblers and/or comparisons of problem gamblers and non-problem gamblers on suicidality (or sufficient information to calculate such data). Meta-analyses will be conducted separately for each individual suicide parameter (i.e., ideation, attempts, deaths by suicide) provided it is reported by five or more studies. The between-study variance will be investigated by subgroup analysis and/or meta-regressions.

Results: The project is ongoing, and the current presentation will present and discuss preliminary findings.

Discussion & Conclusion: Will be presented at the conference

Funding sources: Norwegian Competence Center for Gambling and Gaming Research.

Conflict of interest: None to be declared

Ethical statement: Not applicable

Corresponding author: Joakim Hellumbråten Kristensen

Email: Joakim.Kristensen@uib.no

Biography: Joakim Hellumbråten Kristensen holds a master's degree in Social- and Cognitive psychology from the University of Bergen, Norway. He currently works as a PhD candidate at the Department of psychosocial science at the same university of which he is affiliated with the Addiction research group and the Norwegian Competence Center for Gambling and Gaming Research. Kristensen's main research areas are within behavioural addiction, with an emphasis on problem gambling and problem video gaming research. His doctoral work concerns the relationship between problem gambling and suicidality.



The effect of gambling marketing articles, gambling ads, and gambling warning message on the intention to gamble: results from an online study

Adam Hörömpöli^{1,2}, Gyöngyi Kökönyei², Zsolt Demetrovics^{3,2}

1 Doctoral School of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

2 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

3 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: gambling, gambling ads, warning message, gambling intention, past gambling behaviour

Abstract

Background: Positively framed messages on gambling – e.g., easy money with gambling – have been considered to promote gambling intentions and behaviours. On the contrary, gambling-related warning messages might help individuals to regulate their gambling behaviours to reduce gambling-related harm.

Objectives: In the present study we aimed to investigate whether well-designed gambling-related warning messages (compared to gambling ads and a control condition) had an effect on gambling intention after reading articles about money making (with gambling vs. hard work).

Methods: We analysed the data of 657 participants (aged between: 18-83 year; 463 female). In our online survey, participants were randomly assigned to one of the three groups: (1) reading an article on money making with gambling; (2) reading an article on money making with hard work; or (3) a control condition (no article). Additionally, 3 types of ads were randomly used: gambling ads, warning message, or asking of stop the adblockers (as neutral option). In our analysis, we controlled for gambling severity assessed by the Problem Gambling Severity Index and past gambling behaviour.

Results: The two-way ANOVA showed that article type had a significant main effect ($F(1, 648)=6.040$ $p=.014$ $\eta_p^2=.009$), and post-hoc analysis revealed that those who read the money making with hard work article had lower score ($p<.014$) on the intention to gamble in the next month. Reading about easy money with gambling condition did not differ from control condition. Adverts had no significant effect on gambling intention.

Discussion & Conclusion: Contrary to our expectations, neither positively framed message on gambling nor gambling-related warning message had significant effect on gambling intention. These results might be explained by the fact that our participants were mainly non-problematic gamblers. Future studies should focus on the examination of problem gamblers.

Funding sources: This study was supported by the Hungarian National Research, Development and Innovation Office (KKP126835, FK128614) and ÚNKP-20-3 New National Excellence Program Of The Ministry For Innovation And Technology from the source of the National Research, Development And Innovation Fund

Conflict of interest: ELTE Eötvös Loránd University receives funding from the Szerencsejáték Ltd. to maintain a telephone helpline service for problematic gambling. ZD has also been involved in research on responsible gambling funded by Szerencsejáték Ltd. and the Gambling Supervision Board and provided educational materials for the Szerencsejáték Ltd's responsible gambling program. The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation. However, these funding aren't related to this study and the funding institution had no role in the study design or the collection, analysis, and interpretation of the data.

Ethical Statement: The study was approved by the Research Ethics Committee of the Faculty of Education and Psychology, ELTE Eötvös Loránd University

Corresponding author: Adam Hörömpöli

Email: horompoli.adam@ppk.elte.hu

Biography: Adam Hörömpöli is a phd student at ELTE Eötvös Loránd University, Doctoral School of Psychology, Budapest (Hungary). His research focuses on the connection between emotional regulation strategies (especially repetitive negative thinking) and problem gambling.



Anger rumination and harmful cannabis use: a bifactor model of the Anger Rumination Scale (ARS) and the mediating role of coping motives

Zsolt Horváth¹, Gyöngyi Kökönyei¹, Péter Sárosi^{1, 2}, Mónika Koós^{1,2}, Zsolt Demetrovics^{1,3}, Róbert Urbán¹

¹ Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

² Doctoral School of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

³ Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: anger rumination, Anger Rumination Scale, bifactor model, cannabis use, coping motives.

Abstract

Background: Concerns regarding the Anger Rumination Scale's (ARS) factor structure were raised. Hierarchical factor models can contribute having more precise measurement on the ARS. Anger rumination (AR) is consistently associated with maladaptive psychopathological outcomes. However, there is a lack of research on the specific association between harmful cannabis use and AR.

Objectives: The goals of the present study were to examine the factor structure of the ARS among cannabis users, and to examine the mediating role of AR and coping motives on the relationship between hostility and harmful cannabis use.

Methods: The cross-sectional study used a convenience sample of 899 past year cannabis users (Males: 67.63%, Age: M=29.18 [SD=7.83]). Standardized questionnaires measured harmful patterns and motives of cannabis use, AR and hostility. Confirmatory factor analysis and structural equation modelling were applied to test the study aims.

Results: A bifactor model of the ARS presented the most optimal model fit. High proportion of the variance was explained by the general AR factor. Two significant indirect effects were identified in the mediation model. The positive effect of hostility on harmful cannabis use was mediated via coping motives and via AR and coping motives.

Conclusion: The bifactor model of the ARS was essentially unidimensional. Sufficient reliability was presented for the general AR factor but not for the specific factors. A possible risk mechanism via AR was suggested in the context of harmful cannabis use: hostility can lead to AR which in turn can predict harmful cannabis use via coping motives.

Funding sources: Zsolt Horváth was supported by the ÚNKP-21-4 New National Excellence Program of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund. Zsolt Demetrovics's contribution was supported by the Hungarian National Research, Development and Innovation Office (KKP126835, K131635). Mónika Koós was supported by the New National Excellence Program of the Ministry of Human Capacities (ÚNKP-21-3).

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The authors declare that all procedures followed the ethical standards of the Declarations of Helsinki. Informed consent was obtained from all the participants for being included in the study. The study protocol has been approved by the Research Ethics Committee at the Faculty of Education and Psychology of ELTE Eötvös Loránd University, Budapest, Hungary (approval number: 2020/407).

Corresponding author: Zsolt Horváth

Email: horvath.zsolt@ppk.elte.hu

Biography: Zsolt Horváth is an assistant lecturer at the Psychology Institute of ELTE Eötvös Loránd University, Budapest, Hungary. His research mainly focuses on topics concerning addictive behaviours and psychometrics. Specifically, his PhD dissertation examines the associations between alcohol use-related outcomes and psychopathological symptoms by using person- and variable-oriented analytical approaches.



Interrelations of ethno-cultural and socio-economic risk factors with alcohol use in an urban environment

Karoline Huth^{1,2}, Judy Luigjes¹, Maarten Marsman², Anneke Goudriaan^{1,3}, Ruth van Holst¹

1 Amsterdam UMC location University of Amsterdam, Amsterdam, the Netherlands

2 University of Amsterdam, Amsterdam, the Netherlands

3 Arkin Mental Health Institute, Amsterdam, the Netherlands

Keywords: alcohol use, socio-economic, ethnicity, network analysis, urban environment

Abstract

Background: Social determinants such as ethno-cultural and socio-economic factors gain increasing acknowledgement as pressing factors for mental health. While social determinants largely affect mental health, individuals themselves have little influence on those determinants; one cannot change one's ethnicity and social status to a little extent. Through assessing these societal influences, one takes the perspective of population mental health, where mental distress in communities can be understood as a response to relative deprivation, social injustice, structural racism and inadequate access to health care and education facilities.

Methods: We utilise a large-scale ethnic diverse population sample in an urban context, the Healthy Life in Urban Setting (HELIUS) study in Amsterdam to address the question: What are the mechanisms underlying the interplay of ethno-cultural factors, socio-economic determinants, and mental health? The dataset consists of 24,789 participants who range between the age of 18 to 70 and belong to the five major ethnic groups in the Netherlands (i.e., Dutch, African Surinamese, South-Asian Surinamese, Ghanaian, Turkish, and Moroccan). We leverage a Bayesian network analysis to assess the mutual influence of ethno-cultural factors (i.e., perceived ethnic discrimination, ethnic identity), socio-economic factors (i.e., education, employment), and alcohol use.

Results: Will be presented at the congress.

Conclusion: We conclude with suggestions how interventions could become a matter of public health such as better socio-economic opportunities.

Funding sources: None

Conflict of interest: None

Ethical Statement: We utilized an existing dataset for which original authors obtained ethics approval.

Corresponding author: Karoline Huth

Email: k.huth@uva.nl

Biography: Karoline Huth is a Ph.D. candidate at the Centre for Urban Mental Health at the University of Amsterdam. She focuses on developing a network theory of depression and addiction in an urban context. Her project is supervised by prof. dr. Ruth van Holst, prof. dr. Maarten Marsman, prof. dr. Judy Luigjes, and prof. dr. Anneke Goudriaan. With a strong background in psychological methods, she advances statistical methods around network analysis and applies those to answer questions in (clinical) psychology.



Neurobiological, endocrine and clinical associated factors in gambling addiction

Susana Jimenez-Murcia^{1, 2, 3, 4}, Roser Granero^{3, 4, 5}, Isabel Baenas^{1, 3, 4}, Bernat Mora-Maltas¹, Amparo del Pino-Gutierrez^{1, 3, 4, 6}, Mikel Etxandi^{1, 7}, Sulay Tovar^{4, 8}, Carlos Diéguez^{4, 8}, Neus Solé-Morata^{1, 3}, Mónica Gómez-Peña^{1, 3}, Laura Moragas^{1, 3}, Fernando Fernández-Aranda^{1, 2, 3, 4}

1 Department of Psychiatry, Bellvitge University Hospital-IDIBELL, Barcelona, Spain

2 Department of Clinical Sciences, School of Medicine and Health Sciences, University of Barcelona, Barcelona, Spain

3 Psychoneurobiology of Eating and Addictive Behaviors Group, Institut d'Investigació Biomèdica de Bellvitge IDIBELL, Barcelona, Spain

4 Ciber Fisiopatología Obesidad y Nutrición (CIBEROBN), Instituto de Salud Carlos III, Barcelona, Spain

5 Department of Psychobiology and Methodology, Autonomous University of Barcelona, Barcelona, Spain

6 Departament d'Infermeria de Salut Pública, Salut Mental i Maternoinfantil, Escola Universitària d'Infermeria, Universitat de Barcelona, Barcelona, Spain

7 Department of Psychiatry, Germans Trias i Pujol Hospital, Barcelona, Spain

8 Centro de Investigación en Medicina Molecular (CIMUS), Universidade de Santiago de Compostela and Instituto de Investigaciones Sanitarias de Santiago de Compostela (IDIS), Santiago de Compostela, Spain

Keywords: Gambling disorder, endophenotypes, biomarkers, etiology

Abstract

Background: Gambling has been an entertainment and leisure activity since ancient times. Although for most people this activity is only a distraction, for others it becomes a disorder with serious consequences. Although gambling brings very significant benefits in the form of jobs, taxes, social aid actions, etc., this activity can have dramatic consequences for the people who suffer from it and their families. Gambling Disorder (GD) has a complex multifactorial etiology with the interaction between biological (genetic, neuroendocrine, neuropsychological...) and environmental (psychosocial, educational, cultural...) factors. Its study in association with the clinical (phenotypic) characteristics of the disorder allows a better understanding of the nosology of GD. This enables the development of diagnostic, prevention and treatment tools based on potential therapeutic targets, with the premise of promoting precision medicine.

Objectives: To identify differentiated endophenotypes and phenotypes in a clinical sample of patients with a diagnosis of GD, who had requested treatment for their gambling problem in a specialized unit of a tertiary public hospital.

Methods: A cross-sectional cohort design was applied. The total sample size was 237 subjects with a diagnosis of GD and 41 controls. The two groups were assessed with a comprehensive battery of psychological and neuropsychological tests.

Results: The clinical group (GD) consisted mainly of males (92.4%), with a mean age of 40.36 years, with primary or secondary education (90.3%), single (49.8%) and with low or medium-low socioeconomic position indexes (81.9%). Control group included also mainly men (75.0%), single (52.8%) and within mean-low to low social level (94.5%). Compared to the control group, GD patients showed worse neurocognitive performance and lower mean levels in some hormones (such as LEAP2 and leptin). It was also possible to identify differentiated subtypes of patients, depending on these risk factors and the type of game preferred (strategic vs. nonstrategic).

Conclusions: GD is a heterogeneous condition, in which different subtypes can be identified, depending on a number of endophenotypes, phenotypes and type of gambling chosen for addiction. The search for biomarkers is crucial for the development of personalized treatment programs.

Corresponding author: Susana Jiménez-Murcia

Email: sjimenez@bellvitgehospital.cat

Biography: Susana Jiménez-Murcia, Specialist in Clinical Psychology, has been the director of the Pathological Gambling and Behavioral Addictions Unit at the Department of Psychiatry (University Hospital Bellvitge-HUB/IDIBELL) since 2002. She is the Co-PI of Group CIBEROBN (Excellent Spanish Research Network for Obesity and Nutrition) and Associate Professor since 2006 of the School of Medicine at the University of Barcelona.



Religiosity, psychological proneness and the occurrence of addictive behaviours

Bettina Kata Kádár¹, Lea Péter¹, Bálint Andó¹, Borbála Paksi^{2,+}, Zsolt Demetrovics^{3,4,+}

1 Addiction Research Group, Department of Psychiatry, University of Szeged, Szeged, Hungary

2 Institute of Education, ELTE Eötvös Loránd University, Budapest, Hungary

3 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

4 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

+ These authors contributed equally to this work

Keywords: addictive behaviours, religiosity, psychological proneness

Abstract

Background: It has been demonstrated that religiosity/spirituality is a protective factor and contribute to the recovery from addictions. However, religiosity and different addictions have not yet been comprehensively examined. Therefore, the relationship between religious status and distinct addictive behaviours were assessed, supplemented by psychological factors which contribute to the development of addictive disorders.

Methods: Chi-square, Kruskal-Wallis and Mann-Whitney tests were conducted based on the data from two studies carried out on representative adult sample of Hungary (N=1385) and representative young adult sample of Budapest (N=3890). Psychological factors (impulsivity/sensation seeking/rumination/well-being/mentalization/trait of worry) and distinct addictive behaviours (non-medical sedative/hypnotic use/problematic alcohol use/nicotine use/problem gambling/problematic internet use/work addiction/eating disorders) were comprehensively examined along three values of religious status (religious/uncertain/non-religious).

Results: Psychological factors pointed in the same direction, the religious group generally showed significantly lower, while uncertain status higher level of psychological proneness. Furthermore, uncertain and non-religious groups significantly differed from religious individuals regarding the problematic alcohol use, problem gambling and problematic internet use in both samples, the non-medical sedative/hypnotic and nicotine use in the representative adult sample of Hungary and the work addiction in the representative young adult sample of Budapest. The occurrence of these behaviours was significantly higher in uncertain and/or non-religious groups compared to the religious individuals.

Conclusion: Our comprehensive study suggests uncertain and/or non-religious individuals' higher level of involvement in addictive behaviours, which may be related to their psychological proneness. Religiosity and mental stability have protective effect and it could be hypothesized that spirituality-based interventions are effective therapeutic options.

Funding sources: This work was supported by the Hetényi Géza Grant (SZTE-ÁOK-KKA-2019-HG). The National Survey on Addiction Problems in Hungary (NSAPH) and Budapest Longitudinal Study (BLS) were supported by the Hungarian National Research, Development and Innovation Office (KKP126835; K128604; ELTE Thematic Excellence Programme 2020, KP2020-IKA-05).

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The research was conducted in accordance with the principles embodied in the Declaration of Helsinki and in accordance with local statutory requirements.

Corresponding author: Bettina Kata Kádár

Email: kadar.bettina.90@gmail.com

Biography: Bettina Kata Kádár is consultant psychiatrist at the Department of Psychiatry, University of Szeged, Hungary. She is obtained her M.D. degree and psychiatric specialization at the same university. She is Ph.D. candidate of the Addiction Research Group in the Department of Psychiatry. Her current research field include substance use disorders.



Comparing casual gamers, highly engaged gamers, e-sports players and gamers at risk of gaming disorder

Orsolya Király¹, Fanni Bányai¹, Zsolt Demetrovics^{2, 1}

¹ Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

² Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: gaming disorder, esports, gaming motives, game genres, psychiatric symptoms

Abstract

Background: The inclusion of gaming disorder (GD) in the International Classification of Diseases 11th Revision has stirred strong objection from the gaming industry and some researchers. One of the main concerns was the possible stigmatization of healthy but engaged gamers.

Objectives: The present study aimed to compare casual gamers, highly engaged gamers, esports players and gamers at risk of GD in terms of their preference for specific game genres, gaming motives, psychiatric symptoms and other problematic behaviors

Methods: Questions regarding participation in online and offline video gaming competitions, gaming motives, gaming disorder symptoms, psychiatric symptoms and self-esteem were administered to a large sample of online gamers (N=5623; 90.9% male; mean age: 22.7 years, SD=6.5) recruited via gaming-related websites.

Results: In terms of psychiatric symptoms (i.e., depression and anxiety), as well as self-esteem and other related problematic use variables (i.e., problematic internet and social networking use) the GD group was considerably more affected than all the other groups. Motives varied between the four groups, with certain motives being more specific to certain groups (e.g., escape and fantasy for the GD group, skill development and social for the esports group). Preference for specific game genres varied between the four groups as well, with certain genres being more specific to certain groups (e.g., role-playing games for the engaged and GD groups, shooter games for the esports group, MOBA games for the GD group).

Discussion & Conclusion: The GD group differed considerably from both the highly engaged and the esports player group in several characteristics.

Funding sources: Orsolya Király was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences and by the ÚNKP-21-5 New National Excellence Program of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund.

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical statement: The study was approved by the Institutional Review Board of the Faculty of Education and Psychology, ELTE Eötvös Loránd University (Budapest, Hungary).

Corresponding author: Orsolya Király

Email: kiraly.orsolya@ppk.elte.hu

Biography: Orsolya Király works as a senior lecturer at the Institute of Psychology, Eötvös Loránd University, Budapest, Hungary. Her main research interest relates to the psychology of video games in general and problematic gaming (or “video game addiction”) in particular. She is also interested in the psychology of internet and social networking sites use, as well as the impact of digital technology on our lives. She has published over 50 referred papers in several international journals and presented her work in numerous national and international conferences related to addictions, psychology, and mental health. She regularly holds popular-science lectures and writes popular-science articles related to her area of expertise.



The role of trait rumination and gender in the association between trait impulsivity and problematic gambling

Natália Kocsel¹, Borbála Paksi², Gyöngyi Kökönyei^{1,3}, Zsolt Demetrovics^{1,4}

1 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

2 Institute of Education, ELTE Eötvös Loránd University, Budapest, Hungary

3 SE-NAP2 Genetic Brain Imaging Migraine Research Group, Hungarian Academy of Sciences, Semmelweis University, Budapest, Hungary

4 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: Problematic gambling, impulsivity, rumination, gender, interaction

Abstract

Background: Converging evidence showed the relevance of impulsivity and emotional regulation deficits in the development and maintenance of problematic gambling/gambling disorder. Although in emotion regulation studies there was a particular emphasis on rumination (defined as a repetitive thinking about the reasons and consequences of depressed mood), it was not extensively studied in addiction research. Surprisingly, the association between rumination and impulsivity was not investigated in detail, despite that rumination was particularly associated with impulsive responses to negative emotional states.

Objectives: To investigate the complex associations between impulsivity and problematic gambling and test whether trait rumination and gender moderated this relationship.

Methods: The present study surveyed a nationally representative adult sample. In the first wave, 1235 participants (31.2% of the whole sample; 670 males; mean age=28.13±4.27) reported gambling in the past 12 months, therefore we used their data for further analysis. Gambling severity was assessed by the Problem Gambling Severity Index, impulsivity was measured by Barratt Impulsiveness Scale, while rumination was assessed by the Ruminative Response Scale.

Results: Results showed positive associations between impulsivity and problematic gambling ($\beta=0.307$; $p<.001$), and we found that both rumination and gender moderated this association ($\beta=0.142$; $p<.001$). The three-way interaction of rumination x impulsivity x gender also was a significant predictor.

Discussion & Conclusion: Our results suggested that the interplay of rumination and impulsivity might contribute to problem gambling, potentially by the impulsive desire to alleviate negative mood states. Our results revealed that these associations could be stronger among men than in women.

Funding sources: This study was supported by the Hungarian National Research, Development and Innovation Office (KKP126836; FK128614).

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical statement: The study was approved by the Scientific and Research Ethics Committee of the Medical Research Council (Hungary).

Corresponding author: Natália Kocsel

Email: kocsel.natalia@ppk.elte.hu

Biography: Natália Kocsel is an assistant professor of psychology at the Department of Clinical Psychology and Addiction, Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary. She received her MA degree in psychology (2014) and her PhD (2020) in clinical and health psychology at the same university. Her research examines how individual differences in emotion regulation shape subjective well-being and somatic complaints throughout adolescence and adulthood. Specifically, her work seeks to understand how perseverative cognitions (trait and state rumination, worry) are associated with emotional information processing, heart rate variability and mental/somatic health in the laboratory and in everyday life.



Rumination is more strongly associated with problematic social media use than worry: a representative study in young adults

Gyöngyi Kökönyei^{1,2}, Borbála Paksi³, Zsolt Demetrovics^{1,4}

1 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

2 SE-NAP2 Genetic Brain Imaging Migraine Research Group, Hungarian Academy of Sciences, Semmelweis University, Budapest, Hungary

3 Institute of Education, ELTE Eötvös Loránd University, Budapest, Hungary

4 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: emotion regulation, rumination; worry; social media use; behavioural addiction

Abstract

Background: Perseverative thinking has been considered to be associated with psychopathologies, including behavioural addiction as well. Perseverative cognitions are not only relevant in clinical groups but are risk factors for problematic behaviour in community samples. However, there is little research that has examined how the different forms of perseverative cognitions – such as rumination and worry – relate to problem or addicted behaviours.

Objectives: The present study aimed to examine the differential associations of rumination and worry with problematic social media use in young adults.

Methods: In a national representative sample (N=3890), 89% of young adults (aged between 18-34 years) reported social media use in the past 30 days and provided information on problematic social media use. Data were collected before the pandemic. Rumination were measured with the 10-item Ruminative Response Scale, while worry was assessed with the Penn State Worry Questionnaire.

Results: Rumination and worry were both uniquely associated with problematic social media use even after controlling for gender, age, education, and negative affectivity (adjusted $R^2 = 0.28$). Compared with worry ($\beta = .08, p < .001$), rumination ($\beta = .40, p < .001$) was more strongly associated with problematic social media use.

Discussion & Conclusion: Our results support that both perseverative cognitions are risk factors of problematic social media use and despite having common features, rumination and worry could be distinguished and measured separately. Our results indirectly support the notion (Nolen-Hoeksema & Watkins, 2011) that rumination could be a risk factor for any pathological behaviours that provide an escape from ruminative thoughts.

Funding sources: This study was supported by the Hungarian National Research, Development and Innovation Office (KKP126836; FK128614).

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The study was approved by the Scientific and Research Ethics Committee of the Medical Research Council (Hungary)

Corresponding author: Gyöngyi Kökönyei

Email: kokonyei.gyongyi@ppk.elte.hu

Biography: Gyöngyi Kökönyei is an associate professor at the Department of Clinical Psychology and Addiction, Institute of Psychology, ELTE Eötvös Loránd University, Budapest and also works as a researcher consultant at SE-NAP2 Genetic Brain Imaging Migraine Research Group, Budapest (Semmelweis University). Her research focuses on emotion regulation: particularly on the relationship between rumination and mental and physical health using a variety of approach and methods including self-report questionnaires, cognitive paradigms (such as dot-probe, emotional Stroop, Implicit Association Test) as well as psychophysiological measurements and brain imaging (functional magnetic resonance imaging) methods.



The effects of Tik-Tok videos on body image and the problematic use of TikTok: an experimental study

Beatrix Koronczai¹, Zsolt Horváth¹

¹ Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

Keywords: the problematic use of TikTok, body focused TikTok videos, body attitude, body shame

Abstract

Background and aim: Literature has already established a link between a negative body attitude and problematic social media (PSMU). The effect of TikTok use on body image particularly is not well-documented, since this platform is one of the newest social media sites.

Methods: The current experimental and online study includes 309 Hungarian secondary school girls ($M=16.26$, $SD=1.26$). The participants were randomly assigned to 3 groups. In each group, the participants watched 10 TikTok videos. There were body focused videos in group 1, body positive videos in group 2 and body neutral videos in group 3. Body attitude and body shame were measured pre- and post-watching videos. Additionally, questionnaires on problematic use of TikTok, social comparison in TikTok and sociocultural attitudes towards appearance were also administered. Mediation modelling was performed on the whole sample, and ANOVA models were tested in the 3 groups.

Results: The relationship between body shame and the problematic use of TikTok is mediated by social comparison, and also by sociocultural attitude towards appearance in the entire sample. In the case of negative appreciation of body size (which is the subscale of the Body Attitude Scale), the main effect of repeated measures and the interaction of repeated measures and groups have been found significant (negative appreciation decreased in all the 3 groups). The change of body shame was also significant, but the groups were not different from each other in the change.

Conclusions: The effects of the 10 videos (about 3 minutes long in total) on body image were similar, which is not in line with our hypothesis, but problematic TikTok use (which implies intensified use) associates with body shame indirectly (through social comparison in TikTok) as we accepted.

Corresponding author: Beatrix Koronczai

Email: beatrix.koronczai@ppk.elte.hu

Biography: Beatrix Koronczai is a clinical child psychologist, psychotherapist, senior lecturer at Eötvös Loránd University, Department of Developmental and Clinical Child Psychology. Her research area is problematic use of internet and social media. Besides her teaching and research activities, she conducts individual therapy for adolescents and adults as well as couple and family therapy. She is also a qualified psychodrama director and leads psychodrama groups for teenagers.



Emotional coping mediates the relationship between COVID-related distress and compulsive buying

Lilla Nora Kovacs⁴, Eva Katzinger¹, Sunghwan Yi², Zsolt Demetrovics^{3,4}, Aniko Maraz¹, Gyöngyi Kökönyei^{4,5}

1 Institut für Psychologie, Humboldt-Universität zu Berlin, Berlin, Germany

2 University of Guelph, Ontario, Canada

3 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

4 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

5 SE-NAP2 Genetic Brain Imaging Migraine Research Group, Hungarian Brain Research Program, Semmelweis University, Budapest, Hungary

Keywords: shopping addiction, buying-shopping disorder, distress, COVID-19, emotional coping, task coping

Abstract

Background: COVID-19 is a chronic worldwide stressor that posits psychological challenges and often leads to maladaptive behaviour.

Objectives: In the current study we assessed whether the relationship between COVID-related distress and compulsive buying is mediated by task-focused and emotion-focused coping. We also examined whether these associations were invariant over time as the pandemic unfolded.

Methods: Self-report surveys were administered online in the United States in the first six months of the pandemic (March-October 2020) in sampling batches of 25 participants every three days, resulting in a total sample of $N=1418$ (40 % female, mean age = 36.6). We carried out structural equation modeling to assess whether the relationship between distress related to COVID-19 and compulsive buying is mediated by task-focused and emotion-focused coping. Time was used as a grouping variable based on events related to the pandemic in the U.S. to calculate model invariance across the three time periods.

Results: Results indicated significant mediation between distress, emotion-focused coping and compulsive buying, but not between task-focused coping and compulsive buying. The mediation model showed excellent fit to the data ($\chi^2 = 1119.377.430$, $df = 420$, $RMSEA = 0.059$ [0.055-0.064], $SRMR = 0.049$, $CFI = 0.951$, $TLI = 0.947$). Models were not invariant across the three time periods.

Discussion & Conclusion: Our results indicate that compulsive buying is more likely to occur in relation to emotion-focused coping as a response to COVID-related distress compared to task-focused coping, especially during periods of increasing distress. However, model paths varied during the course of the pandemic.

Funding sources: This study was supported by the Hungarian National Research, Development and Innovation Office (KKP126835, FK128614).

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The study procedures were in accordance with the Declaration of Helsinki. Ethical consent of the Institutional Review Board was obtained prior to data collection (2020-15R3).

Corresponding author: Lilla Nora Kovacs

Email: kovacs.lilla@ppk.elte.hu

Biography: Lilla Nóra Kovács is a PhD candidate at the Doctoral School of Psychology at Eotvos Lorand University (ELTE), Budapest, Hungary, where she is a research fellow in the Personality, Health and Emotion Regulation Research Group led by Dr. Gyöngyi Kökönyei. Lilla's research focuses on the maladaptive emotion regulation strategies of healthy adults and clinical populations and their relation to psychological problems. Lilla spent two semesters as a Fulbright visiting researcher at the University of Colorado, Boulder, USA, where she carried out research regarding positive emotion disturbances.



Therapists' adherence to Community Reinforcement Approach

Anneleen Kraan^{1,2}

1 a IrisZorg, Center for Addiction Care and Sheltered Housing, Arnhem, the Netherlands

2. Nijmegen Institute for Scientist-Practitioners in Addiction (NISPA), Radboud University, Nijmegen, the Netherlands

Keywords: Substance use; Community Reinforcement Approach; Therapist adherence; Treatment related determinants; Therapist related determinants.

Abstract

Background: Treatment model adherence is an important predictor of treatment outcome. In clinical practice evidence-based treatments are delivered in widely varying degrees. The results of two studies regarding treatment adherence to Community Reinforcement Approach (CRA) and the design and actual status of the follow-up study are presented in this lecture.

Objectives: The main focus of the studies is the adherence to CRA procedures by addiction care therapists and how this is associated with treatment, therapist, and organization factors and advanced training.

Methods: The first studies integrated two observational designs. Firstly, using a prospective design, 24 therapists registered every CRA procedure delivered during every patient contact over a six-month period. Secondly, using a cross-sectional design, personal characteristics of 69 therapists, were assessed including their self-reported adherence to CRA procedures and their perceptions with regard to several treatment and therapist factors.

Results: The number of CRA procedures delivered varied substantially among therapists both at session and patient level. More experienced therapists and those that had received advanced training previously, delivered more CRA procedures. Finally, the adherence to CRA procedures was positively associated with experienced meaningfulness and negatively associated with difficulty but also with patient cooperation.

Discussion & Conclusion: The results of the first studies confirm the relation between treatment adherence and experienced meaningfulness and difficulty of CRA procedures and provide support for advanced training to enhance the adherence to a wider range of CRA procedures. The design of the follow-up study which focuses on increasing treatment adherence by advanced CRA training, is also discussed. This study concerns a randomized controlled trial in which the effect of advanced coaching and feedback on CRA adherence after basic training is studied. Therapists are randomized into two groups. The experimental group receives advanced coaching and feedback regarding the delivery of CRA and the control group does not. The two therapist groups are compared with regard to CRA adherence, patient treatment outcomes and patient's judgement on the working alliance with their therapist.

Funding sources: No funding was received for this work.

Conflict of interest: The authors have no conflict of interest to declare

Ethical Statement: There was no need for ethics approval for this study. Informed consent was received from all participants prior to data collection. The local ethical committee gave their approval in advance.

Corresponding author: Anneleen Kraan

Email: a.kraan@iriszorg.nl

Biography: Anneleen Kraan is a registered mental health clinical psychologist and working in addiction care for seventeen years. As a therapist, she works with a broad client population and provides psychodiagnostics and psychotherapy. She also coaches and supervises colleagues in conducting treatments. She has specific academic interests in the implementation and execution of CRA in Dutch addiction care centers. She also has her own practice together with two colleagues in which she treats other psychiatric problems, such as anxiety and personality disorders.



The prevalence and risk factors of work addiction in Hungary

Bernadette Kun¹, Zsolt Demetrovics^{1, 2}, Katalin Felvinczi¹, Borbála Paksi³

1 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

2 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

3 Institute of Education, ELTE Eötvös Loránd University, Budapest, Hungary

Keywords: work addiction, workaholism, epidemiology, risk factors

Abstract

Background: Work addiction (WA) is a behavioral addiction characterized by obsessive overwork that results in physical, mental, and social disturbances. Although much research investigated the correlates of WA, almost all of them used convenience samples. To date, only in three countries (Norway, Hungary, and South Korea) have been conducted survey studies in nationally representative samples.

Objectives: Our aim was to investigate the prevalence of WA among Hungarian adult population and compare the results to our earlier findings. We aimed to examine the risk factors of WA too.

Methods: The study was carried out on a nationally representative sample of the Hungarian adult population (N=1385). In addition to sociodemographic variables, the following measurements were applied: Bergen Work Addiction Scale, Barratt Impulsiveness Scale, Brief Sensation Seeking Scale, Well-Being Inventory, Penn-State Worry Questionnaire, Patient Health Questionnaire, Ruminative Response Scale, and Reflective Functioning Questionnaire.

Results: 7% of the adult population currently having a job has been classified to be at-risk for WA, and there was no change in the prevalence in the last four years. The prevalence of WA is the same in Hungary as in Norway (7%), however, much less than in South Korea (39%). Binary logistic regression analysis showed that somatic symptoms, sensation seeking, uncertainty about mental states, and rumination predicted WA.

Discussion & Conclusion: The prevalence of WA is higher than the prevalence of other behavioral addictions that emphasizes the importance of this phenomenon. Our results highlight those individuals affected by WA show difficulties in controlling negative thinking and in mentalizing, therefore, more future studies should investigate the cognitive mechanisms behind WA.

Funding sources: The study was supported by the Hungarian National Research, Development, and Innovation Office (FK134807, KKP126835).

Conflict of interest: The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation.

Ethical Statement: The present study was approved by the institutional review board (IRB) of the research team's university (ref. number: 2019/212) and the study followed the guidelines of the Declaration of Helsinki.

Corresponding author: Bernadette Kun

Email: kun.bernadette@ppk.elte.hu

Biography: Bernadette Kun is an associate professor at the Institute of Psychology, ELTE Eötvös Loránd University and she is the head of Department of Clinical Psychology and Addictions. Her main research area is behavioral addictions, such as work addiction, exercise addiction, gambling disorder, and online gaming disorder. She teaches several courses about substance related and other addictive disorders at Eötvös Loránd University. She is author of nearly 100 articles related to chemical and behavioral addictions.



A comparative review of negative reinforcement motives in problematic gambling and videogaming behaviour

Chanel Larche^{1, 2}, Candice Muir¹, Hyacinth Raymundo¹, Heather McCormick Jankowski¹, Mike Dixon¹

¹ University of Waterloo, Ontario, Canada

² Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: Problematic gambling, escapism, video-gaming

Abstract

Background: Researchers and clinicians have identified various motives associated with addictive behaviours. Of rising concern is the so-called 'negative reinforcement' pathway', which drives individuals to engage in problematic addictive behaviours in order to 'escape' from exogenous and/or endogenous negative states. Frequent activation of this 'negative reinforcement' pathway may lead to reliance on maladaptive avoidant coping strategies, which may exacerbate existing pre- or co-morbid mental health conditions (e.g., depression) or influence the onset of new psychiatric symptoms. Despite a general theoretical consensus that gambling and gaming may be used by players to 'escape', and that such behaviours may be associated with problematic playing behaviours and harm, the existing literature within each of these research domains is relatively scarce and inconsistent. Furthermore, comparison of escape-related motives between gambling and gaming is virtually non-existent.

Objectives & methods: The purpose of this study is three-fold. First, we conducted (separate) systematic reviews of the peer-reviewed literature within the gambling and gaming research fields to identify relationships between play and escape. Here, we wished to identify: a) trends in escape-play relationships within each domain and b) heterogeneity in definitions of 'escape' related constructs (e.g., zone, flow, immersion). Second, we sought to identify similarities and differences in gambling and gaming play motives to 'escape'. Finally, we used our descriptive literature review analyses to propose a theoretical framework to develop 'next-steps' in psychometric scale development on play motives in attempt to encourage research cohesion within the (separate) gambling and gaming research domains, and to allow direct comparison between these domains.

Funding sources: NSERC, FRQNT

Conflict of interest: None

Ethical Statement: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Corresponding author: Chanel Larche

Email: chanel.larche@unigib.edu.gi

Biography: Chanel Larche is an associate researcher at the Centre of Excellence in Responsible Gaming. Chanel's work broadly focuses on identifying and reducing harms associated with digital games (e.g., Electronic Gaming Machines, Videogames) and emerging technologies that converge videogaming and gambling modalities (e.g., loot boxes). She has published on the relation between immersive experiences and addictive behaviours, as well as the impact of structural characteristics in digital games (e.g., near-misses, slot machine stop buttons) on videogaming and gambling behaviour. More recently she has also published on loot box use and social media use.



Alcohol withdrawal-related seizures and delirium tremens: A clinical epidemiological study

Ildikó Katalin Pribék¹, Ildikó Kovács², Bettina Kata Kádár¹, Bálint Andó¹, **Bence András Lázár¹**

1 Addiction Research Group, Department of Psychiatry, University of Szeged, Szeged, Hungary

2 Department of Psychiatry, University of Szeged, Szeged, Hungary

Keywords: withdrawal-related seizure, alcohol withdrawal syndrome, delirium tremens, retrospective

Abstract

Background: Several reports suggest that withdrawal-related seizure (WRS) in patients' medical history possesses a higher risk of developing delirium tremens (DT). However, other studies indicate that there are no significant correlations between the severity of alcohol withdrawal syndrome (AWS), the development of DT and the history of WRS.

Objectives: The aim of the present study is to evaluate the correlates of WRS and the association between the presence of DT and the history of WRS.

Methods: Data were collected from the medical database of the Department of Psychiatry, University of Szeged. Patients' hospital appearances between 2008 and 2015 with the diagnosis of alcohol use disorder (AUD; N=2900) were registered. Prevalence of WRS was calculated in the total group, in patients with and without DT (DT and nDT groups, respectively). Statistical analyses were performed by using Independent Samples t-test and Chi-squared test.

Results: WRS showed a prevalence of 10.69% in the AUD group. Significant differences were revealed between men (11.55%) and women (7.49%; $\chi^2 (1) = 8.361$; $p = 0.002$). Non-WRS group was associated with higher mean age ($M = 49.99$; $SD = 11.32$) than the WRS group ($M = 47.11$; $SD = 10.86$; $t (2897) = -4.252$; $p < 0.001$). The rate of WRS was significantly higher in the DT group (16.15%) compared to the nDT group (9.94%; $\chi^2 (1) = 12.520$; $p < 0.001$).

Discussion & Conclusion: Our findings demonstrate that the prevalence of WRS was higher among men and showed lower mean age, suggest the significance of demographic correlates of WRS. Our observation that the history of WRS is significantly associated with the emergence of DT supports the importance of WRS during AWS.

Funding sources: This work was supported by the Hetényi Géza Grant (SZTE-ÁOK-KKA-2019-HG) and EFOP-3.6.3-VEKOP-16-2017-00009.

Conflict of interest: We have no conflict of interest to declare.

Ethical Statement: The research was conducted in accordance with the principles embodied in the Declaration of Helsinki and in accordance with local statutory requirements.

Corresponding author: Bence András Lázár

Email: b.a.lazar.md@gmail.com

Biography: Bence András Lázár is assistant professor and consultant psychiatrist at the Department of Psychiatry, University of Szeged, Hungary. He is obtained his M.D. degree; psychiatric specialization and he received his Ph.D. in theoretical neuroscience at the same university. He established the Addiction Research Group in the Department of Psychiatry where he is a principal co-investigator. His current research field include substance use disorders and neuromorphology.



Increased alcohol-specific mortality in Germany during COVID-19: State-level trends from 2010 to 2020

Carolin Kilian¹, Sinclair Carr^{2,3}, Bernd Schulte^{2,3}, Jakob Manthey^{2,3}

1 Institute of Clinical Psychology and Psychotherapy, Technische Universität Dresden, Dresden, Germany

2 Center for Interdisciplinary Addiction Research (ZIS), Department of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf (UKE), Hamburg, Germany

3 Department of Psychiatry, Medical Faculty, University of Leipzig, Leipzig, Germany

Keywords: Alcohol, Mortality, COVID-19, Germany, Pandemic

Abstract

Background: Alcohol use has changed during the COVID-19 pandemic. In Germany, sales data suggest a decline of beer consumption during lockdown months, whereas survey data suggest increasing alcohol intake among heavier drinkers. Furthermore, treatment availability was restricted due to prioritization of COVID-19 treatment. So far, trends in alcohol-attributable harms during the pandemic are understudied.

Methods: We explored alcohol-specific mortality trends in Germany of the years 2010 to 2020. Alcohol-specific mortality data aggregated by sex, 5-year age groups and state were collected from the annual cause-of-death statistics and analysed descriptively.

Results: The overall alcohol-specific mortality rate (age-standardised) has mainly decreased between 2010 and 2020. However, increased alcohol-specific mortality rates for the year 2020 compared to 2019 were found for both, women (+4.8%) and men (+5.5%), particularly in age groups between 40 to 69 years. Changes in alcohol-specific mortality rates differed between federated states, with steeper increases in East Germany. There was no indication that the trend reversals in alcohol-specific mortality rates in 2020 were connected to the COVID-19 mortality rates at state level.

Discussion & Conclusion: Contrasting the recent decline in the alcohol-specific mortality in Germany, an increase in the death toll was observed in 2020.

Funding sources: None

Conflict of interest: None

Ethical Statement: None

Corresponding author: Jakob Manthey

Email: j.manthey@uke.de

Biography: Jakob Manthey is a trained psychologist with extensive experience in analysing survey, routine health care as well as mortality data. He has been involved in several international research projects concerning alcohol and cannabis use in the field of epidemiology and health economics. His research is motivated by the quest for reducing the social, health and economic harms resulting from cannabis and alcohol use.



A double-blinded randomized controlled trial of attentional control training for treating alcohol use disorder

Angelina Isabella Mellentin^{1,2,3}, Miles Cox⁴, Javad S Fadardi⁵, Nicolaj Mistarz¹, Lotte Skøt¹, Kristine Rømer, Thomsen⁶, Kim Mathiasen³, Mia Lichtenstein³, Anette Søgård Nielsen¹

1 Unit for Psychiatric Research, Department of Clinical Research, University of Southern Denmark, Odense, Denmark.

2 Brain Research-Inter-Disciplinary Guided Excellence (BRIDGE), Department of Clinical Research, University of Southern Denmark, Odense, Denmark.

3 Centre for Telepsychiatry, Mental Health Services in the Region of Southern Denmark, Odense, Denmark.

4 School of Human and Behavioral Sciences, Bangor University, Bangor, United Kingdom.

5 Cognitive Health Laboratory, Department of Psychology, Ferdowsi University of Mashhad, Mashhad, Iran.

6 Centre for Alcohol and Drug Research, Department of Psychology and Behavioral Sciences, Aarhus University, Aarhus, Denmark.

Keywords: Stroop task; add-on treatment; alcohol use disorder; attentional bias; cognitive bias modification; randomized clinical trial.

Abstract

Background: There is consistent evidence that community and clinical samples of individuals with an alcohol use disorder (AUD) have attentional biases toward alcohol cues. The alcohol attentional control training program (AACTP) has shown promise for retraining these biases and decreasing alcohol consumption in community samples of excessive drinkers. However, there is a lack of evidence regarding the effectiveness of AACTP in clinical AUD samples.

Objectives: The main aim of the present study is to investigate whether primary pharmacological and psychological, evidence-based alcohol treatment can be enhanced by the addition of a gamified AACTP smartphone application for patients with an AUD.

Methods: The study will be implemented as a randomized controlled trial. A total of 317 consecutively enrolled patients with AUD will be recruited from alcohol outpatient clinics in Denmark. Patients will be randomized to one of three groups upon initiation of primary alcohol treatment: Group A: a gamified AACTP smartphone application + treatment as usual (TAU); Group B: a gamified AACTP sham-control application + TAU; or Group C: only TAU. Treatment outcomes will be assessed at baseline, post-treatment, and at 3- and 6-month follow-ups. Repeated measures MANOVA will be used to compare the trajectories of the groups over time on alcohol attentional bias, alcohol craving, and drinking reductions. It is hypothesized that Group A will achieve better treatment outcomes than either Group B or Group C.

Perspectives: Because attentional bias for alcohol cues is proportional to the amount of alcohol consumed, and these biases are not addressed within current evidence-based treatment programs, this study is expected to provide new evidence regarding the effectiveness of the gamified AACTP in a clinical population. Furthermore, due to promising results found using AACTP in community samples of excessive drinkers, there is a high probability that the AACTP treatment in this study will also be effective, thereby allowing AACTP to be readily implemented in clinical settings. Finally, we expect that this study will increase the effectiveness of evidence-based AUD treatment and introduce a new, low-cost gamified treatment targeting patients with an AUD.

Funding sources: Trygfonden

Conflict of interest: None

Ethical statement: None

Corresponding author: Angelina Isabella Mellentin

Email: amellentin@health.sdu.dk

Prevalence estimation of alcohol-related disorders and treatment rates using a data linkage of routine data in Bremen 2016/2017

Justin Möckl¹, Christina Lindemann², Jakob Manthey^{2,3,4}, Bernd Schulte², Jens Reimer^{2,5}, Oliver Pogarell⁶, Ludwig Kraus^{1,7,8}

1 IFT Institut für Therapieforschung München, Germany

2 Zentrum für Interdisziplinäre Suchtforschung (ZIS) Universitätsklinikum Hamburg-Eppendorf (UKE), Hamburg, Germany

3 Institut für Klinische Psychologie und Psychotherapie, TU Dresden, Dresden, Germany

4 Klinik und Poliklinik für Psychiatrie und Psychotherapie, Universitätsklinikum Leipzig, Leipzig, Germany

5 Zentrum für Psychosoziale Medizin, Klinikum Itzehoe, Germany

6 Klinik für Psychiatrie und Psychotherapie, Klinikum der Universität München, LMU München, Munich, Germany

7 Department of Public Health Sciences, Centre for Social Research on Alcohol and Drugs, Stockholm University, Stockholm, Sweden

8 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

Keywords: Alcohol, Alcohol Dependence, Addiction Specific Care, Treatment, Routine Data, Claims Data, Data-Linkage

Abstract

Background: Estimates of 16% of alcohol-dependent people in Germany receiving addiction-specific care per year, including 1.8% who underwent inpatient rehabilitation treatment indicate the need for increasing treatment utilization.

Objectives: The present paper aims at estimating the number of people diagnosed with AD in the health care system (administrative prevalence) and the utilization rate by type of addiction-specific care in the general population of Bremen.

Methods: The number of people with AD was estimated using data from the Epidemiological Survey of Substance Abuse (ESA) from 2018. Based on a data linkage procedure, routine register data of two statutory health insurance funds (SHI), the German Pension Insurance (DRV) and the Hospital Network Bremen Gesundheit Nord (GeNo) for the years 2016 and 2017 were analysed. The administrative prevalence was calculated using ICD-10 diagnoses (F10.X) of the different settings. Care services included outpatient addiction care (GeNo) visits and the use of addiction-specific treatments, i.e., qualified withdrawal treatment (QWT), relapse prevention with pharmacotherapy, and rehabilitation treatment.

Results: The number of people with AD in Bremen was estimated at 15,792. Of these, 11,427 people (72.4 %) were registered with an ICD-10 diagnosis in the health care system. The overall utilization rate of addiction-specific care in Bremen was 10.0 %, 4.7 % received QWT, 4.3 % outpatient addiction care, 0.8 % pharmacotherapy, and 2.6 % rehabilitation treatment. The remaining 62.4 % received no addiction-specific treatment.

Discussion & Conclusion: Efforts to reduce AD-related morbidity and mortality by increasing addiction-specific care utilization seem to be a matter of treatment motivation rather than a problem of identification.

Funding sources: None

Conflict of interest: None

Ethical Statement: None

Corresponding author: Justin Möckl

Email: moeckl@ift.de

Biography: Justin Möckl works as a doctoral researcher at the IFT Institute for Therapy Research for the department Epidemiology and Diagnostics. His main field of work concerns the Epidemiological Survey of Substance Abuse and a secondary data analysis of people with alcohol related diagnoses in the health care system.



Regional variations in density of alcohol outlets and consumption

Jacek Moskalewicz ¹, Jakub Stokwiszewski ¹, Łukasz Wieczorek ¹

¹ Institute of Psychiatry and Neurology, Poland, Warsaw

Keywords: alcohol, availability density of outlets, alcohol consumption,

Abstract

Background: Relationship between alcohol availability and alcohol consumption is well established. The 1990s witnessed rapid increase in a number of alcohol outlets in Poland that affected consumption levels, alcohol morbidity and mortality according to time series analyses applied.

Objectives: In this study, an attempt is made to investigate how regional differences in density of alcohol outlets affect variation in alcohol consumption across 16 administrative regions in Poland.

Methods: Data on a number of outlets were taken from official reports and re-calculated to numbers of inhabitants per one outlet while consumption was estimated from a value of alcohol sales. Linear regression model was applied.

Results: Except for two outliers, relationship between density of outlets and per capita consumption is linear and explains one third of variability of consumption.

Discussion & Conclusion: From a public health perspective, density of alcohol outlets has to be closely monitored and controlled at regional level having in mind close relationship between consumption and alcohol harm

Funding sources: Institute of Psychiatry and Neurology

Conflict of interest: None to be declared

Ethical statement: No ethical approval required

Corresponding author: Jacek Moskalewicz

Email: moskalew@ipin.edu.pl

Biography: Jacek Moskalewicz, Ph.D. is sociologist, works in the Department of Studies on Alcoholism and Drug Dependence at the Institute of Psychiatry and Neurology in Warsaw, Poland. For over 30 years involved in alcohol and drug research as well as in psychiatric studies incl. epidemiology, policy-oriented studies, action research, social history. Member of the World Health Organization experts' advisory panel on drug dependence and alcohol problems. Consultant or technical adviser to international organizations including the WHO, EMCDDA, UNODC. Recipient of La Medaille de la Ville de Paris (1994), Jellinek Memorial Award (2001) and Chevalier Cross of Polonia Restituta (2004).



Quality improvement by merging addiction and mental health services assessed with the EFQM criteria

Udo Nabitz¹, et al.

1 Arkin Mental Health Care Services Amsterdam, Amsterdam, the Netherlands

Keywords: Merger of mental health care services, Total Quality Management, EFQM, Quality assurance, Quality assessment

Abstract

Objectives: To assess the impact of merger of three Dutch mental health services (addiction, psychiatry and forensic) on the quality of cares as defined by the nine criteria of the EFQM Model for total quality management.

Methods: A case study with a pre-post design is applied, with an EFQM baseline and follow-up assessments by certified assessors. The baseline report was scored individually by the assessors and evaluated during a site visit at the start of the merger. During a period of five years the merge was effectuated, following guidelines for mergers and the findings of the advice of the feedback report. An EFQM follow-up assessment was carried out scored and evaluated. The study can be seen as a naturalistic experiment.

Results: The comparison of the nine EFQM criteria before and after the merger on the bases of the scores of the consensus meeting of the assessor teams shows an overall improvement from 358 to 425 points on the EFQM scale 0-1000. There is one deterioration concerning criterion 8: Society Results, one of the nine criteria, criterion 5: Partners & Resources remained stable, but seven criteria show positive changes. The top three criteria with the highest improvement are 1: Leadership (15%), 5: Processes, Products and Services, (12%) 6: Customer Results (15%). The overall statement of the audit team is: 'The merged organisation strives for effectiveness, which leads to better results in most of the areas.' Learning from the results is one recommendation of the assessors for the future.

Discussion & Conclusion: The planned and conducted merge of mental health care services in an urban setting showed an improvement based on the criteria of the EFQM model.

Funding sources: None

Conflict of interest: None

Ethical Statement: The Dutch standards for scientific research (VNG) are applied.

Corresponding author: Udo Nabitz

Email: udo.nabitz@xs4all.nl

Biography: Udo Nabitz studied clinical psychology at the Eberhard Karls Universität Tübingen in Germany and at the University of Amsterdam. He is a clinical psychologist (GZ Psycholoog), obtained his doctorate with a thesis on Quality management in Health Care. He retired in 2019 but still works at Arkin and for the Dutch Psychological Association (NIP) as a senior consultant, researcher and quality advisor. The focus of his work is on quality improvement and result measurement in healthcare. Udo Nabitz has published in various scientific and professional journals.



A guided digital intervention to reduce cannabis use: the ICan randomized controlled trial.

Marleen I.A. Olthof^{1,2}, Anna E. Goudriaan^{2,3,4}, Margriet W. van Laar¹, Matthijs Blankers^{1,2,3}

1 Trimbos Institute, Netherlands Institute of Mental Health and Addiction, Utrecht, The Netherlands.

2 Amsterdam UMC location University of Amsterdam, Psychiatry, Amsterdam, The Netherlands.

3 Arkin Mental Health Care, Amsterdam, The Netherlands.

4 Amsterdam Public Health Research Institute, Amsterdam, The Netherlands.

Keywords: digital intervention, SBIRT, eHealth, cannabis use disorder

Abstract

Objectives: The aim of this study was to test the effectiveness of a digital intervention to reduce cannabis use (ICan) with adherence focused guidance compared to educational cannabis information.

Methods: A single-blind randomized controlled trial. Follow-up measurements took place 3 months and 6 months after randomization. Inclusion criteria were ≥ 18 years; cannabis use on ≥ 3 days/week; the desire to reduce/quit cannabis and using a smartphone. $n=378$ participants were randomized (69% male, mean age 27.5 years). The primary outcome was the number of cannabis use days in the 7 days prior to the 6-month follow-up measurement. Secondary outcome measures were the number of grams of cannabis used and attitudes towards seeking professional help for cannabis use related problems.

Results: Preliminary intention-to-treat analysis showed that six months after randomization the mean number of cannabis use days in the past 7 days was reduced in both the ICan condition and the control condition ($p<.001$) with no significant difference between conditions ($p=0.93$). Three months after randomization the mean number of grams used in the past 7 days was reduced in both conditions, with a significantly larger reduction in the ICan condition ($p=.009$, Cohen's $d_{\text{between}}=0.15$). At 6-month follow-up the difference between conditions was no longer statistically significant ($p=0.30$). In both conditions attitudes towards seeking professional help remained virtually unchanged over time.

Conclusion: Our preliminary results show favourable 3-month effects of ICan in reducing grams of cannabis used, but no difference in use days compared to our control condition. Cannabis use reductions were maintained in both conditions between three- and six-months follow-up.

Funding sources: The ICan study is funded by the Dutch Ministry of Health, Welfare and Sport.

Conflict of interest: The authors declare that they have no competing interests.

Ethical Statement: The study was approved by the Medical research Ethics Committees United (MEC-U). The trial was prospectively registered in the Netherlands Trial Register, NL7668.

Corresponding author: Marleen Olthof

Email: molthof@trimbos.nl

Biography: Marleen Olthof is a PhD student at the Trimbos Institute, the Netherlands Institute of Mental Health and Addiction. Her PhD project focuses on the development and evaluation of a guided digital intervention (ICan) to reduce cannabis use.



One size does not fit all. Loss limits should be adjusted for income.

Ståle Pallesen^{1,2,3}, Eilin Kristine Erevik^{1,2}, Jakob Jonsson⁴, Arne Magnus Morken¹, Elias Langeland¹, Ingvild Faxvaag Johnsen¹, Kaja Kastrup Strømme¹, Rune Mentzoni^{1,2}

1 Department of Psychosocial Science, University of Bergen, Norway

2 Norwegian Competence Centre for Gambling and Gaming Research, University of Bergen, Norway

3 Optentia, the Vaal Triangle Campus of the North-West University, Vanderbijlpark, South Africa

4 Karolinska Institutet, Sweden

Abstract

Objectives: To identify loss-limit cut-offs for moderate risk and problem gambling, broken down by income groups.

Methods: Data was based on the last three problem gambling surveys (2013, 2015 and 2019) in Norway and was available for 14630 gamblers. Based on self-reported expenditure on different games, a proxy for total gambling expenditure was calculated and adjusted for inflation. Self-reported income was divided into quartiles (Q1-Q4). The prevalence of moderate risk and problem gambling varied between 0.5-10.4%. Due to imbalanced data, precision-recall analyses were preferred over receiver operator characteristic analyses. In order to evaluate the predictive value of the models the area under the curve (AUC) was compared to the baseline models comprising the prevalences. The F1-value (harmonic mean of precision and recall) was used for identifying cut-offs.

Results: For moderate risk gambling the AUCs were 0.42 (Q1), 0.31 (Q2), 0.38 (Q3), and 0.26 (Q4), respectively, far above the respective baseline models. The suggested monthly loss limits were 390 NOK (Q1), 1148 NOK (Q2), 2202 NOK (Q3), and 2318 NOK (Q4), respectively. For problem gambling the AUCs were 0.41 (Q1), 0.31 (Q2), 0.37 (Q3), and 0.16 (Q4), respectively, also far above the respective baseline models. The suggested monthly loss limits were 1942 NOK (Q1), 3494 NOK (Q2), 2663 NOK (Q3) and 3799 NOK (Q4), respectively.

Discussion: The results suggest that loss limits should be adjusted for income. Future studies investigating other aspects (e.g. debt, possessions) of the economical situation of gamblers should be conducted regarding suggested loss limits.

Corresponding author: Ståle Pallesen

Email: Staale.Pallesen@uib.no

Biography: Ståle Pallesen is a professor in psychology at the Faculty of Psychology, University of Bergen (UiB), Norway. He has been pursuing a research interest related to gambling and gaming since 2003 and has received several grants on these topics from the Norwegian Research Council. He was the principal investigator of the three most recent national surveys about gambling and gaming problems in Norway. He is serving as the Head of the Norwegian Competence Center for Gambling and Gaming Research, funded by the Norwegian Gaming Authority, the Norwegian Health Directorate and the Norwegian Media Authority. In terms of research on gambling Pallesen's work covers studies such as surveys, experiments, treatments studies, register-based studies, player account studies as well as meta-analyses.



Abuse of non-opioid analgesics in Germany: Prevalence and associations among self-medicated users

Christian Rauschert¹, Nicki-Nils Seitz¹, Sally Olderbak^{1,2}, Oliver Pogarell³, Tobias Dreischulte⁴, Ludwig Kraus^{1,5,6}

1 Department for Epidemiology and Diagnostics, IFT Institut für Therapieforschung, Munich, Germany

2 Department of Psychology, University of Arizona, Tucson, United States

3 Department of Psychiatry, University of Munich, Munich, Germany

4 Department of General Practice and Family Medicine, Ludwig Maximilian University Munich, Munich, Germany

5 Department of Public Health Sciences, Centre for Social Research on Alcohol and Drugs, Stockholm University, Stockholm, Sweden

6 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

Keywords: Non-opioid, analgesics, abuse, self-medication, epidemiological survey, over the counter

Abstract

Background: Abuse of non-opioid analgesics (NOA) is associated with serious health consequences. However, due to inconsistent definitions of NOA abuse, prevalence estimates for the German population are lacking.

Objectives: This study aimed to estimate the 12-month prevalence of NOA abuse among self-medicated users of these drugs in the general German population and to identify risk factors.

Methods: Data are from the 2015 Epidemiological Survey of Substance Abuse, a nationally representative sample with 9,204 individuals aged 18-64 years. Classification of NOA abuse was based on self-reported information according to the definition of the ICD-10-GM diagnosis F55.2 abuse of non-dependence producing substances. Multiple logistic regression was performed to examine associations between NOA abuse and sociodemographic, behavioral, and health-related variables.

Results: The weighted 12-month prevalence of NOA abuse was 14.6% (95%-CI [13.2- 16.0]) among self-medicated users of these drugs. Extrapolation of the proportion of individuals abusing NOA to the German population aged 18 to 64 is 3,243,396 individuals or 6.4% (95%-CI [5.7- 7.1]). Inexplicable physical pain, being underweight, depression, hazardous alcohol use, daily smoking, illegal drug use, and frequent use of NOA (one or more times per week and daily use) were associated with an increased probability of NOA abuse. The use of cannabis was associated with a lower probability of NOA abuse.

Discussion & Conclusion: Abuse of NOA is highly prevalent in the German population. Against the background of increasing self-medication of NOA, healthcare providers need to be aware of potential risk factors of abuse to better identify and prevent this problem.

Funding sources: The 2015 Epidemiological Survey of Substance Abuse (ESA) was supported by funding from the German Federal Ministry of Health (project no. IIA5 –2514DSM200).

Conflict of interest: None

Ethical statement: The ESA 2015 has been approved by the ethics committee of the German Psychological Society (DGPs; Reg.-No: GBLK06102008DGPS)

Corresponding author: Christian Rauschert

Email: Rauschert@ift.de

Biography: Christian Rauschert is a researcher in epidemiology at the IFT Institute for Therapy Research Munich in Germany and a doctoral student at the faculty of medicine of the Ludwig-Maximilians-University Munich. As a part of his dissertation, he is investigating the consumption of analgesic medicines in the German population as well as substance-related disorders of these drugs.



Implementing Methamphetamine Prevention Strategies into Action (IMPRESA): Design and first results of an ongoing project in five European countries

Moritz Rosenkranz ^{1,2}, Marcus-Sebastian Martens ^{1,2}, Harald Lahusen ^{1,2}, Dr. Heike Zurhold ^{1,2}, PD Dr. Uwe Verthein ^{1,2}

1 Centre for Interdisciplinary Addiction Research of Hamburg University, Hamburg, Germany

2 University Medical Centre Hamburg-Eppendorf, Dep. of Psychiatry, Hamburg, Germany

Keywords: Amphetamine-type stimulants; drug use career; quantitative study; risk and protective factor; logistic regression

Abstract

Background: Methamphetamine use is spreading in the European Union with significant public health impact in Czech Republic, Slovakia, Germany, Poland and Lithuania. Several preventive strategies are described in the literature, but a systematic overview is missing. Moreover, we still lack a sound understanding of what works in which context and specifically for which target groups, when it comes to tackling methamphetamine use.

Objectives: In order to reduce methamphetamine related harm across Europe, the project aims to provide an effective knowledge transfer model for five highly affected regions in the EU.

Methods: A systematic literature review was employed, building the basis for a subsequent Delphi consensus finding process in order to select the most adequate evidence-based prevention strategies. Further, a desk review, a survey of stimulant users as well as of relevant stakeholders was conducted to assess the local needs in the model cities/regions. Multi-stakeholder partnerships (incl. local authorities, researchers, service providers, and users) in each of the five cities/regions were established to drive the design, assessment and implementation of intervention packages. Best practice strategies to prevent methamphetamine use will be tailored according to the local context and needs and will be implemented accordingly. Translation processes and public health impact of the tailored intervention packages will be evaluated based on the RE-AIM framework.

Results: Results of the literature review and the Delphi consensus finding process will be presented. Furthermore, preliminary results of the desk review, the user and the stakeholder survey will illustrate the implementation context in the model cities/regions.

Discussion & Conclusion: IMPRESA will provide new insights into the implementation of methamphetamine prevention activities in daily practice and an improved understanding of which factors and processes influence the effective and sustainable implementation of such programs in different European regions.

Funding sources: European Commission, DG HOME / German Federal Ministry of Health

Conflict of interest: None

Ethical statement: The Ethics Committee of the Centre for Psychosocial medicine of University Medical Centre Hamburg-Eppendorf deliberated upon and approved the project (LPEK-0352).

Corresponding author: Moritz Rosenkranz

Email: moritz.rosenkranz@uni-hamburg.de

Biography: Moritz Rosenkranz is a Sociologist and has a background in psychology and political science, too. His special research interests are controlled consumption of stimulants, regulated cannabis distribution, and research methods. He was involved in several EU and international projects as a researcher and short term expert.



Drug use in German Prisons – An area of conflict for inmates and staff?

Franziska Schneider^{1,2}

1 German Monitoring Centre for Drugs and Drug Addiction, Munich, Germany

2 IFT Institut für Therapieforchung, Munich, Germany

Keywords: drugs in prison, incarceration, drug use, help measures, repression, qualitative data

Abstract

Background & Objectives: Despite strong control, illicit substance use is prevalent in German correctional facilities. The present paper aims at investigating the relationship between repression measures – which often ensue when substance use is detected in prisons – and offers of help.

Methods: A total of 27 guideline-based interviews were conducted in a German prison. The interviews were recorded, transcribed and analysed using qualitative content analysis. The target groups were adult, incarcerated men and staff of the prison's General Correctional Service.

Results: Even though prison staff is officially in charge of bringing drug-using inmates in contact with help measures, the interviewed staff named mainly punitive aspects when speaking about drug use in prison. Accordingly, inmates don't report progress within the intramural setting through help measures; their personal focus lies mostly in the extramural setting. Furthermore, prison staff demands self-initiative from prisoners regarding their personal health. But prison structures require inmates to go through several levels of permissions with any request they have making said initiative nearly impossible and leading to frustration on both the inmates' and the staff's side.

Discussion & Conclusion: The close intertwining of punishment and help measures regarding drug use in prisons will continue to be an important area in the penal system. Results indicate that the focus for help measures needs to be shifted towards the extramural setting and prison staff needs to be trained to be able to maintain a more balanced approach of help and repression within prison. A good transition management including early preparations for leaving prison is key.

Funding sources: None

Conflict of interest: None

Ethical Statement: Participation was voluntary, and all interviews were fully anonymized during transcription.

Corresponding author: Franziska Schneider

Email: schneider@ift.de

Biography: Franziska Schneider is a criminologist. Her main area of responsibility at the German Monitoring Centre for Drugs and Drug Addiction is the preparation of reports on drug markets and drugs in custody.



Effectiveness of a digital alcohol moderation intervention as an add-on to depression treatment for young adults: preliminary findings of a pragmatic randomized controlled trial

Maria Schouten ¹, Jack Dekker ¹, Anneke Goudriaan ¹, Matthijs Blankers ¹

¹ Arkin Institute for Mental Health, Amsterdam, the Netherlands

Keywords: digital intervention, problematic alcohol use, depressive disorders, young adults

Abstract

Background: As problematic drinking often co-occurs with depression, we developed an add-on digital alcohol moderation intervention (Beating the Booze, BtB) to complement treatment as usual (TAU) for depressive disorders.

Objectives: Our study aimed to evaluate the effectiveness of BtB+TAU compared to TAU among young adults (18-35 years) with co-occurring depressive disorders and problematic alcohol use.

Methods: Participants were randomized to either TAU+BtB (n = 81) or TAU (n = 82). The primary outcome was treatment response at 6-months follow-up, operationalized as a composite score that combines alcohol use (7-day Timeline Followback (TLFB)) and depression measures (Center for Epidemiological Studies-Depression, (CES-D)). Secondary outcomes included depression and alcohol use measures.

Results: The sample included 163 participants with depressive disorders, with a mean age of 25 years (SD 4.5) and 78% was female. At baseline, the total sample had a mean CES-D score of 30.4 (SD 10.7), which is above the cut-off for severe depression (i.e. ≥ 21). The mean number of weekly drinks was 16.1 (SD 13.5) and mean AUDIT (Alcohol Use Disorder Identification Test) score was 15.2 (SD 7.0), corresponding to the lowest cut-off for alcohol dependence (≥ 15). Concerning BtB adherence, mean number of logins was 18.8 (SD 27.8) and 25% of the users proceeded until the last module of the programme. Follow-up results regarding effectiveness of the intervention (TLFB and CES-D) are currently being analysed and will be presented during the conference.

Discussion & Conclusion: If proven effective, the digital alcohol moderation intervention could be implemented in practice and might improve depression treatment.

Funding sources: The study is funded by ZonMw (The Netherlands Organisation for Health Research and Development, grant number 636310009).

Conflict of interest: None

Ethical Statement: The study was approved by the Medical Research Ethics Committees United (MEC-U) in the Netherlands (NL66899.100.18). The study was conducted in accordance with the Helsinki declaration and is pre-registered at the Netherlands Trial Register under registration number NL8122 (<https://www.trialregister.nl/trial/8122>).

Corresponding author: Maria Schouten

Email: maria.schouten@arkin.nl

Biography: Maria Schouten is a PhD student at Arkin Institute for Mental Health Care and the Vrije Universiteit Amsterdam (the Netherlands). She has an academic background in Health Sciences and Epidemiology. Her research project is focused on evaluating the (cost-) effectiveness of a digital alcohol moderation intervention as an add-on to depression treatment for young adults.



Individual differences that characterize skill in poker

Carrie Shaw¹ and Robert Williams²

1 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

2 University of Lethbridge, Lethbridge, Alberta, Canada

Keywords: poker, skill, individual differences, gambling, problem gambling

Abstract

Background: Poker is characterized as a "mixed" game: a game that includes both skill and chance components. But what individual differences are characteristic of skilled poker players? Some investigations have examined associations between poker skill and individual differences in statistical knowledge or executive functions or personality, but no previous study had sought to evaluate a broad scope of characteristics that could contribute to skill in poker.

Objectives: The purpose of this study was to fill this void by attempting to comprehensively examining the individual characteristics associated with good poker players.

Methods: A sample of community members and university students ($n = 100$), tested individually, undertook 12 counter-balanced tasks. Two poker skill tasks: a virtual poker playing assessment and the Poker Skills Measure (PSM, Leonard, Staples, & Williams, 2015) and 10 measures of individual differences that included: intelligence, working memory, mathematical ability, poker specific quantitative skill, the Gambling Fallacies Measure, social intelligence, problem and pathological gambling, risk-taking perception, personality, and demographics.

Results: Results showed that good players are more likely to be male, to have lower susceptibility to gambling fallacies, a greater tolerance for financial risk, superior social information processing skills, and less openness to aesthetic and imaginative experience. Evidence from this study also indicates that having sufficient levels of most of these attributes is more important for poker success than having exceptional strength in just one or two of these areas.

Conclusion: Success in poker, rather than being solely reliant on chance, is influenced by individual characteristics that contribute to a player's ability to influence the outcomes of the game. Having a profile characterised by important individual differences seems to provide a foundation on which players can build skill.

Funding Sources: This research was funded by the Alberta Gambling Research Institute and the Social Sciences and Humanities Research Council of Canada

Conflict of interest: There are no conflicts of interest to declare

Ethical Statement: This study received ethical review and approval from the University of Lethbridge Human Subject Research Committee.

Corresponding author: Carrie Shaw

Email: Carrie.Shaw@unigib.edu.gi

Biography: Dr. Carrie A. Shaw (nee Leonard) served as the Project Manager for the AGRI National Project (ANP) "Gambling and Problem Gambling in Canada: A National Study" until 2021. She is now the Senior Researcher at the Centre of Excellence in Responsible Gaming at the University of Gibraltar. Her research interests include cognitive and social individual differences, the role those individual difference factors play in erroneous belief formation and the role of erroneous beliefs in problem gambling. Dr. Shaw's recent publications include: "Gambling in Canada During the COVID Lockdown: Prospective National Survey" (2021), "Gambling Fallacies: Predicting Problem Gambling in a National Sample" (2021), "Fallacious beliefs: Gambling specific and belief in the paranormal" (2018), "The relationship between gambling fallacies and problem gambling" (2016), "Gambling Fallacies: What are they and how are they best measured?" (2015), and "Characteristics of good poker players" (2015).



Adaptation and validation of four gambling disorder-screening tests

Janusz Sierosławski¹, Katarzyna Dąbrowska¹, Łukasz Wieczorek¹

¹ Department of Studies on Alcoholism and Drug Dependence, Institute of Psychiatry and Neurology, Poland, Warsaw

Abstract

Background: A need for gambling disorder-screening tests was expressed by both practitioners and researchers dealing with gambling problem in Poland. As a response to those needs research program aimed at adaptation and validation of such tests was implemented.

Methods: On the bases of literature review, four tests were identified for these purposes: The South Oaks Gambling Screen (SOGS), Canadian Problem Gambling Index (CPGI), Early Intervention Gambling Health Test (EIGHT), Lie/Bet Questionnaire. Test adaptation procedure consisted in translation of tests items and checking their understanding in cognitive interviews. Test validation included test implementation in diagnosed populations of 300 respondents (55% with positive diagnose and 45% with negative one). The internal reliability of the tests was estimated using the standardized Cronbach's alpha coefficient. The Receiver Operating Curve (ROC) was used to assess the predictive power of the tests and to establish the critical values. Sensitivity, Specificity, Positive Predictive Value (PPV), Negative Predictive Value (NPV) were calculated.

Results: Cronbach α for four validated screening tests was in range 0.917-0.602. All four tests have satisfactory psychometric properties. The best properties have SOGS (Sensitivity 0.895, Specificity 0.910, PPV 0.938, NPV 0.832) and CPGI (Sensitivity 0.914, Specificity 0.910, PPV 0.925, NPV 0.896). In case of three tests (SOGS, CPGI, Lie/Bet) new thresholds have been established compared to the original test versions.

Conclusion: CPGI or SOGS were recommended for clinical practice and Lie/Bet for population studies.

Funding sources: Project was supported by the Found of Solving of Gambling Problems being in disposal of the Ministry of Health, grant: 3/HM/2016 as a part of the competition organized by the National Bureau for Drug Prevention.

Conflict of interest: No conflict of interest

Ethical statement: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Ethical approval to conduct the study was obtained from Bioethical Commission of the Institute of Psychiatry and Neurology, Warsaw, Poland (ref. 14/2016).

Corresponding author: Janusz Sierosławski

Email: sierosla@ipin.edu.pl

Biography: Janusz Sierosławski is sociologist, for 39 years working at the Institute of Psychiatry and Neurology in Warsaw, conducting research focused on epidemiological monitoring in the area of alcohol, drug and gambling problem, as well as, evaluation of social response to substance use related problems including alcohol and drug policy. Permanent Correspondent of Poland to Pompidou Group (Council of Europe), collaborating also with European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Involved in numerous international research projects e.g. principal investigator in the European School Survey Project on Alcohol and Other Drugs (ESPAD). Author or co-author of about 140 scientific publications in Polish, English, German, Russian and Serbian



Can yoga be addictive? A study on the risk of addiction in experienced female yogis

Attila Szabo¹

¹ Faculty of Education and Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

Keywords: dependence, exercise, health, stress, training

Abstract

Background: Yoga in the western world is a popular recreational activity and health practice, especially among women. It could become a long-term lifestyle involving passion, but it may also be addictive like regular exercise. While exercise addiction is widely studied, addiction to yoga has not received research attention to date.

Methods: This cross-sectional study examined 215 experienced women who practiced yoga for at least three years and at least twice a week. I scrutinized harmonious passion (HP), obsessive passion (OP), the risk of exercise addiction (REA), while also gathering various other demographic measures. Reported OP, feeling guilty when missing a yoga session, weekly frequency of yoga practice, and the tendency to practice yoga when injured predicted the REA by accounting for 42% of the variance.

Results: Yogis who regularly practiced pranayama (breathing exercises) scored higher on HP than those who never or only seldom used breath regulation. Only 2/215 (0.93%) of the sample were at REA. Participants choose yoga primarily for physical or mental health, followed by social, spiritual, and skill-development reasons. The posting of yoga-related messages on social media was positively related to HP, OP, REA, and the frequency of practice.

Conclusion: These findings imply that the REA among female yogis is minimal or negligible and that HP can only be associated with forms of yoga that involve pranayama.

Funding sources: None

Conflict of interest: The author has no conflict of interest to declare.

Ethical Statement: The study was performed with ethical permission obtained from the Research Ethics Committee of the Faculty of Education and Psychology at ELTE Eötvös Loránd University, Budapest, Hungary (Permission number: 2021/425)

Corresponding author: Prof. Dr. Attila Szabo

Email: szabo.attila@ppk.elte.hu

Biography: Prof. Dr. Attila Szabo, is Doctor of the Hungarian Academy of Sciences and Professor of Psychology at ELTE Eötvös Loránd University in Budapest, Hungary. He completed his undergraduate and postgraduate education at Concordia University (BSc in Psychology and MSc in Biology) and University of Montreal (PhD in 'Sciences de l'activité physique'), in Montreal, Canada. He served the sport science teaching and research teams at Nottingham Trent University, first as Senior Lecturer then as Reader for nearly nine years. His research interest is in behavioural addictions and placebo effects in sports and exercise.



Gender differences in a clinical sample of 60+ year old patients receiving treatment for alcohol use disorder

Jeppe Tryggedsson^{1,2}, Kjeld Andersen^{1,2}, Michael P. Bogenschutz³, Angelina I. Mellentin^{1,2}, Anette Sogaard Nielsen^{1,2}

1 Unit of Clinical Alcohol Research, Institute of Clinical Research, University of Southern Denmark, Odense, Denmark

2 Department of Mental Health Odense, Region of Southern Denmark, Odense, Denmark

3 NYU Langone Medical Center, New York, NY, USA

Keywords: Alcohol use disorder, older adults, gender differences, epidemiology.

Abstract

Background: Gender differences have been found in treatment-seeking older adults with AUD, concerning areas such as quality of life, drinking patterns, and prevalence of AUD. However, little is known about how these gender differences may relate to treatment.

Objectives: To investigate gender differences in quality of life, problematic areas at treatment start, and subsequent choice of treatment, in a clinical sample of 60+ year old patients receiving treatment for AUD.

Methods: We will utilize data from the Elderly Study; a multi-national (USA, Germany, and Denmark), single-blind randomized controlled trial. Participants (n=693) were randomized to brief, outpatient treatment based on motivational enhancement therapy alone (4 sessions) or motivational enhancement therapy followed by a community reinforcement approach age-adapted to older adults (up to 8 sessions). The latter was a module-based treatment where participants chose which module(s) they deemed most relevant. Modules focused on coping with aging, building sober networks, mood management, etc. The gender differences at baseline will be described by means of descriptive statistics (e.g. one-way analysis of variance, χ^2 statistics, etc.). Gender differences, including choice of modules, will be investigated by means of multivariate statistics, e.g. generalized linear models. Analyses will be controlled for relevant confounders such as age, country, education, work situation, marital status, family and friends, type of housing, etc.

Results: We will present our preliminary results at the EASAR congress.

Conclusion: Will be presented at the EASAR congress.

Funding sources: The Lundbeck Foundation, University of Southern Denmark, and The Psychiatric Research Foundation, the Region of Southern Denmark

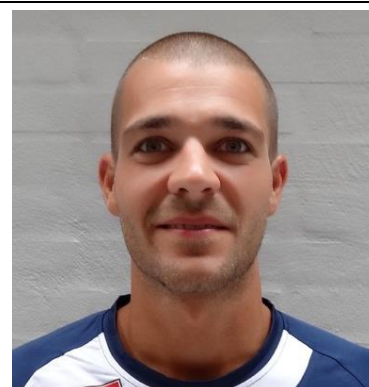
Conflict of interest: None

Ethical Statement: The study was approved by the local ethics committee structures at each site/country

Corresponding author: Jeppe Schmidt Tryggedsson

Email: jtryggedsson@health.sdu.dk

Biography: Jeppe Tryggedsson is a young researcher in alcohol treatment and PhD student at the Unit of Clinical Alcohol Research, University of Southern Denmark, and the Region of Southern Denmark. He holds a Master's degree in Public Health (Cand.scient.san.publ.) from the University of Copenhagen. His work focuses primarily on the treatment of elderly patients with alcohol use disorder. Before becoming a PhD student, Jeppe worked as a research assistant and investigated the relationship between duration and intensity of treatment and different clinical outcomes in a sample of individuals seeking treatment for alcohol use disorder.



Gaming in young elementary school-aged children

Anna Urešová¹, Kateřina Lukavská^{1,2}, Roman Gabrhelík¹

1 Department of Addictology, First Faculty of Medicine, Charles University, Prague, Czech Republic

2 Department of Psychology, Faculty of Education, Charles University, Prague, Czech Republic

Keywords: gaming, digital games; media use; screens; young elementary school-aged children

Abstract

Background: Gaming is a popular leisure activity. It is receiving increasing attention due to its positive as well as harmful effects. There is a growing body of studies focused on gaming in adults and adolescents, but not many data on gaming in smaller children. This study focused on gaming in young elementary school-aged children.

Objectives: This study focused on gaming in young elementary school-aged children.

Methods: Using parental reports, the prevalence of gaming, and the association between gaming and screen time was assessed in the sample of 1915 children attending grades 1-3 of elementary schools in Czechia, Slovakia, and Finland. Data were collected April-June 2021. The study also presents the analysis of gaming titles prevalent within this age group based on small-scale survey among 341 Czech and Slovak parents conducted in January 2021.

Results: Only 18% of children do not play any games. On the contrary, 24% of children play the games daily. The proportion of non-gamers is significantly higher in girls (23% against 12%, OR = 2.3). The proportion of daily gamers is higher in boys (28%) than girls (21%), but the difference is less pronounced (OR = 1.5). Most daily gamers (95%) were found to exceed the daily threshold of two hours in front of screens recommended by pediatricians. The content analysis of game titles showed that many children consume games inappropriate for their age.

Conclusion: Gaming was found to be prevalent. There is a high risk of excessive screen use in daily gamers. Parents should be educated on the appropriate extent and content of gaming in their children.

Funding sources: Cooperation – Addictology/Psychology; GAČR no. 21-31474S; Specific university research, grant number 260500

Conflict of interest – Authors declare no conflict of interest

Ethical statement – The study was approved by Institutional Review Board of Charles University and carried out in accordance with the Declaration of Helsinki

Corresponding author: Anna Urešová

Email: Anna.Ure@seznam.cz

Biography: Anna Urešová is a Ph.D. student in the addictology program at the 1st Medical Faculty of Charles University in Prague. She graduated with a master's degree in psychology and works as a psychologist mainly with children and families. She is interested in digital technologies, especially gaming.



Psychedelics in the treatment of addictive disorders

Wim van den Brink¹

¹ Department of Psychiatry, Amsterdam University Medical Centers, Amsterdam, the Netherlands

Keywords: addiction, treatment, psychedelics

Abstract

Background: Addiction can be seen as brain disease with a biopsychosocial basis, including specific biological and psychological abnormalities. There are proven-effective pharmacological and psychological treatments (resulting in functional brain changes) but dropout is generally high, effect sizes small and relapse rates are high. Psychedelics, including LSD, psilocybin, ketamine, and MDMA (ecstasy) are promising new medications in the treatment of addictive and other mental disorders.

Objectives and Methods: This presentation provides an overview of past and current research on the efficacy and safety of psychedelics in the treatment of addictive disorders, some remaining questions and topics for future research.

Results: Findings show that 1-3 psychedelic sessions are a promising new treatment for addictive disorders with rapid response, large effect sizes and long-lasting protection against relapse.

Conclusion: Psychedelics might be effective in the treatment of addictive disorder, especially in patients with a dual disorder or a polysubstance use disorder.

Funding sources: None

Conflict of interest: Janssen, Clearmind Medicine

Ethical Statement: None

Corresponding author: Wim van den Brink

Email: w.vandenbrink@amc.uva.nl

Biography: Wim van den Brink is a professor of Addiction Psychiatry. In 2014 he received the lifetime scientific achievement award from the Netherlands Association of Psychiatry and in 2015 he was granted the status of honourable member of the Spanish Society for Dual disorders. In 2017 he received the European Addiction Research Award from the European Federation of Addiction Societies (EUFAS) and in 2020 he became Doctor et Professor Honoris Causa at the Eötvös Loránd University in Budapest, Hungary. His main scientific interests are related to the neurobiology and pharmacological treatment of addictive disorders and related comorbidities, and the reduction of stigma regarding patients with an addiction. He is a (co)author of more than 600 peer-reviewed publications, and he supervised more than 75 PhD students.



Addictive behaviors including internet addiction, gaming disorder, exercise addiction and alcohol consumption were associated with genetic variants of the Forkhead box protein N3 (FOXN3)

Andrea Vereczkei¹, Eszter Kotyuk², Andrea Belik¹, Rajendra D. Badgaiyan³, Kenneth Blum^{2,4}, Zsolt Demetrovics^{2,5}, Csaba Barta¹

1 Department of Molecular Biology, Institute of Biochemistry and Molecular Biology, Semmelweis University, Budapest, Hungary

2 Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary

3 Department of Psychiatry, Ichan School of Medicine at Mount Sinai, New York, NY

4 Division of Addiction Research & Education, Center for Psychiatry, Medicine, & Primary Care (Office of the Provost), Western University Health Sciences, Pomona, CA, USA

5 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

Keywords: internet use, gaming, social networking site use, gambling, exercising, hair-pulling, alcohol consumption, genetics, genetic association, SNP, FOXN3

Abstract

Background: The co-occurrences, similarities in psychological and molecular mechanisms among various substance and behavioral addictions strongly suggest a common genetic basis. The aim of the present study was to investigate possible genetic overlaps between different types of substance-related, addictive and compulsive behaviors conducted as part of the Psychological and Genetic Factors of Addictions (PGA) study. The uniqueness of this study is the genetic analysis of both substance and behavioral addictions within the same cohort of 3003 young adults. Our sample was assessed for a wide range of potentially addictive substances (nicotine, alcohol, cannabis, and other drugs) and potentially addictive behaviors (internet use, gaming, social networking site use, gambling, exercising, hair-pulling and eating).

Methods: The present genetic association analysis focused on 32 single-nucleotide polymorphisms (SNPs) in candidate genes formerly implicated in studies of various addictions.

Results: The genetic analyses revealed 29 nominally significant associations, from which nine survived FDR_{bl} correction for multiple testing. Four of the nine significant associations were observed between the FOXN3 rs759364 SNP and certain potentially addictive behavioral traits: frequency of alcohol consumption and mean scores of scales assessing internet addiction, gaming disorder and exercise addiction.

Discussion & Conclusion: The results indicate a pleiotropic effect, ie. that certain genetic factors may contribute to multiple forms of addiction. In the current study, rs759364 of FOXN3 was shown to constitute genetic risk for increased alcohol consumption, internet use, gaming and exercise. Future studies should examine functional correlates and potential mechanisms underlying these relationships.

Funding sources: This work was supported by the Hungarian National Research, Development and Innovation Office (Grant numbers: KKP126835). Kenneth Blum was supported by R41MD012318/MD/NIMHD. Eszter Kotyuk was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Science, BO/00099/21. Csaba Barta was supported by funding from the Merit-prize fellowship of Semmelweis University, the Bolyai János research fellowship of the Hungarian Academy of Sciences BO/00987/16/5, the ÚNKP-18-4 of the new National Excellence Program of the Ministry of Human Capacities and the Baron Munchausen Program of the Institute of Medical Chemistry, Molecular Biology and Pathobiochemistry, Semmelweis University.

Conflict of interest: Kenneth Blum is the inventor of the Genetic Addiction Risk Severity (GARS) test and maintains a portfolio of both USA and Foreign Patents. ELTE Eötvös Loránd University receives funding from the Szerencsejáték Ltd. to maintain a telephone helpline service for problematic gambling. Zsolt Demetrovics has also been involved in research on responsible gambling funded by Szerencsejáték Ltd. and the Gambling Supervision Board and provided educational materials for the Szerencsejáték Ltd's responsible gambling program. The University of Gibraltar receives funding from the Gibraltar Gambling Care Foundation. Zsolt Demetrovics has been a member of a WHO advisory group on the public health consequences of addictive behaviours. In this capacity he has been eligible for travel support from the WHO or the host center to attend advisory group meetings but has not been remunerated for his work. Andrea Vereczkei, Csaba Barta, Andrea Belik, Rajendra D. Badgaiyan, Eszter Kotyuk have no conflict of interest to declare.

Ethical Statement: The study protocol was designed in accordance with guidelines of the Declaration of Helsinki and was approved by the Scientific and Research Ethics Committee of the Medical Research Council (ETT TUKEB). All participants signed written informed consent.

Corresponding author: Andrea Vereczkei

Email: vereczkei.andrea@med.semmelweis-univ.hu

Biography: Andrea Vereczkei is working as a senior lecturer at Semmelweis University, Budapest, Hungary. Her main topics of education include biochemistry and molecular cell biology. As a molecular biologist her main field of expertise is the genetics of various psychiatric disorders, including substance-related and addictive behaviors, depression, Tourette Syndrome. The applied methods include genetic association studies with different genotyping methods from traditional to high-throughput ones, recombinant DNA techniques for functional validation in cell cultures, epigenetic analyses of miRNA regulation and DNA methylation via pyrosequencing.



Public stigma and treatment preferences for alcohol use disorders

Sara Wallhed Finn^{1,2}, Anna Mejldal¹, Anette Søgaaard Nielsen^{1,3}

¹ Unit of Clinical Alcohol Research, Institute of Clinical Research, University of Southern Denmark, Odense, Denmark.

² Department of Global Public Health, Karolinska Institutet, Stockholm, Sweden

³ Psychiatric Hospital, University Function, Region of Southern Denmark, Odense, Denmark.

Keywords: alcohol; health care utilization; public health; treatment seeking

Abstract

Background: Alcohol use disorders (AUD) are among the most highly stigmatized medical conditions. Only a minority of individuals with AUD seek treatment, where stigma is one important barrier to treatment seeking. However, there is a lack of knowledge about the associations between stigma and preferences for help seeking respectively treatment preferences.

Objectives: to investigate the associations between stigma, preferences for potential help seeking and treatment for AUD.

Methods: Study design: Cross-sectional study. Participants: Adults aged 30 – 65 years, in total n=3037. Data: Year 2020, an online questionnaire was administrated by a market research company. The questionnaire covered demographic data, preferences for help seeking and treatment for AUD, stigma measured with the Difference, Disdain & Blame Scales for Public Stigma and alcohol use measured with the AUDIT questionnaire. Analyses: restricted cubic spline models were applied in order to model outcomes, and odds ratios were calculated.

Results: Lower level of stigma was associated with a higher probability of preferring seeking professional treatment and informal help for AUD. Both high and low level of stigma was associated with a higher probability of preferring GP. Stigma was not associated to other preferences for treatment seeking, a preference for trying to change myself or a passive strategy. The sub analyses, taking level of alcohol use into consideration, showed similar results.

Discussion & Conclusion: Stigma is associated with lower preferences for formal and informal help seeking, however not type of treatment preferred. Future studies should address stigma in relation to other factors of the treatment seeking process.

Funding sources: TrygFonden, grant number 129450

Conflict of interest: None

Ethical Statement: The study was approved by the Research Ethics Committee at the University of Southern Denmark on the 14th of January 2021, registration number: 20/70424.

Presenting author: Sara Wallhed Finn

Email: sarawf@health.sdu.dk

Biography: Sara Wallhed Finn's research focusses on different aspects of alcohol use disorders; prevention, treatment seeking, stigma, treatment utilization, treatment models and long-term outcomes after treatment.

Anna Mejldal is a PhD at the University of Southern Denmark.

Anette Søgaaard Nielsen is a Professor at the University of Southern Denmark, and the project director of the Unit for Clinical Alcohol Research. She has extensive experience in alcohol research, both epidemiological and clinical.



Fear of missing out and gaming disorder among Chinese students: The mediating role of maladaptive metacognition and depression

Shu M. YU¹, Anise M. S. WU^{2,3}, Meng Xuan Zhang^{*4}

1 Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar

2 Department of Psychology, Faculty of Social Sciences, University of Macau, Macao, China

3 Centre for Cognitive and Brain Sciences, University of Macau, Macao, China

4 Department of Medical Humanities, School of Humanities, Southeast University, Nanjing, Jiangsu, China

Keywords: Gaming Disorder; Maladaptive Metacognition; Psychological Distress; Chinese adolescent gamers

Abstract

Background: Fear of Missing Out (FoMO) has been reported as a salient factor in developing technology-related addictions among adolescents. However, the underlying mechanisms remained unclear. Drawing on the Self-Regulatory Executive Function Model of psychological distress, this study investigated the interplay of FoMO, maladaptive metacognition, psychological distress, and gaming disorder (GD) tendency.

Methods: Data were collected in a public high school in Shijiazhuang, China. 284 participants (41.9% females; age range = 16 to 20) with past-year gaming experience voluntarily completed an anonymous questionnaire, which consisted of self-report measures of GD tendency, FoMO, maladaptive metacognition, depression, and demographic information.

Results: As hypothesized, positive correlations were shown among GD tendency, FoMO, maladaptive metacognition, and depression ($r_s = .34$ to $.61$, $p_s < .001$). Path analysis was used to test the hypothesized serial mediation model. The assessed model showed good fit ($\chi^2/df = 1.42$, $p = .21$, CFI = .994, GFI = .992, RMSEA = .039, 90% CI [.000, .047], SRMR = .024). With demographic variables controlled, path analysis results showed that FoMO had direct effect on GD tendency ($\beta = .15$, 95% CI [.006, .289]). Maladaptive metacognition and depression mediated the association between FoMO and GD tendency, respectively and serially. The total indirect effect of FoMO on GD tendency was .12, 95%CI (.049, .204). Moreover, the total variance in GD tendency explained was approximately 32.2%.

Conclusions: Findings of this study provide empirical evidence regarding GD development among adolescents. GD intervention programs may consider incorporating metacognition and depression interventions for improved outcomes.

Funding: This work is supported by the Fundamental Research Funds for the Central Universities and University of Macau (MYRG2020-00106-FSS).

Conflict of interest: None

Ethical Statement: Ethics approval was obtained from the Department of Psychology, University of Macau

Presenting author: Shu (Mogu) YU

Email: Mogu.Yu@unigib.edu.gi

Biography: Mogu (Shu) received her higher education at the University of Macau, China. After obtaining B.S.S. in Psychology, she earned her M.S.S. in Criminology, then completed her Ph.D. in Psychology. Her work mainly focused on research concerning both individual and public health, with particular emphasis on addictive behaviors (e.g., gambling, gaming, Internet use, and smartphone use). In the past few years, she has conducted projects on psychosocial protective/risk factors for behavioral addictions, juvenile delinquency, and people's gambling attitude in different cultural background.



Further participants

Maja Bundalo Bocic

Email: bundalobm@zd-ptuj.si

Biography: psychiatrist and CBT therapist, working in the field of general psychiatry and addictology, with interest in evaluation of treatment for alcohol dependence.



Andrea Czako

Email: andrea.czako@unigib.edu.gi

Biography: Andrea Czako works as Research Manager at the Centre of Excellence in Responsible Gaming, responsible for coordinating research, educational and developmental activities of the Centre. She holds a Master's Degree in Psychology and completed her PhD in 2017 at the Doctoral School of Psychology at Eötvös Loránd University, Budapest. Andrea has a decade of experience in different leadership and management roles in higher education environment, especially in quality assurance, project management, and the planning and implementation of research and developmental activities.



Dr. Zsolt Demetrovics

Email: zsolt.demetrovics@unigib.edu.gi

Biography: Zsolt Demetrovics is professor of psychology, chair of the Centre of Excellence in Responsible Gaming at the University of Gibraltar, and head of the Addiction Research Group at the ELTE Eötvös Loránd University, Budapest, Hungary. Formerly, he served as dean of the Faculty of Education and Psychology (2014-2021) and director of the Institute of Psychology (2011-2021). His research interest covers the epidemiology, assessment and psychological correlates of substance use behaviour and behavioural addictions including gambling, video game use, internet addiction, hypersexual behaviour, exercise addiction, and compulsive buying. He is president of the *International Society for the Study of Behavioral Addictions* and funding Editor-in-Chief of the *Journal of Behavioral Addictions*.



Amandeep Dhir

Email: amandeep.dhir@uia.no

Roman Gabrhelík, Ph.D.

Email: roman.gabrhelik@lf1.cuni.cz

Biography: Roman, an Associate Professor at the 1st Faculty of Medicine, Charles University, is a psychologist by background and an addiction specialist with vast experience in various psycho-therapeutic approaches. His work is centered around Prevention Science and Implementation Science. He has been directly involved in the development of the National System of School-based Prevention of Risk Behaviors in Czechia for nearly two decades. Recently, his interests are in utilizing data from nation-wide health registers. Further, he is involved in research and applications of eHealth and mHealth in treatment of substance use disorders.



Anneke Goudriaan

Email: Anneke.Goudriaan@arkin.nl

Biography: Anneke Goudriaan has been working in the field of addiction research since 2001, as a professor in Addiction: Working Mechanisms and Treatment appointed in 2014 and before this, as a Principal Investigator. Core themes of her research are the unravelling of the neural mechanisms behind addictive disorders; the effects of substances on the brain; how psychological, pharmacological and neuromodulation interventions can positively add to the treatment of addictive disorders. Another topic is the conceptualization of behavioral addictions and more specifically pathological gambling. She has received several innovational grants from the Dutch Scientific Society, and from other national and European funding agencies. Another interest is in using neuromodulation to improve treatment outcomes in addictions. She works as a licensed mental health psychologist at Jellinek Addiction Treatment center, where she also heads the Academic Workplace Addiction. They relaunched the Amsterdam Institute for Addiction Research website (<https://aiar.nl>) Research at AIAR reaches from fundamental neuroscience studies to clinical applied research, such as in a recent RCT on PTSD and addiction, and e-health comorbidity interventions in addiction. They apply innovative methodology such as network modelling and datascience in their studies, next to neuroscience projects focusing on (pharmacological) MRI and neuromodulation studies, using rTMS in alcohol dependence.



Dr. Ludwig Kraus

Email: Kraus@ift.de

Biography: Prof. Dr. phil. Ludwig Kraus is a senior researcher and former scientific director of the IFT Institut für Therapieforschung in Munich, Germany, a senior researcher at the Department for Public Health Sciences, Stockholm University, Stockholm, Sweden and an honorary professor at the Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary. His background is in experimental psychology and epidemiology. He is assistant editor of the journals Addiction, Journal of Behavioral Addictions and Sucht, and he is president of the European Association of Substance Abuse Research (EASAR). His research topics span social and clinical epidemiology of substance use and gambling behaviour, diagnostics, treatment, addiction policy, and prevention.



Kateřina Lukavská, Ph.D.

Email: email@katerinalukavska.cz

Biography: Kateřina is a lecturer and researcher at Charles University, Prague, Czech Republic. Her background is in psychology and special education. Her research activities center around screen-related addictive behaviors, mostly gaming and the use of social media. Currently, she focuses on the use of screen-based electronic devices and digital media in pre-adolescents. She is especially interested in the role of family factors in the children's problematic use of screens and media. She is also involved in the effort to improve school-based prevention of risk behavior related to the use of screens and digital media.



Harshdeep Mangat

Email: Harshdeep.Mangat@unigib.edu.gi

Biography: Harshdeep is a PhD student at the University of Gibraltar with an interest in addictive behaviours among adolescents, especially a strong desire to explore underage and unregulated gambling among adolescents. Harsh holds a BA in Economics and an MA in Political Economy with a longstanding interest in behavioural economics & public policy, stemming from his high school and undergrad majors in Psychology and Sociology



Ronald Ngetich

Email: Ronald.Ngetich@unigib.edu.gi

Biography: Ronald is a doctoral researcher at the Centre of Excellence in Responsible Gaming at the University of Gibraltar. His research interests lie in cognitive processes, working memory and decision making. Currently, he is investigating how gambling and gaming disorders may impact working memory. Previously, he has investigated the causal role of specific brain areas in distinct cognitive domains using neuroscientific techniques such as theta-burst stimulation.



Michael Schaub

Email: michael.schaub@isgf.uzh.ch

Biography: Dr. Michael P. Schaub is Associate Professor at the University of Zurich and the Scientific Director of the Swiss Research Institute of Public Health and Addiction ISGF, a WHO Collaborating Centre, associated with the University of Zurich. He is a trained psychotherapist with a strong clinical and scientific background as well as a public health expert in the area of substance use disorders and behavioral addictions. He completed his Ph.D. in 2005 on the topic of cannabis use, its associated personality dimensions in the general population, and co-occurring mental-health problems in vulnerable persons. In 2012 he received his postdoctoral lecture qualification (Habilitation) for psychology, with the specialization for “treatment and diagnostic of substance use disorders” at the University of Zurich and was appointed Associate Professor in 2019. One of his main focus is on Internet and mobile device interventions for the reduction of substance use and substance use disorders as well as for the prevention and treatment of behavioral addictions. Dr. Schaub has published more than 130 peer-reviewed papers in scientific journals. He is scientific expert in addiction research for the World Health Organization WHO and at the United Nations Office on Drugs and Crime UNODC. Moreover, he is appointed member to the Technical Advisory Group on the Mental Health Impacts of COVID-19 in the WHO European Region.

