

# International Centre for Youth Gambling Newsletter



## USING SOCIAL MEDIA TO BETTER UNDERSTAND GAMBLING DISORDER

By Mark van der Maas, PhD; Lia Nower, JD, PhD, MSW; Ray Cho, PhD, Center for Gambling Studies, Rutgers University

We are currently in a period of rapid increases in gambling opportunities. This trend is being driven by enhanced technologies that make it easier to gamble over the internet and mobile networks, and the tendency for governments to legalize emerging forms of gambling, largely in efforts to divert residents from unregulated, off-shore websites and apps. Canada is part of this global trend, passing Bill C-218, legalizing single event sports betting over a year ago in August 2021.

Generally speaking, it is better for those who would like to gamble to do so with legal providers that are properly regulated by their local governments. However, legalization can also greatly increase the availability of gambling opportunities, which can lead to serious problems. While there is some disagreement as to how long the impact of initial legalization lasts, research consistently shows that increased availability of gambling is associated with increased occurrence of Gambling Disorder, at least in the short term (LaPlante & Shaffer, 2007). This is not surprising given the wealth of research on alcohol and tobacco that shows that when a potentially addictive product is easier to acquire, problems related to that product increase (Babor et al., 2010; Hoffman & Tan, 2015).

Based on what we know about sports betting and mobile/online gambling, we should reasonably expect increases in these forms of gambling to cause more harm among adolescents and young adults than in older cohorts. Research across multiple countries shows that younger cohorts are more likely to use mobile and internet technologies to gamble and that the use of those technologies to gamble increases chances of a developing a disorder (Griffiths & Parke, 2010; Calado, Alexandre, & Griffiths, 2017). In markets such as the UK, where single event sports betting has been available for much longer than in Canada, language related to gambling has become embedded in the basic understanding of sports and for an increasing proportion of young men, gambling is viewed as vital to their enjoyment when watching sports (McGee, 2020).

Unfortunately, compared to other popular addictive products like alcohol and tobacco, most jurisdictions in North America do a poor job of collecting the information needed to assess how increases in gambling availability affect public health. Even where existing data collection does occur regularly, researchers and policy makers typically have to wait before the data is made useable and released.

## Newsletter Highlights

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One possible solution to a lack of relevant, timely information is to use social media data. Social media describes online platforms that allow users to interact with each other and share information, often allowing for both public and private communication between users. Popular social media platforms include *Facebook*, *Reddit*, *Twitter*, *Youtube*, *Instagram* and *LinkedIn*. In 2022, in Canada, there are an estimated 33.3 million social media users, a 1.1 million growth compared to 2021 (Kemp, 2022).

### Opportunities

A primary advantage of using social media data is that it is easy to know the exact time that a piece of information was posted. This is useful when trying to determine if there are any changes in online behavior before and after a policy modification that might increase gambling access. Using machine learning techniques, we can also see if discussions related to certain topics related to gambling change over time. While longitudinal research such as repeated surveys usually give us information on these changes year over year, social media posts can give us this information down to the second.

For researchers attempting to learn about the experiences of those suffering gambling-related harms, social media can be a great source of information. Because of the detailed descriptions that some users are willing to share about their experiences with Gambling Disorder, it is possible for the reader to learn a lot. For example, when reading the *Reddit* forum on problem gambling, *r/problemgambling*, one will see biographical histories, how contributors' gambling developed, the problems they suffered, loved ones who have been hurt, aspects of gambling that present the greatest difficulties in attempts at control, and resources that have been helpful in recovery.

Sometimes, all of this information is contained within one post. There is also the opportunity to see interactions between contributors on most social media platforms adding to even greater richness in information. Reading stories and exchanges from people with lived experience can help inform the reader about the issues and vernacular at the heart of Gambling Disorder. For practitioners, this can be especially helpful in developing rapport and credibility with clients experiencing problems with their gambling.

For those seeking support or strategies to help them cope with problems created by their gambling, online forums can be attractive. This is largely because online sources of help reduce the barriers that might prevent someone from seeking help from other sources. Social media platforms are typically easy to access, cost little in terms of money and time, provide a wealth of personal experiences, are written in plain language, allow them to avoid the stigma that might result from disclosure, and can provide peer support.

### Challenges

User agreements typically acknowledge the public nature of the information posted on social media platforms, providing some grounds for implicit consent of a contributor's public posts to be included in research. However, there are substantial ethical considerations in the use of public data that must be considered, especially for those who would like to use this data for research purposes (Proferes, Jones, Gilbert, Fiesler, & Zimmer, 2021). These considerations include presenting information in a way that it cannot be traced back to individual users, and reporting on potentially sensitive issues where there are few options to track the potential negative effects of research on contributors or offer support when those effects might occur.

It is important to keep in mind when reading people's contributions on social media platforms that it may not be representative of the general population or even more specific sub-groups. Users of social media tend to skew younger, some platforms over-represent men while others over-represent women, and can be geographically dispersed with little information to make the residence of contributors known.

It is also important to be cautious when trying to determine the mental health status of a user based on their contributions. Most techniques that we have for identifying a condition like a Gambling Disorder are based on responses to specific questions in clinical or research settings. Much more work needs to be done to create a valid way to apply something like a screen for Gambling Disorder to what a user writes on social media (Chancellor & De Choudhury, 2020). Even where users self-identify as having a Gambling Disorder, it is difficult to tell if they are referring to a diagnosis from a mental healthcare professional, a self-diagnosis, or an exaggeration of their participation as a joke to others. This problem is especially important when trying to use machine learning programs to classify posts as examples of Gambling Disorder. If the program is trained in the early stages with some kind of bias or inaccurate information then those biases will continue through the classifications that program makes (Mehrabi, Morstatter, Saxena, Lerman, & Galstyan, 2021). The more bias that is introduced, the less valuable the classifications are in using social media to study Gambling Disorder.

### Using Social Media in Research: An Example

One example of how social media data can be used to understand changes in how gambling is discussed online can be found in a study that my colleagues and I published in *Computers in Human Behavior* earlier this year (van der Maas, Cho, & Nower, 2022). For this study, we were interested in how online discussions of problem gambling changed before and after the repeal of the Professional and Amateur Sports Protection Act in the U.S. The repeal of this act meant that individual states would be able to offer legal sports betting opportunities to their residents, which was previously illegal at the federal level outside of Nevada. With internal university Review Board approval, we accessed the *r/problemgambling* forum on *Reddit* to find discussions of problem gambling and collected 4 years of posts. This forum serves as a space for those who are experiencing trouble from gambling, either their own or someone close to them. Contributors share their stories, offer each other support, and share resources and strategies that have helped them in reducing the negative impacts of gambling on their lives.

We first wanted to see if there was a change in activity volume after American states started to implement legal sports betting. Using the start dates of legal sports betting in New Jersey and Delaware (the first two states to legalize outside of Nevada), we found significant and meaningful changes. We were able to measure a significant jump in activity at the start date and showed that growth on the forum was significantly faster after that jump (see Figure 1).

This change far outpaced the general growth of the *Reddit* platform as whole. (Figure 1) *r/problemgambling* weekly posts before and after the initiation of state sports betting programs in the U.S. outside of Nevada (June 1, 2018).

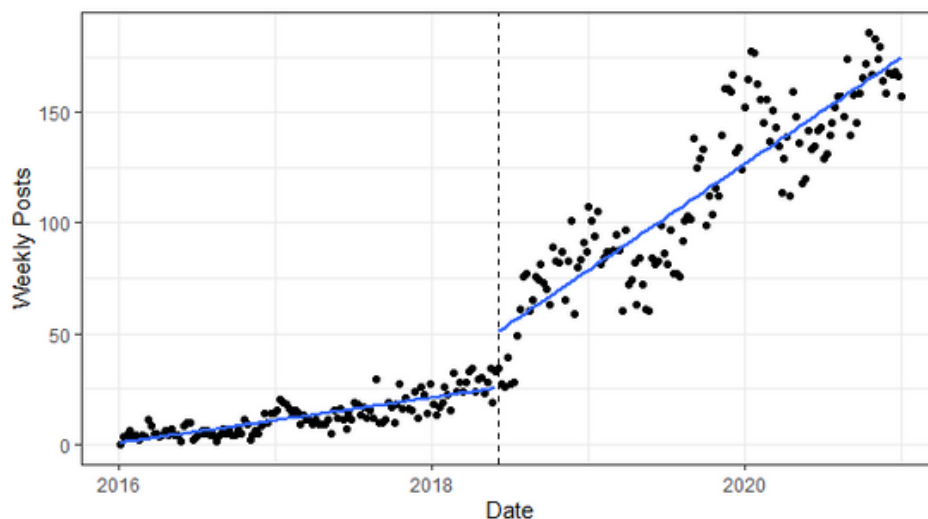


Figure 1: *r/problemgambling* weekly posts before and after the initiation of state sports betting programs in the US outside of Nevada (June 1, 2018)

We also looked at the content of the posts to see if there were any changes in how sports betting was being discussed on the problem gambling forum. We found that before the jump, most sports betting discussions were focused upon European football (soccer) leagues, but afterwards there was an increase in the discussion of North American professional sports, particularly American football. This was most pronounced around the Super Bowl, when contributors started sending messages encouraging each other to resist betting and stories of those who were not so lucky and broke sobriety to bet on the event. In short, we found that the timing and characteristics of changes in posts suggested that they were impacted by increases in sports betting availability in the U.S.

### Future Directions

Online gambling communities are growing over time and information technologies get more integrated with our social worlds, there is little reason to think that this trend will end any time soon. Considering a greater proportion of gambling behaviour is happening online, and the preference of online and mobile gambling for younger age groups, it is more important than ever to improve our understanding of how gambling is discussed in online forums.

While the size and scope of data on social media might present problems for a single person trying to organize or evaluate the information that is being shared, these data do lend themselves to machine learning and artificial intelligence approaches. These methods make it possible to take very large collections of data and identify trends and patterns in the language used to discuss gambling.

It is even theoretically possible, with a properly trained machine learning program, to quickly identify posts that either reflect symptoms of Gambling Disorder, or misunderstandings of gambling activities that can lead to greater harm. Such predictive programs could help support moderators in identifying possibly triggering statements or help clinicians trying to develop effective treatment plans when analyzing text-based treatment methods.

### References

- Babor, T. F., Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K. (2010). *Alcohol: No ordinary commodity: Research and Public Policy*.
- Calado, F., Alexandre, J., & Griffiths, M. D. (2017). Prevalence of adolescent problem gambling: A systematic review of recent research. *Journal of Gambling Studies*, 33(2), 397-424.
- Chancellor, S., & De Choudhury, M. (2020). Methods in predictive techniques for mental health status on social media: A critical review. *NPJ Digital Medicine*, 3(1), 1-11.
- Griffiths, M. D., & Parke, J. (2010). Adolescent gambling on the Internet: A review. *International Journal of Adolescent Medicine and Health*, 22(1), 59-75.
- Hoffman, S. J., & Tan, C. (2015). Overview of systematic reviews on the health-related effects of government tobacco control policies. *BMC Public Health*, 15(1), 1-11.
- Kemp, S. (2022). Digital 2022: Canada. Retrieved from <https://datareportal.com/reports/digital-2022-canada>
- LaPlante, D. A., & Shaffer, H. J. (2007). Understanding the influence of gambling opportunities: Expanding exposure models to include adaptation. *American Journal of Orthopsychiatry*, 77(4), 616-623.
- McGee, D. (2020). On the normalisation of online sports gambling among young adult men in the UK: A public health perspective. *Public Health*, 184, 89-94.
- Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021). A survey on bias and fairness in machine learning. *ACM Computing Surveys (CSUR)*, 54(6), 1-35.
- Proferes, N., Jones, N., Gilbert, S., Fiesler, C., & Zimmer, M. (2021). Studying reddit: A systematic overview of disciplines, approaches, methods, and ethics. *Social Media+ Society*, 7(2), 20563051211019004.
- van der Maas, M., Cho, S. R., & Nower, L. (2022). Problem gambling message board activity and the legalization of sports betting in the US: A mixed methods approach. *Computers in Human Behavior*, 128, 107133.

# INTRODUCING THE CENTRE OF EXCELLENCE IN RESPONSIBLE GAMING

By Zsolt Demetrovics, Centre of Excellence in Responsible Gaming (CERG)

In 2021, the Centre of Excellence in Responsible Gaming (CERG) (<https://www.unigib.edu.gi/research/centre-of-excellence-in-responsible-gaming/>) was established as a research institute at the University of Gibraltar. The University of Gibraltar is an autonomous, non-profit post-secondary institution founded on a commitment to inclusiveness by way of innovative partnerships with government, charitable foundations, healthcare, educational institutions and business sectors.

Within this collaborative environment, the CERG strives to be proactive and prompt in the identification of emergent challenges in modern societies, as well as reflective in the efforts to respond to these problems. To this end, and in line with the University's mission, the CERG aims to contribute to societal needs through the pursuit of pure research, evaluation of existing programs, and the creation of evidence-based interventions and training programs.

The overarching aims of the CERG include the identification of the etiological factors of addictive disorders and, in turn, to contribute to the development of effective prevention and treatment thereof. While having a wider interest in understanding the mechanisms of the development and maintenance of addiction processes, the CERG's research focuses specifically on the study of gambling and video game use (gaming). The CERG investigates the nature of risks and the mechanisms of the development of harm related to gambling and gaming behaviour. In addition to this line of pure research, the CERG also aims to evaluate existing interventions and to develop educational programmes and other intervention initiatives that would contribute to the minimization of gambling and gaming-related harms. The CERG is dedicated to the contribution of rigorous and transparent science with aims to produce quality research that is recognized internationally. The team also expects the results of their research to have practical applicability, intending their study results to be used in the development of preventive measures and treatments. The CERG also expects that their studies will assist operators in the development of efficacious protection measures. In order to accomplish these goals, the CERG aspires to global engagement and is actively seeking multidisciplinary and interdisciplinary collaborations.

Given that Gibraltar is a jurisdiction where numerous gambling companies have settled over the past two decades, this research centre will also have a good possibility of working strategically with them. The CERG aims to explore their needs, given the data that they have available, and work with them to establish effective solutions for gambling-related problems.

During the first year of CERG, the research team started the planning and implementation of several studies and joined international collaborations. One of these aims to set research priorities for gambling research over the next five years with the involvement of more than 270 gambling researchers from all over the world. They also started to plan an international gambling study, aiming to involve at least 25 countries in the collection of data. Several research reports have already been published, and they also raised attention to [gambling features and monetization in video games](#) and to the implications of [policy change related to video games](#).

The CERG team also intends to engage in inclusive outreach, planning activities such as international academic conferences, and a lecture series designed for the general public. They have started an international webinar series on gambling in collaboration with Yale University to provide insight into various gambling-related topics. Invited speakers from all over the world present and discuss gambling-related issues, questions, and best practices, including gambling policies, safer gambling interventions, current research in gambling and many other gambling-related topics.

The Centre is led by Prof. Zsolt Demetrovics who has published numerous research papers on the epidemiology, assessment and psychological correlates of substance use behaviour and behavioural addictions including gambling, video game use, problematic internet use, exercise addiction, compulsive buying, and hypersexual behaviour. His work has led him to serve as president of the International Society for the Study of Behavioural Addictions ([ISSBA](#)), as well as being a board member of the European Association of Substance Abuse Research ([EASAR](#)), and Editor-in-Chief of the Journal of Behavioral Addictions ([JBA](#)). At CERG, he heads a team of researchers which includes Research Manager, Dr Andrea Czakó; Researcher Dr Cristina Villalba García, PhD; Associate Researchers: Dr Shu (Mogu) Yu, Tyrone L. Burleigh, Laura Maldonado-Murciano, and six PhD students. For further information please visit our website: <https://www.unigib.edu.gi/cerg> or sign up for our [newsletter](#).



## DURAND JACOBS AWARD 2021 AND 2022

The Durand Jacobs Award is given to the best graduate student paper related to the psychology of addictive behaviors. The reviewing panel consists of international experts in the field of addiction. This annual award is dedicated to Dr. Durand Jacobs' lifelong desire to help mentor students.

The recipient of the 2021 Durand Jacobs Award was Thomas Swanton for his manuscript titled "Debt stress partly explains the relationship between problem gambling and comorbid mental health problems."

Tom is working with Professors Sally Gainsbury, Ellen Garbarino, and Sharon Collard. His PhD research investigates how payment methods impact gambling behaviour and interact with individual characteristics, including vulnerabilities to experiencing gambling-related harm. Tom has (co-)authored numerous peer-reviewed journal articles and has presented his work at domestic and international academic conferences. He has also received a Diploma of Counselling, Bachelor of Liberal Studies (International), and Graduate Diploma in Psychology. You can follow Tom's research updates on Google Scholar, LinkedIn, and Twitter.



### Abstract

**Rationale:** Easy access to consumer credit products, such as credit cards, overdrafts, and personal loans, may facilitate gambling beyond affordable levels, which can result in debt problems. Debt and mental health problems are both potential motivators and core consequences of problem gambling. Debt stress (i.e., worry regarding ability to repay debts) is one potential psychological mechanism underlying the relationship between debt and mental health problems. This cross-sectional study aimed to investigate the mediating effect of debt stress between gambling frequency and mental health and wellbeing.

**Methods & Results:** A sample of 309 Australian past-month gamblers (83.8% male; mean age 41.5 years) completed an online survey. There was no evidence for the pre-registered association between gambling frequency and debt stress, ruling out a predicted mediating effect for debt stress between gambling frequency and mental health and wellbeing. However, exploratory path analysis showed debt stress has statistically significant mediating effects between problem gambling and psychological distress, depression, wellbeing, and gambling-related family impacts, after controlling for sociodemographic factors and psychiatric history.

**Conclusions & Implications:** Debt stress is a robust indicator of financial problems and may indicate underlying problem gambling and mental health issues, making debt stress a useful risk indicator. Clinical services should conduct screening for debt stress and address subjective worry about debts as a standard part of treatment plans as this may help to mitigate some of the impact of gambling and/or financial problems on poor mental health. Health practitioners should develop strong referral networks with gambling and financial counselling services. Government investment in making gambling and financial counselling services freely available and easily accessible is recommended to ensure appropriate support is received via effective care pathways.



Dr. Jeffrey Derevensky and Thomas Swanton at the 2022 EASG Conference

## DURAND JACOBS AWARD - CONTINUED

The recipient of the 2022 Durand Jacobs Award was Ciara Cannoy for her manuscript titled "Response to Health Warnings on Cigarette Packs as a Predictor of Future Smoking Among Current Tobacco Smokers."

Ciara Cannoy is a PhD candidate in clinical psychology at Wayne State University (Detroit, MI). She is currently completing her predoctoral internship at the Forensic Mental Health Program within the Minnesota Security Hospital. Her research largely focuses on addictive disorders, homelessness, and stress and health.



### Abstract

**Rationale:** The United States Food and Drug Administration (FDA) requires health warning labels on all cigarette packages as part of a campaign to reduce tobacco smoking. Prior research has revealed the mixed effectiveness of these health warning labels. The present study used nationally representative, longitudinal data from the Population Study of Tobacco and Health (PATH) Study to assess whether initial reactions to health warning labels on cigarette packs predict smoking frequency and smoking cessation two years later. We hypothesized that individuals who reported strong reactions to health warnings at Wave 1 of the PATH Study would engage in less frequent smoking behavior and would be more likely to have completely quit cigarette smoking two years later (Wave 3), compared with individuals who did not report strong reactions. Multinomial and binary logistic regressions were used to estimate the associations between attitudes toward health warning labels and later smoking frequency and smoking cessation. Our hypotheses were partially supported; results indicated that several attitudes toward health warnings predict later smoking behaviors. These findings indicate general effectiveness of health warning labels and support the FDA's initiative to require more attention-grabbing health warning labels on cigarettes packs.

**Implications:** Past research has yielded mixed results regarding the effectiveness of health warning labels on cigarette packs. Although results indicate that health warning labels may lead to initial cognitive and behavioral reactions, no studies have assessed whether these reactions to health warning labels predict future smoking frequency or smoking cessation. Results from the present study reveal that individuals who are strongly impacted by health warning labels are more likely to reduce smoking frequency or quit altogether after two years and support proposed FDA regulations for more attention-grabbing health warning labels on cigarette packs.

## RASCHKOWAN WEBINAR SERIES: GAMBLING IN THE DIGITAL AGE

The International Centre for Youth Gambling in conjunction with the National Council on Problem Gambling (NCPG) present the the Raschkowan Lecture series "Gambling in the Digital Age." The webinars, featuring internationally renowned researchers, are free to attend but registration is required. The list of presenters includes:

**October 20, 2022 - Dr. Heather Wardle**

**Games Without Frontiers? Exploring Gambling and Gaming Behaviours Among Youth**



Great Britain has one of the most liberal gambling environments in the world. Emerging Adults (those aged 18-24) are a cohort of young people growing up in an environment where gambling advertising, marketing and widespread availability are the norm. In addition, the COVID-19 pandemic generated unprecedented disruptions to daily life, especially among young adults who should have been embarking on major life transitions. Using data from the Emerging Adults Gambling Survey, a longitudinal survey of young people in Britain, Dr. Wardle explored how gambling patterns have changed, how gambling and gaming are increasingly combined and the risks associated with this and drew implications for future policy directions – both nationally and internationally, as other countries seek to learn lessons from the British experience.

**November 17, 2022 - Dr. Michael Wohl**

**The Changing Face of Responsible Gambling: Positive Play and How to Harness It**

Most people who gamble do so without experiencing any gambling-related harm. Yet, the focus of the field of gambling studies and responsible gambling efforts have been on minimizing risk factors associated with problem gambling. In this webinar, Dr. Wohl discussed the negative consequences of this focus for responsible gambling programming and the downstream impact on players, and how this focus has begun to change. Specifically, recent theory and research has begun to direct attention toward positive play, which is not merely an absence of risky or problematic play, but a set of beliefs and behaviours that exist independently of problematic beliefs behaviours. Although positive play increases player satisfaction whilst minimizing the harms associated with gambling, the gambling industry continues to struggle with how to achieve and maintain positive players. To address this situation, Dr. Wohl has (with some controversy) proposed that rewards programs are well positioned to facilitate positive play by rewarding engagement with responsible gambling tools. The net effect being an increase in the current low rate of tool use. He concluded with a call for empirical research on the antecedents and consequences of rewards program membership, and particularly on whether membership can be leveraged to advance positive play.





## RASCHKOWAN WEBINAR SERIES: GAMBLING IN THE DIGITAL AGE

February 2, 2023 - Dr. Rachel Volberg

Gambling in Massachusetts – From Table Games to Sportsbooks



With the passage of the Expanded Gaming Act in 2011, Massachusetts authorized the development of a casino industry in the state. During the subsequent eight years, three resort casinos were built in the cities of Plainville, Springfield, and Everett. These casinos brought immediate economic benefit to the Commonwealth in the form of local job creation, tourism revenue, tax revenue, and local aid. In addition, the social impacts of introducing casinos with electronic gaming machines and table games into the state have been documented by the SEIGMA team over the last decade with some surprising, and some not so surprising, results. The recent legalization of sports betting will bring a new gambling format to the Massachusetts gambling landscape. The economic and social impacts of such a venture can only be speculated upon at this early stage; however, previous work done by the research team can provide an idea of the potential impacts the introduction of sports betting may bring to the Commonwealth over time.

March 2, 2023 - Dr. Daniel King

Future Directions in Gaming Disorder Research

The concept of 'gaming addiction' has generated significant debate for many years. Among other concerns, opposing views have often cited the lack of consistency and standardization in the evidence base. With the recent inclusion of '6C51 Gaming disorder' and 'QE22 Hazardous Gaming' in the International Classification of Diseases (ICD-11), the field has formal classifications that appear likely to propel the study of problem gaming forward. This talk will consider some of the important challenges and future directions of the gaming disorder field. Which areas of research are most needed to strengthen the evidence base for the condition, as we look ahead to the DSM-6? What technological trends and emerging gaming developments might affect the study of gaming disorder? What does the field need now? These questions will be addressed by Dr. King.



For more information and to register, visit [www.ncpgambling.org/raschkowan](http://www.ncpgambling.org/raschkowan). Recordings of past webinars are available on our Youth Gambling International YouTube channel.

## GIFT RESPONSIBLY CAMPAIGN

Each year, McGill University's International Centre for Youth Gambling Problems and the National Council on Problem Gambling (NCPG) ask lottery corporations to support our responsible gambling campaign and help raise awareness regarding the risks of underage lottery play during the holiday season. In 2022, once again, 100% of Canadian and U.S. lotteries, along with numerous international lotteries and non-lottery organizations, have joined the Campaign to promote responsible gambling. The Campaign is also endorsed by the North American Association of State and Provincial Lotteries (NASPL) and the European Lotteries (EL).



The 2022 Gift Responsibly Campaign participants include:

### Lottery Level 3

Alberta Gambling, Liquor and Cannabis (AGLC), Arkansas Scholarship Lottery, Atlantic Lottery, California State Lottery, Colorado Lottery, Connecticut Lottery Corporation, Hoosier Lottery, Illinois Lottery, Michigan State Lottery, New Jersey Lottery, New York State Gaming Commission, Division of Lottery, Ohio Lottery Commission, Oregon Lottery, Pennsylvania Lottery, The Mississippi Lottery Corporation, Virginia Lottery.

### Lottery Level 2

BCLC, DC Lottery, Florida Lottery, Georgia Lottery Corporation, Hrvatska Lutrija d.o.o., Iowa Lottery Authority, Kentucky Lottery Corporation, Maine State Lottery, Massachusetts State Lottery, Missouri Lottery, North Carolina Education Lottery, PLI Operator of Ireland's National Lottery, Rhode Island Lottery, South Carolina Education Lottery, South Dakota Lottery, Tennessee Education Lottery, Texas Lottery Commission.

### Lottery Level 1

Arizona Lottery, Camelot UK Lotteries Limited, Delaware Lottery, Idaho Lottery, Kansas Lottery, Loterija Slovenije, Loto-Québec, Louisiana Lottery Corporation, Manitoba Liquor & Lotteries, Maryland Lottery & Gaming Control Agency, Minnesota Lottery, Montana Lottery, National Lottery of North Macedonia, National Video Lottery of Macedonia - Casinos Austria LLC Skopje, Nebraska Lottery, New Hampshire Lottery, New Mexico Lottery, Nova Scotia Gaming Corporation, Oklahoma Lottery Commission, Ontario Lottery and Gaming Corporation (OLG), Österreichische Lotterien GmbH (Austrian Lotteries), Sask Lotteries, SAZKA a.s., Ukrainian National Lottery, Vermont Department of Liquor and Lottery, Washington's Lottery, Western Canada Lottery Corporation, Wisconsin Lottery, WV Lottery, WyoLotto.

### Non-Lottery Participants

AdCare Educational Institute of Maine, Alcohol & Drug Abuse Services, Inc., Amplify, Inc, Area Substance Abuse Council, Arkansas Problem Gambling Council, Armstrong-Indiana-Clarion Drug and Alcohol Commission, Catholic Charities Steuben/Livingston Prevention Services, Center for Human Development, Inc, Choices Treatment Center, Community and Family Resources, Council on Chemical Abuse, Council on Compulsive Gambling of PA, Evergreen Council on Problem Gambling, Fayette County Drug and Alcohol Commission, GamFin.org, Grace Emmanuel Baptist Church, Hanover County Behavioral Health Wellness, HealthReach Community Health Centers of Maine, iCarol Software, IGT, Illinois Association for Behavioral Health, Illinois Council on Problem Gambling, Illinois Department of Human Services, Substance Use Prevention and Recovery, Jackpocket, Kansas Coalition on Problem Gambling, KYCPG, Lawrence County Drug and Alcohol Commission, Linn County Alcohol & Drug, MA Council on Gaming and Health (MACGH), Maine Council On Problem Gambling, Maryland Center of Excellence on Problem Gambling, Maryland Council on Problem Gambling, Minnesota Alliance on Problem Gambling, National Association of Administrators for Disordered Gambling Services, Nicasa Behavioral Health Services, Oklahoma Association on Problem Gambling and Gaming, Pathway To Recovery, Philadelphia Department of Behavioral Health and Intellectual Disability Services, Prevention Action Alliance, Problem Gambling Coalition of Colorado, Problem Gambling Network of Ohio, Recovery Resources, Scientific Games, Stark County Mental Health & Addiction Recovery, The Florida Council on Compulsive Gambling, The Way Back Inn, Inc., Virginia Council on Problem Gambling, Washington County Prevention Coalition, Western CT Coalition, Westmoreland Drug and Alcohol Commission, WI Council on Problem Gambling, Wyoming Valley Alcohol and Drug Services, Inc.

## PUBLICATIONS

### In Press

#### Journal Articles

Delfabbro, P., Dodig-Hunric, D., Ricijas, N., Derevensky, J. & Gavriel-Fried, B. (in press). What contributes to public stigma towards problem gambling? A comparative analysis of university students in Australia, Canada, Croatia and Israel. *Journal of Gambling Studies*.

Derevensky, J., Marchica, L. & Richard, J. (in press). The migration between gaming and gambling: Our current knowledge. *Pediatric Research and Child Health*.

Duffy, S. & Derevensky, J. (in press). Helping parents understand the content of video games: Upgrading the ESRB rating system. *Journal of Children and Media*.

Richard, J., Temcheff, C., Fletcher, E., Lemieux, A., Derevensky, J. & Dery, M. (in press). Externalizing and internalizing pathways to adolescent gambling: A longitudinal study. *International Gambling Studies*.

Valenciano-Mendozaa, E., Mora-Maltasa, B., Mestre-Bach, G., Munguia, L., Richard, J., Derevensky, J., Potenza, M., & Jimenez-Murcia, S. (in press). Clinical correlates of sports betting: A systematic review. *Addictive Behaviors*.

#### Book Chapters

Derevensky, J. (in press). Behavioral addictions among elite athletes: Excessive gambling and gaming. In C. Reardon (Ed.), *Mental health care for elite athletes*. London: Springer Nature.

Derevensky, J., Marchica, L., Gilbeau, L. & Richard, J. (in press). Behavioral addictions in children and adolescents: A focus on gambling, gaming, internet addiction and smartphone use. In V. Preedy & V. Patel (Eds.), *The handbook of substance misuse and addictions: From biology to public health*. London: Springer Nature.

Marchica, L. & Derevensky, J. (in press). Prevention of impulse control disorders. In J. Grant & M. Potenza (Eds.), *Oxford handbook of impulse control disorders*. New York: Oxford University Press.

Richard, J. & Derevensky, J. (in press). Counselling interventions for youth problem gambling. In M. Zangeneh, J. Landon & S. Rodda (Eds.) *Counselling approaches for gambling disorder: An empirical review*.

## PUBLICATIONS (CONT'D)

### Journal Articles

Duffy, S. & Derevensky, J. (2022). A public health perspective on the necessity of regulation for the video gaming industry. *Journal of Addiction & Addictive Disorders*, 9, 088. DOI: 10.24966/AAS-7276/100088.

Donati, M.A., Derevensky, J., Cipollini, B., Leonardo, L., Iraci-Saferi, G. & Primi, C. (2022). Measuring gambling outcome experiences in adolescents: Testing the psychometric properties of a modified version of the Gambling Expectancy Questionnaire. *Journal of Gambling Studies*, 38, 31-52. <https://doi.org/10.1007/s10899-021-10053-y>

Marchica, L., Richard, J., Nower, L., Ivoska, W. & Derevensky, J. (2022). Problem video gaming in adolescents: An examination of the Pathways Model. *International Gambling Studies*, 22 (2), 282-299.

Pagani, L., Jalbert, M., & Derevensky, J. (2022). From one year to the next: Video-gaming lifestyle predicts subsequent psychosocial risk in adolescent boys and girls. *Journal of Paediatrics and Child Health*. doi:10.1111/pc.16032.

Richard, J., Temcheff, C., Fletcher, E., Lemieux, A., Derevensky, J. & Dery, M. (2022). An empirical investigation of externalizing and internalizing pathways to problem video gaming: A longitudinal study across childhood and adolescence. *Computers in Human Behavior*, 128, 1-8.

Roberts, A. Murphy, R., McNally, E-J, Derevensky, J. & Sharman, S. (2022). Teacher attitudes and awareness of adolescent gambling behavior in the U.K. *International Gambling Studies*.

### Book Chapters

Marchica, L., Temcheff, C., Bowden-Jones, H. & Derevensky, J. (2022). Addiction: An overview. In A.C. Michalos (Ed.). *Encyclopedia of quality of life research-Revised*. Netherlands: Springer Dordrecht Publishing.

## PRESENTATIONS

Derevensky, J. (2022). Understanding gambling problems from a high-risk framework: New approaches for the prevention and treatment of gambling disorders. Paper presented at the 13th European Conference on Gambling Studies and Policy Issues, Oslo, September.

Fletcher, E., Richard, J., Boutin, S., Lemieux, A., Derevensky, J. & Temcheff, C. (2022). Mental health trajectories of adolescents who engage in gambling behaviours. Poster presented at the Life History Research Society Conference, Oxford University, Oxford, July.

Richard, J., Temcheff, C., Fletcher, F., Lemieux, A., Derevensky, J. & Dery, M. (2022). A longitudinal investigation of the pathways to disordered gaming. Poster presented at the Life History Research Society Conference, Oxford University, Oxford, July.

Derevensky, J., Sciola, A., Paskus, T. & Richard, J. (2022). College student athletes' gambling behaviors: A look at changes in sports wagering from 2004-2020. Paper presented at the National Council on Problem Gambling Annual Conference, Boston, July.

Richard, J., Temcheff, C., Ivoska, W. & Derevensky, J. (2022). Problem gambling and gaming in the hierarchical structure of psychopathology. Poster presented at the National Council on Problem Gambling annual conference, Boston, July.

Richard, J., Temcheff, C., Fletcher, E., Lemieux, A., Derevensky, J. & Dery, M. (2022). A longitudinal investigation of the externalizing and internalizing pathways to disordered gaming. Snapshot paper presented at the Canadian Psychological Association annual conference, Calgary, June.

## INVITED ADDRESSES

Derevensky, J. (2022). What can we learn from the past and what will the future bring? Boomers and Zoomers. Invited talk presented at the 13th European Conference on Gambling studies and Policy Issues. Oslo, Norway, September.

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Derevensky, J. (2022). Best practices in youth gambling prevention. Invited presentation to the Young People and Behavioral Addictions: From Identification to Action meeting, Provincial Council of Gipuzkoa, San Sebastian, Spain, July.

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Derevensky, J. (2022). Exploring how gambling support and treatment have evolved over the past 10 years. Invited presentation to the 10th New Horizons in Responsible Gambling Conference, Vancouver, B.C. March (presented remotely).

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Derevensky, J. (2022). Understanding adolescent gambling problems incorporating a high-risk framework: Implications for prevention and treatment. Invited presentation at the Michigan Department of Health & Human Services & the Community Mental Health Association of Michigan's 14th Virtual Annual Problem Gambling Symposium. March.

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Derevensky, J. (2022). The prevention of youth gambling problems: New issues and concerns. Invited presentation to the Annual Council on Compulsive Gambling of Pennsylvania conference, March.

