



US Military Veterans: One Example of Special Populations to Consider for Assessment and Treatment of Problem Gambling

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In the US, although millions of adults gamble recreationally each year without experiencing problems, a subset of Americans develop a gambling disorder characterized by recurrent and maladaptive patterns of gambling that are associated with clinically significant impairment and distress. Estimated lifetime prevalence of gambling disorder among US adults ranges from 0.4% to 1.6% and between 1-4% for problem gambling (Hodgins, Stea et al., 2011). We will use the term “problem gambling” to describe individuals who have strong urges to gamble frequently despite harmful consequences or desire to quit. One special population of problem gamblers is US military veterans. Studying problem gambling among US veterans and active duty military personnel is particularly important given their increased likelihood of experiencing trauma and substance addictions and the availability of gambling opportunities on non-domestic military bases. A recent study found that 2.2% of veterans surveyed reported having issues with problem gambling in the past year (Stefanovics, Potenza et al., 2017). Veterans with problem-gambling features reported greater issues with substance use, anxiety, depression, physical and sexual trauma, and had sought mental health treatment more often compared to recreational gamblers.

Alcohol Use and Gambling Frequently Co-occur among U.S. Military Veterans

Alcohol-use disorder commonly co-occurs with gambling disorder (<50%) (Petry, Stinson et al. 2005). Despite this, relatively few randomized clinical trials for alcohol dependence have assessed for the possible influence of problem-gambling features on patient treatment outcomes. To investigate, we examined using secondary analyses the influence of problem-gambling features on treatment outcomes for veterans with alcohol dependence and one or more co-occurring non-gambling psychiatric disorders at three VA outpatient clinics in New England (Grant, Potenza et al., 2017). Two-hundred-and-fifty-four veterans were treated for 12 weeks in an outpatient medication study conducted at three VA outpatient clinics from 2001-2004 (Petrakis, Poling et al., 2005). Specifically, veterans were randomized to one of four groups: (1) naltrexone alone, (2) placebo alone, (3) (open-label) disulfiram and (blinded) naltrexone, or (4) (open-label) disulfiram and (blinded) placebo. One-hundred-and-seventy-four veterans were assessed for the diagnostic criteria for pathological gambling using the Massachusetts Gambling Screen. Primary outcomes and secondary outcome measures assessed alcohol-use and psychopathology-related outcomes.

Our analyses yielded interesting results. First, while a relatively small number of veterans met full criteria for pathological gambling (n=11, 6.3%), this percentage with pathological gambling is well above documented rates found in community samples. Given that subsyndromal levels of problem-gambling severity are associated with negative health measures including psychopathology (Desai and Potenza, 2008), we examined the influence of problem-gambling features (acknowledged by one or more inclusionary criteria for pathological gambling) on treatment outcomes. Approximately one in four (n=45, 25.9%) veterans in the study exhibited problem-gambling features. Over the 12 weeks of treatment, veterans with problem-gambling features showed less improvement in some alcohol-related outcomes and overall general psychiatric functioning, specifically within somatization, anxiety, paranoid ideation, and interpersonal sensitivity domains than veterans without such features. Strengths of our study included its large sample size, comprehensive assessment battery used to assess alcohol and psychopathology, and use of biological assessments (e.g., urine screens).

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Limitations included recruiting a mostly male sample, using a low threshold for problem-gambling features, and not assessing problem-gambling severity across the course of the trial.

Overall, the relationships found between problem-gambling features and poorer outcomes in dually diagnosed veterans suggest the need for improved screening for problem gambling in individuals with multiple psychiatric conditions. Within the VA healthcare system, there is a growing need to screen for problem gambling among veterans reporting issues with substance use, post-traumatic stress disorder, depression, and compulsive sexual behavior. As illustrated in our paper (Grant et al., 2017), more research is needed to develop effective treatments for veterans with problem gambling and co-occurring mental health conditions, particularly since dually diagnosed individuals often have poor treatment outcomes.

Local research efforts in Massachusetts to help veterans with problem gambling

An estimated 2.2% of Massachusetts adults are believed to experience problem gambling. The Massachusetts Behavior Risk Factor Surveillance System surveyed 3,988 Massachusetts adults and found that higher gambling frequency was associated with increased alcohol consumption, binge drinking, and tobacco use. In addition, those who gambled two or more times a week were twice as likely to report 14 days or more of poor health in the past month (Okunna, Rodriguez-Monguio et al. 2016).

To improve our understanding of the prevalence and characteristics of veterans with problem gambling in Massachusetts, we recently received funding from the Massachusetts Gaming Commission (FY2017) to implement the first systematic screening study of problem gambling in the Primary Care Behavioral Clinic at the Edith Nourse Rogers Memorial Veterans Hospital. Over the course of six months, we have begun screening four-hundred veterans seeking treatment in primary care to determine the prevalence of problem gambling and its co-occurrence with other mental health conditions such as chronic pain, opioid use and opioid-use disorder, depression, suicidal behaviors, and post-traumatic stress disorder. Through this grant, we seek to develop an effective screening protocol for identifying veterans with problem gambling so that they can be quickly be referred to appropriate treatment services. In response to veterans' anticipated treatment needs, Dr. Kraus

created the VA Behavioral Addictions Clinic at the Edith Nourse Rogers Memorial Veterans Hospital. This Clinic offers specialty treatment to veterans with behavioral addictions (e.g., problem gambling, compulsive sexual behavior, binge eating, and other conditions). At present, the Clinic is developing new treatment approaches for treating problem gambling and other behavioral addictions for veterans with plans for training and dissemination across the VA healthcare system.

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From Play-to-Win to Pay-to-Win: The Trap of 'Loot Boxes' in Videogames

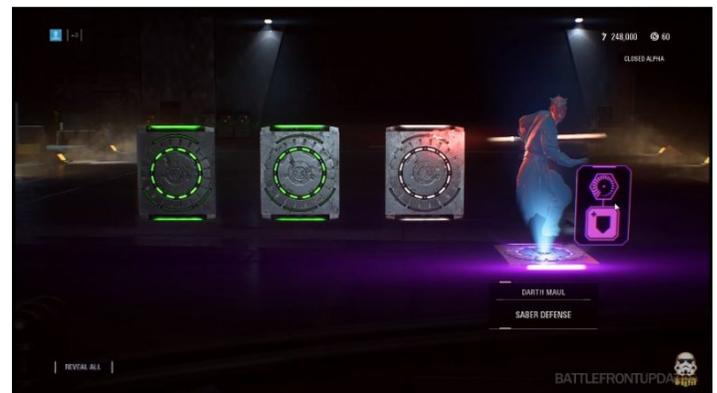
Jeremie Richard, International Centre for Youth Gambling Problems and High-Risk Adolescent Behaviors

This last year has seen overwhelming controversy regarding microtransactions and loot boxes in videogames and whether these in-game features can be considered gambling. A loot box is an in-game consumable item that gives the player a chance to receive a random virtual reward ranging from cosmetic features that do not influence gameplay, to equipment that accelerates one's progress in the game. Although loot boxes were previously more prevalent in 'freemium' mobile games (games downloaded for free with money charged for additional features or virtual goods), loot boxes have now become an important aspect of purchased console (i.e., PlayStation, Xbox) and personal computer (PC) games. Of relevance, many console games released in the latter half of 2017 included some type of loot box feature, including but not limited to: *Star Wars Battlefront II*, *Need for Speed: Payback*, *NBA 2K18* and *Call of Duty: WWII*. Although loot boxes can frequently be earned through regular gameplay such as completing various missions or earning achievements, current trends emphasize the 'advantage' of purchasing loot boxes through in-game microtransactions.

Recent reports indicate that the videogame industry as a whole is expected to have generated \$108.9 billion in revenue in 2017 (McDonald, 2017). Interestingly, \$7.29 billion of this revenue was generated solely by in-game microtransactions on consoles, routinely involving the purchase of loot boxes (Newzoo, 2017). As the videogame market is rapidly expanding and is progressively integrating loot boxes within new games, concern is growing about whether such features can be considered gambling. Whether or not spending money to acquire random virtual items of differing value can be considered gambling, it is possible that the purchase of loot boxes constitutes a risk in normalizing gambling behaviours amongst children and adolescents.

According to recent reports, 95% of adolescents are online (Madden et al., 2013) and 72% report playing videogames (Lenhart, 2015). Research indicates that Internet or online gaming begins in middle or high school (Rho et al., 2017) and provides an interactive environment for adolescents. However, some adolescents can devote substantial time playing videogames which can lead to neglecting important areas of life functioning while increasing emotional distress (Gonzalez, Espada, & Tejeiro, 2017; Liu, 2007; Smohai et al., 2017). Due to the negative sequelae associated with excessive time spent playing online videogames, much attention has been brought to the proposed criteria for Internet Gaming Disorder (IGD). The American Psychiatric Association (2013) defines IGD as the "persistent and recurrent use of the Internet to engage in games, often with other players, leading to clinically significant impairment or distress." Interestingly, the proposed criteria for IGD does not include a criteria specific to money spent on online gaming. A recent study by Rho et al. (2017) identified several significant risk factors for IGD including impulsivity, low self-control, amount of weekly

play time and money spent on gaming. As such, it appears as though spending money on in-game microtransactions, especially on loot boxes, would be an important factor to consider due to the numerous behavioural similarities existing between IGD and gambling disorder (American Psychiatric Association, 2013; Kaptsis et al., 2016; Kardefelt-Winther, 2015; Ohannessian, 2015; Yen et al., 2008). Bearing in mind the random nature of loot boxes, it is possible that the systematic integration of these features within videogames muddles the distinction between what can be considered gambling or gaming.



Loot Crates in the *Star Wars Battlefront 2*

If one witnesses the opening of a loot box in any videogame, an interesting universal pattern of animations is observed across all games. With vibrant colors, explosive visuals, and loud sound effects, loot boxes have many features bound to keep players purchasing more whether or not they receive the reward they desire. Interestingly, the animations developed for the opening of loot boxes appear to replicate that of electronic gambling machines (i.e., slot machines) to a striking degree. Reinforcing this assertion, both slot machines and loot boxes have similar features including the potential for rapid repeated attempts, intermittent reinforcement schedules and ancillary features (bright colors, lights and sounds). All of these features are intended to increase the likelihood that the individual will continue gambling or purchasing loot boxes, while keeping them entertained and engaged for extended periods of time (Abbott, Volberg, & Ronnberg, 2004; Dowling, Smith & Thomas, 2005; Griffiths, 1999; Wood & Griffiths, 2004). To further emphasize the dangerous nature of slot machines, a study by Dixon et al. (2014) found that including sound effects on slot machines increased a player's arousal and pleasure, while contributing to the overestimation of the number of times they won when gambling. Because loot boxes share many of the same features as slot machines, especially online slot machines, it is possible that opening loot boxes may reinforce purchasing behaviours with the potential for overspending or even financial consequences. Such behavioural reinforcement can be very dangerous for children and adolescents

who tend to be more susceptible to gambling problems, while being higher in risk-taking behaviours, impulsivity and having lower levels of self-control (Brezing, Derevensky, & Potenza, 2010; Chambers & Potenza, 2003; Nower, Derevensky, & Gupta 2004; Wood & Griffiths, 2004). With the cost of loot boxes ranging from \$0.99 to over \$99.99 (notwithstanding 'special offers'), the accessibility and attractiveness of such microtransactions give players of all ages the maximal incentive necessary to buy in and hope that they will receive the item they desire.

In addition to the behavioural and psychological similarities between gambling and loot boxes, additional environmental reinforcers may be influencing the purchase of loot boxes. On popular video sharing websites such as *YouTube*, many videogame players submit or stream videos of their gameplay including live competitive matches (e.g., eSports), strategic gameplay, and even the opening of loot boxes. These videos reach a wide audience, with some gaming channels reaching tens of millions of followers and videos gathering millions of views on a daily basis. More specific to gaming, the video streaming website *Twitch* reports having over 15 million daily active viewers watching an average of 106 minutes of gameplay per person each day (Twitch, 2017).



Supply Drops in *Call of Duty*

Interestingly, some of the most popular videos on YouTube gaming channels are videos where the individual opens hundreds of dollars worth of loot boxes for time periods occasionally exceeding 30 minutes. By searching for “loot box opening”, “loot crate opening” or “chest opening” on YouTube, one will notice that hundreds of new loot box opening videos are posted daily while gathering thousands or even millions of views. This overexposure to watching others opening loot boxes may allow people to experience similar levels of psychological and physiological satisfaction without spending a dime on loot boxes. However, this may also influence others to purchase loot boxes through behavioural modeling and the hope that they may also win rare rewards. Although demographic information regarding the viewers of videos on *YouTube* and *Twitch* is generally restricted to channel creators, available data suggests that children, adolescents and young adults are amongst the top viewers of gaming videos (Newzoo, 2016). As these populations have been identified as being at increased risk for problem gambling and excessive online gaming (Brezing, Derevensky, & Potenza, 2010),

the daily viewing of loot box opening videos by these populations may reinforce behavioural patterns with the potential of causing further dysfunction on the part of these individuals.

Although there are clear behavioural and psychological similarities between gambling and loot boxes, various organizations and regulators have publicly stated that the purchasing and opening of loot boxes is *not* considered gambling. The Entertainment Software Rating Board (ESRB), an American self-regulatory organization that assigns age restrictions and content ratings for videogames, recently stated the following:

“The ESRB does not consider loot boxes to be gambling... While there’s an element of chance in these mechanics, the player is always guaranteed to receive in-game content (even if the player unfortunately receives something they don’t want). We think of it as a similar principle to collectible card games: Sometimes you’ll open a pack and get a brand new holographic card you’ve had your eye on for a while. But other times you’ll end up with a pack of cards you already have.” (Schreier, 2017)

Similarly, Trish Millward, a licensing compliance manager for New Zealand’s Gambling Compliance office within the Department of Internal Affairs stated “While the payment of money for a loot box with the contents of which are determined by chance may appear to be gambling, the Department is of the view that loot boxes do not meet the definition of gambling” (Cross, 2017). These claims have been reiterated by the United Kingdom Gambling Commission, where Executive Director Tim Miller stated that under United Kingdom gambling law:

“A key factor in deciding [what is legally classified as gambling] is whether in-game items acquired 'via a game of chance' can be considered money or money’s worth. In practical terms this means that where in-game items obtained via loot boxes are confined for use within the game and cannot be cashed out it is unlikely to be caught as a licensable gambling activity. In those cases our legal powers would not allow us to step in.” (Miller, 2017)

In 2016, the United Kingdom Gambling Commission also published a position paper indicating that when “in-game items can be traded or exchanged for money or money’s worth outside a videogame, they acquire a monetary value and are themselves considered money or money’s worth” (Gambling Commission, 2016). At this point, virtual in-game items of differing rarity would be considered of monetary value and loot boxes would presumably meet the criteria for gambling. Based on this case-by-case definition of gambling centered on trading or exchanging items, the Commission’s proposition appears inadequate. As it is technically possible to trade any in-game item or online account given a market emerges for such goods (see ‘Skins’ gambling controversy for *Counter Strike: Global Offensive* and *FIFA 17*), their policy would only regulate gambling behaviours after the damage has already been done. Although, it is impossible to predict which videogame will be next to face such a controversy, one thing that

is certain is that if such a controversy does occur, it will happen over a videogame with some kind of randomized loot box feature.

Alternative views regarding the legality of loot boxes have been presented by various others. Regulating commissions in Australia and Belgium have begun to look into the issue of loot boxes and are currently investigating whether or not they meet their country's legal definition of gambling (Louvigny, 2017; Walker, 2017). Interestingly, some individuals have made bolder claims in regards to regulating loot boxes. Hawaiian State Representative Chris Lee announced on November 21, 2017 that he plans "to address predatory practices in online gaming and the significant financial consequences that it can have on families and has had on families across the nation" (Hawaii State Capital, 2017). To this date, Lee has announced that he is currently developing a plan which aims to prohibit the sale of games with gambling mechanisms such as loot box features to individuals under the age of 21 (Lee, 2017). As these bills are currently being drafted, the decision made by Hawaiian state legislators will be important in deciding the future of online gaming within the state and potentially within the entire country. As for countries that have already integrated some type of regulation on loot boxes, China's Ministry of Culture decided in 2017 to make it a legal obligation for gaming companies to reveal the odds (or percentage rates) players have to get their desired item when purchasing loot boxes (Frank, 2017). Although the obligations established by China may seem minor, it may be enough to precipitate policy change in other countries with the intent of protecting consumers of all ages from predatory practices in videogames.

Given the rapid spread and integration of loot box features in videogames, the future of loot boxes remains uncertain. Will videogame developers continue adding randomized reward systems in games and demand money from for access to in-game content? With the development of virtual reality gaming systems, additional questions arise in terms of the types of games that will be released and whether virtual reality casinos will come into being. As for the near future, the question of whether loot boxes can be considered a form of gambling will have to be answered and the consequences of such a decision will follow. With the rising costs in videogame production, game developers will also have to consider the price at which they want to sell their product and whether they can consider reverting to letting players *play* to win, instead of *paying* to win.

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Centre Fundraising Campaign in Full Swing

The Centre's ongoing fundraising campaign continues to grow with the support of corporate and private sponsors. Due to restricted government infrastructure funding, we have initiated a fundraising campaign to help us maintain our ability to develop and deploy empirically-based prevention and harm-minimization programs. The Centre is housed on McGill University's main campus in the heart of Montreal, Canada. McGill University is a public university and recognized charitable organization.

Donations can be made to:

The International Centre for Youth Gambling Problems and High-Risk Behaviors
McGill University
3724 McTavish Street
Montreal, Quebec H3A 1Y2

Official letters of contributions and tax receipts will be forwarded

2018 Durand Jacobs Award Call for Papers

The International Centre for Youth Gambling Problems and High-Risk Behaviors at McGill University invites submissions to the 2018 Durand Jacobs Award competition, to be awarded to the best graduate student paper related to the psychology of addictive behaviors. This annual award is dedicated to Dr. Durand Jacobs' lifelong desire to help mentor students. Published and/or publishable papers will be considered by the selection committee, comprised of an international panel of experts in the field. The recipient will receive an award plaque and their work will be featured in the Youth Gambling International newsletter. Graduate students from all related disciplines are encouraged to submit their papers by April 30, 2018.

Please submit all entries electronically in Word format to lynette.gilbeau@mcgill.ca.

If you have any questions, please direct them to:
Lynette Gilbeau by email, or telephone: (514) 398-4438.

Problem Gambling Awareness Month

March is Problem Gambling Awareness Month. This National Council on Problem Gambling (NCPG) campaign strives to raise awareness concerning problem gambling and highlight the availability of prevention, treatment and recovery services.

NCPG state affiliates, organizational and individual members, state health agencies, gambling companies, recovery groups and a wide range of healthcare organizations and providers participate in this campaign by holding conferences, airing Public Service Announcements, providing counselor training, hosting screening days, running social media campaigns and many other activities.

The 2018 PGAM theme is "Have the Conversation." For more information, visit www.ncpgambling.org.



Upcoming Events

- **Discovery 2018 - Responsible Gambling Council**
April 10-12, 2018
Toronto, Ontario
- **Alberta Gambling Research Institute's 17th Annual Conference**
April 12-14, 2018
Banff, Alberta
- **Canadian Gaming Summit**
June 18-20, 2018
Niagara Falls, Ontario
- **NCPG 32nd Annual Conference**
July 18-21, 2018
Cleveland, Ohio
- **12th European Conference on Gambling Studies and Policy Issues**
September 11-14, 2018
Valletta, Malta

In Memoriam



The Centre remembers Jeff Beck who passed away suddenly on March 10, 2018. Jeff was a pioneer in the problem gambling world. He worked at the Council on Compulsive Gambling of New Jersey for many years, served on the Board of Directors of the National Council on Problem Gambling from 2009 through 2015, chaired NCPG's Nominations and Recovery Committees and served tirelessly on many others. Jeff was also president of the American Certification Board for many years and vice president of the International Gambling Counselor Certification Board. We extend our heartfelt condolences to his family, friends and colleagues.

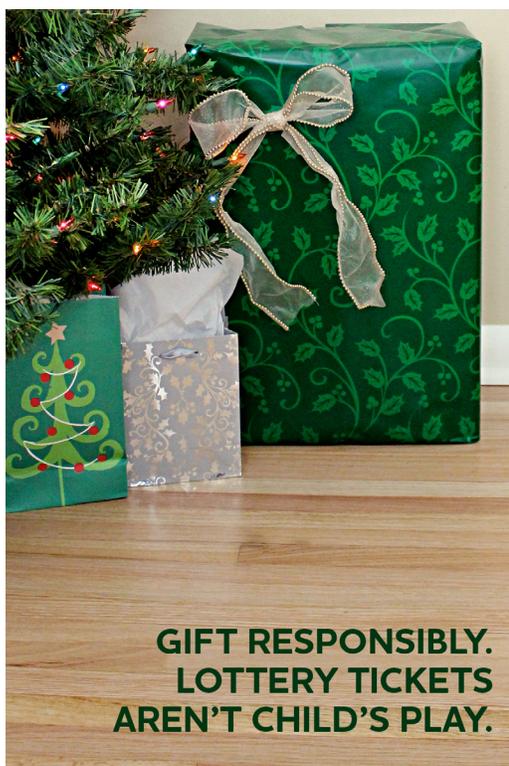
The Centre also mourns the loss of Dr. Rob Hunter, Las Vegas gambling addiction psychologist. Dr. Hunter was hailed as "the man who created problem gambling treatment in Las Vegas." Rob received his Doctorate in Clinical Psychology from the University of Nevada, Reno in 1982. Together with Dr. Robert Custer, they opened the Charter Hospital Center and later the Problem Gambling Center where thousands of problem gamblers have received treatment. This center has served as a model for other treatment programs around the world. Rob was a great colleague and avid supporter of our Centre's research and clinical work. We extend our heartfelt condolences to all those touched by his loss.



Holiday Campaign 2017

Thank you!!

The campaign participation grew tremendously in 2017! We would like to take this opportunity to thank all of the lottery corporations who have collaborated with us in 2017 and look forward to even greater support for next year's initiative!



The annual Holiday Campaign, a collaborative initiative of the International Centre for Youth Gambling Problems and High-Risk Behaviors at McGill University and the National Council on Problem Gambling (NCPG), highlights the risks of giving lottery tickets and scratch cards as holiday gifts to minors.

Support for the campaign by North American and international lottery corporations has grown incrementally every year since the program inception. In 2017, a record number of lotteries participated in the campaign. The final list of 2017 participating lotteries included:

United States

Arkansas Lottery, California Lottery, Colorado Lottery, Connecticut Lottery Corporation, DC Lottery and Charitable Games, Delaware Lottery, Florida Lottery Corporation, Georgia Lottery Corporation, Hoosier Lottery (Indiana), Idaho Lottery, Illinois Lottery, Iowa Lottery, Kansas Lottery, Kentucky Lottery, Maine State Lottery, Maryland State Lottery and Gaming Control Agency, Massachusetts State Lottery Commission, Michigan Lottery, Minnesota Lottery, Missouri Lottery, Montana Lottery, Nebraska Lottery, New Hampshire Lottery Commission, New Jersey Lottery, New York Lottery, North Carolina Education Lottery, North Dakota Lottery, Ohio Lottery, Oklahoma Lottery Commission, Oregon Lottery, Pennsylvania Lottery, Rhode Island Lottery, South Dakota Lottery, Tennessee Education Lottery Corporation, Texas Lottery, Vermont Lottery, Virginia Lottery, Washington's Lottery, West Virginia Lottery, Wyoming Lottery.

Canada

Alberta Gaming and Liquor Commission, Atlantic Lottery, British Columbia Lottery Corporation, Loto-Québec, Manitoba Liquor and Lotteries, Nova Scotia Provincial Lotteries and Casino Corporation, Ontario Lottery and Gaming Corporation, Saskatchewan Lotteries.

International

AB Svenska Spel (Sweden), Austrian Lotteries, Hrvatska Lutrija d.o.o. (Croatia), Lotto New Zealand, Lottotech Limited (Mauritius), Nederlandse Loterij.

Centre News

Congratulations to...

Congratulations to Yaxi Zhao on attaining her M.A. in Educational Psychology (Human Development). Her thesis was titled: "Adolescent Multiple Engagement in Addictive Behaviors and the Role of Parents." We wish Yaxi the best of luck in her future endeavors.

Centre Receives Grant

Professors Jeffrey Derevensky, Tina Montreuil (McGill University, C.A.R.E Research group) and Matthew Keough (University of Manitoba) have been awarded a Manitoba Gambling Research Program Grant. Their proposal "The Impact and Role of Emotion Regulation in Problem Gambling" will examine the relationship between emotion regulation and gambling problems among late adolescents and emerging adulthood in order to identify whether dysfunctional emotion regulation skills increase risk for problematic gambling behaviors.

Upcoming Presentations

Dr. Derevensky will be presenting his research in the coming months:

- Derevensky, J. (2018). Thirty years of research on understanding youth gambling problems and high-risk behaviors: What have we learned and do we still need to be concerned. Invited Keynote Address to be presented at the National Council on Problem Gambling annual conference, Cleveland, July.
- Derevensky, J. (2018). Gambling disorder and other behavioral addictions in elite athletes. Invited address to be presented at the International Olympic Committee Consensus Meeting on Mental Health in Elite Athletes, Lausanne, Switzerland, November.

Recent Publications and Presentations

REFEREED PUBLICATIONS

Mills, D., Milyavskaya, M., Mettler, J., Heath, N. & Derevensky, J. (in press). How do passion for video games and needs frustration explain time spent gaming? *British Journal of Social Psychology*.

Mills, D., Milyavskaya, M., Heath, N., & Derevensky, J. (in press). Gaming motivation and problematic gaming: The role of needs frustration. *European Journal of Social Psychology*.

Zhao, Y., Marchica, L. Derevensky, J. & Ivoska, W. (in press). Mobile gambling among youth: A warning sign for problem gambling? *Journal of Gambling Issues*.

Derevensky, J. & Marchica, L. (2018). Fantasy sports wagering: Is it a concern and does it require more regulation? *Gambling Law Review: Economics, Regulation, Compliance and Policy*, 22 (1), 55-60.

Marchica, L. Zhao, Y., Richard, J. Derevensky, J. & Shaffer, H.J. (2018). A comparative analysis of Canadian University policies toward alcohol, drugs and gambling use. *Canadian Journal of Addiction*, 9(1), 18-25.

St-Pierre, R.A., Derevensky, J., Temcheff, C., Gupta, R. & Martin-Story, A. (2017). Evaluation of a school-based gambling prevention program for adolescents: Efficacy of using the Theory of Planned Behaviour. *Journal of Gambling Issues*, 36 (6), 113-137.

Pitt, H., Thomas, S., Bestman, A., Daube, M., & Derevensky, J. (2017). What do children observe and learn from televised sports betting advertisements? A qualitative study among Australian children. *Australian and New Zealand Journal of Public Health*, Online; doi:10.1111/1753-6405.12728.

BOOK CHAPTERS

Derevensky, J. & Gilbeau, L (in press). Preventing adolescent gambling problems. In A. Heinz, N. Romanczuk-Seiferth, & M. Potenza (Eds.). *Gambling disorders*. Berlin: Springer International.

Marchica, L. & Derevensky, J. (in press). Sports wagering. In E. O. Acevedo (Ed.). *Oxford encyclopedia of sport, exercise and performance psychology*. New York: Oxford University Press.

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.

BOOK CHAPTERS (CONT'D)

Derevensky, J. & Gilbeau, L. (2017). Adolescent gambling: Another risky behavior. In D L. Evans, E.B. Foa, R.E. Gur, H. Hendin, C.P. O'Brien, D. Romer, M. Seligman & B.T. Walsh (Eds.). *Treating and preventing adolescent mental health disorders: What we know and what we don't know. A research agenda for improving the mental health of our youth, 2nd edition*. New York: Oxford University Press, 571-584.

CONFERENCE PRESENTATIONS

Pitt, H., Thomas, S., Bestman, A., Daube, M. and Derevensky, J. (2017). The factors influencing children's attitudes and gambling consumption intentions. Paper presented at the American Public Health Association annual meeting, Atlanta, November.

Pitt, H., Thomas, S., Bestman, A., Daube, M. & Derevensky, J. (2018). Does sports betting advertisement impact Australian children's gambling attitudes, product knowledge and behaviours? Paper presented at the International Gambling Conference, Auckland, February.

Derevensky, J. (2018). Twenty-five years of youth gambling research: Should we be concerned and what can we do about it? Paper presented at the New Horizons in Responsible Gambling Conference, Vancouver, February.

INVITED ADDRESSES

Derevensky, J. (2018). The role of industry in gambling research. Paper presented at the New Horizons in Responsible Gambling Conference, Vancouver, February.

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