



# Gambling and Videogame Playing Among Adolescents: Defining Specific and A-Specific Predictors

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Gambling activities and videogames share a number of common features. For instance, both provide: an interaction between players and technology, maintain player interest by providing occasional reinforcement, structural and aesthetic characteristics such as lights, sounds, and graphical features (Wood et al., 2004). Given these similarities, videogame playing may be a risk factor for gambling among youth, as children who regularly play videogames may demonstrate a “false sense of confidence and security” when they gamble (Gupta & Derevensky, 1996). It has also been argued that videogame playing could influence a developmental pathway that may result in pathological gambling (Wood et al., 2004).

Despite the similarities, the studies that have examined the concurrent participation in gambling and videogaming behaviors among adolescents have shown inconsistent results. Past research, conducted with older arcade videogames (which were coin operated, located in specific geographical locations, and had generally short session lengths) reported significant and high correlations between the two behaviors (Greenberg et al., 1999). More recent research, focused on non-arcade forms of videogames, has generally reported smaller correlations (Wood et al., 2004). In general, recent studies (Parker et al., 2008; Walther et al., 2012) found a small to moderate correlation between videogame playing and gambling.

A multitude of predictive factors have been associated with pathological gambling and videogame playing among adolescents. In terms of pathological gambling, the following risk factors have been identified: gender (male adolescents are more at-risk than females (Donati et al., 2013), susceptibility to probability biases (such as the representative heuristics and the gambler’s fallacy), erroneous thoughts, superstitious thinking and cognitive distortions related to gambling (Delfabbro, Lambos et al., 2009), personality characteristics (e.g., sensation seeking and impulsivity) (Nower et al., 2004), as well as social factors related to parental or peer gambling modeling behavior (Vachon et al., 2004). In terms of pathological videogame playing, the following predictive factors have been identified: gender (higher risk for boys than girls) (Forrest et al., 2016), personality (Mehroof & Griffiths, 2010), and psychosocial factors such as social anxiety, loneliness, and poor self-esteem (Walther et al., 2012).

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To date, inconsistent results have been found concerning the relationship between gambling and videogame playing in adolescence (Delfabbro, King et al., 2009; King et al., 2012). Consequently, there remains an unclear association between these two behaviors in adolescents, as well as the relationship between the two addictions. Moreover, there is relatively little research regarding the predictors of the two addictions among youth (Parker et al., 2008; Walther et al., 2012). Finally, although it has been suggested that cognitive biases or distortions may also underlie involvement in videogame playing (Walker, 1992), little attention has focused on the cognitive aspects related to this behavior.

Our team conducted a study analyzing the relationship between gambling and videogame playing among adolescents, taking into account gender as well as a set of cognitive and psychosocial risk factors. The aim was to investigate the predictors of pathological gambling and videogame playing, weighting the specific contribution of each predictor.

The study included 1063 adolescents (60% male, mean age=15.7 years, SD=1.1) attending high school in Italy. Measures used included: the Gambler’s Fallacy Task (GFT; Primi & Chiesi, 2011) - used to measure the susceptibility to commit

the gambler’s fallacy in some probabilistic problems with high scores corresponding to normative probabilistic reasoning; the Italian version of the Superstitious Thinking Scale (STS; Chiesi et al., 2010); the Gambling Related Cognitions Scale (GRCS; Donati et al., 2015); the Brief Sensation Seeking Scale (BSSS; Primi et al., 2011); the Rosenberg Self-Esteem Scale (RSES; Prezza et al., 1997); the Louvain Loneliness Scale for Children and Adolescents (LLSCA; Melotti et al., 2006); the Social Pressure to Conform to Peers subscale from the How Peers Influence Me scale (Sandstrom et al., 2008) - used to assess social conformism from peers; the Italian version of the South Oaks Gambling Screen – Revised for Adolescents (SOGS-RA; Colasante et al., 2013) - to assess gambling frequency and problem gambling severity); the Italian version of the Game Addiction Scale (GAS; Ammannato, 2013 - used to determine the time spent on videogames and gaming addiction).

In order to understand the co-occurrence of gambling and videogaming behaviours, we computed the correlations between gambling frequency, time spent on videogaming, and the SOGS-RA and GAS total scores. As shown in Table 1, the correlation between gambling frequency and time spent on videogaming was positive, but quite low, as was the correlation between gambling frequency and the GAS total score. A very low and positive correlation was found between time spent on videogaming and the SOGS-RA total score. Finally, pathological gambling was shown to be positively and moderately correlated with pathological videogaming (Table 1).

Table 1. *Correlations, Means, and Standard Deviations for Scores on Gambling frequency, Time spent on videogames, Pathological gambling (SOGS-RA total score) and Pathological videogaming (GAS total score).*

	1.	2.	3.	4.
1. Gambling frequency	-			
2. Time spent on videogames <sup>1</sup>	.11***	-		
3. SOGS-RA total score	.42***	.09*	-	
4. GAS total score	.18***	.42***	.29***	-
	M	3.65	7.65	.64
	(SD)	(4.37)	(9.29)	(1.33)
				11.97
				(4.71)

Note: <sup>1</sup>Time spent on videogames was measured in hours *per week*. \* $p < .05$ , \*\*\* $p < .001$

We then computed the correlations between the risk factors and the total scores obtained on the SOGS-RA and the GAS. Results revealed that gender, gambling-related distortions, sensation seeking, loneliness, and pressure to conform to peers were significantly correlated with both the total scores. Probabilistic reasoning and superstitious thinking were correlated only with the SOGS-RA total score, while self-esteem was only correlated with the GAS total score (Table 2).

Table 2. *Correlations, Means, and Standard Deviations for the Independent Variables and Pathological Gambling (SOGS-RA total score) and Pathological Videogaming (GAS total score).*

	SOGS-RA total score	GAS total score
1. Gender <sup>1</sup>	-.14***	-.23***
2. Probabilistic reasoning	-.10**	-.04
3. Superstitious thinking	.10**	.01
4. Gambling-related cognitions	.55***	.31***
5. Sensation seeking	.12**	.06*
6. Self-esteem	-.05	-.10***
7. Loneliness	.09*	.20***
8. Pressure to conform to peers	.19***	.27***

Note: <sup>1</sup>Boys coded as 1, girls coded as 2. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Subsequently, we generated a simultaneous linear regression using the total score on the SOGS-RA as a dependent variable and all the factors that suggested significant linear relationships with pathological gambling as independent variables. Results suggested that the regression model was significant ( $F(7,772)=51.45$ ,  $p<.001$ ) and explained about 30% of the variance ( $R=.56$ ,  $R^2=.32$ ). Significant predictors were gender ( $\beta=-.11$ ,  $p=.001$ ), probabilistic reasoning ( $\beta=-.10$ ,  $p=.001$ ), gambling-related distortions ( $\beta=.52$ ,  $p=.001$ ), and pressure to conform to peers ( $\beta=.07$ ,  $p=.036$ ). As a subsequent step, an analogous simultaneous linear regression was conducted using the total score of the GAS as dependent variable and all the factors that showed significant linear relationships with pathological videogame playing as independent variables. The results showed that the regression model was significant ( $F(6,965)=41.91$ ,  $p<.001$ ) and explained 20% of the variance ( $R=.46$ ;  $R^2=.21$ ). Significant predictors were gender ( $\beta=-.24$ ,  $p=.000$ ), gambling-related distortions, loneliness ( $\beta=.26$ ,  $p=.000$ ), and pressure to conform to peers ( $\beta=.16$ ,  $p=.000$ ).

Our results provide a substantial contribution to the field as they expand the current knowledge about the specificity of the predictors of pathological gambling and videogaming among adolescents. Through our study, we have shown that probabilistic reasoning is a predictor solely of problem gambling (Donati et al., 2013), while loneliness is a significant predictor of only problem videogaming (Seay & Kraut, 2007). Gender, gambling-related cognitions, and social pressure from peers were significant predictors across the two pathological behaviors. It can be argued that, both in gambling and videogaming there exist some central characteristics – being male, as well as competitive and persistent (Delfabbro, King et al., 2009). The common risk factor of gambling-related distortions may support the theory of migration from videogaming to gambling, based on distorted perceptions that winning in videogaming will result in winning when gambling. (Wood et al., 2004). Concerning the relationship between gambling, videogaming, and gambling-related erroneous cognitions, King et al. (2012) reported that videogaming predicted the illusion of control and superstitious beliefs among the gamblers, and concluded that videogaming may influence some gambling cognitions among those who gamble and play videogames. Finally, the predictive power of social conformism on both the pathological behaviors is consistent with the fact that these two activities share a social nature; both create a sense of community and can serve to obtain social rewards, such as peer respect and admiration (Delfabbro et al., 2009).

Practical implications can be drawn from this study. Indeed, the identification of common predictors may suggest that intervention and prevention strategies for youth might be more effective if they simultaneously targeted a common range of at-risk factors. For instance, it may be useful to work with adolescents in order to identify and modify the erroneous ideas underlying cognitive distortions that are common between pathological gambling and videogaming. It would be also useful to foster adolescents' social abilities and assertiveness skills.

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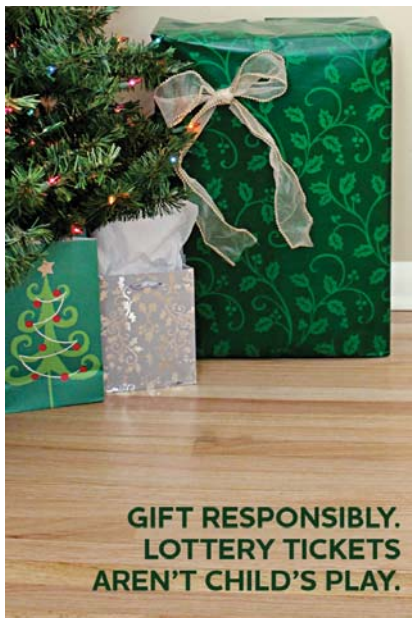
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## The Annual Holiday Campaign



The Holiday season is approaching, and once again the widely endorsed annual Holiday Lottery Campaign is underway. This annual 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), encourages lottery corporations in North America and around the world to share the message that when gifting lottery tickets, it is important to keep the recipient's age in mind. Momentum and participation in this NASPL and European Lotteries endorsed Holiday Lottery Campaign is growing steadily and participation is free.

Studies show a growing number of high school students reportedly receive one or more lottery tickets or scratch cards as gifts. Additionally, research shows that the majority of adolescents gamble at least occasionally, and that lottery products may be a gateway to problem gambling. Youth gambling has been shown to be linked to other risk-taking and addictive behaviors such as smoking, drinking and drug use.

Last year, 42 lottery organizations world wide formally participated in this initiative. We are continuing to expand our collaborative efforts to promote responsible gambling. This year, we have produced industry-specific materials that will help lottery corporations spread the message including a playcenter insert. The playcenter insert has been designed to publicize this initiative and lottery corporations are encouraged to use it in their retail locations. The insert was designed to facilitate rapid and easy lottery corporation customization. A space is provided on the insert enabling lotteries to add their corporate logo prior to printing. We also encourage lottery corporations to develop their own materials and responsible gambling initiatives based on the Holiday Campaign theme.

# Prevention of Disordered Gambling: What Have We Learned and Where Do We Go from Here?

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The National Council on Problem Gambling (NCPG) Prevention Committee (2015) devised and released a foundational document titled, "Prevention of Gambling Disorders: A Common Understanding." In this document, the committee proposes that our current understanding of prevention is frequently limited to information dissemination and education efforts, and recommends that the field adopts a more comprehensive approach in order to enhance the impact of our prevention efforts, particularly among vulnerable groups.

Over the past three decades, adolescents have been increasingly recognized as a vulnerable population (Volberg et al., 2010). While it is understood that adolescent gambling behaviour can be transitory and may not necessarily lead to adult gambling (Delfabbro et al., 2014), there is nevertheless evidence that the onset of gambling behaviour in pre-adolescence or adolescence is associated with later development of gambling disorders (Slutske et al., 2014; Vitaro et al., 2004). Also of concern is that adolescent disordered gambling is frequently correlated with multiple negative consequences, including poor or disrupted family relationships, engagement in risky sexual behaviours, delinquency, alcohol and substance use problems, mental health problems, and suicidal ideation and behaviours (Cook et al., 2014; Volberg et al., 2010). The adverse consequences of adolescent gambling and gambling disorders draw attention to the need for sensitizing young people to the risks associated with gambling.

In response to this need, various school-based prevention initiatives have been developed (Williams et al., 2012). Despite their importance, only a limited number of these prevention initiatives have been empirically evaluated for efficacy (Ladouceur et al., 2012; St-Pierre, Temcheff, et al., 2015; Williams et al., 2012). Of those initiatives that have been systematically assessed, many have reliably obtained improvements in knowledge or decreases in misconceptions about gambling (Ladouceur et al., 2012; St-Pierre, Temcheff, et al., 2015; Williams et al., 2012). Conversely, few of the existing prevention initiatives have been successful in producing sustained changes in skills or behaviour (Ladouceur et al., 2012; St-Pierre, Temcheff, et al., 2015; Williams et al., 2012).

Considering that the principle goal of any prevention initiative is to decrease the incidence of a potential problematic behaviour, there is a clear need for the development of adolescent disordered gambling prevention initiatives in the context of new theoretical models of behaviour change in order to improve the likelihood of successful long-term outcomes (Williams et al., 2010). Health and social cognition research reveals that several factors can play an influential role in behaviour decision-making and change. These include: perceptions of risk in performing the behaviour; notions of self-efficacy; and intentions or motivations to change the behaviour (Ogden, 2012). It is plausible that effectiveness of existing prevention initiatives is generally restricted because

they fail to target all of the salient factors found to influence behaviour change. This situation has prompted researchers to advocate for increased consideration of the Theory of Planned Behaviour (TPB; Ajzen, 1991) as an alternate framework that could more accurately describe gambling behavioural decision-making processes (Cummings & Corney, 1987; Martin et al., 2010) and guide prevention efforts (Evans, 2003).

## The Theory of Planned Behaviour and Disordered Gambling

The TPB proposes that any deliberate behavior is determined by a person's intentions (i.e., motivation to exert effort in performing a specific behavior). The TPB also contends that behavioral intentions are themselves determined by attitudes (i.e., overall positive or negative evaluations of the behavior), subjective norms (i.e., perceptions of important others' appraisals of the behavior) and perceptions of behavioral control (PBC; i.e., expectations about the facility or difficulty in performing the behavior).

The validity of the TPB model for explaining young adult gambling and problem gambling behaviour has been empirically investigated and received some support (e.g., Martin et al., 2010, 2011; Wu & Tang, 2012). Research with younger youths has provided additional evidence for the utility of the TPB in explaining the frequency of gambling behaviour and perceived gambling-related problems (Moore & Ohtsuka, 1997; St-Pierre, Derevensky, et al., 2015). Additionally, there is preliminary evidence of the value of the TPB in the development of interventions for addictive behaviours (e.g., Cuijpers, Jonkers, De Weerd, & De Jong, 2002; Guo, Lee, Liao, & Huang, 2015). However, the suitability of the TPB model for the elaboration or evaluation of school-based disordered gambling prevention initiatives remains an underexplored area of research.

## The Theory of Planned Behaviour in Adolescent Disordered Gambling Prevention

In order to address this, a study from the International Center for Youth Gambling and High-Risk Behaviours aimed at exploring the efficacy of targeting key TPB constructs in a universal, school-based preventive intervention video. While the results from focus groups provided preliminary evidence for the appropriateness of the video for high-risk and general adolescent populations, its impact on adolescent gambling beliefs, intentions and behaviours remained to be established.

This project was designed as a controlled experimental trial. A sample of high school students from the greater Montreal (Canada) area was randomly assigned, by individual classrooms, to a video-based preventive intervention condition or a control

condition. Prior to the delivery of the intervention program, all participating students were administered a baseline survey (Time 1) to measure key TPB constructs, as well as participants' frequency of gambling participation. Following completion of the survey, students assigned to the experimental condition received a 45-minute intervention, while students in the control group were asked to proceed with regular academic activities. A post-intervention survey, repeating select scales from the baseline survey, was given approximately one week after the intervention (Time 2). A final post-intervention survey was administered approximately 3 months after completion of the intervention program (Time 3), which included all of the scales from the Time 1 survey.

At baseline, approximately half of the participants reported having gambled money on at least one activity in the past three months. However, the data also revealed that participants reported a relatively low frequency of gambling participation during that time. Additionally, participants indicated having modest intentions to gamble, anticipated substantial negative emotions resulting from gambling or becoming over-involved in gambling, and perceived high behavioural control for resisting gambling. Further, although participants reported moderately favourable gambling attitudes, they nevertheless had modest perceptions of family and peers' approval of gambling.

Contrary to expectations, both the intervention and control groups demonstrated more positive gambling attitudes, more positive peer and family subjective norms, and a decrease in PBC over their ability to refuse gambling at post-intervention than pre-intervention. Additionally, both the intervention and control groups demonstrated more positive gambling attitudes and more positive peer and family subjective norms, as well as a decrease in the frequency of play from pre-intervention to follow-up. Taken together, the results from this research revealed that the TBP-based preventive intervention was ineffective in producing changes in the TPB's key constructs or the frequency of gambling behaviour in the desired direction over a *three-month* time frame.

The findings from this study provide a substantial contribution to the field as they represent an initial first step towards the development of stronger theoretical models of youth gambling behaviour that are valuable for the development of school-based problem gambling prevention initiatives. Firstly, the findings suggest that attention to TPB-derived cognitive targets by themselves is likely insufficient for promoting changes in adolescent disordered gambling behavior. Additionally, the findings provide evidence that TPB-based adolescent gambling prevention programs need be tailored to characteristics of the participants (e.g., underage vs. legal age gamblers; low frequency vs. higher frequency or disordered gamblers) in order to be effective. Further, the findings reveal that a brief one-session, TBP-based preventive intervention delivered in isolation may be insufficient for modifying the theoretically-important correlates of behavior or for changing actual frequency of play. As such, future TPB-based adolescent problem gambling preventive interventions may need to be incorporated within more intensive

and comprehensive curricula. Prevention practitioners may need also to draw upon other recognised theoretical frameworks (e.g., prototype willingness model) and well-developed research outside of the TPB in order to select multiple, effective cognitive- and behaviour-change strategies. Other approaches identified in the health risk behaviour intervention literature that may potentially be useful for school-based adolescent gambling prevention initiatives include:

1. targeting adolescents' mental representations of problem/non-problem gamblers by strengthening/weakening the perceived similarity to these images; and
2. targeting adolescents' willingness or openness to gambling via education on differences between intentional or planned and reactive behaviours (Gerrard et al., 2008; Gibbons et al., 2009).

Given that adolescent disordered gambling remains a significant global public health concern, future research in in this area remains critical.

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# 2017 Durand Jacobs Award

The recipient of the 2017 Durand Jacobs Award is Christina Rash for her paper titled “Self-generated motives for not gambling among young adult non-gamblers.” The Durand Jacobs Award recognizes outstanding work related to the psychology of addictive behaviors, and is dedicated to the late Dr. Durand Jacobs' lifelong efforts to help mentor students.

Christina is currently a MSc. student in the Department of Psychology at the University of Calgary. Her research focuses on protective factors; specifically, cognitive variables and personality traits that differ between those who engage in addictive behaviours such as gambling and those who do not. Following the completion of her current degree, she plans to enter a clinical psychology program and focus on examining these factors among forensic populations.

## *Congratulations Christina!*

### **Abstract**

Motivational models have been shown to usefully describe reasons for engaging in addictive behaviors including gambling disorder. Although most scales designed to measure motives have been derived statistically, self-generated open-ended responses have also shown utility for identifying unique motives for gambling. While the motivational structure for gambling disorder has been extensively explored, there has been a paucity of research examining motives for choosing not to gamble. This is not the case for other addictive behaviors such as alcohol use where motives for abstaining from drinking have been well defined. The primary goal of this study was to qualitatively explore and identify motives for not gambling in a sample of young adult non-gamblers using open-ended responses. A sample (N = 196) of undergraduate current non-gamblers, defined as no gambling activity over the previous 12 months, completed a series of questionnaires on demographics, gambling behavior, and alcohol consumption. Furthermore, they were asked to provide their top three reasons for not gambling in rank order. The results revealed eight specific motives for why participants chose not to gamble: ‘financial reasons and risk aversion’; ‘disinterest and other priorities’; ‘personal and religious convictions’; ‘addiction concerns’; ‘influence of others’ values’; ‘awareness of the odds’; ‘lack of access, opportunity, or skill’; and ‘emotional distress’. Personal and religious convictions reasons were also related to lifetime non-drinking, suggesting that these motives are associated with decreased addictive behaviors in general. Ultimately, these results may help to inform the design of prevention strategies for gambling disorder

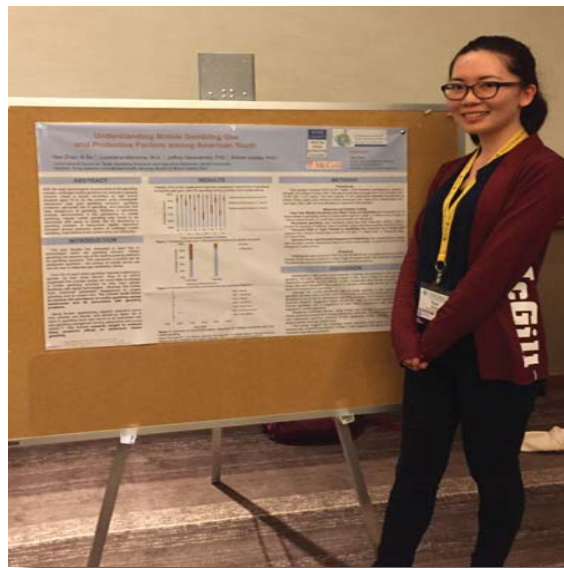




# Centre News

## Dr. Derevensky NCPG Receives Lifetime Research Award

On July 21, 2017 at the National Council on Problem Gambling (NCPG) conference in Portland Oregon, Dr. Derevensky was awarded the Lifetime Research Award. This award is given to honor a person for exceptional long-standing achievement in the field of gambling research that has had a profound impact on the study of gambling. This award is only bestowed in exceptional times and circumstances, to individuals who exemplify at least twenty years of research in the field of gambling studies.



## Yaxi Zhao Presents Poster at NCPG Conference

Yaxi Zhao, MA student in our lab, presented her research at the recent 31st annual National Council on Problem Gambling (NCPG) conference in Portland, Oregon.

Poster Title: Understanding Mobile Gambling Use and Protective Factors among American Youth

With the rapid technological developments in the gambling industry, underage mobile gambling has become a growing concern. Using a survey completed by high school students aged 10 to 19, this study investigated adolescent past year gambling behavior, gambling problems, perceived risk in gambling, and parental and peer disapproval of gambling. Whereas a descriptive analysis demonstrated a low prevalence of mobile gambling, regular mobile gambling was found to be associated with being at higher risk for developing a gambling problem. A hierarchical logistic regression analysis revealed several protective factors concerning underage mobile gambling. Implications of the study were discussed.

# Centre News (Cont'd)

## Loredana Marchica PhD Student - Conference Presentations

- In June, Loredana Marchica, PhD student in our lab, presented her research on adolescent gambling at the Canadian Psychological Association conference in Toronto, Ontario. Her presentation won the poster award within the Educational Psychology division at the conference.

Poster Title: A comparative analysis of Canadian University policies towards alcohol, drugs and gambling.

University students are within a transitional developmental period that is marked by excessive engagement in a variety of potentially risky addictive behaviors including substance use, binge drinking and gambling (Arnett, 2000; Derevensky, 2015). While the university years represent a unique time of increased independence and freedom, university policies impact a student's daily life and establish general guidelines for behavior. For instance, university policies towards alcohol consumption have been associated with less consumption and binge drinking among students (Wechsler et al. 2001) resulting in a large number of alcohol and drug policies being enacted. Evidence comparing alcohol, drug and gambling policies among U.S colleges has demonstrated that the prevalence of gambling policies was much lower than alcohol (Shaffer et al., 2005). However, no studies have investigated this comparison among Canadian universities. The sample includes 97 universities (78 English, 19 French), members of Universities Canada, comprising a comprehensive national sample with the purpose of identifying the prevalence and patterns of university policies toward drug and alcohol consumption and gambling.

- In August, Loredana presented a poster at the American Psychological Association Conference in Washington, D.C. Her poster was selected to also be presented in the "Data Blast" a new initiative in the Addiction division of the APA, where she also delivered a short PowerPoint presentation based on the topic of her poster.

Poster Title: A decade of fantasy sports: An examination of student-athlete participation.

University students represent a large proportion of the population of Western countries while also existing within a developmental period associated with increased participation in high-risk behaviors (e.g., frequent alcohol use, drug use and gambling). University student-athletes are suggested to be at particular risk for not only participating in these activities excessively, but also experiencing problematic behaviors (St-Pierre et al., 2013). Gambling problems among student-athletes is a well-documented phenomenon that can have serious short-term and long-term consequences affecting academic, financial, legal and social life. However, fantasy sports wagering has not been fully explored even though the resemblance between gambling and these activities is undeniable. Using data from the 2004, 2008, 2012 National Collegiate Athletic Association (NCAA) studies, Marchica and colleagues (2016) found student-athletes who reported participation in fantasy sport leagues were more likely to be at risk for gambling problems. With the recent emergence of daily fantasy sports, the present study builds on the previous results using recently collected data from the 2016 NCAA study by assessing gambling behaviors and problems among U.S college student athletes. Specifically, this study explores the prevalence and growth of fantasy sports participation among student-athletes and its relationship to gambling behaviors and gambling disorders. Participants included student-athletes from 22 sports (11 women's, 11 men's sports) that were sampled proportionately in each NCAA division (Division I, II, III), within each administration year. Further, the sample data was weighted in comparison to the 2008 participation rates, in order to control for differences across each administration year. The comparative data available for the 2004 surveys included a total of 19,354 athletes, 2008 survey included 19,371 athletes, the 2012 surveys included 22,935 and the 2016 data included approximately 23,000 athletes. With the increased presence of fantasy sports, and in particular daily fantasy sports, among sports teams and media outlets, it is expected that a steady increase in participation in fantasy sports will be found looking at these four cross-sectional studies. The increase in participation may be further associated with potentially heightened reports of gambling disorder symptoms. Understanding the relationship between fantasy sports participation among student-athletes will allow for increased refinement of educational and awareness programs for college students, as well as, modified policies to reflect this change in gambling activities.

# Recent Publications and Presentations

## REFEREED PUBLICATIONS

Marchica, L., Zhao, Y., & Derevensky, J. (in press). An analysis of health-related information using gambling-related keywords. *Journal of Substance Abuse and Alcoholism* (Special Themed Issue - Research on Gambling Disorders).

Castren, S., Temcheff, C., Derevensky, J., Joeselsson, K., Alho, H. & Salonen, A. (2017). Teacher awareness and attitudes regarding adolescent risk behaviours: A sample of Finnish Middle and High School teachers. *International Journal of Mental Health & Addiction*, 15(2), 295-311.

Deans, E., Thomas, S., Daube, M., & Derevensky, J. (2017). The role of peer influences on the normalisation of sports wagering: A qualitative study of Australian men. *Addiction Research & Theory*, 25(2), 103-113.

Deans, E., Thomas, S., Derevensky, J. & Daube, M. (2017). The influence of marketing on the sports betting and consumption behaviours of young men: Implications for harm reduction and prevention strategies. *Harm Reduction Journal*, 14(5), 1-12.

Marchica, L., Zhao, Y., Derevensky, J. & Ivoska, W. (2017). Understanding the relationship between sports-relevant gambling and being at-risk for a gambling problem among American adolescents. *Journal of Gambling Studies*, 33, 437-448.

Zhao, Y., Marchica, L., Derevensky, J. & Shaffer, H. J. (2017). The scope, focus and types of gambling policies among Canadian colleges and universities. *Canadian Psychology/Psychologie Canadienne*, 58, 187-193.

## INVITED ADDRESSES

Derevensky, J. (2017). Preparing for the future: Emerging forms of gambling and new technologies. Invited paper presented to the National Council of Legislators from Gaming States, Denver, June.

## CONFERENCE PRESENTATIONS

Marchica, L. & Derevensky, J. (2017). A decade of fantasy sports: An examination of student-athlete participation. Poster presented at the American Psychological Association annual conference, Washington, DC, August.

Pitt, H., Thomas, S., Bestman, A., Daube, M. and Derevensky, J. (2017). Parents, peers, or promotion? Which factors are the most influential in shaping children's attitudes towards gambling. Paper presented at the 6th International Conference on Drug and Addiction Research 2017, Lisbon, July.

Zhao, Y., Marchica, L., Derevensky, J., & Ivoska, W. (2017). Understanding mobile gambling use and protective factors among American youth. Poster presented at the National Council on Problem Gambling annual conference, Portland, July.

Marchica, L., Zhao, Y., Richard, J., Derevensky, J. & Shaffer, H.J. (2017). A comparative analysis of Canadian university policies towards alcohol, drugs, and gambling use. Poster presented at the Canadian Psychological Association annual conference, Toronto, June.

Marchica, L., Tilley, M., Montreuil, T. & Derevensky, J. (2017). Escaping feelings: Investigating why University students gamble. Poster presented at the Canadian Psychological Association annual conference, Toronto, June.

Stark, S., Wiebe, J., Reynolds, J. & Derevensky, J. (2017). Youth gambling (8-24 years) in Ontario: Behaviours, motivations and problems. Poster presented at the Annual Discovery Conference, Toronto, April.

## 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

## News Briefs

### Abilify Federal Lawsuits

In July 2017, federal legal cases against Bristol-Myers Squibb and Otsuka Pharmaceutical, the makers of Abilify, an antipsychotic drug used in the treatment of depression, bipolar disorder and schizophrenia, were starting to be heard in Tallahassee and Pensacola, Florida. The law suits contend that Abilify caused compulsive behavior such as gambling, shopping and heightened desires for food and sex. Only in 2016, after many years of the drug being on the market in the United States did the FDA issue a warning that Abilify was associated with the potential for impaired impulse control behaviors and urged physicians, Abilify users, and their caregivers to be aware of the potential for uncontrollable urges. For customers in Canada and Europe, Abilify carried warning labels cautioning users of the compulsive side effects.

### Wellness in Vegas

Yoga classes and wellness retreats are the latest offerings along the Vegas Strip. Casino operators continue to amplify the entertainment destination factor of Vegas by constantly broadening the range of services and activities. Visitors can stretch and hold yoga poses while on the High Roller, the world's tallest Ferris wheel. Guests are guided through the sessions while wearing headsets allowing them to hear the instructor and music. The sessions cater to both novice and advanced participants. These novel yoga classes provide a spectacular 360-degree vista encompassing beautiful mountains and the incomparable Vegas skyline. Namaste y'all.

Enjoy  
The  
Rest  
of  
SUMMER!

## Upcoming Events

- **World Regulatory Briefing: Responsible Gambling Innovation**  
September 19, 2017  
London, UK
- **18th Annual NCRG Conference on Gambling and Addiction**  
October 1-2, 2017  
Las Vegas, Nevada
- **G2E**  
October 3-5, 2017  
Las Vegas, Nevada
- **New York Council on Problem Gambling Annual Conference**  
November 16-17, 2017  
Albany, New York
- **Issues of Substance Conference - Addiction Matter**  
November 13-15, 2017  
Calgary, Alberta
- **NAGS 27th Annual Conference**  
November 22-24, 2017  
Melbourne, Australia



## YGI Newsletter

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