Winter 2023

GAMBLING RESEARCH REVEALS

ALBERTA GAMBLING RESEARCH INSTITUTE

Are There Riskier Forms of Gambling? An Interview with Graduate Scholarship Recipient Nolan Gooding

On September 26th, Nolan Gooding presented findings to the University of Lethbridge's Gambling Research Group from his examination of whether certain gambling formats put participants at greater risk of experiencing gambling disorders. As a follow-up to the presentation, he provided answers to the following questions about his investigation.

Q: Can you tell us a little bit about how you developed an interest in gambling research?

I got involved in research during my first year as an undergraduate at the University of Lethbridge, though the research I originally worked on was in the field of behavioural ecology, not gambling. I was about a year into my degree before I got involved in gambling research under the supervision of Dr. Jennifer Williams. I was originally drawn to this field because it gave me an opportunity to undertake more clinically-relevant research. Despite my opportunistic introduction, I quickly developed a passion for gambling research and an appreciation of the supportive and collaborative nature of the field. I'm still at the U. of Lethbridge and am currently working on a Master's of Science in Psychology under the supervision of Dr. Robert Williams.

Q: What is the focus of your Master's research?

My research is focused on identifying the risk of harm in problem gambling and includes two intersecting lines of inquiry. The first part is an investigation of the relationship between different gambling formats and problem

The primary aim of the Alberta Gambling Research Institute, a consortium of the Universities of Alberta, Calgary, and Lethbridge, is to support academic research related to gambling.

MISSION

To facilitate evidence-based broad research that informs gambling public policy and educates Albertans and the wider audience about the effects of gambling.

gambling. The second is a revision of the *Problem and Pathological Gambling Measure (PPGM)* to improve the prospective validity of its sub-clinical classifications (i.e., at-risk and recreational gamblers). The connection between these projects is that participation in certain gambling formats, as well as features of gambling intensity like frequency and expenditure, are strong prospective predictors of problem gambling. As such, we are hoping to identify how gambling participation and behaviour are related to problem gambling both concurrently and prospectively, and then extend those findings so that we can better identify cases in which problem gambling will emerge.

Q: You recently presented your research on the topic "Are there riskier forms of gambling?" for the U. of Lethbridge's Gambling Research Group... what research data did you examine for this investigation and why?

For this project, we used the AGRI National Project's online panel survey dataset. We used these data for a couple of reasons. For starters, it's the most up-to-date and comprehensive dataset on gambling participation in Canada. It also includes a huge sample of Canadian gamblers from virtually all regions of the country. These two features of the data made our results incredibly robust, as well as more widely generalizable than those of previous studies.

Q: What does the existing literature tell us about risky gambling formats? What is it about them that makes them more risky to participants?

The existing literature indicates that continuous gambling formats are associated with a higher risk of problem gambling. Examples of continuous formats include electronic gambling machines (EGMs) and casino table games, and it's thought that their association with problem gambling results from their ability to facilitate rapid play and provide a high frequency of reinforcement. Multiline EGMs are particularly problematic for this. In addition to facilitating rapid play, they signal wins whenever any specific pay line wins, even if the amount won is lower than the total bet placed (i.e., a net loss disguised as a win).

Q: Your research presentation indicated that participation in gambling formats is confounded with "breadth of involvement." Can you explain what you mean by breadth of involvement and why this is important to disentangle?

In our study, breadth of involvement refers to the number of gambling formats that an individual participates in on a monthly or more frequent basis. It's important to consider an individual's breadth of involvement because individuals with problem gambling have been shown to participate in a greater number of gambling formats than non-problem gamblers. If we ignore the relationship between breadth of involvement and problem gambling when we are investigating game-specific associations with problem gambling, we are unable to disentangle whether certain formats really are associated with a greater risk of problem gambling, or whether any such association is due to a greater breadth of involvement among individuals participating in these formats.

Q: What did your research investigation involve? What methods did you use?

We used four converging methods to investigate the association between gambling formats and problem gambling. We looked at the univariate, cross-sectional association between gambling formats and problem gambling by calculating the proportion of individuals who participated in each format, and the proportion of those participants who met criteria for problem gambling. We then investigated the cross-sectional association between gambling formats and problem gambling while controlling for breadth of involvement. Breadth of involvement was controlled for by plotting the proportion of problem gamblers separately for each gambling format across increasing levels of breadth of involvement. To identify the relationship between specific gambling formats and future problem gambling, we re-reported results obtained by Williams et al. (2022) in The etiology of problem gambling in Canada which was recently published in *Psychology of Addictive Behaviors*. The final component of our investigation was to identify the gambling formats that individuals with problem gambling believed contributed to their problems.

Q: What were the main findings of your investigation? Was there anything unexpected or that surprised you?

Collectively, our results indicate that breadth of gambling involvement is more closely related to problem gambling than any specific format, but some gambling formats do confer an additional risk. For example, all of our analyses implicated EGM participation in problem gambling. EGMs had the highest rate of problem gambling among individuals who participated in only one format, were the only gambling format that was prospectively related to problem gambling, and were the format most often endorsed by problem gamblers as contributing to their problems. These findings were not surprising, as they are consistent with the literature in this area. However, one interesting finding was that illegal online gambling as a modality of gambling access was also related to problem gambling prospectively. In the study, illegal online gambling refers to gambling on out-of-province websites and, while a relationship between online gambling and problem gambling has been demonstrated in the literature, it is unclear why only illegal online gambling was significant. Given that some provinces have had their own online gambling platforms for longer than others, we speculate that problem gamblers are seeking out more established websites with more users and a wider variety of gambling opportunities.

Q: Results from your study indicated that participants in four or more gambling formats are at high risk of being a problem gambler? Why might this be the case?

The most compelling explanation for this relationship is the close association we found between breadth of gambling involvement and indicators of gambling intensity, such as time spent gambling, gambling frequency, and gambling expenditure. Recently developed *Lower-Risk Gambling Guidelines (LRGG)* indicate that there is an increased risk of harm associated with each of these factors. An increased breadth of involvement is therefore likely to facilitate more intense and harmful gambling.

Q: Do your results tell us what combinations of multiple gambling formats would heighten risk for gamblers?

Our results did not identify specific combinations of gambling formats that increase the risk for problem gambling, though this is an interesting question and one that I hope to study in the future. We were, however, able to identify the proportion of problem gamblers who, for example, used EGMs and three other gambling formats. Unfortunately, the comprehensive nature of this project precluded us from conducting additional analyses to identify what those other three formats tended to be.

Q: Are there implications from your investigation for gamblers?

In a lot of ways, our results echo the advice of the LRGG, in that a greater breadth of gambling involvement increases the risk of problem gambling. The close relationship we found between gambling intensity (i.e., gambling frequency and expenditure) and breadth of involvement helps to explain why the number of games people play is associated with problem gambling. Namely, participating in a greater number of gambling formats facilitates more frequent gambling as well as greater gambling losses, both of which contribute to gambling-related harm. For gamblers with sub-clinical levels of symptomatology, these findings indicate that limiting gambling participation is one way to help avoid gambling-related harm.

Q: Will you be continuing to analyze this gambling data set or do you have other initiatives planned?

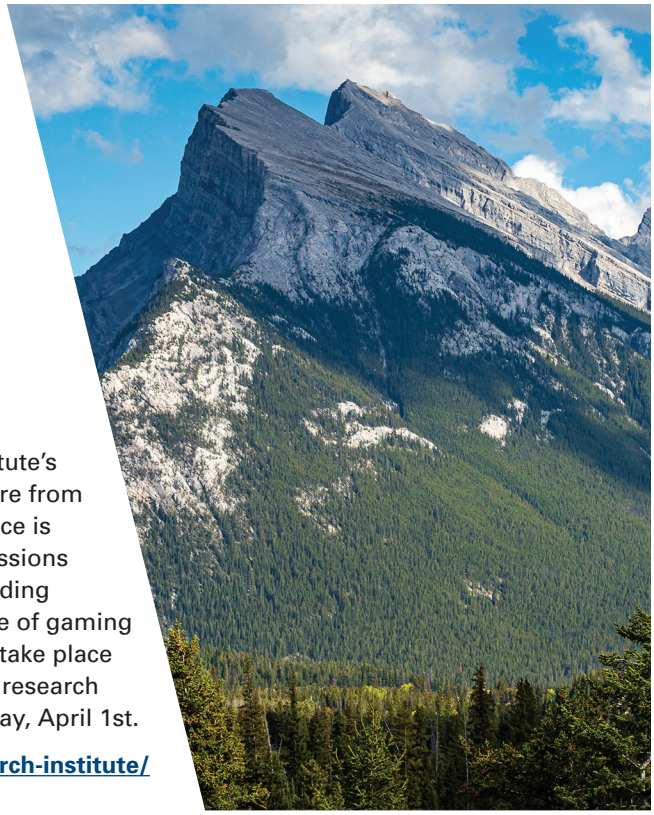
Both! I will continue to analyze this dataset for the second component of my Master's thesis, in which I am developing a prospective assessment of problem gambling to be included in a revised version of the PPGM. I also recently co-authored an article published in *Addictive Behaviors* titled "Individual differences and predictors of general awareness in problem gambling" that analyzed these data. However, I do have other initiatives planned with other datasets, including an analysis of the *Canadian Community Health Survey*.

Q: Is there anything else you'd like people to know about your research?

The research team has recently submitted a manuscript for this riskier gambling formats investigation to a peer-reviewed gambling journal. If anyone has remaining questions, please feel free to reach out, and I would be happy to further discuss my findings. I'm also open to potential research collaborations if this investigation has piqued anyone's interest.

Nolan Gooding obtained a Bachelor of Science (Psychology) from the University of Lethbridge in the spring of 2022 and is a recipient of an AGRI Graduate Scholarship in 2022-23. Gooding is currently working on a Master's of Science in Psychology under the supervision of Dr. Robert Williams.

Institute's 22nd Annual Conference to Take Place at Banff Centre



CONTEMPORARY ISSUES in Gambling Research

Mark your calendars and plan to attend the Institute's annual conference in Banff, Alberta at the Banff Centre from **March 30 to April 1, 2023**. The theme of the conference is 'Contemporary Issues in Gambling Research' and sessions will include presentations on a variety of topics including sports betting, online gambling, and the convergence of gaming and gambling. A conference welcome reception will take place on the evening of Thursday, March 30th followed by research presentations on both Friday, March 31st and Saturday, April 1st.

https://research.ucalgary.ca/alberta-gambling-research-institute/institute-conference

Research Grants 2022/23

Two New Major Grants Approved for Funding in 2022/23

The Institute's Proposal Approval Committee (PAC) has recommended funding two new major research grant investigations which were selected from the 2022/23 research grant competition. They are:

- ***An Examination of Cryptocurrency Ownership in Canada and its Relationship to Gambling Involvement and Severity*** (Drs. Daniel McGrath, Robert Williams, Carrie Shaw & Paul Delfabbro)

  This project will explore involvement in cryptocurrencies among a sample of Canadians. *[Stakeholder Priority: Internet / Remote Gambling]*.

- ***Reinforcement Schedules Underlying the Allure of Gambling*** (Dr. David R. Euston)

  This investigation seeks to discover the psychological reasons why gambling activities are so alluring and how this might lead to gambling problems. *[Stakeholder Priority: Treatment & Stigma]*.

The Card Players
(ca.1890-1895) by Paul Cézanne, oil on canvas, Musée d'Orsay, Paris

Paul Cézanne (1839-1906) has been recognized as one of the most influential artists in the history of modern painting. In 1890, Cézanne began a series of five pictures of Provençal peasants playing cards. The versions themselves vary in size, the number of players, and the setting in which the game takes place. These five paintings are generally acknowledged as a series of masterpieces which demonstrate his system of color gradations to build form and create a three-dimensional quality in the figures.

One version of *The Card Players* was sold in 2011 to the Royal Family of Qatar for a price estimated at $250-million which at the time was the highest ever price for a painting.

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