# A Comparison of Online Gamblers, Offline Gamblers, and Hybrid Gamblers on Gambling Behaviours and Substance Use

#### Abstract

Background: The emergence of online gambling has increased access to gambling 24 hours a day. Unlike land-based venues, ease of access allows for problem gambling behaviours to perpetuate at home. However, the extent to which online gambling could exacerbate substance use has not been adequately explored.

**Method:** A sample (N = 303) of three different types of gamblers (online gamblers, offline gamblers, and mixed mode gamblers) completed a survey assessing gambling motives, substance use, and mental health. Multinomial logistic regression analyses assessed statistical predictors (i.e., gambling behaviour, substance use, mental health variables) of gambling type.

**Results:** It is expected that gambling severity, specific activities, and greater substance use will differentiate gambler types. Furthermore, it is anticipated that gambling motives will moderate the relationship between type of gambler and substance use.

**Conclusion:** Understanding predictors of gambling type plays an important role in helping individuals that are at risk of experiencing problem gambling. Implications for treatment programs and policy will be discussed.

## Introduction

- Disordered gambling (DG) can be defined as persistent and reoccurring gambling behaviour resulting in distress. Over 200,000 people in Canada meet the criteria for diagnosis of DG. DG is characterized by a reduced quality of life and an increased risk of bankruptcy, divorce, and other negative consequences.
- It is estimated that up to 60% of people with DG that have sought treatment also present with a comorbid substance use disorder
- Mixed mode gamblers and online gamblers report spending more money and time gambling compared to land-based gamblers
- However, little is known about how substance use patterns, as well as gambling motivations, differ across gambling modalities
- The primary goal of this study was to further examine the role of gambling modality on gambling behaviours, motivations, and substance use, and to identify if gambling motives moderate the relationship between gambling modality and substance use

## Method

The sample was comprised of three groups. Online gamblers (n = 99), mixed mode (*n* = 103), and land-based only (*n* = 101) gamblers. They were recruited in the United States, through a Qualtrics online panel.

All participants completed a 15-minute study through Qualtrics assessing substance use, alcohol use (AUDIT), motives to gamble (GMQ-F), problem gambling (PGSI), and psychological wellbeing (DASS-21).

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## Results

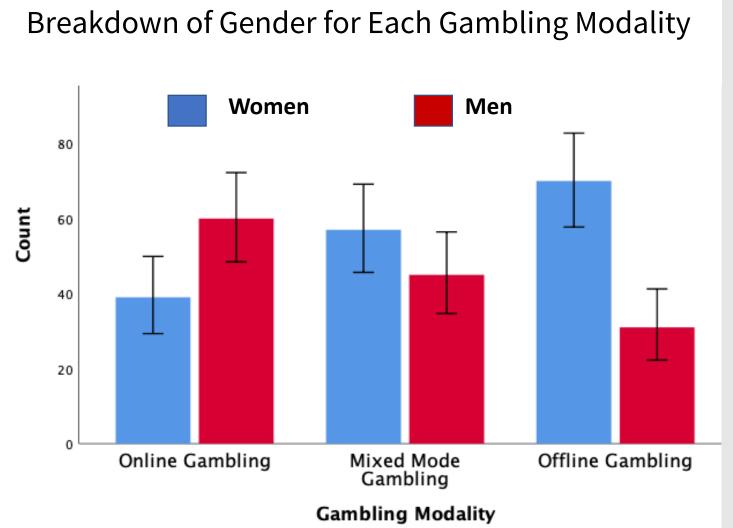


Figure 1: Gender difference. 39 online gamblers (39.4%), 57 mixed mode gamblers (55.3%), and 70 offline gamblers (69.3%) were women. 60 online gamblers (60.6%), 45 mixed mode gamblers (43.7%), and 31 offline gamblers (30.7%) were men, a statistically significant difference in proportions, p < 0.001

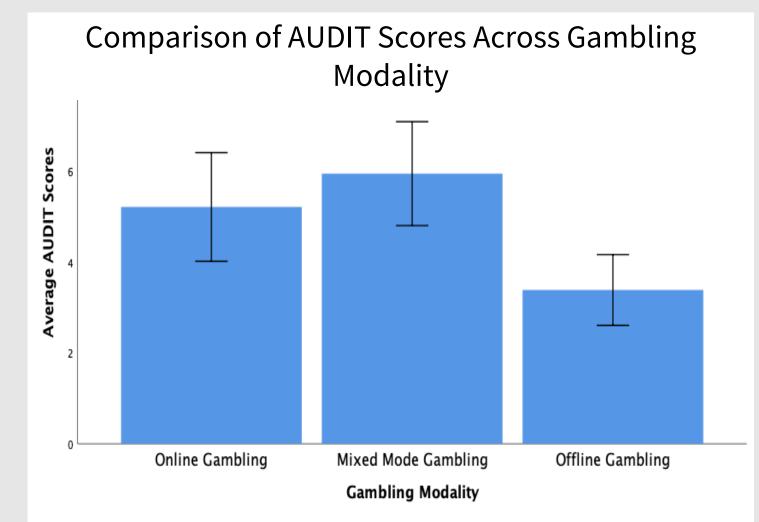


Figure 2: AUDIT. There was a significant effect of gambling gamblers (M = 3.12, SD = 3.05) had significantly lower AUDIT

#### Relationship Between Gambling Modality and Alcohol Consumption with Coping Motives as a Moderator While Controlling for Gambling Severity

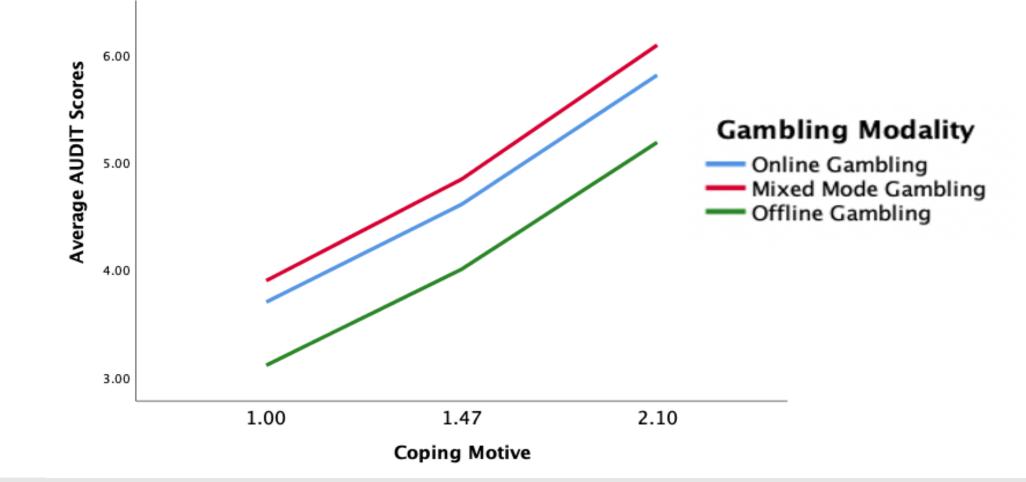
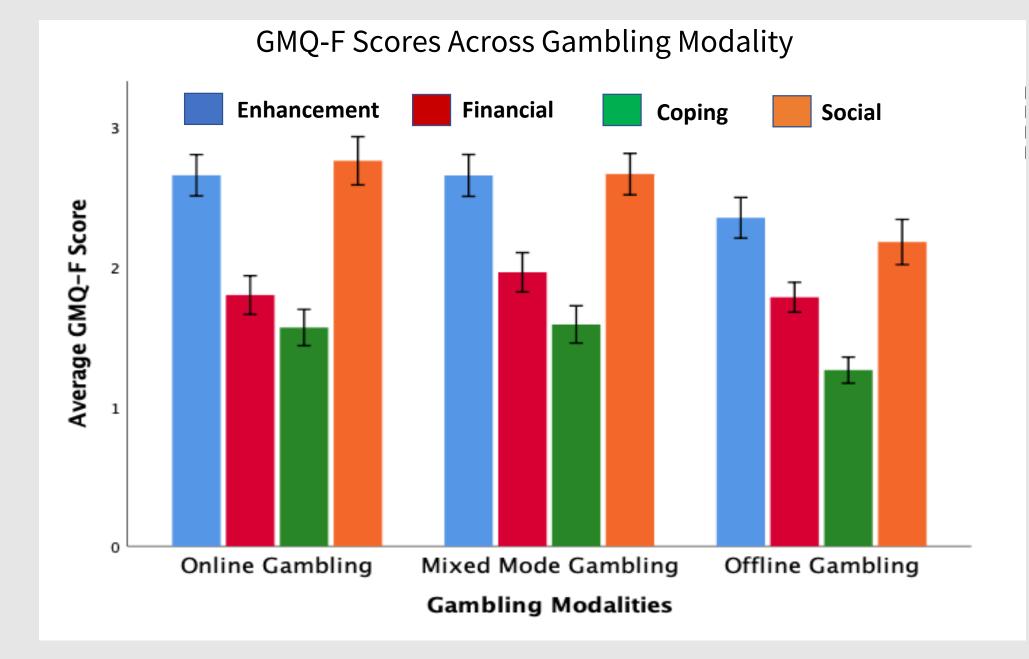


Figure 4: Coping motive as a moderator. Model was significant in predicting AUDIT scores F(6, 296) = 14.45, p < 0.001,  $r^2 = 0.23$ . No interaction between the variables mixed mode gambling and coping mechanisms p = 0.93. No interaction between the variables offline gambling and coping mechanisms p = 0.98. Adding the interaction into the model did not result in a significantly better prediction of AUDIT scores compared to having no interaction in the model F(6, 296) = 0.006, p = 0.9939,  $\Delta R^2 = 0$ 



modality on AUDIT score F(2, 300) = 6.83, p = 0.001. Offline scores compared to online gamblers (M = 4.94, SD = 5.41) (p =0.016) and mixed mode gamblers (M = 5.39, SD = 5.06) (p =

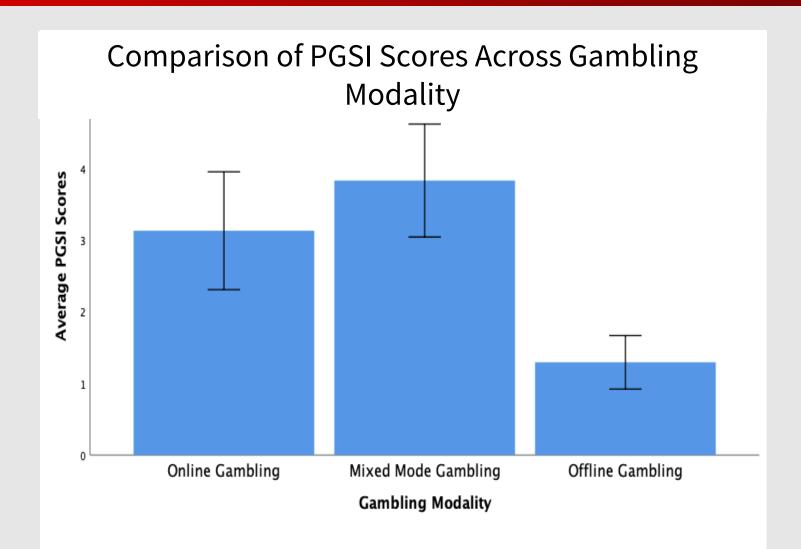


Figure 3: PGSI scores. There was a significant effect of gambling modality on PGSI scores F(2, 300) = 13.84, p < 0.001. Offline gamblers (M = 1.31, SD = 1.92) had significantly lower PGSI scores than online gamblers (M = 3.16, SD = 4.14) (p = 0.001) and mixed mode gamblers (*M*=3.68, *SD*=3.88) (*p*=0.489)

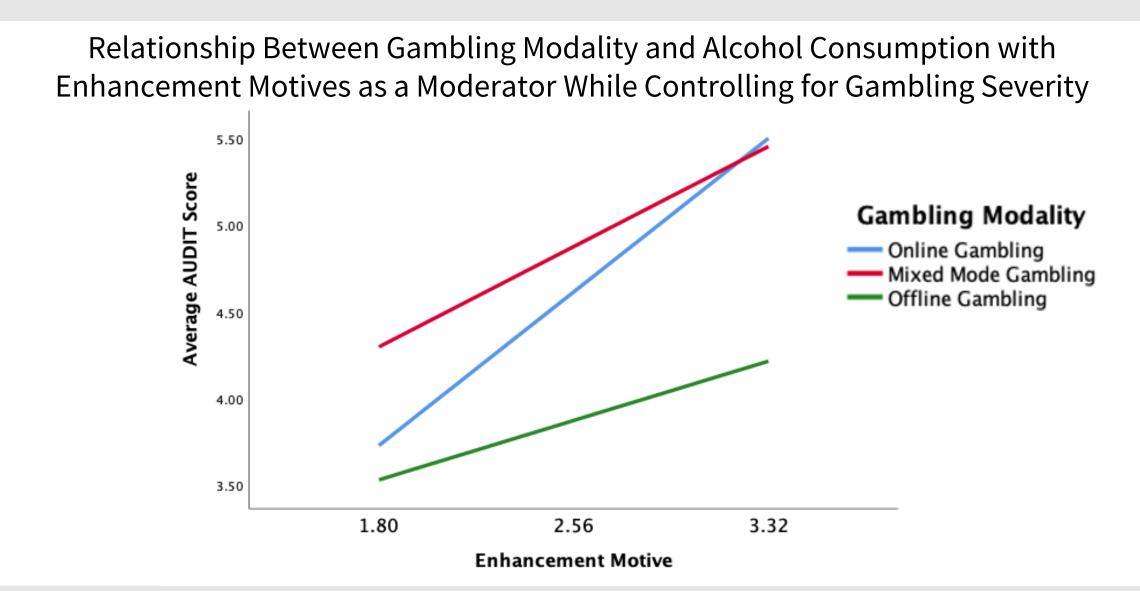


Figure 5: Enhancement as a coping motive. Model was significant in predicting AUDIT scores F(6, 296) = 11.95, p < 0.00,  $r^2 = 0.19$ . No significant interaction between the variables mixed mode gambling and enhancement motives p = 0.6126. No interaction between the variables offline gambling and enhancement motives p = 0.3834. Adding the interaction into the model did not result in a significantly better prediction of AUDIT scores compared to having no interaction in the model F(6, 296) = 0.38, p = 0.6820,  $\Delta R^2$  = 0.002

> Figure 6: GMQ-F. Significant effect of gambling modality on GMQ-F scores F(8, 596) = 4.87, *p* < 0.001. No difference in social motives. Lower enhancement motives scores in the offline group (M = 2.35, SD =0.74) compared to the online group (M =2.66, SD = 0.74) (p = 0.004) and the mixed mode group (M= 2.66, SD= 0.77) (p= 0.004). Lower coping motives in the offline group (M = 1.26, SD = 0.47) compared to the mixed mode group (M = 1.59, SD = 0.68) (p < 0.001) and the online gambling group (*M* = 1.57, *SD* = 0.65) (p < 0.001). Lower financial motives in the offline group (M = 2.18, SD = 0.82) compared to the mixed mode group (M =2.67, SD = 0.76) (p < 0.001) and the online gambling group (*M* = 2.76, *SD* = 0.87) (*p* <

## Discussion

The results suggest that offline gamblers have significantly lower PGSI scores and AUDIT scores than mixed mode gamblers and online gamblers.

These findings indicate the people who engage in online gambling may be more susceptible to problematic substance use.

Offline gamblers have significantly lower enhancement motives, coping motives, and financial motives than mixed mode gamblers and online gamblers.

However, neither enhancement motives nor coping motives were found to moderate the relationship between gambling modality and AUDIT scores.

A limitation in this study is that participants self-reported their preferred gambling modality but had previously engaged in other forms of gambling.

Future work should consider controlling for prior gambling involvement beyond their preferred gambling modality.

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