# Gender Differences in Treatment Seeking Gamblers with a Comorbid Eating Disorder

Maryam Sharif-Razi<sup>1</sup>, R. Diandra Leslie<sup>1</sup>, Hyoun S. (Andrew) Kim<sup>1</sup>, Kristin M. von Ranson<sup>1</sup>, Daniel S. McGrath<sup>1</sup>, David C. Hodgins<sup>1</sup>, & Hermano Tavares<sup>2</sup>

<sup>1</sup>Department of Psychology, University of Calgary, Calgary, Alberta. <sup>2</sup>Department of Psychiatry, University of São Paulo, Butantã, São Paulo, Brazil.

# INTRODUCTION

- Gambling and eating disorders co-occur more frequently than once assumed.
- There are commonalities across gambling disorder and eating disorders such as impulsivity, emotional dysregulation, and poor coping skills.
- Previous studies have identified distinct gender differences for each disorder.
- For example, gambling disorder affects men at a higher rate than women [1,2], and eating disorders are significantly more common in women [3,4].
- However, no studies have directly examined whether gender differences exist in comorbid gambling and eating disorder.
- **Study objective:** To explore gender differences in current gambling behaviours, gambling severity, gambling-related cognitive distortions, and psychiatric comorbidities in individuals with a gambling and eating disorder.

# **METHODOLOGY**

#### **Participants**

N = 342 adults seeking treatment for gambling problems were recruited at a large university hospital in São Paulo, Brazil.

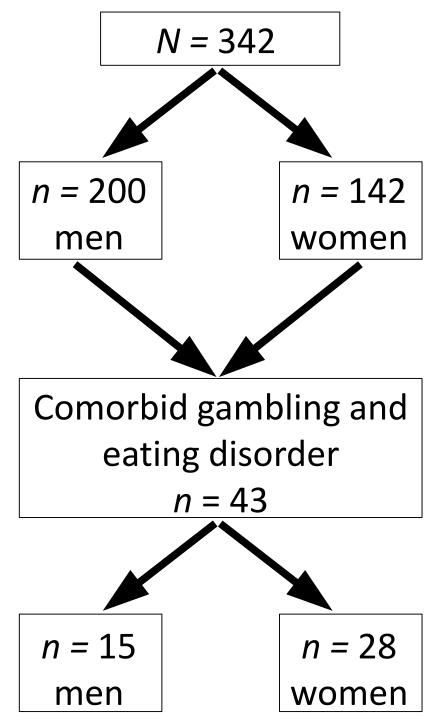


Figure 1: Gender distribution

• Mean age (final sample):  $41.5 \pm 9.4$  years (men);  $50.3 \pm 12.1$  years (women).

#### Measures

- Age of onset of gambling disorder
- Past gambling behaviours
- Weekly number of hours spent gambling
- Number of days spent gambling in the past month
- Amount of money lost in the past month
- GSAS (Gambling Symptom Assessment Scale)
- GBQ (Gamblers' Beliefs Questionnaire)
- MINI (Mini-International Neuropsychiatric Interview)

#### Statistical Analyses

- t-tests and Mann-Whitney U tests were used to compare gambling variables
- A chi-square test of independence was used to compare the proportion of men and women with a psychiatric disorder.

## RESULTS

**Table 1**: Gambling variables among men and women with a co-morbid gambling and eating disorder.

Gambling variables	Men ( <i>n</i> = 15)		Women ( <i>n</i> = 28)			
	M	SD	M	SD	Statistic	p
Age started regular betting (years)	27.8	12.7	35.1	13.0	t = -1.72	0.09
Weekly hours spent gambling	12.6	15.5	9.6	12.1	<i>U</i> = 182.00	0.71
Days gambled (past month)	11.6	10.3	12.2	10.9	t = -0.16	0.87
Dollars lost (past month)	2834.3	4946.4	2390.7	3986.0	<i>U</i> = 191.00	0.89

*Note*. t = t-test, U = Mann-Whitney U

### **Gambling Self-Report Measures**

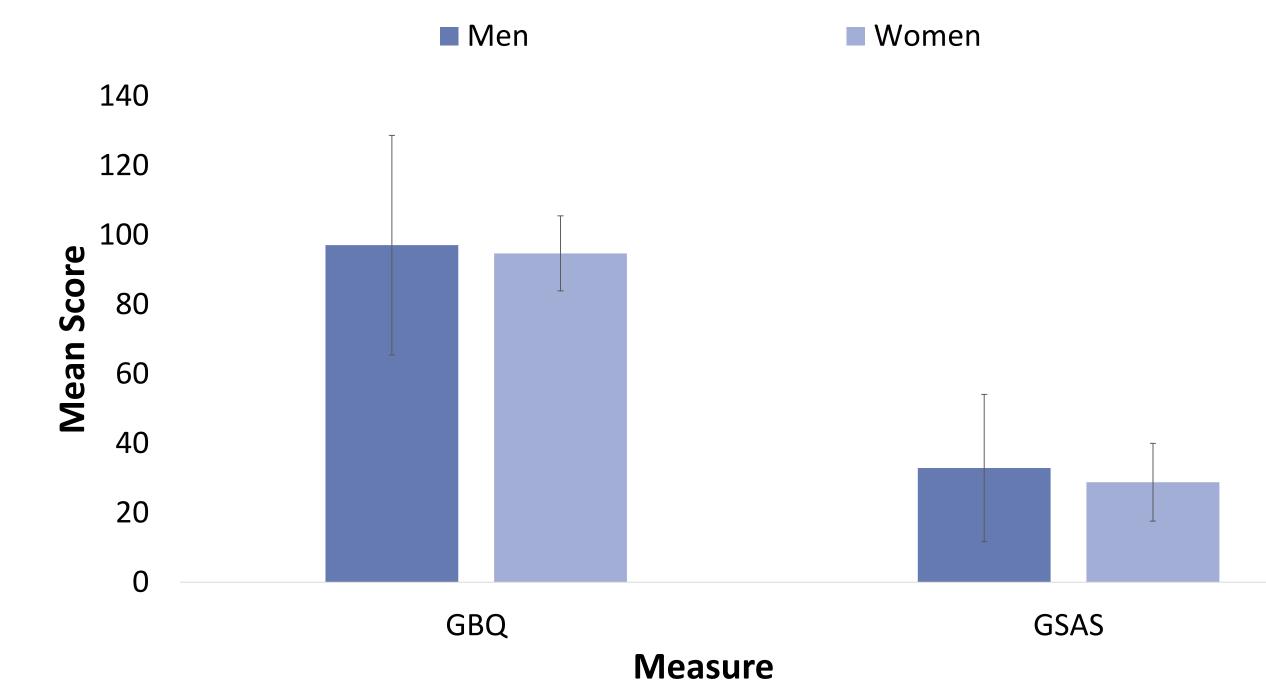
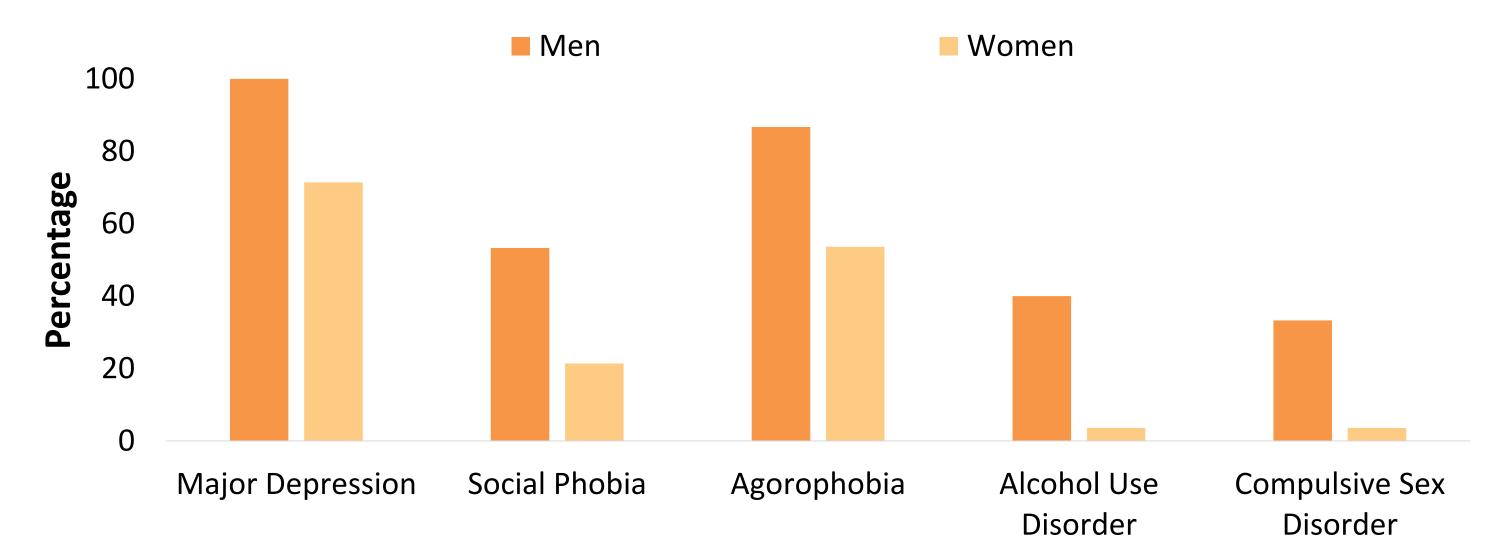


Figure 2: Differences in gambling self-report scores.

No gender differences emerged on any gambling variables, including age of onset, past month gambling behaviors, gambling problem severity, and cognitive distortions related to gambling, ps > 0.05.

#### **Psychiatric Comorbidities: Gender Differences**



#### **Psychiatric Comorbidity**

Figure 3: Differences in psychiatric comorbidities between men and women with a dual diagnosis of gambling and eating disorder(s).

To correct for multiple-comparisons, a backwards Wald binary logistic regression was conducted with psychiatric co-morbidities that were significant at the univariate level. The overall model fit was significant ( $\chi^2$  (2) = 15.158, p = .001), with an overall classification accuracy of 81.4%. Men were more likely to present with <u>alcohol use disorder</u>, Wald's  $\chi^2$  (1) = 5.92, p = .015, B = 2.90, SE = 1.19, OR = 18.23, 95% CI = [1.76, 188.61] and <u>compulsive sexual behavior</u>, Wald's  $\chi^2$  (1) = 4.59, p = .032, B = 2.62, SE = 1.22, OR = 13.71, 95% CI = [1.24, 150.64].

# **DISCUSSION**

- Women were more likely than men to present with a comorbid eating disorder diagnosis.
- This may be due to greater cultural and media emphasis on women's bodies, greater dissatisfaction with weight among women, and differences in body fat content and metabolic responses [5, 6, 7].
- Male gamblers with a comorbid eating disorder were more likely to present with an alcohol use disorder and compulsive sexual behaviour than women.
  - These differences may be due to similar etiological mechanisms such as higher levels of impulsivity a trait typically more elevated in men [8,9].
- More than 8% of men also presented with an eating disorder, suggesting a non-trivial number of male gamblers are affected by eating disorders.

# CONCLUSION AND FUTURE DIRECTIONS

- Although no gender differences in gambling variables were found, men were more likely to present with psychiatric comorbidity.
- Findings suggest that addressing gender-specific differences may aid in prevention, and the treatment of individuals with this dual diagnosis.
- Eating disorders are largely underreported and understudied in men. Thus, clinicians treating problem gambling may want to consider incorporating eating disorder screens [11] into their assessments.
- Transdiagnostic approaches that focus on shared features such as emotional dysregulation and impulsivity should be considered in treatment [10].

#### REFERENCES

[1] Hing, N., Russell, A., Tolchard, B., & Nower, L. (2016). Risk Factors for Gambling Problems: An Analysis by Gender. [2] Tavares, H., Carneiro, E., Sanches, M., Pinsky, I., Caetano, R., Zaleski, M., & Laranjeira R. (2010). Gambling in Brazil: lifetime prevalences and socio-demographic correlates. [3] Hudson, J. I., Hiripi, E., Pope, H. G., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. [4] Duncan, A.E., Ziobrowski, H.N., Nicol, G. (2017). The prevalence of past 12-month and lifetime DSM-IV eating disorders by BMI category in US men and women. [5] Forrester-Knauss, C., & Stutz, E. Z. (2012). Gender differences in disordered eating and weight dissatisfaction in Swiss adults: Which factors matter? [6] Södersten, P., Bergh, C., & Zandian, M. (2006). Understanding eating disorders. [7] Striegel-Moore, R. H., & Bulik, C. M. (2007). Risk factors for eating disorders. [8] Raymond, N. C., Coleman, E., & Miner, M. H. (2003). Psychiatric comorbidity and compulsive/impulsive traits in compulsive sexual behavior. [9] Nolen-Hoeksema, S., & Hilt, L. (2006). Possible contributors to the gender differences in alcohol use and problems. [10] Farstad, S.M., von Ranson, K.M., Hodgins, D.C., El-Guebaly, N., Casey, D.M. (2015). The influence of impulsiveness on binge eating and problem gambling: A prospective study of gender differences in Canadian adults. [11] Strother, E., Lemberg, R., Stanford, S. C., & Turberville, D. (2012). Eating disorders in men: underdiagnosed, undertreated, and misunderstood.





Poster presented at the 18<sup>th</sup> annual Alberta Gambling Research Institute Conference in Banff, Alberta. March, 2019.

Contact information: maryam.sharifrazi@ucalgary.ca