

# Demographic, psychological, and addiction-related correlates of co-occurring anxiety symptoms among Canadian adults who gamble

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## Introduction

- Anxiety symptoms are frequently endorsed by people who gamble (Giddens et al., 2012; Lorains et al., 2011), but less is known about the specific individual-level characteristics that may be associated with this co-occurrence.
- It is important to understand who is more likely to both gamble and experience anxiety symptoms, as their co-occurrence may be associated with poorer outcomes than either alone.
- As such, the present study examined the demographic, psychological, and addiction-related correlates of co-occurring anxiety symptoms among Canadian adults who gamble.

## Methods

### Participants

**N = 202**  Canadian adults  
 • Gambled in past 12 months  
 • Recruited from Academic Prolific

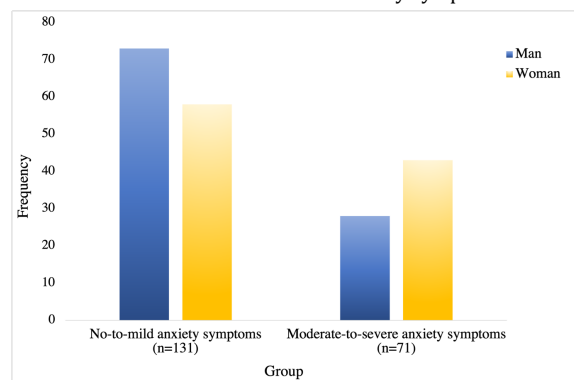
**n = 131** **n = 71**  
 No-to-mild anxiety symptoms Moderate-to-severe anxiety symptoms

### Measures

- Depression Anxiety Stress Scales-21 (DASS-21)
- Short-Form Difficulties in Emotion Regulation Scale (DERS-18)
- Adverse Childhood Experience Questionnaire (ACE)
- Short-Form Impulsive Behavior Scale (SUPPS-P)
- Screeners for Substance and Behavioral Addictions (SSBA) - Gambling, Alcohol

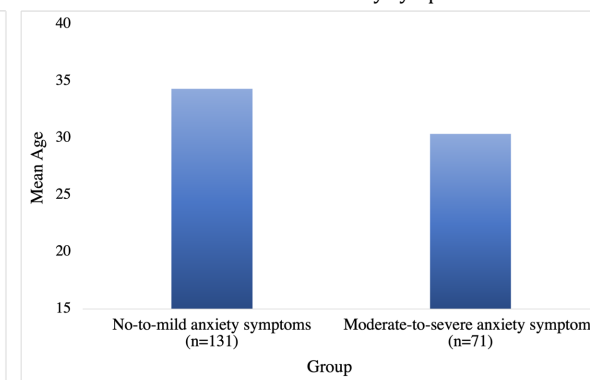
## Results

**Figure 1.** Gender differences between gamblers with no-to-mild versus moderate-to-severe anxiety symptoms



Gamblers with moderate-to-severe anxiety symptoms were significantly more likely to be **women** than men, while the opposite result was found for gamblers with no-to-mild anxiety symptoms.

**Figure 2.** Age differences between gamblers with no-to-mild versus moderate-to-severe anxiety symptoms



Gamblers with moderate-to-severe anxiety symptoms were significantly **younger** than gamblers with no-to-mild anxiety symptoms.

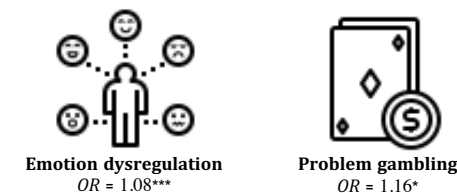
**Table 1.** Means, medians, and Mann-Whitney U test statistics for differences in psychological and addiction-related correlates between gamblers with no-to-mild versus moderate-to-severe anxiety symptoms

	No-to-mild anxiety symptoms (n=131)			Moderate-to-severe anxiety symptoms (n=71)			Test statistic	p-value
	M	Median	SD	M	Median	SD		
<b>ACE</b>	2.05	2.00	2.01	3.31	3.00	2.63	5945.50	< .001***
<b>DERS-18</b>	38.11	38.00	10.71	50.65	52.00	12.88	7147.00	< .001***
<b>SUPPS-P</b>								
Negative urgency	2.12	2.00	.70	2.55	2.50	.69	6226.50	< .001***
Positive urgency	1.67	1.50	.53	2.00	2.00	.71	5875.00	.002**
Perseverance	1.75	1.75	.46	1.90	2.00	.45	5512.50	.028*
Premeditation	1.66	1.75	.47	1.92	2.00	.53	5897.00	.001**
Sensation seeking	2.31	2.25	.70	2.29	2.25	.64	4688.50	.923
<b>SSBA</b>								
Gambling	1.18	.00	2.15	2.77	1.00	3.71	5873.50	< .001***
Alcohol	1.54	.00	2.71	3.41	2.00	4.04	4376.50	< .001***

Note. ACE = Adverse Childhood Experience Questionnaire; DERS-18 = Short-Form Difficulties in Emotion Regulation Scale; SUPPS-P = Short-Form Impulsive Behavior Scale; SSBA = Screener for Substance and Behavioral Addictions  
 \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

## Results

A binary logistic regression including all significant correlates of co-occurring gambling and anxiety symptoms revealed that **problem gambling** and **emotion dysregulation** were the strongest predictors of being a gambler + endorsing moderate-to-severe anxiety symptoms.



Note. OR = Odds Ratio  
 \*  $p < .05$ ; \*\*\*  $p < .001$

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## Discussion

- Findings assist in elucidating the psychological and addiction-related constructs that are associated with anxiety symptoms among adults who gamble.
- Problem gambling and emotion dysregulation appear to be the most strongly implicated in this co-occurrence.
- People who both gamble and experience anxiety symptoms may benefit from interventions which target both problem gambling and emotion dysregulation.
- Future research may consider examining anxiety symptoms among gamblers longitudinally to understand the temporal sequence of this relationship.