



The Association Between Anxiety and Gambling Frequency: A Comparative Analysis of Males and Females

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Introduction

- Anxiety has been noted as a precipitating and perpetuating factor in problem gambling, but there is ongoing debate on the credibility (Coman 1998, Schmidt 2018, Walker 2008).
- Risk-taking and social anxiety are key contributors to the development of problem gambling. While females are more prone to general anxiety, males exhibit higher levels of both risk-taking and social anxiety (Wong 2012, Rapinda 2023).
- DSM-5 GD criteria has shown a positive correlation between anxiety severity and gambling severity, with more anxiety symptoms leading to more severe anxiety (Medeiros 2016)

Research Questions

- Are individuals who have prescribed anxiety disorders more likely to develop pathological gambling than those that don't?
- Does this relationship differ between sex?
- Does the amount of anxiety-related symptoms cause an increase in pathological gambling probability?

Methods

Sample

- Respondents (n=195) were drawn from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) survey, a sample of non-institutionalized U.S. residents over the age of 17

Measures

- Lifetime anxiety diagnosis was measured in the diagnosis section based off the prompt, "Generalized anxiety disorder - lifetime".
- Participants who have had pathological gambling diagnosis was represented with the prompt, "Pathological gambling - lifetime".
- Anxiety-related symptoms score was compiled of 27 "yes" or "no" questions regarding possible symptoms.
- Participants included their sex with either "Male" or "Female".

Results

Figure 1:

- Logistic regression analysis showed that Anxiety-Related Symptoms were significantly associated with pathological gambling development probability ($p = 3.68e-15$).
- With each increase in anxiety-related symptoms the odds of developing pathological gambling increases by 9%.

Figure 1: Probability of Pathological Gambling Disorder by Anxiety-Related Symptoms Count.

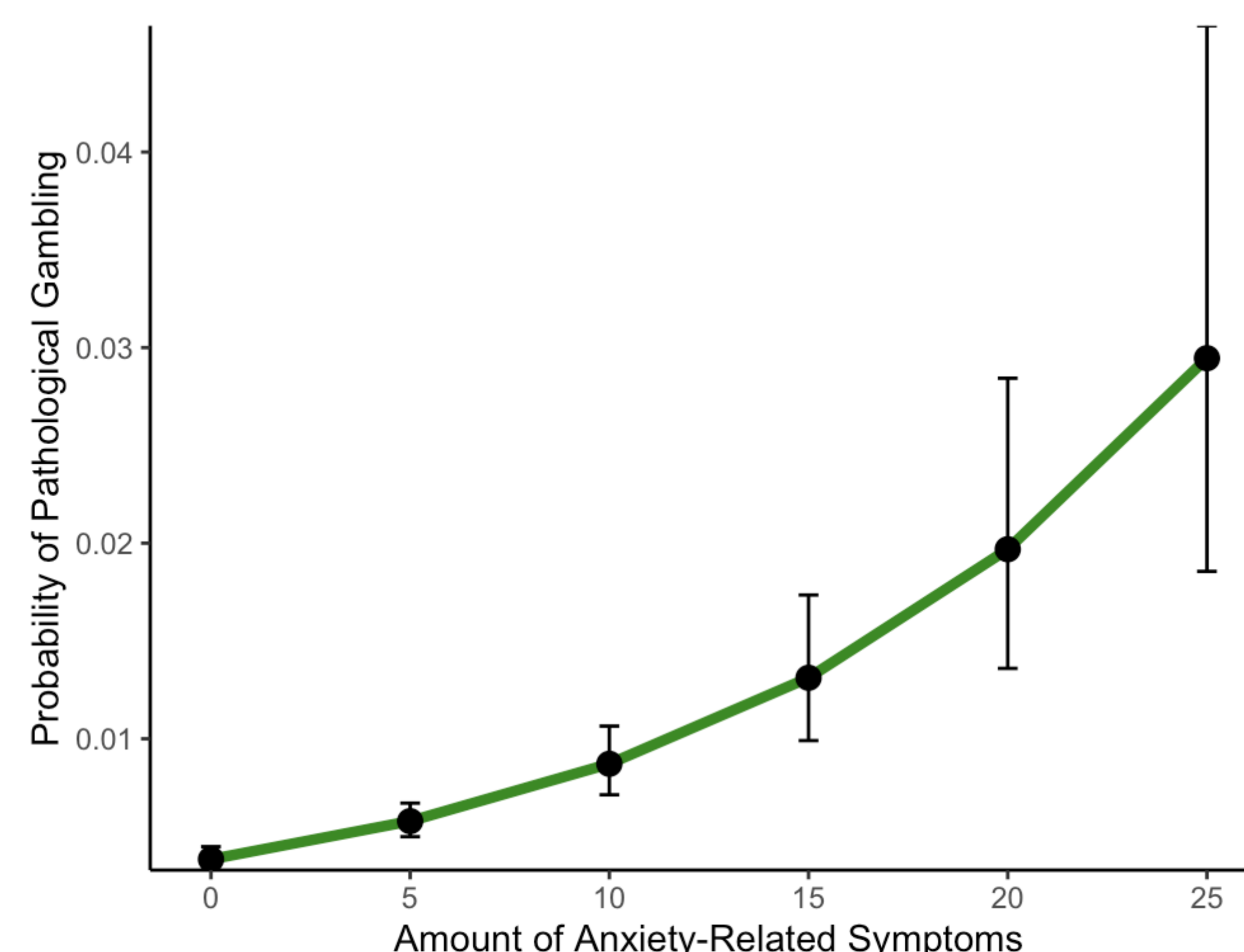
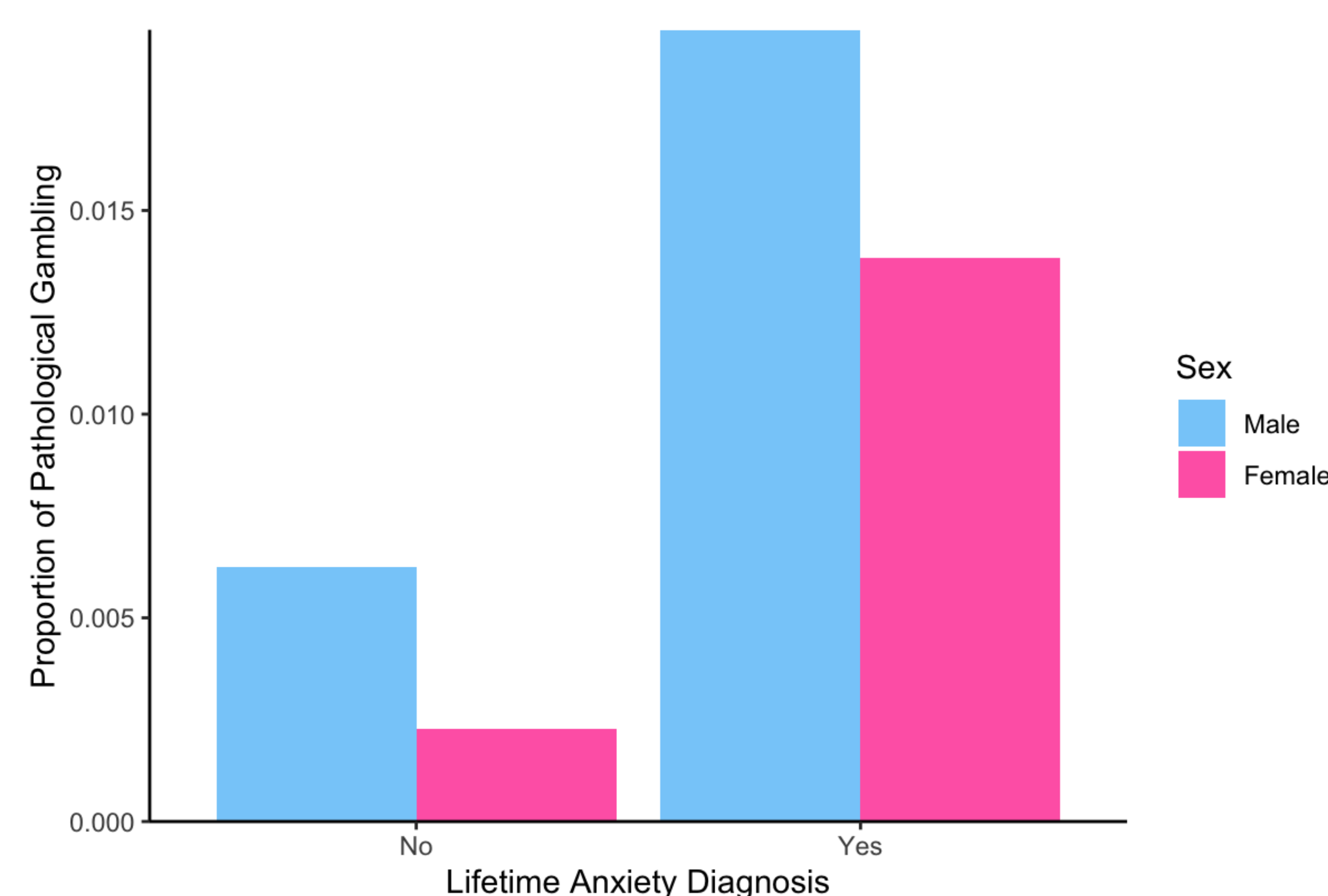


Figure 2:

- Bivariate linear regression analysis showed that lifetime anxiety diagnosis was significantly associated with pathological gambling onset ($p < 0.001$).
- Every individual who has been professionally diagnosed with anxiety has a 1.14% higher chance of developing pathological gambling, regardless of sex.
- Multivariate logistic regression analyses showed that there was no statistically significant difference between this relationship in males and (OR = 1.943, $p = 0.111$), though males appear to be more likely to develop a disorder.

Figure 2: Proportion of Respondents with Pathological Gambling Disorder by Lifetime Anxiety Diagnosis based on Biological Sex.



Discussion

- Individuals diagnosed with anxiety or showing increased symptoms are more likely to develop pathological gambling disorders, regardless of sex.
- These findings suggest that professional anxiety diagnoses aren't required for an increased risk of pathological gambling.
- While sex has been thought to influence the anxiety-gambling relationship, no differences were found between males and females.
- Future research should explore the possible bidirectional causality that comes with anxiety and gambling frequency. Additionally, exploring potential factors that may contribute to this relationship, such as environmental influences.

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