

# Does alcohol consumption have any impact on avoiding social situation or social fear among US adults?

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Course: Statistical Methods for Data Analysis

## Introduction

Social phobia or social fear is a chronic mental health condition in which social interactions cause irrational anxiety. People who have social phobia usually avoid social situations and fail to make significant relationship with other persons. Researchers have found out a positive correlation between social phobia and antisocial personality disorder (ASPD). Researchers tried to find out the correlation between ASPD and alcohol use disorders(1). ASPD appear to identify a more pernicious clinical profile of Alcohol used disorder among adults in the general U.S. population. People who have post-traumatic stress disorders are also more addicted to drug than general people(2). Gender and age have an effect on social anxiety disorder(3). Matured people suffer from less anxiety. Despite age-related reductions in symptom frequency, a core set of social phobia symptoms consistently distinguished between diagnostic groups, irrespective of age.(4)

## Dataset Information

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) conducted a national survey to study the comorbidity of several mental health illnesses, including alcohol and other substance abuse, personality disorders and anxiety/depression disorders. The total number of people who participated in Wave 1 was 43,093 and it was conducted in 2001-2002.

## Methodology

All of the following statistical were performed with R using the RStudio, at the  $\alpha = 0.01$  significance level:

- Used Logistic regression to predict the risk of social phobia
- Chi-square test of independence to find association between social phobia and alcohol consumption status..

## Result

- Logistic regression considering gender, whether or not consumer of alcohol, and whether or not parents have history of drug issues revealed that the US adults are less likely to experience strong fear or avoidance of social situation are those who are current or ex consumers of alcohol (odds ratio= 0.613,  $p < 0.001$ ), whose parents have drug issues (odds ratio= 0.477,  $p < 0.001$ ), or are female in gender (odd ratio=0.842,  $p < 0.01$ ).
- When testing the relationship between the consumption of alcohol and whether or not an adult have experienced strong fear or avoidance of social situation, a chi-square test indicated that there is a significantly strong evidence of a correlation between them ( $\chi^2(1)=89.242$ ,  $p < 0.001$ ).

Alcohol Consumption	Has Social Phobia	No Social Phobia
Consumer	3143	28675
Not Consumer	467	6894

Table 1

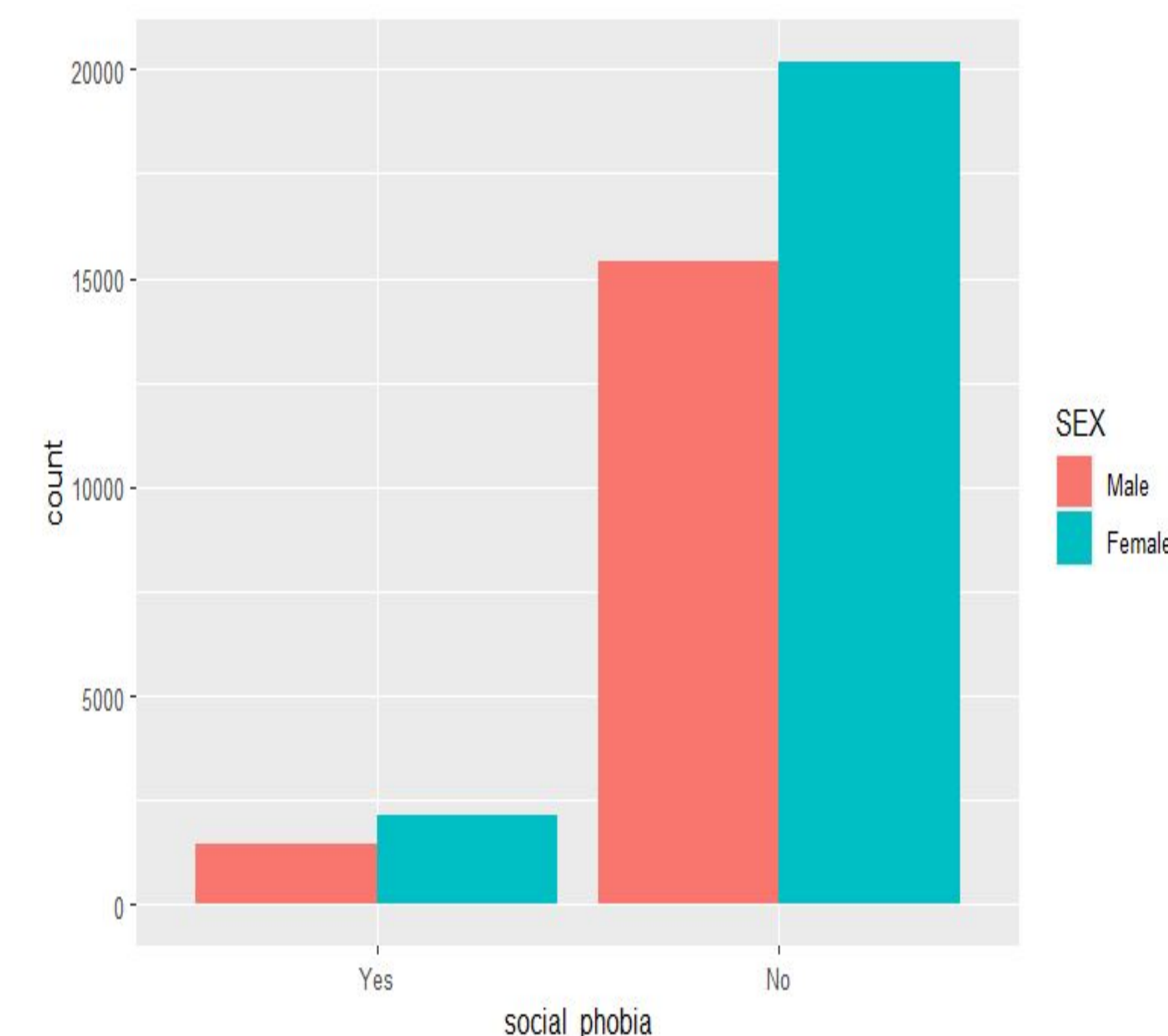


Figure 1

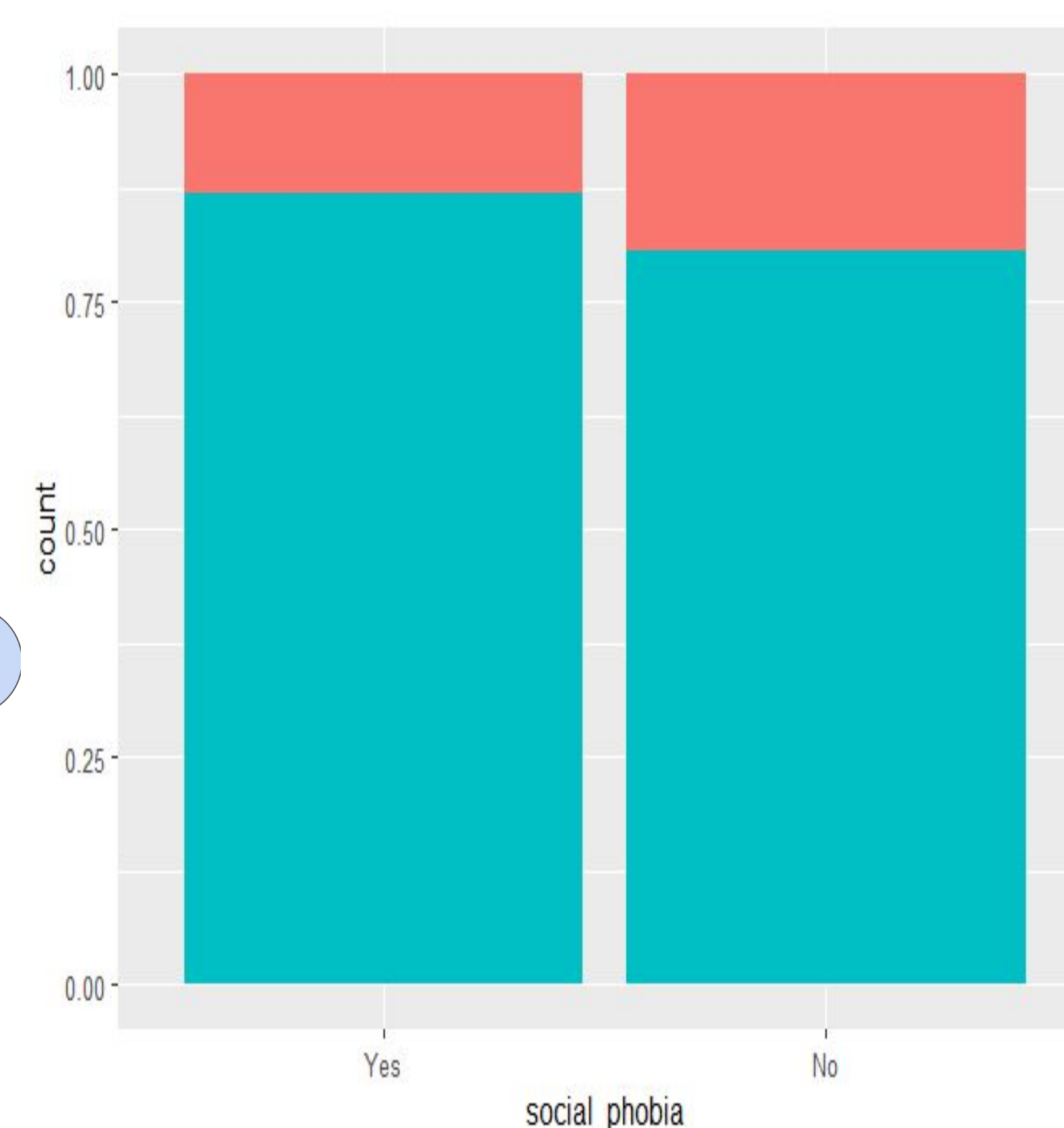


Figure 2

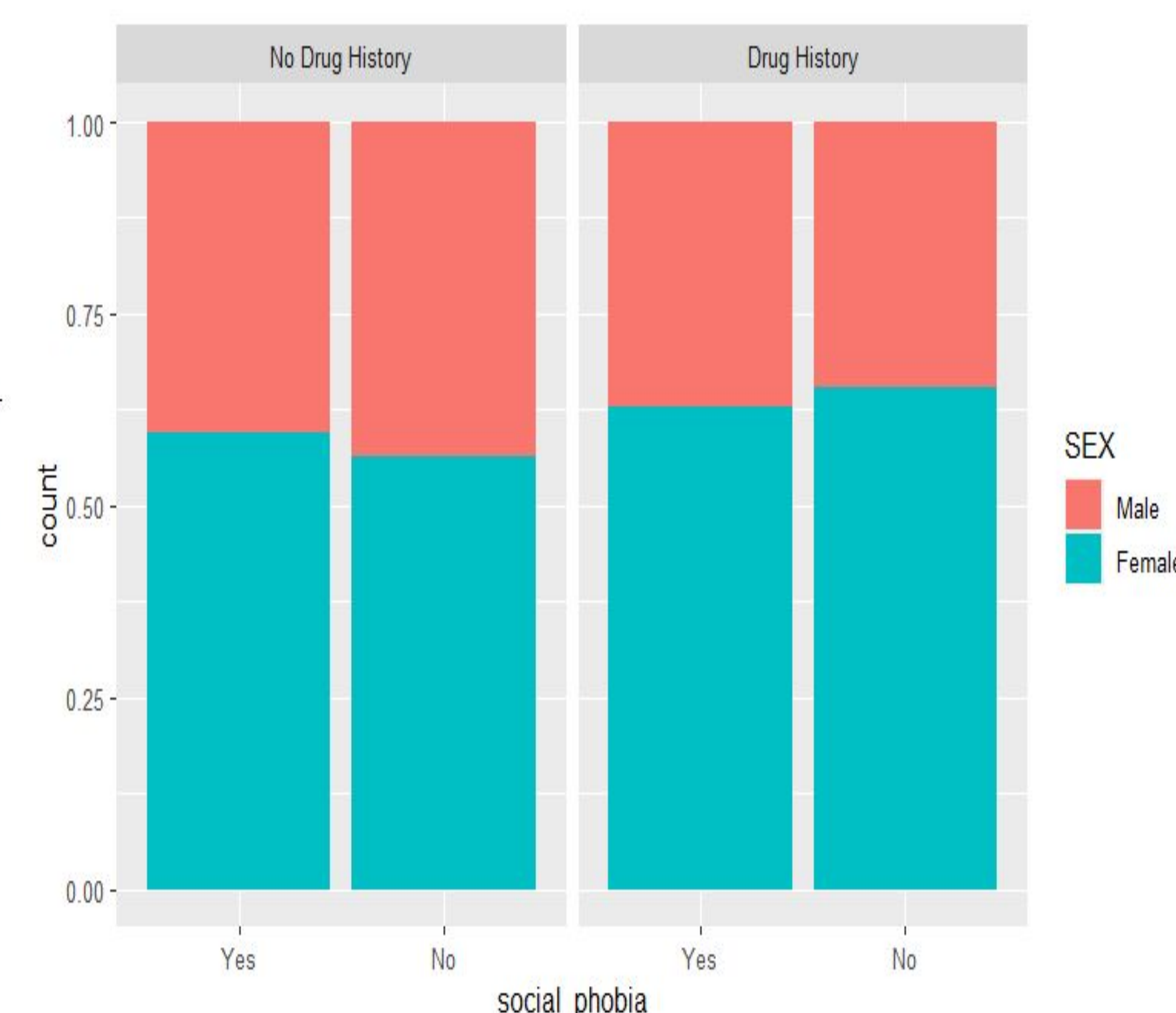


Figure 3

## Conclusions

In this large study of US adults, probability of having social phobia is higher for those who have alcohol consumption history.

Gender and parents drug history are also found to be related with social fear. Female population suffers more in social phobia than male do. Those whose parents take drugs, are more likely to have social phobia.

## References

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