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# Neuroticism as a Moderator of the Relationship Between Family History of Drinking Problems and College Alcohol Use

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## ABSTRACT

Literature has long suggested a correlation between family history and alcohol dependence; heredity plays a role in risk for alcohol dependence. To investigate the influence of the personality trait neuroticism as a moderating factor of the relationship between family history of alcohol dependence, and an individual's alcohol consumption, analyses were conducted in the Fall 2011 Spit for Science cohort. Survey questions examined the binary variable of whether participants reported a family history of drinking problems, as well as the continuous variable measuring the number of alcoholic drinks participants had consumed in the past 30 days. There were a total of 779 responses that included answers to both questions about family history as well as drinking scores in the data and on these, a linear regression and ANOVA was performed. Results show that reports of family history and high levels of neuroticism are both correlated with increased frequency of alcohol use. Analyses continue to examine the moderating effect of neuroticism on the relationship between family history of alcohol use and an individual's alcohol consumption. These results add more basic information to the literature on alcohol use in college students.

## INTRODUCTION

- Underage drinking is a momentous reality in college atmospheres. Studies have examined the drinking patterns of university students for ages.
- In one study, LaBrie et al found that participants who reported a genetic predisposition to alcohol were found to consume significantly more total drinks, maximum drinks, and were more likely to drink heavily than participants who did not have a family history (LaBrie et al, 2009).
- Neuroticism: negative emotionality and/or level of emotional stability. A person's vulnerability to stress and tendency to experience negative emotions such as anger, anxiety or depression (Fiske et al, 2009).

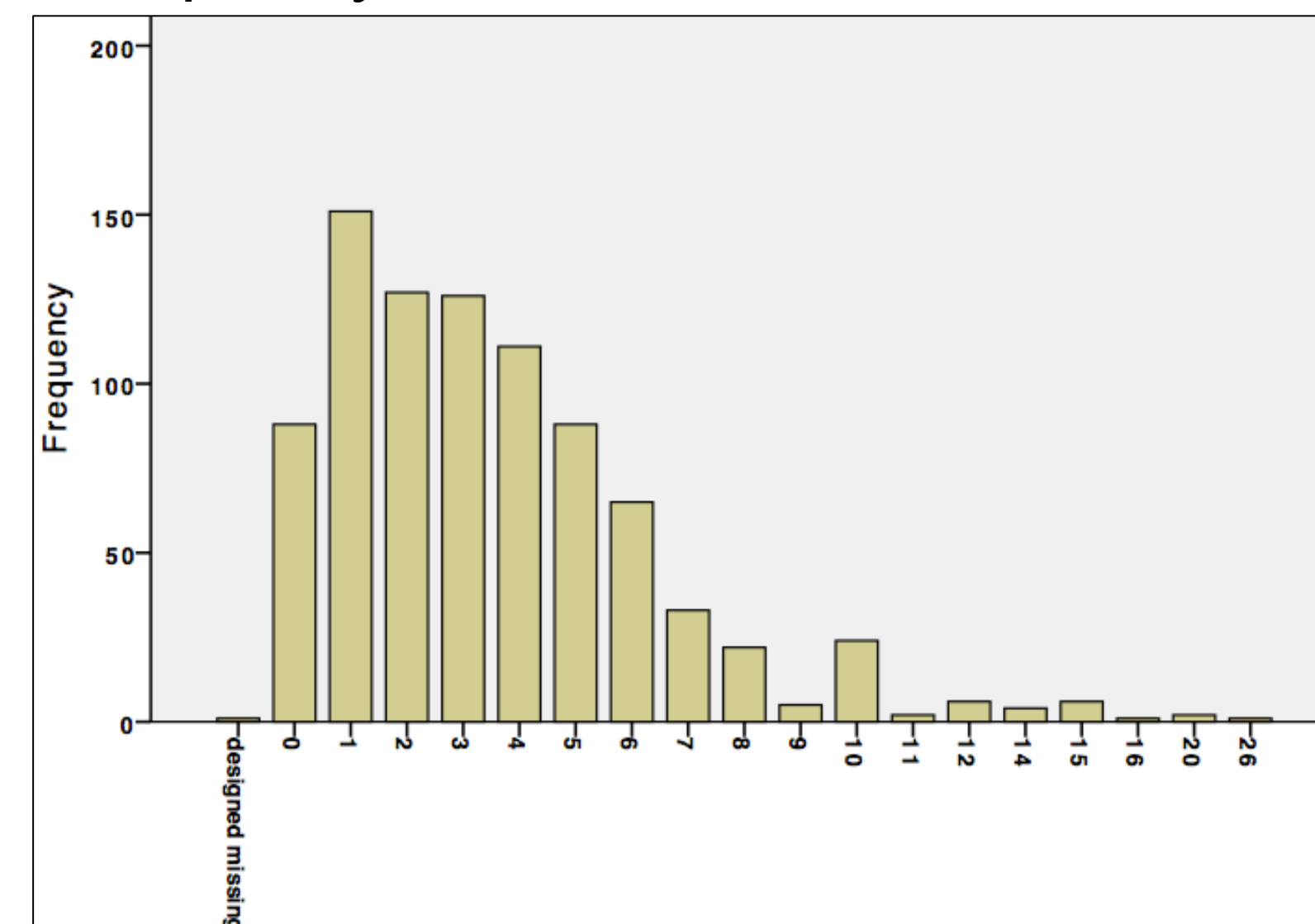
**Hypothesis:** Higher neuroticism scores compounded with reports of family history of drinking problems result in a greater number of drinks consumed in the previous thirty days than in participants with lower levels of neuroticism and a positive family history.

## METHODS

Survey questions examined the binary variable of whether participants reported a family history of drinking problems, as well as the continuous variable measuring the number of alcoholic drinks participants had consumed in the past 30 days, and the continuous variable of neuroticism. Neuroticism was measured through a series of questions derived from the Big 5 personality inventory; scores were calculated using an algorithm designated in the inventory. There were a total of 779 responses that included answers to all: questions about family history, drinking scores, as well as neuroticism scores in the data. On these responses, a linear regression and ANOVA was performed to examine the responses of family history in relation to number of drinks consumed, the neuroticism scores in relation to the number of drinks consumed, as well as the relation between family history and number of drinks consumed, as moderated by neuroticism scores.

## RESULTS

Frequency of Alcohol Use in Past Month

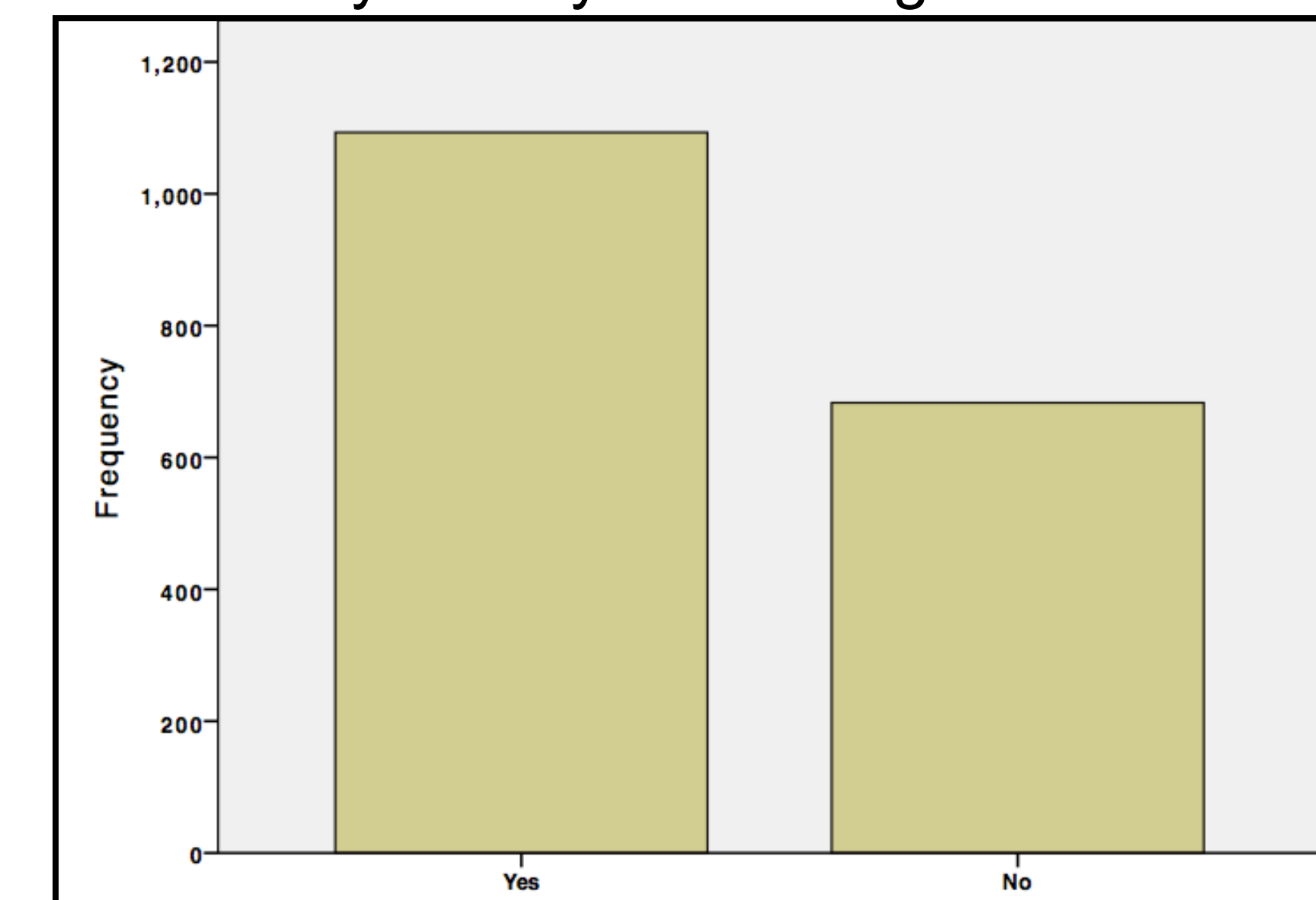


Number of Drinks in Past 30 Days

- ❖ Distribution skewed to the right
- ❖ Participants who drank consumed between 1 and 5 drinks in past 30 days.

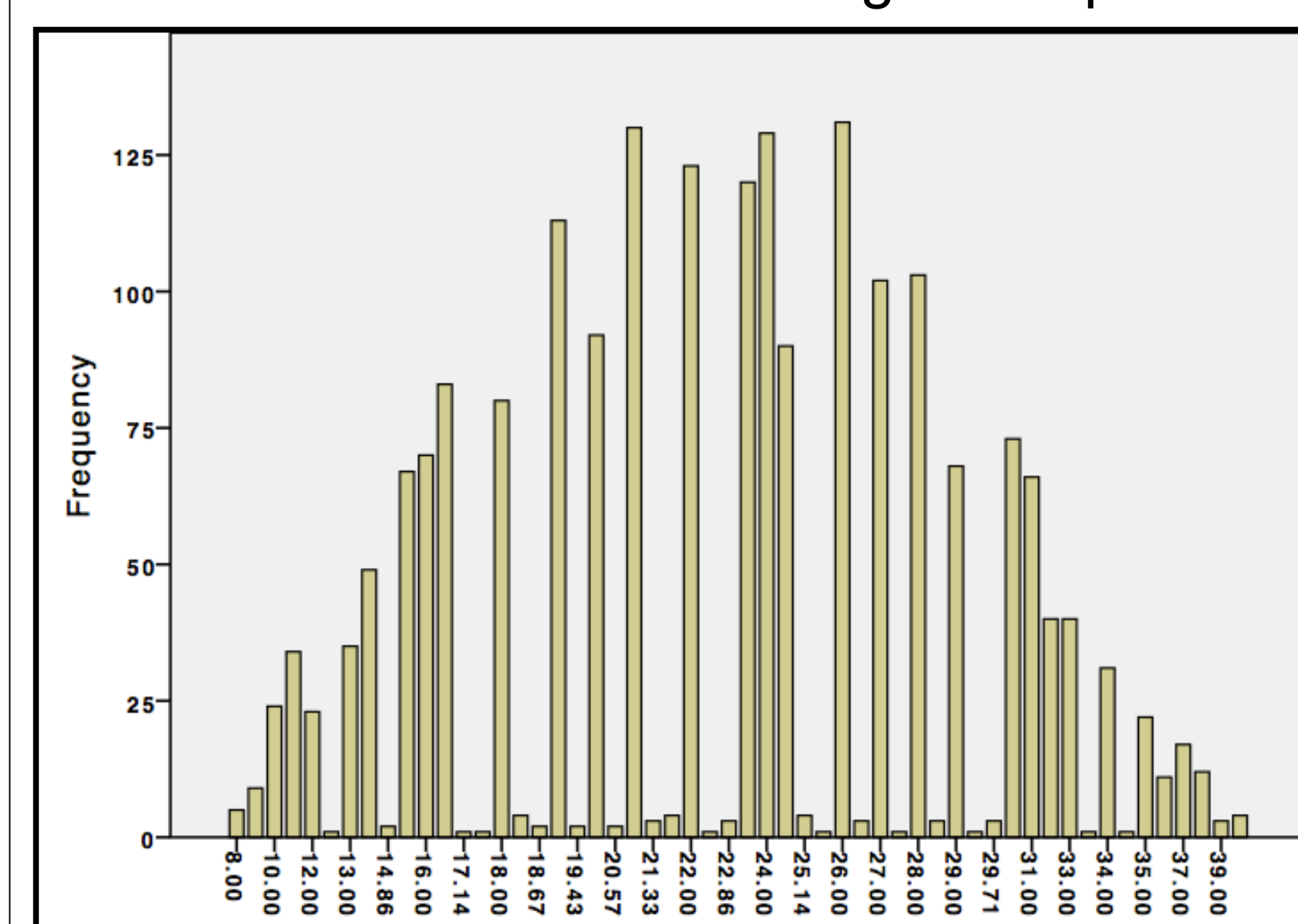
- ❖ Higher report of positive family history

Family History of Drinking Problems



Family History of Drinking Problems

Neuroticism Scores Among Participants



- ❖ Relatively normal distribution of neuroticism scores

- Family history of drinking problems were predictive of higher consumption of alcohol as measured in number of drinks in the past 30 days ( $t = -2.343$ ,  $p < 0.05$ ).
- Higher levels of neuroticism were predictive of higher alcohol consumption as measured in number of drinks in the past 30 days ( $t = 2.176$ ,  $p < 0.05$ ).
- Work continues to examine the role of neuroticism as a moderating factor on family history of drinking problems and number of drinks consumed in the past 30 days.

## Neuroticism's Moderation Effects



## CONCLUSIONS

- ❖ High levels of neuroticism or a family history of drinking problems may be risk factors for increased alcohol use in college.
- ❖ Further research should continue to generate any concrete conclusions from this study and determine the impact of neuroticism as a moderating factor.

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