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# Spit for Science: The relationship between deviant high school behavior and college substance use

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## ABSTRACT

This study examined the relationship between deviant high school behavior, as defined by symptoms of conduct disorder, and frequency of alcohol and cigarette use in the past 30 days in college freshman at VCU. Deviant high school behaviors included skipping school, running away, stealing, starting a fire, destroying property, hurting animals or people, using weapons, fighting, and lying. The sample included first year freshmen at VCU who participated in the Spit for Science study. The software SPSS was used to calculate the significance of the correlations between deviant high school behavior and frequency of alcohol and cigarette use. A sum score was created for each individual based on their endorsement and frequency of each deviant behavior. There was a positive, significant correlation between deviant high school behavior and frequency of alcohol and cigarette use ( $p=.0001$  and  $p=.0001$ , respectively). This suggested that there is a relationship between high school students' deviant behavior, as defined by symptoms of conduct disorder, and the use of alcohol and cigarettes once they attend college. This study suggests risk factors for substance use in the VCU student body.

## INTRODUCTION

- Though the rate of consumption of alcohol has remained a constant over the past 20 years, more college students drink with the aim to get drunk than they did in 1970 (Baer, et. al., 1995).
- Another longitudinal study by Corbin et. al. assessed the use of alcohol and the attitude and beliefs that are related to such behavior. It was concluded that high school students with higher social motives tend to participate in heavier alcohol consumption as they transition into college (Corbin et. al., 2011).
- In this study, the relationship between deviant high school behaviors as defined by symptoms of conduct disorder and the frequency of alcohol and cigarette use in the past 30 days is analyzed.
- It is hypothesized that there is a positive correlation between deviant behaviors in high school and the usage of alcohol and cigarettes among VCU student in the past 30 days.

## METHODS

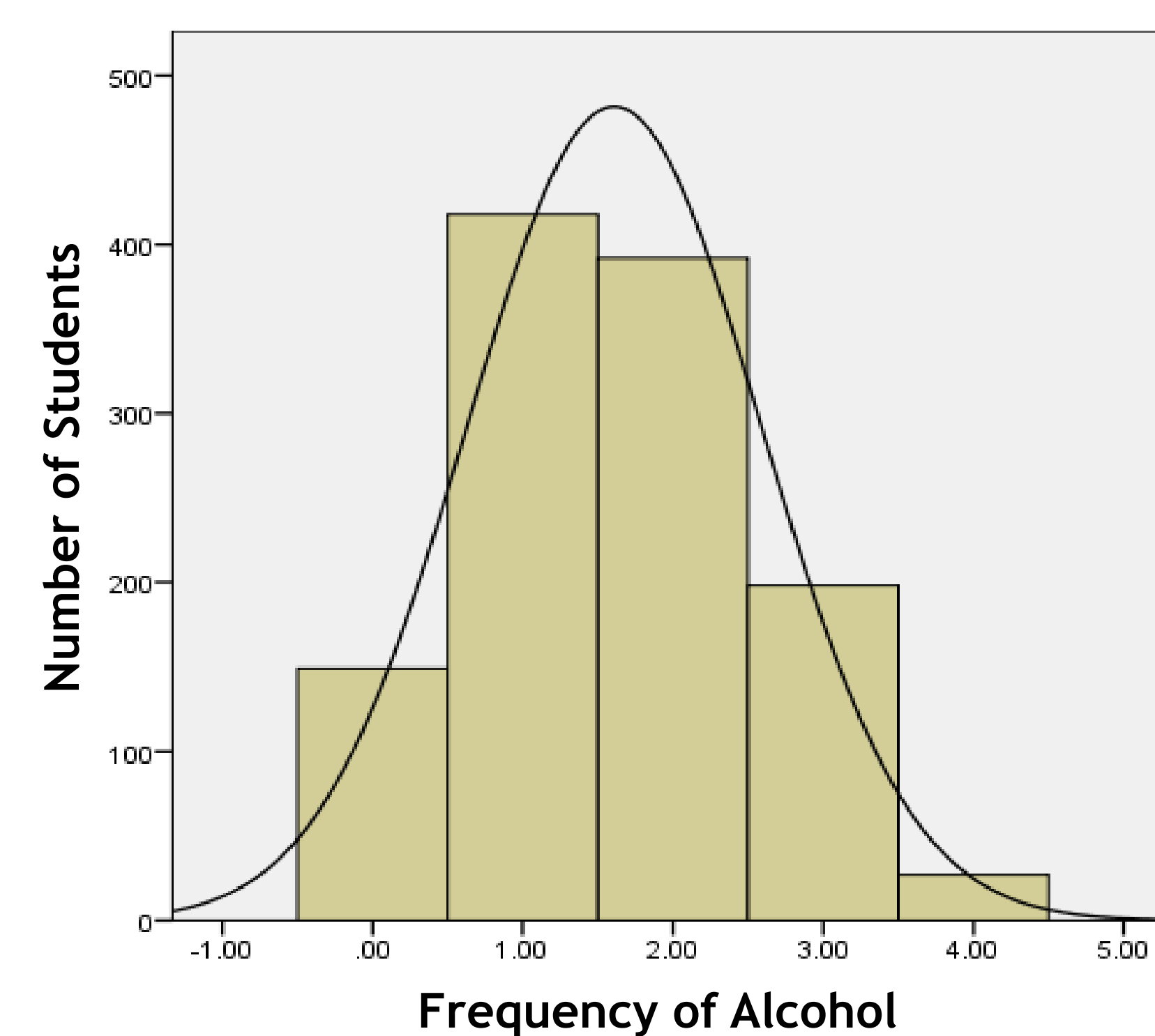
- The data from the Spring Follow-Up (2012) VCU Spit for Science survey were used.
- Deviant high school behaviors were defined as: skipping school, running away from home, stealing or robbing, starting a fire, destroying property, hurting animals or people, using weapons, fighting and lying.
- Students were to state how many times they had indulged in each deviant behavior. Reponse options were (1) 6 or more times, (2) 3 - 5 times, (3) 1 - 2 times, (4) Never, and (5) I choose not to answer.
- Questions related to alcohol included: "How often do you have a drink containing alcohol?", with response options (1) Never, (2) Monthly or less, (3) 2 to 4 times a month, (4) 2 to 3 times a week, (5) 4 or more times a week, (6) I choose not to answer. "How many drinks containing alcohol do you have on a typical day when you are drinking?" with response options (1) 1 or 2, (2) 3 or 4, (3) 5 or 6, (4) 7, 8, or 9, (5) 10 or more, (6) I choose not to answer.

- Questions related to cigarette use included: "How frequently did you smoke cigarettes in the last 30 days?" with response (1), I didn't smoke any cigarettes in the last month, (2) Once or twice, (3) A few days (3 to 4 days a month), (4) A couple of days a week (5 to 11 days a month), (5) Three times a week (12 to 14 days a month), (6) Most days of the week (15 to 25 days a month), (7) Daily or almost daily (26 to 30 days a month), (8) I choose not to answer. "How many cigarettes/smokeless tobacco products per day did you smoke/use?" with response options (1) 10 or fewer cigarettes OR 7 or fewer chaws OR 5 or fewer dyps, (2) 11 - 20 cigarettes OR 8-15 chaws OR 6-10 dyps, (3) 21 - 30 cigarettes OR 16-20 chaws OR 11-15 dyps, (4) 31 or more cigarettes OR 21 or more chaws OR 16 or more dyps, (5) I choose not to answer.
- A sum score was given to each option, where the option "never" was coded as 0 and "I choose not to answer" was set to missing.
- Using the program SPSS, a correlation test was administered between deviant behavior in high school and frequency of alcohol and cigarette use over the past 30 days in college.

## RESULTS

- The total participants included 2056 VCU students. Of the participants, n=1184 students answered all questions related to alcohol use and n=689 answered all questions related to cigarette use.

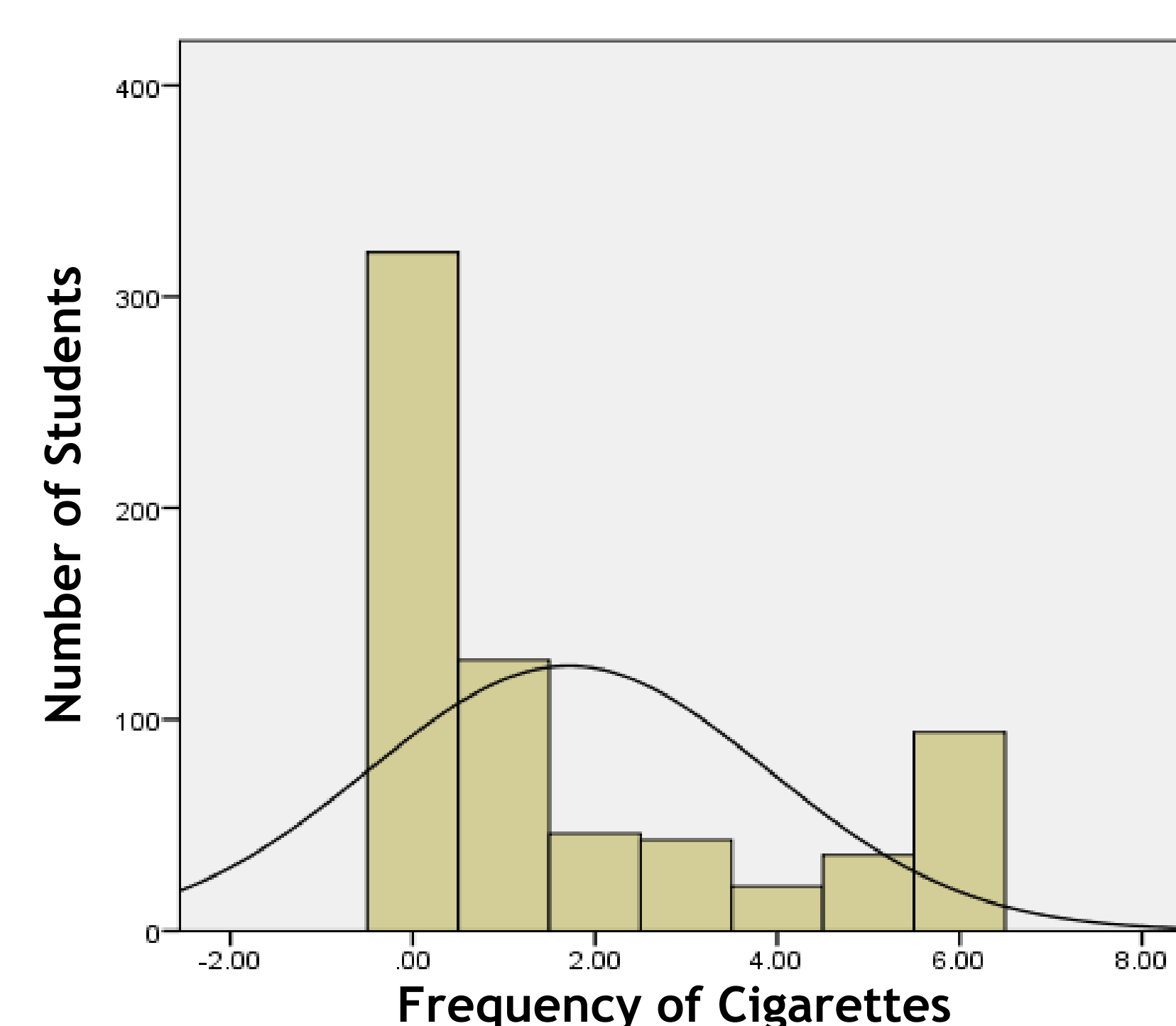
Figure 1: number of students consuming alcohol over the past 30 days



N: 1, 184  
Mode: 1(monthly or less)

- 0 - never
- 1 - monthly or less
- 2 - 2 to 4 times a month
- 3 - 2 to 3 times a week
- 4 - 4 or more times a week

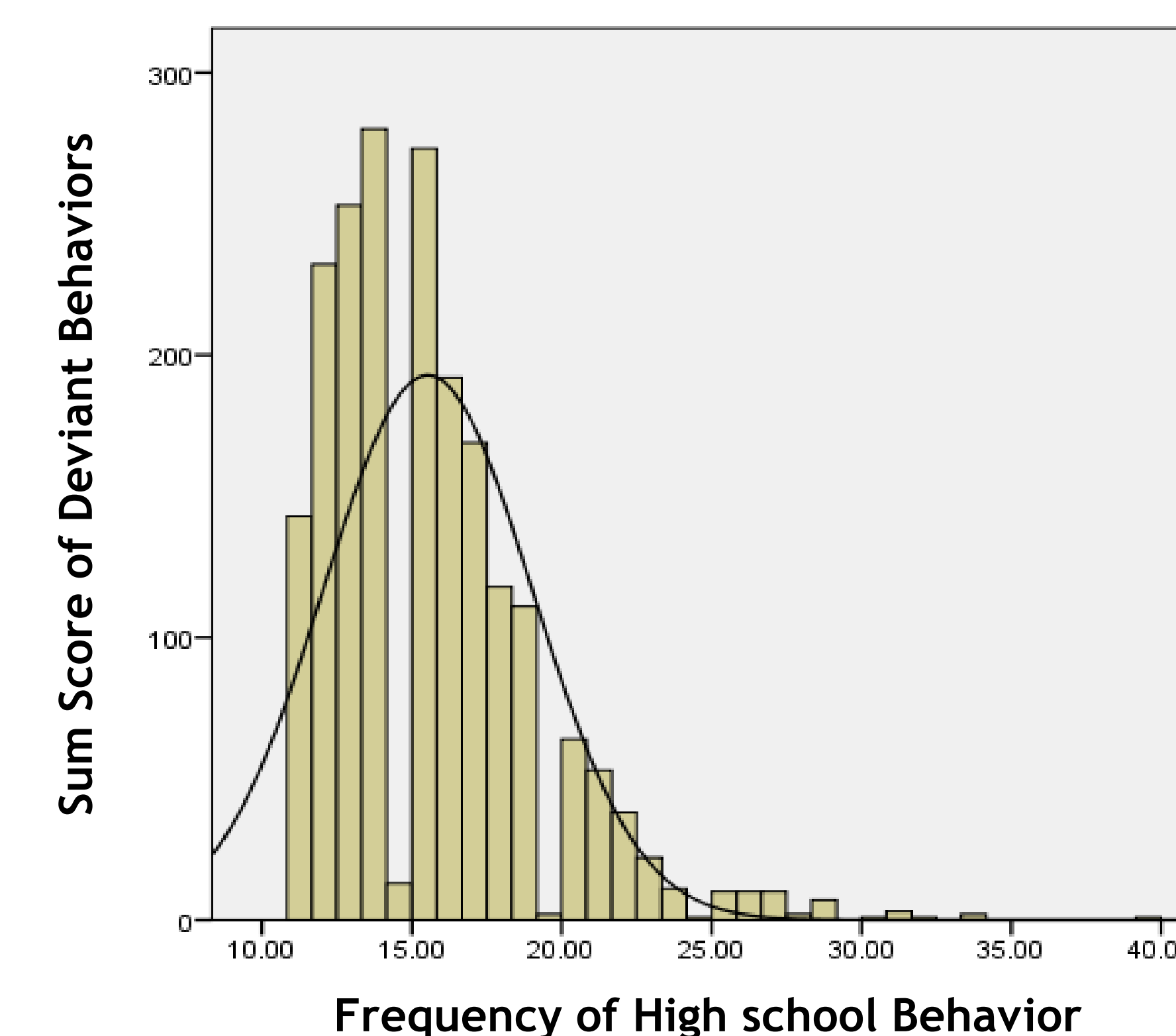
Figure 2: frequency of students smoking over the past 30 days.



N: 689  
Mode: 1 (Once /twice a month)

- 0 - I didn't smoke any cigarettes in the last month
- 1 - Once or twice a month
- 2 - 3 to 4 days a month
- 3 - 5 to 11 days a month
- 4 - 12 to 14 days a month
- 5 - 15 to 25 days a month
- 6 - 26 to 30 days a month

Figure 3: frequency of students who partook in deviant behaviors in high school.



N: 2, 022

Table 1: the correlation between high school deviant behaviors and the frequency of alcohol and cigarette use in the past 30 days.

	Frequency of Alcohol Use	Frequency of Cigarette Use
<b>High School Deviant Behavior</b>		
Pearson Correlation	.231**	.219**
Significance (2-tailed)	.000	.000
N	1174	679

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## CONCLUSIONS

According to the results, it can be seen that there is a **significant, positive relationship between deviant behavior among high school students, as defined by symptoms of conduct disorder, and alcohol and cigarette use once they attend college.** This study allows researchers to understand the risk factors that increase the use of substance use in college. With this groundwork laid out, additional research can be conducted to further understand the correlation and eventually finding prevention methods.

## REFERENCES

- Baer, J. S., Kivlahan, D. R., Marlatt, G. A. (1995). High\_Risk Drinking across the Transition from High School to College. *Alcoholism: Clinical and Experimental Research*, Volume 19 (1), 54-58.
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