



VCU

Virginia Commonwealth University
VCU Scholars Compass

Undergraduate Research Posters

Undergraduate Research Opportunities Program

2013

The Relationship between Deviant High School Behavior and the frequencies of Alcohol and Nicotine Use

Flora Achiko

Virginia Commonwealth University

Follow this and additional works at: <https://scholarscompass.vcu.edu/uresposters>

© The Author(s)

Downloaded from

Achiko, Flora, "The Relationship between Deviant High School Behavior and the frequencies of Alcohol and Nicotine Use" (2013).
Undergraduate Research Posters. Poster 15.

<https://scholarscompass.vcu.edu/uresposters/15>

This Article is brought to you for free and open access by the Undergraduate Research Opportunities Program at VCU Scholars Compass. It has been accepted for inclusion in Undergraduate Research Posters by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.



The relationship between Deviant High School Behavior and the frequencies of Alcohol and Nicotine Use



F.Achiko¹, E.Do², N.Goyal², A.Adkins³, D.Dick³

¹Dept of Biology, ²Center for Clinical and Translational Research, ³Dept of Psychiatry, VCU, Richmond, Virginia

ABSTRACT

The study examined the relationship between deviant high school behavior as defined by symptoms of conduct disorder and the frequencies of alcohol and nicotine use among freshmen at VCU. The sample sizes for items corresponding to alcohol and nicotine use were n=1184 and n=689 freshmen, respectively. Correlation analyses revealed significant statistical evidence for a positive relationship between deviant high school behavior and frequency of alcohol use (r= .231, significant at p=0.01 level) and deviant high school behavior and the frequency of nicotine use (r=.219, significant at p=0.01 level). There was also a significant correlation between the frequencies of alcohol and nicotine use (r=.197, significant at p=0.01 level). These findings suggest there is a relationship between deviant behavior in high school and increased alcohol and nicotine use in college. Establishment of a positive correlation allows for further testing on risk factors for substance use and could lead to preventive strategies.

INTRODUCTION

- Research has shown an existing correlation between deviant high school behavior and the frequencies of alcohol and nicotine use. The more symptoms of deviant behavior displayed, the more likely that the student will develop alcohol and/or nicotine use problems (Anderson et al, 2007).
- Deviant behavior may not always result in increased risk for substance abuse, but positive behavior may be influential in setting positive drinking patterns. Students who endorse deviant behavior may also have underlying personality traits likely to influence them in substance abuse (Anderson et al, 2007).
- The Spit for science study is trying to investigate how environmental factors interact with genetics to influence student social behavior and emotional health.
 - The hypothesis for this study is to test whether there is a correlation between deviant high school behavior and the frequencies and daily use of alcohol and cigarettes.
 - It is predicted that increased symptoms of deviant behavior will correlate to increased alcohol and nicotine use

METHODS

Participants: The target group was VCU freshmen aged 18 and beyond. The sample size ranged from 1184 (Alcohol questions) to 689 (Cigarette questions).

Design: Using the survey methodology and a DNA collecting component, the purpose of the study was to investigate on how environmental factors interact with genetics to influence social behavior and emotional health of college student. Participants received a \$10 compensation for completing the survey and an extra \$10 if they opted to donate their DNA sample.

Measures: After data was recoded, a correlation analysis was performed. Deviant behavior was identified as the independent variable while the frequencies of and daily alcohol and nicotine use were identified as the dependent variables. Since all of the variables were continuous, a correlation test was the most suitable. Outliers from collected data were coded to missing.

RESULTS

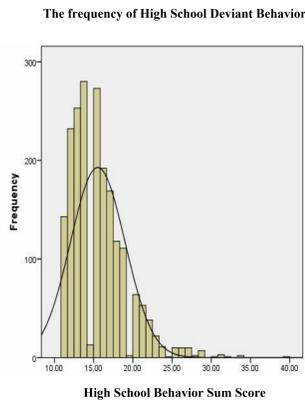


Figure 1. Data distribution for students who responded to the deviant behavior items. The x-axis represents the sum score of deviant high school behavior whereas the y-axis represents its frequency (i.e the count of people). Deviant high school behavior was treated as a continuous variable. The data is skewed to the right showing that more people exhibited less symptoms of deviant behavior.

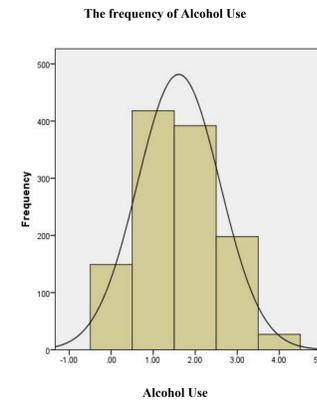


Figure 2. Data distribution for students who endorsed the alcohol use questions. The distribution is normal, with a likelihood of students having just as much high as low frequency of alcohol use. Most students endorsed drinking monthly or less. The x-axis represents the coded student responses, from 1=Never, 2= Monthly or Less, 3= 2 to 4 times a month, 4= 2 to 3 times a week, to 5= 4 or more times a week.

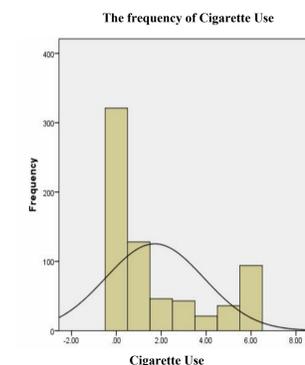


Figure 3. Among students who smoked, most students endorsed their smoking frequency to once or twice in a 30 day period. The x-axis corresponds to the coded responses from, 1= I didn't smoke any cigarettes last month, 2= once or twice, 4= a couple of days a week, to 6= most days of the week.

The relationship between Deviant High School Behavior and the Frequency and Daily use of Alcohol and Cigarettes

	Frequency of Alcohol Use	Frequency of Cigarette Use	Daily Alcohol Use	Daily Cigarette Use
Deviant High School Behavior	+ R=0.231	+ R=0.219	+ R=0.197	+ R=0.175

Table 1: The data represents the relationship between deviant high school behavior and the frequencies alcohol and cigarette use and the daily alcohol and cigarette use. The correlation results are R= 0.231, R= 0.219, R=0.197, and R=0.175 respectively and are significant at p.value= 0.01. The + represents a positive correlation.

CONCLUSIONS

- There was a positive correlation between deviant high school behavior and the frequency of both alcohol and nicotine use.
- There was a positive correlation between deviant high school behavior and the daily alcohol and cigarette use.
- The results are consistent with previous research, which continues to show an increased risk for potential alcohol and cigarette problems in students with deviant high school problems.
 - These results could therefore be used as preventative strategies to the students at risk of developing negative drinking and nicotine use patterns.
- Limitations to this study include but are not limited to sample size, limited items on symptoms of deviant behavior, and response bias.
- Future studies could investigate on gender, ethnic background and personality factors, as they are predicted to have an influence on not only deviant behavior, but also alcohol use (Christensen & Bilenberg 2000).

REFERENCES

1. Anderson, K.G., Tapert, S.F., Moadab, I. *et al.* (2007). Personality risk profile for conduct disorder and substance use disorders in youth. *Addict Behav.* 32(10), 2377-2382. doi: 10.1016/j.addbeh.2007.02.006
2. Christensen, H.B., & Bilenberg, N. (2000). Behavioral and emotional problems in children of alcoholic mothers and fathers. *Eur Child Adolesc Psychiatry.* 9(3),219-226. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/11095045>

ACKNOWLEDGEMENTS

I would like to thank Dr. Danielle Dick, Dr. Amy Adkins, and graduate students, Neeru Goyal & Elizabeth Do for their guidance in the completion of this project. Also major gratitude to VCU students who were involved in the study and UROP for the financial assistance.