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Flora Achiko
Virginia Commonwealth University

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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=0.231, significant at p=0.01 level) and deviant high school behavior and the frequency of nicotine use (r=0.197, 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 students. 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

The frequency of High School Deviant Behavior

The frequency of Cigarette Use

The frequency of Alcohol Use

Figure 1. Data distribution for students who endorsed the alcohol use questions. The x-axis corresponds to the coded frequency of alcohol use. Deviant high school behavior was measured 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 x-axis represents the coded school behavior whereas the y-axis represents the frequency (i.e the count of people). Deviant high school behavior was measured as a continuous variable. The data is skewed to the right showing that more people exhibited less symptoms of deviant behavior.

Figure 3. Among students who smoked, most students endorsed their smoking frequency to once a week to 3 times a week. 57% once a week, 27% 2-3 times a week, 10% 3 to 5 times a week, 5% 4 or more times a week.

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

<table>
<thead>
<tr>
<th>Frequency of Alcohol Use</th>
<th>Frequency of Cigarette Use</th>
<th>Daily Alcohol Use</th>
<th>Daily Cigarette Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deviant High School Behavior</td>
<td>R=0.231</td>
<td>R=0.219</td>
<td>R=0.197</td>
</tr>
</tbody>
</table>

Table 1: The data represents the relationship between deviant high school behavior and the frequencies of 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 for 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 & Bilgen, 2000).

REFERENCES


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