



VCU

Internalizing Symptoms and Alcohol-Related Outcomes

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Abstract

Research indicates a higher prevalence of alcohol consumption among college student populations in the US. This behavior can lead to a wide array of negative psychological, cognitive, and physiological outcomes. This research uses secondary data analysis from the Spit4Science data set to explore the effects of internalization of symptoms of anxiety and depression and their correlation to alcohol-related outcomes among undergraduate college students. The researchers hypothesized a direct positive correlation between internalization and alcohol-related outcomes. This research offers new insights into college students' mental health needs which can help combat internalizing symptoms and the risky drinking behaviors associated with them.

Introduction

Studies have shown a direct correlation between mental health symptoms and alcohol consumption and/or alcohol use disorder (AUD) (Acuff et al., 2018; Borsari et al., 2018). When compared to other emerging adults, drinking to cope with anxiety and/or depression is more prevalent in college students (Kenney et al., 2018) and is a predictor for negative outcomes (Vernig & Orsillo, 2015).
Research Question: How do anxiety and/or depressive symptoms correlate to alcohol consumption and/or AUD?
Hypothesis: Students who suffer from anxiety and/or depression will be more likely to drink alcohol and/or suffer from AUD.

Methodology

The study examined online data from the Year 1 Spring survey of Spit4Science cohorts 1-4 (n=7,040).
Spit4Science (S4S): A longitudinal study focused on how genes and environmental factors come together to influence college student substance use and emotional health (Dick et al., 2014).
Alcohol User Disorder (AUD) Score: Symptoms based on the DSM-5. Symptoms had to occur 3 or more times to be counted.
Alcohol Consumption: Monthly consumptions of grams of ethanol (frequency x quantity x 14 g ethanol/drink).
Anxiety and Depression: Sum scores were calculated based on a Likert scale of possible answer choices—respondents had to answer at least 2 out of 4 questions for anxiety and 2 out of 4 questions for depression. Questions came from the SCL-90. For more information, see <https://osf.io/hqr2s/>

Results/Discussion

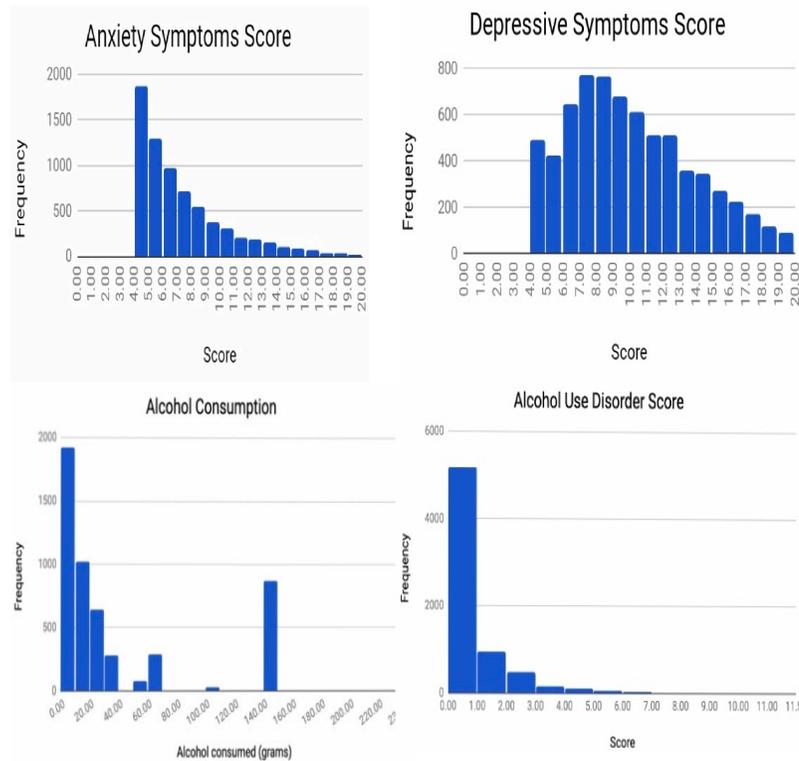


Figure 1. Distribution of analysis variables in the sample.

	Anxiety and Alcohol Consumption	Anxiety and AUD	Depression and Alcohol Consumption	Depression and AUD
<i>r</i>	0.03	0.16	0.03	0.14
<i>p</i>	0.01	<0.001	0.01	<0.001

Table 1. Bivariate correlation analysis results.

- Anxiety and depressive symptoms were both significantly correlated with alcohol consumption and AUD symptoms.
- The correlation between internalizing symptoms AUD was stronger than the correlation between internalizing symptoms and alcohol consumption.

Conclusion

The study found a weak, positive, highly significant correlation between anxiety and both alcohol consumption as well as AUD. The study also found a weak, positive, highly significant correlation between depression and alcohol consumption as well as AUD. Though the correlations were weak, they do indicate that as symptoms of anxiety and/or depression increase, alcohol consumption and/or AUD likelihood also increases. The results align with the hypothesis. The researchers posit that if the mean age of participants had been above the legal drinking age instead of 18.9 years, these correlations may have been stronger.

These findings indicate a need for increased mental health services on college campuses as well as a need for the de-stigmatization of mental health so that students who need help will not be ashamed to seek it. These findings could also be used to advocate for policy change to increase the legal drinking age so as to deter college student drinking. Some future directions could include research involving college students over the age of 21, looking at peer group influence on these correlations, as well as considering if student housing options affect these correlations.

Works Cited

Acuff, S.F., Solis, K. E., Luciano, M. T., & Meshesha, L. Z. (2018). Depressive Symptoms as Predictors of Alcohol Problem Domains and Reinforcement Among Heavy Drinking College Students. *American Psychological Association*, 37(7), 792-799. doi: 10.1037/adb0000397.

Borsari, B., Yalch, M. M., Pedrelli, P., Radomski, S., Bachrach, R.L., Read, J. P. (2018). Associations Among Trauma, Depression, and Alcohol Use Profiles and Treatment Motivation and Engagement and College Students. *Journal of American College Health*, 66(7), 644-654. doi:10.1080/07448481.2018.1446438.rin

Dick, D.M., Nasim, A., Edwards, A.C., Salvatore, J.E., Cho, S.B., Adkins, A., Meyers, J., Yan, J., Cooke, M., Clifford, J., Goyal, N., Halberstadt, L., Ailstock, K., Neale, Z., Opalesky, J., Hancock, L., Donovan, K.K., Sun, C., Riley, B., and Kendler, K. S. (2014). Spit for Science: Launching a Longitudinal Study of Genetic and Environmental Influences on Substance Use and Emotional Health at a Large US University. *Frontiers in Genetics*, 5(47). doi: 10.3389/fgene.2014.00047.

Kenney, S. R., Andersen, B. J., & Stein, M. D. (2018). Drinking to Cope Mediates the Relationship Between Depression and Alcohol Risk: Different Pathways for College and Non-College Young Adults. *Addictive Behaviors*, 80, 116-123. doi: 10.1016/j.addbeh.2018.01.023.

Vernig, P. M. & Orsillo, S. M. (2015). Drinking Motives and College Alcohol Problems: A Prospective Study. *Journal of Substance Use*, 20(5),340-346. doi:10.3109/14659091.2014.923053.

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