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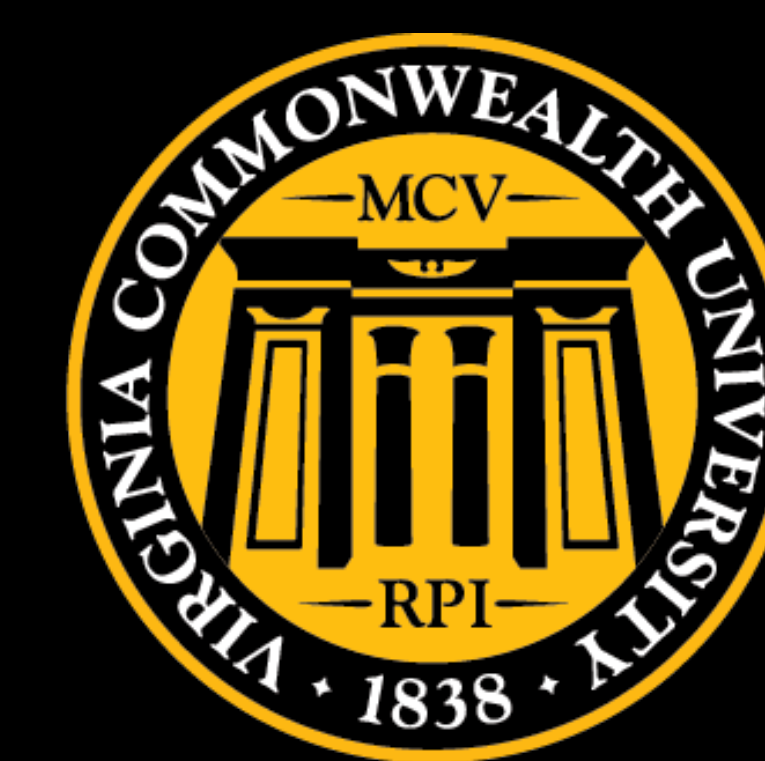
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College Student Alcohol Use and Engagement in Prevention Programming

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Introduction

Social problems and adverse consequences have been associated with risky alcohol use (Paschall et al, 2015). Personalized Normative Feedback (PNF) has been utilized to address these problems (White and Hingson, 2014) by comparing students' alcohol use to campus or national norms (Butler et al, 2009).

•**Research Question:** Are there differences in alcohol use behaviors in freshmen who did and did not report completion of a personalized feedback intervention (PFI) in a diverse sample of college students from the Spit for Science (S4S) project?

•**Hypotheses:** (1) PFI freshmen would exhibit greater alcohol consumption and AUD symptoms in the fall (pre-PFI), and (2) students in both groups would exhibit equal rates in the spring (post-PFI).

Methods

The study examined online personalized normative feedback assessments of alcohol use during the fall and spring of freshman year participants (N=1,168) from cohort 3 of the Spit4Science survey dataset (Dick et al, 2014).

•**Spit4Science (S4S):** a campus-wide, longitudinal study on the genetic and environmental factors that contribute to mental health and substance use outcomes in college students.

•**Semi-Structured Assessment for the Genetics of Alcoholism (SSAGA):** measured physical, social, and psychological consequences related to alcohol use and alcohol related disorders. Sum scores of SSAGA data were calculated to assess AUD symptoms.

•**The Alcohol Use Disorder Identification Test (AUDIT):** screened for AUD and excessive drinking.

- Grams of ethanol per month data calculated by AUDIT was log transformed to account for skewness.

•**T-test:** analyzed mean differences in alcohol consumption and AUD symptoms of both "Yes" feedback (n=365) and "No" feedback (n=803) groups in the fall and spring semesters.



Results

Table 1. Average sum scores of Alcohol Use Disorder symptoms of both groups in both fall and spring semesters

| | 'Yes' Prevention Program Mean (sd) | 'No' Prevention Program Mean (sd) | P-value |
|---|------------------------------------|-----------------------------------|---------|
| Fall Sum Score of Alcohol Use Disorder Symptoms | 2.42 (2.56) | 2.02 (2.61) | .031* |
| Spring Sum Score of Alcohol Use Disorder Symptoms | 2.51 (2.40) | 2.09 (2.22) | .009** |

Note: *p<0.05, **p<0.01

Table 2. Average grams of ethanol consumed by both groups in both fall and spring semesters

| | 'Yes' Prevention Program Mean (sd) | 'No' Prevention Program Mean (sd) | P-value |
|---|------------------------------------|-----------------------------------|---------|
| Log of Fall Grams of Ethanol Consumed | 1.39 (1.10) | 1.12 (1.01) | .000* |
| Log of Spring Grams of Ethanol Consumed | 1.62 (1.02) | 1.44 (1.04) | .005** |

Note: *p<0.05, **p<0.01

- Students in the prevention group exhibited higher levels of alcohol consumption (t=-3.77, p<0.001) and AUD symptoms (t=-2.16, p=0.031) in the fall.
- Students in the prevention group exhibited higher levels of alcohol consumption (t=-2.80, p<0.01) and AUD symptoms (t=-2.54, p<0.01) in the spring.

Conclusion

Average alcohol use and AUD symptoms increased in both groups from fall to spring. Participants who completed the alcohol prevention program experienced higher alcohol use than participants who did not in both fall and spring.

- **Fall hypothesis supported:** PFI freshmen exhibited greater alcohol consumption and AUD symptoms.
- **Spring hypothesis not supported:** PFI freshmen exhibited greater alcohol consumption and AUD symptoms in the spring.
- It is important to note that college freshman may have completed the PFI for multiple reasons, one being as a consequence for alcohol related incidents on campus, and another being as a means of seeking services independently through the Well's website.

Future Directions

Future directions could include random assignment of students to a group; one group containing participants who would complete the PNF intervention as an active member of the Reddit Online Support group and the other group would contain participants in only the PNF intervention. This could potentially eliminate sampling bias and lead to better identification of potential supplemental treatments that may reduce levels of alcohol-related incidences and/or symptoms of AUD. Subgroup analysis of heavy drinkers could also be conducted to increase heterogeneity and reduce the effects of variable rates of alcohol consumption among participants. Future research would also examine whether the results may vary by ethnicity or other demographic characteristics.

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