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Hazardous drinking is associated with expectancies for the simultaneous use of alcohol and e-cigarettes

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BACKGROUND AND PURPOSE:

- Alcohol and e-cigarette use is especially prevalent among college-age adults. [1, 2]
- Drinkers are more likely to use tobacco products and tobacco users are more likely to use alcohol. [3]
- Concurrent and simultaneous use of alcohol and nicotine can magnify adverse health outcomes. [4, 7]
- Research indicates individuals report increased pleasure while engaging in simultaneous use of these substances, likely exacerbating the use of both. [6, 8]
- Expectancies for combined alcohol and e-cigarette use are linked to problematic alcohol use, but this has not been examined in college students. [5]

METHODS AND DATA:

Participants:

- College students (N=185) who reported ever using alcohol and e-cigarettes completed self-report measures assessing expectancies and motivations related to alcohol and e-cigarette consumption.

Measures:

- Alcohol Use: The Alcohol Use Disorders Identification Test (AUDIT) assessed frequency, degree of risk, and adverse consequences of alcohol use.
- Expectancies of Simultaneous Use: Via 8 True/False items, The Nicotine and Other Substances Interaction Expectancy Questionnaire - E-Cig Revised (NOSIE-ER) assessed individuals' perceived likelihood of using alcohol and e-cigarettes together. The total scores range from 0-8 and are calculated by summing the two subscales, which individually assess the degree to which alcohol consumption (i.e. NOSIE-ER 1) and e-cigarette consumption (i.e. NOSIE-ER 2) affect expectancies for simultaneous use.

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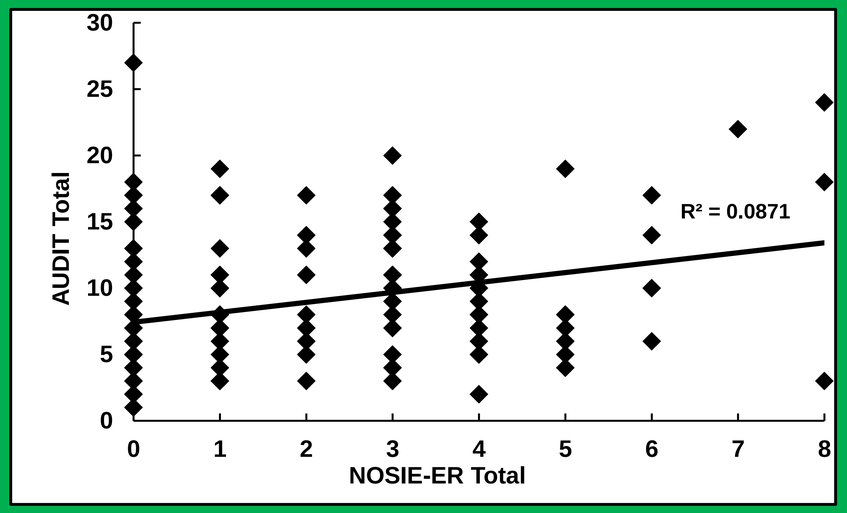
RESULTS:

Sample Characteristics:

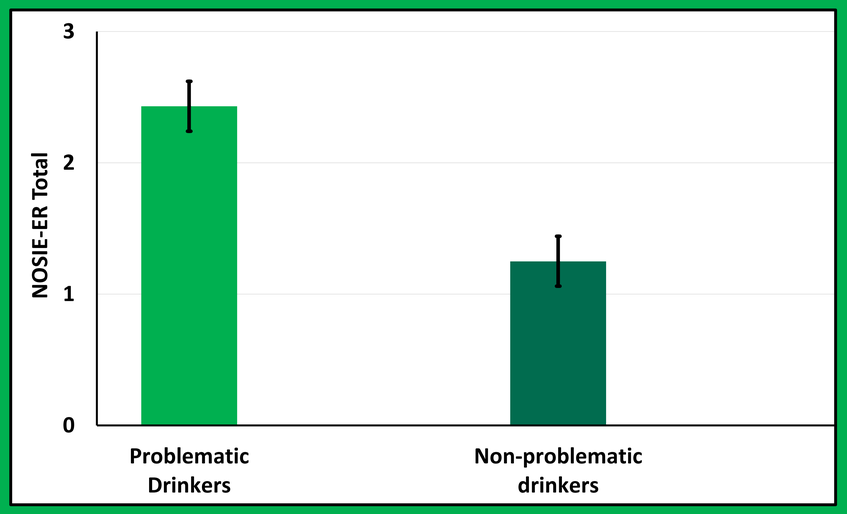
- Mean Age = 19.32 (SD = .98), 72% female
- 30% use e-cigarettes at least once per month
- 62% report hazardous/problematic drinking (AUDIT ≥ 8)

Bivariate Correlations and Mean Comparisons:

- AUDIT scores were associated with expectancies that drinking increases e-cigarette consumption (r=.29, p <.001) and with expectancies that e-cigarette consumption increases drinking (r=.17, p <.05).



- *Figure 1 (above):* AUDIT scores were associated with overall expectancies for the increased simultaneous use of alcohol and e-cigarettes (r=.30, p<.001).



- *Figure 2 (above): Mean (Standard Error) NOSIE-ER scores as a function of drinking status. P*roblematic drinkers (i.e. AUDIT ≥ 8) reported greater expectancies for simultaneous alcohol and e-cigarette use, as compared to non-problematic drinkers (t(183) = 4.2, p < .001).

DATA ANALYTIC STRATEGY:

- Pearson's correlational analyses were used to examine relationships between AUDIT scores and NOSIE-ER scale 1, NOSIE-ER scale 2, and total NOSIE-ER scores.
- An independent samples t-test was used to differentiate expectancies for simultaneous use of alcohol and e-cigarettes between two different degrees of alcohol use (i.e. problematic vs. nonproblematic drinkers.)

CONCLUSIONS:

- Findings are consistent with previous research, which indicates that greater expectancies for simultaneous e-cigarette/alcohol consumption are associated with higher rates of problematic alcohol use. [9]
- Future experimental research should examine the temporal precedence of substance consumption to assess causality (i.e. does alcohol cause e-cigarette use?)
- This relationship should be examined for replicability in nondependent e-cigarette users, to identify at-risk populations and to assess motivating factors related to e-cigarette consumption.

MAIN TAKEAWAY:

As alcohol use becomes more hazardous, college students report greater expectancies for simultaneous use of alcohol and e-cigarettes and may be more likely to use both substances.

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