

*A study of Binge Drinking in College Students:
Identifying Associated Factors and Consequences,
and Bridging the Gap in Knowledge and Interventions*

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Audience Response

- ◆ Which of the following represents the national prevalence rate of binge drinking on college campuses? (SAMHSA, 2015)
 - ◆ Less than 25%
 - ◆ 26 – 33%
 - ◆ 34 – 38%
 - ◆ 39 – 44%

Audience Response

- ◆ In 2015 research on binge drinking was conducted at a small, private, Mid-Atlantic College. Which of the following would you anticipate as the binge drinking rate?
 - ◆ 67%
 - ◆ 52%
 - ◆ 39%
 - ◆ 22%

Audience Response

- ◆ What are some dangerous consequences related to binge drinking?

Consequences

- ◆ Unwanted sexual contact
- ◆ Regretted sexual activity
- ◆ Injuries, falls, accidents
- ◆ Blackouts: Drunk, but still functioning; brain cannot manufacture memories

(NIAAA.gov., 2015)

Consequences

- ◆ Fighting or aggressive behavior
- ◆ Academic decline
- ◆ Anxiety or depressive feelings
- ◆ Suicidal crisis
- ◆ Death (1400-1700/yr are r/to any type of alcohol use)

(NIAAA.gov., 2015)

Audience Response

- ◆ Which statement describes binge drinking?
 - a. drinking alcohol to the point of passing out
 - b. consuming 5 or more drinks by a male or 4 or more drinks by a female over a period of 2 hours or less, which raises blood alcohol concentration to 0.08 or above
 - c. experiencing loss of control over drinking and having withdrawal symptoms upon abstaining from alcohol

Additional Background/ Significance

Factors contributing to initiation and continuation of binge drinking:

- ◆ Desire for approval of peers who are close friends or peers considered important/influential
- ◆ Belief that alcohol enhances one's social abilities
- ◆ Think intoxication is fun or funny
- ◆ Belief alcohol makes one more sexually attractive or enhances chances for a sexual encounter
- ◆ Cultural links to masculinity role
- ◆ Coping strategy to deal with bullying, stress, worry, social anxiety

(Geisner et al., 2012; Weill et al., 2014)

Additional Background/ Significance

- ◆ College students have poor insight into their alcohol use and deny its problematic consequences
 - ◆ Less than 4-5% seek alcohol counseling or any tx (White & Hingson, 2013)
- ◆ Research suggests drinking to cope is a dangerous behavior
 - ◆ There is positive association between those who drink alone and suicidal ideation (Coyz et al., 2013)

Additional Background/ Significance

- ◆ Inconsistent research findings regarding association between binge drinking and depression or anxiety:
 - ◆ Binge drinking associated with depression in males, but not females (Pederson, 2013)
 - ◆ Binge drinking was associated with school stressors in both males and females (Pederson, 2013)
 - ◆ Binge drinking exacerbated depression, anxiety, or suicidal ideation in those with pre-existing sxS (Hingson et al., 2009)

Background on screening and referral

- ◆ Students on the study campus are not screened as a routine
- ◆ Literature supports the SBIRT model: Screening, Brief Intervention and Referral to Treatment (SAMHSA, 2016)
- ◆ One advantage of the SBIRT model is the combination of assessment with intervention addressing the immediate problem. Individuals who engage in binge drinking or other alcohol use at a risky level can be identified and educated about the consequences of this health issue.

Background on screening and referral

- ◆ Study in March 2017 of RN's in adult Level 1 Trauma Center ED and other ED's (N= 29)
 - ◆ Only 23.1% familiar with SBIRT or used it for screening
 - ◆ 80% did not refer patients to treatment after assessed in ED.
 - ◆ Yet, 67.9% said it was important to screen and refer patients.

(unpublished data, 2017)

Significance of this study for addressing a knowledge gap

- ◆ Binge drinking is the primary public health problem on U.S. college campuses. (NIAAA.gov, 2015)
- ◆ An earlier campus study revealed high rates of depression among the student respondents.
- ◆ *Therefore, we thought it important to explore an association between depression, anxiety and binge drinking.*

Purposes of the Study

- ◆ To determine the current rate of binge drinking on this campus (Question 1)
- ◆ To examine the association between binge drinking and anxiety and depression (Question 2)
- ◆ To elucidate the consequences students experience as a result of drinking (Question 3)

Method

- ◆ HSIRB approval as an exempt study
- ◆ Design:
 - ◆ Non-experimental
 - ◆ Descriptive
- ◆ Sample and setting:
 - ◆ Inclusion criteria: 18 years and older; student enrolled at the college
 - ◆ Exclusion criteria: Current abuse of prescription drugs, pain killers, or illegal drugs
 - ◆ Size: N = 201
 - ◆ Setting: Small private college in eastern PA
 - ◆ Spring of 2015

Method

- ◆ Procedure:
 - ◆ Contact of coaches and instructors to visit classroom or team meetings and invite participation:
 - ◆ Nursing classes (sophomore, jr, sr, post-bacc)
 - ◆ Psychology class (senior level)
 - ◆ Sports teams (softball and track)
 - ◆ Paper and pencil survey distributed to those who volunteered
 - ◆ Debriefing at end of survey to remind students of counseling resources

Instruments

- ◆ Generalized Anxiety Questionnaire (GAD-7):
 - ◆ Measures severity of anxiety symptoms
- ◆ Patient Health Questionnaire (PHQ-9):
 - ◆ Measures severity of depressive symptoms
- ◆ Alcohol Use Disorders Identification Test (AUDIT):
 - ◆ Identifies hazardous alcohol consumption and alcohol abuse
- ◆ Brief Young Adult Alcohol Consequences Questionnaire (YAACQ):
 - ◆ Assesses the broad range of consequences associated with hazardous alcohol use
- ◆ *All instruments were validated and reliable*

Results

- ◆ Demographics of Sample: N = 201
 - ◆ Mean age: 21.1 (S.D. 3.8)
 - ◆ Females: 74.6%; Males: 25.4%
 - ◆ Ethnicity:
 - ◆ Caucasian: 81.6%
 - ◆ Hispanic or Latino: 11%
 - ◆ African American: 9%
 - ◆ Pacific Islander or Asian: 4%

Results

- ◆ Year in college:
 - ◆ Freshmen: 14.4%
 - ◆ Sophomores: 26.9%
 - ◆ Juniors: 28.4%
 - ◆ Seniors: 26.9%
 - ◆ Grad students: 3.5%

Results

- ◆ Other demographic questions:
 - ◆ Alcohol's effect on depressive sx's:
 - ◆ Presence of depressive sx's **before** started using alcohol: 29.4%
 - ◆ Depression feelings **after** drinking: 14.9%
 - ◆ Drinking made depression worse: 8.5%
 - ◆ Drinking made depression better: 15.9%

Results

- ◆ Other demographic questions:
 - ◆ Presence of anxiety sx's **before** started using alcohol: 36.3%
 - ◆ Anxiety feelings **after** drinking: 13.4%
 - ◆ Drinking made anxiety worse: 8%
 - ◆ Drinking made anxiety better: 18.9%

Results

- ◆ **Question #1:**
 - 35.8% of all students reported having 5 or more drinks on one occasion less than monthly
 - 19.4% binge monthly
 - 19.4% binge weekly
 - ◆ Overall estimated binge drinking rate = 38.8%
- 13.9% of all students reported on a monthly basis they could not remember what happened during a night of drinking (Blackouts)
 - ◆ More males (21.6%) than females (11.3%) reported blackouts

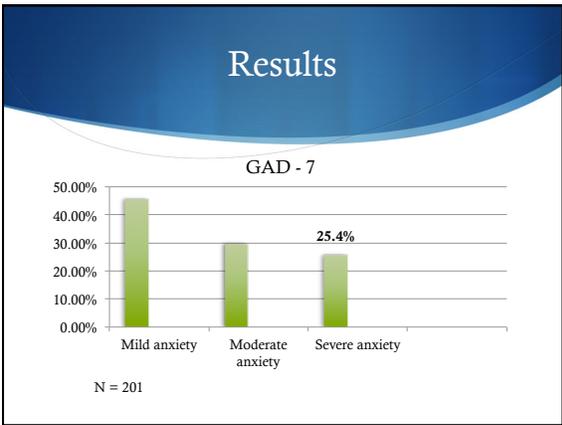
Alcohol Audit

ALCOHOL AUDIT	
Hazardous Drinking (score = 8 -15)	187 (93%)
Need for counseling and monitoring (score = 16 -19)	7 (3.5%)
Alcohol Dependence (score > 20)	7 (3.5%)

Alcohol Audit

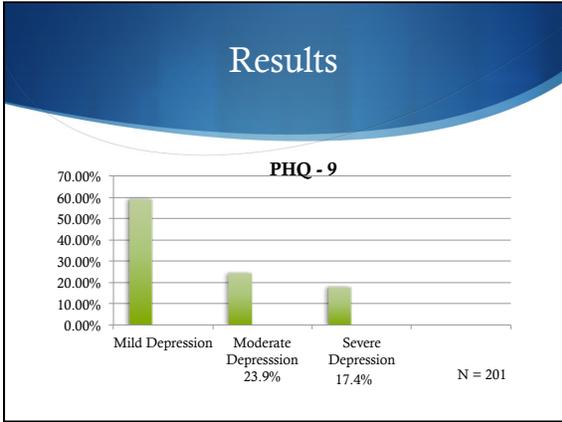
- ◆ Alcohol AUDIT scores by gender:
 - score for males (median = 8)
 - score for females (median = 5)
- ◆ Score for males was significantly higher than score for females
- ◆ Majority of students (47.3%) were drinking 2-4 times/month and having 3-4 drinks on their typical day of drinking (36.8%)

◆ **Question #2:**
The findings did not show an association between binge drinking or hazardous alcohol use and depression or anxiety.
However, a substantial number of students on this campus are struggling with mental health issues.
◆ Statistics trending toward gender significance with females experiencing more anxiety and depression than males



◆ The GAD-7 items most often scored in the moderate and severe range were:

- ◆ Nervousness
- ◆ Worrying
- ◆ Inability to relax



- ◆ PHQ-9 items most often scored in the moderate and severe range were:
 - ◆ Insomnia or hypersomnia
 - ◆ Decreased energy level
 - ◆ Decreased or increased appetite

Results

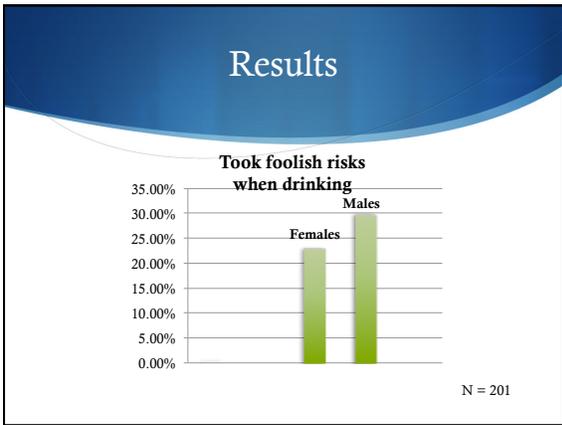
OUTCOME	p-value*
Association between Alcohol Audit and YAACQ Scores	r = .61 Moderate positive Correlation < .0001
Association between GAD-7 and Alcohol Audit Scores	r = - .03 Very weak inverse Correlation .68
Association between PHQ-9 and Alcohol Audit Scores	r - .09 Very weak positive Correlation .20

* Based on Spearman's rank correlation coefficients for. For all comparisons, $p \leq .05$ denotes statistical significance, with no adjustment for the multiple testing.

Results

◆ **Question #3:**
Based on YAACQ: Most common drinking consequences among males and females: (in order)

- ◆ Said or done embarrassing things
- ◆ Had a hangover the morning after drinking
- ◆ Felt sick to one's stomach or vomited after drinking
- ◆ Drinking on a night when one had planned NOT to drink
- ◆ Males differed from females in commonly reporting not being able to remember large stretches of time while drinking heavily





Limitations

- ◆ Sample: small, non-diverse (female Caucasians)
- ◆ Setting: private college in mid-Atlantic region
 - ◆ Results are not generalizable
- ◆ Response bias: students wanting to be seen in a positive light

Conclusions

- ◆ Our findings agree with current literature:
 - ◆ no association was apparent between binge or hazardous drinking and depression or anxiety
- ◆ Our students may, however, be aggravating existing depression or anxiety sxs by drinking
- ◆ Students are struggling with mental health problems
 - ◆ Females more than males
- ◆ Males are drinking more, bingeing more and suffering more memory loss (blackouts)

Implications

- ◆ Practice:
 - ◆ Hospital staff (especially ED) should be educated regarding binge or risky drinking and evidence-based screening and education strategies.
 - ◆ SBIRT model suggested
 - ◆ Collaborative programs between colleges and hospitals to address preventive measures for risky alcohol use.

Implications

- ◆ Education:
 - ◆ Address higher alcohol risk in males:
 - ◆ On campus programs that are sensitive to cultural and social expectations, pressures, and stereotypes in males
 - ◆ Address depression and anxiety in females:
 - ◆ Programs on stress-management
 - ◆ Cognitive therapy techniques
 - ◆ Assessment and screening for depression and anxiety when risky drinking is identified.

Implications

- ◆ Research:
 - ◆ Interventional studies in ED setting:
 - ◆ Examine use of brief screening instruments to identify risky drinkers
 - ◆ Effectiveness of follow up strategies to reduce risky drinking
 - ◆ College health centers:
 - ◆ Exploration of use of brief alcohol screenings at any visit
 - ◆ College counseling centers:
 - ◆ Experimental designs to determine efficacy of EBP-based approaches to assist students with risky drinking

Resources for Teen Drug and Alcohol Abuse

- ◆ <https://www.communitycatalyst.org/resources/publications/what-is-youth-sbirt>

Questions?
 Thank you for your
 attention!

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