

Substance Use on the College Campus: Binge Drinking at the University of Iowa

 Peter E. Nathan
 Departments of Psychology and Public Health

 September 25, 2009

1

Binge Drinking in America has a Long History

- Alcohol-fueled food fights in the late 1600's at Harvard College
- Stover's description of his classmates' drinking practices at Yale in the late 1800's
- Fitzgerald's stories of Jazz Age excesses (including his own) at Princeton
- First empirical survey of American collegiate drinking practices - Straus & Bacon (1953): Collegiate drinking is more intense, troublesome, and widespread than anyone thought.

2

Binge Drinking in America: Pre-1994 Findings

- **Prevalence:** How much and how often, for individuals and on campuses (e.g., Horowitz, 1987; Moore & Gerstein, 1981).
- **Predictors:** Including gender, alcohol expectancies, and campus norms (e.g., Christiansen, Goldman & Inn, 1982; Wood, Nagoshi & Dennis, 1992)
- **Adverse physical, social, and academic consequences:** (e.g., Alterman et al., 1990; Wiggins & Wiggins, 1987)

3

The Wechsler et al. (1994) Study

- A self-administered survey was mailed to a national sample of more than 22,000 US college students; 17,592 students from 140 colleges and universities responded.
- It asked about binge drinking and ensuing health and behavioral consequences.
- **Male Binge drinking:** 5 or more drinks on a single drinking occasion during the two week period preceding the survey
- **Female binge drinking:** 4 or more drinks on a single occasion.
- **Frequent binge drinking:** 3 or more binges in a two-week period.
- Binge drinkers: 44%; Frequent binge drinkers: 19%
- Range of campus binge drinking: 1%-70%
- Substantial differences in consequences between binge and non-binge drinkers.

4

Impact of Drinking Status on Behavioral Consequences in the Wechsler et al. (1994) Sample

Consequences (% endorsing)	Non-binge Drinkers	Binge Drinkers	Frequent Binge Drinkers
Hangover	30%	75%	90%
Regrets	14%	37%	63%
Arguments	8%	22%	42%
Miss Class	8%	30%	61%
Forget where	8%	26%	54%
Unplanned sex	8%	20%	41%
Behind in class	6%	21%	46%
Unsafe sex	4%	10%	22%
Prop. Damage	2%	8%	22%
Injured	2%	9%	23%
Police trouble	1%	4%	11%

5

Principal Predictors of Binge Drinking (Wechsler et al., 1994)

- North Central or Northeast institutional location
- Residential rather than commuter campus
- One or more alcohol outlets within a mile of campus

6

Additional Predictors of Binge Drinking (Wechsler et al., 1994)

- First-year undergraduates
- Males
- Athletes, especially team captains
- Greeks, especially fraternity members

7

The UI (1997-2001) Study

- A self-administered survey was given to UI students enrolled in general education courses offered by the psychology department.
- It asked about binge drinking and ensuing health and behavioral consequences.
- The study was designed to explore rates and predictors of binge drinking on the UI campus, especially in light of the access underage students have to alcohol outlets.
- Almost 1,500 students (1,468) completed the survey.

8

Comparison of Wechsler et al. (1994) and University of Iowa (1997-2001) Samples

	Total Iowa Sample	Iowa Binge Drinkers	Iowa Freq. Binge Drinkers	Wechsler Sample
Average Age	20.21	19.89	20.23	20.12
# of drinking days in last 14 days	3.15	4.12	5.26	---
# drinks in last 14 days	16.89	23.6	35.48	---
Binge drinkers	69.6%			44%
Frequent binge drinkers	46.8%			19%

9

Impact of Gender in the University of Iowa (1997-2001) Sample

	Male (N=380)	Female (N=844)
Average Age	20.36	19.90***
# of drinking days in last 14 days	4.86	3.24***
# of drinks in last 14 days	33.71	14.17***
Meet criteria for binge drinking	92.1%	79.4%***
Note: ***p<.001; **p<.01; *p<.05		

10

Impact of Age in the University of Iowa (1997-2001) Sample

	Under 21 (N=835)	21 and Over (N=390)
Average Age	19.13	22.02***
# of drinking days in last 14 days	3.68	3.87
# of drinks in last 14 days	21.10	18.89**
Meet criteria for binge drinking	87.1%	75.4%***
Note: ***p<.001; **p<.01; *p<.05		

11

Impact of Greek Status in the University of Iowa (1997-2001) Sample

	Non-Greek (N=204)	Greek (N=277)
Average Age	19.91	19.62
# of drinking days in last 14 days	4.00	4.84**
# of drinks in last 14 days	21.98	30.14**
Meet binge drinking criteria	93.1%	90.3%
Note: ***p<.001; **p<.01; *p<.05		

12

Impact of Gender on Quantity/Frequency of Consumption in University of Iowa (1997-2001) Sample

	Male Non-Binge Drinkers (N=30)	Male Binge Drinkers (N=350)	Female Non-Binge Drinkers (N=174)	Female Binge Drinkers (N=670)
# drinking days in last 14 days	1.80	5.12	1.86	3.59***
# of drinks in last 14 days	3.56	36.29	3.50	16.94***
Note:				

***p<.001

Impact of Drinking Status on Behavioral Consequences: Less Serious Consequences

	IA Non-Binge Drinkers	IA Binge Drinkers	IA Freq. Binge Drinkers	Wechsler Binge Drinkers	Wechsler Freq. Binge Drinkers
Arguments	19%	44%	67%	22%	42% (2***)
Miss Class	15%	60%	78%	30%	61% (2***)
Behind in Schoolwork	10%	45%	56%	21%	46% (2**)
Hangover	40%	83%	98%	75%	90% (2**)
Regrets	13%	66%	74%	37%	63% (2**)

***p<.001; **p<.01

Impact of Drinking Status on Behavioral Consequences: More Serious Consequences

	IA Non-Binge Drinkers	IA Binge Drinkers	IA Freq. Binge Drinkers	Wechsler Binge Drinkers	Wechsler Freq. Binge Drinkers
Forget where	4%	52%	55%	26%	54% (2**)
Damage property	4%	22%	24%	8%	22% (2**)
Unplanned sex	8%	37%	46%	20%	41% (2**)
Unsafe sex	8%	21%	23%	10%	22% (1**)
Injured or hurt	6%	27%	30%	9%	23% (2**)
Police trouble	4%	16%	18%	4%	11% (2***)

***<p.001 **<p.01

Behavioral Consequences by Gender in University of Iowa (1997-2001) Sample

	Male Drinkers	Female Drinkers
Behind in schoolwork	52%	38%***
Forget where	59%	44%***
Damage property	46%	7%***
Gotten in fight	14%	5%***
Arrested	15%	3%***
SA treatment	7%	1%***
Police trouble	25%	10%***
Unplanned sex	42%	31%**
Unsafe sex	30%	16%**

***<p.001; **<p.01

The UI (2003) Study

- A self-administered survey was given to 353 UI students enrolled in general education courses offered by the psychology department in the Spring of 2003, asking about binge drinking and ensuing health and behavioral consequences.
- The study was designed (1) to explore predictors of alcohol-related consequences, and (2) to examine the impact of interventions – including *Stepping Up* and changes in “drink specials” - on UI binge drinking rates.

UI Binge Drinking: 1997-2001 vs. 2003

	1997-2003	2003
Age	20.21	19.48
# Drinking Days/Last 14	3.15	3.54
# Drinks in last 14 Days	16.89	23.46
% Binge Drinkers	69.6%	74.9%
% Frequent Binge Drinkers	46.8%	43.3%

**Impact of Gender on Consumption:
1997-2001 vs. 2003**

	1997-2001 Males	2003 Males	1997-2001 Females	2003 Female
# of Drinking Days/14 Days	4.86	4.22	3.24	3.23
# of Drinks in last 14 Days	33.71	36.83	14.17	17.33

19

- Drinking and Decision-Making Study (Fall, 2008)**
- N=138 (All entering Freshmen taking Introductory Psychology)
 - 81.2% Women
 - Mean Age: 18.2 years
 - High School Drinking Behaviors
 - Age of First Drink: 15.7 years
 - Age of "Regular" Drinking: 17.1 years
 - Binge Drinking Rate in High School: 41.6%
 - Trajectory of H.S. Binge Drinking Days/Month: 0.36 days (F); 1.1 (S); 1.7 (J); 2.6 (S) ²⁰

- Drinking and Decision-Making Study (Fall, 2008)**
- Current Drinking Behaviors
 - Average # of Drinks/Occasion: 4.3
 - Binge Drinking Rate:
 - Overall: 52%; Men: 72%; Women: 48%
 - Frequent Binge Drinking Rate: 24%
 - Have you ever thought you had a problem with alcohol?
 - Yes: 7%; No: 93%
 - In What Way has your Drinking Changed since Coming to the UI?
 - Increased: 48.%; Decreased: 10.%; Same: 40.% ²¹

- Drinking and Decision-Making Study (Fall, 2008)**
- How do your peers feel about your having one drink?
 - Very much against it: 0%; probably wouldn't like it: 3%; wouldn't care much or at all: 97%
 - How often does at least one of your parents talk to you about drinking?
 - Never: 25%; Once a week or more: 12%; 1-2 times/month: 36%; Several times/year: 28%
- 22

- Drinking and Decision-Making Study (Fall, 2008)**
- How do your parents feel about:
 - your having one drink?
 - Very much against it: 10%; probably wouldn't like it: 28%; would care much or at all: 62%
 - your drinking to get drunk?
 - Very much against it: 37%; probably wouldn't like it: 49%; wouldn't care much or at all: 13%
- 23

- When and How Do UI Students Learn to Binge?**
- Before they come to the UI:
 - A culture of heavy drinking that begins in high school
 - Parents who believe that, at least comparatively, alcohol is a benign substance
 - Strong peer pressures to drink
 - After they come to the UI:
 - 18, 19, & 20-year-old local option
 - Many bars that heavily promote drink specials
 - Few other entertainment options in I.C.
 - Strong peer pressures to drink
- 24

Proposed Individual Interventions after Students have Begun Attending the UI

- Help students understand that:
 - there are a range of alternatives to binge drinking every weekend evening.
 - alcohol is not a benign substance.
 - abusive alcohol consumption in college is often associated with extremely serious adverse consequences,

25

Proposed Environmental Interventions to Modify Rates of Binge Drinking

- Limit alcohol access among the heaviest and least experienced student drinkers by raising the age of entry to bars and taverns to 21 years.
- Help bar owners appreciate that, in the long run, binge drinking by underage students is not good for them or for Iowa City.
- Create a community climate of unwillingness to tolerate student drunkenness

26

References

- Alterman, A.I., Hall, J.G., Purtill, J.J., Searles, J.S., Holahan, J.M., & McLellan, A.T. (1990). Heavy drinking and its correlates in young men. *Addictive Behaviors, 15*, 95-103.
- Christiansen, B.A., Goldman, M.S., & Inn, A. (1982). The development of alcohol-related expectancies in adolescents: Separating pharmacological from social-learning influences. *Journal of Consulting and Clinical Psychology, 50*, 336-344.
- Horowitz, H.L. (1987). *Campus life: Undergraduate cultures from the end of the eighteenth century to the present*. New York: Knopf.
- Moore, M.H. & Gerstein, D.R. (Eds.) (1981). *Alcohol and public policy: Beyond the shadow of Prohibition*. Washington, D.C.: National Academy Press.

27

References II

- Straus, R. & Bacon, S.D. (1953). *Drinking in college*. New Haven, CT: Yale University Press.
- Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. *Journal of the American Medical Association, 272*, 921-926.
- Wiggins, J.A. & Wiggins, B.B. (1987). Drinking at a southern university: Its description and correlates. *Journal of Studies on Alcohol, 48*, 319-324.
- Wood, M.D., Nagoshi, C.T. & Dennis, D.A. (1992). Alcohol norms and expectations as predictors of alcohol use and problems in a college student sample. *American Journal of Drug and Alcohol Abuse, 18*, 461-476.

28