

Behavioral Decisions and Emotional Trends Among College Students

***Examining Frequent Alcohol Consumption
and the Illness of Depression: A
Comparison of Trends, Actions, and
Emotions of Local and National University
Populations***

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Introduction



- Biochemical and behavioral factors associated with binge drinking among the undergraduate population.
- Biochemical and behavioral factors associated with the illness of major depression.
- The hypothesized correlation of alcohol and the illness of depression.

Specification of Binge Drinking

- The Centers for Disease Control's National Center for Health Statistics defines heavy drinking as consuming five or more drinks on at least five occasions each month.
- Moderate drinking, as defined by the National Institute on Alcohol Abuse and Alcoholism, is the average number of drinks consumed daily that places an adult at low risk for alcohol problems.

Undergraduate Alcohol Consumption



- Specific behavioral patterns and an university environment fosters increased alcohol consumption.
- Undergraduate students consumption vs. young adults of the same age.

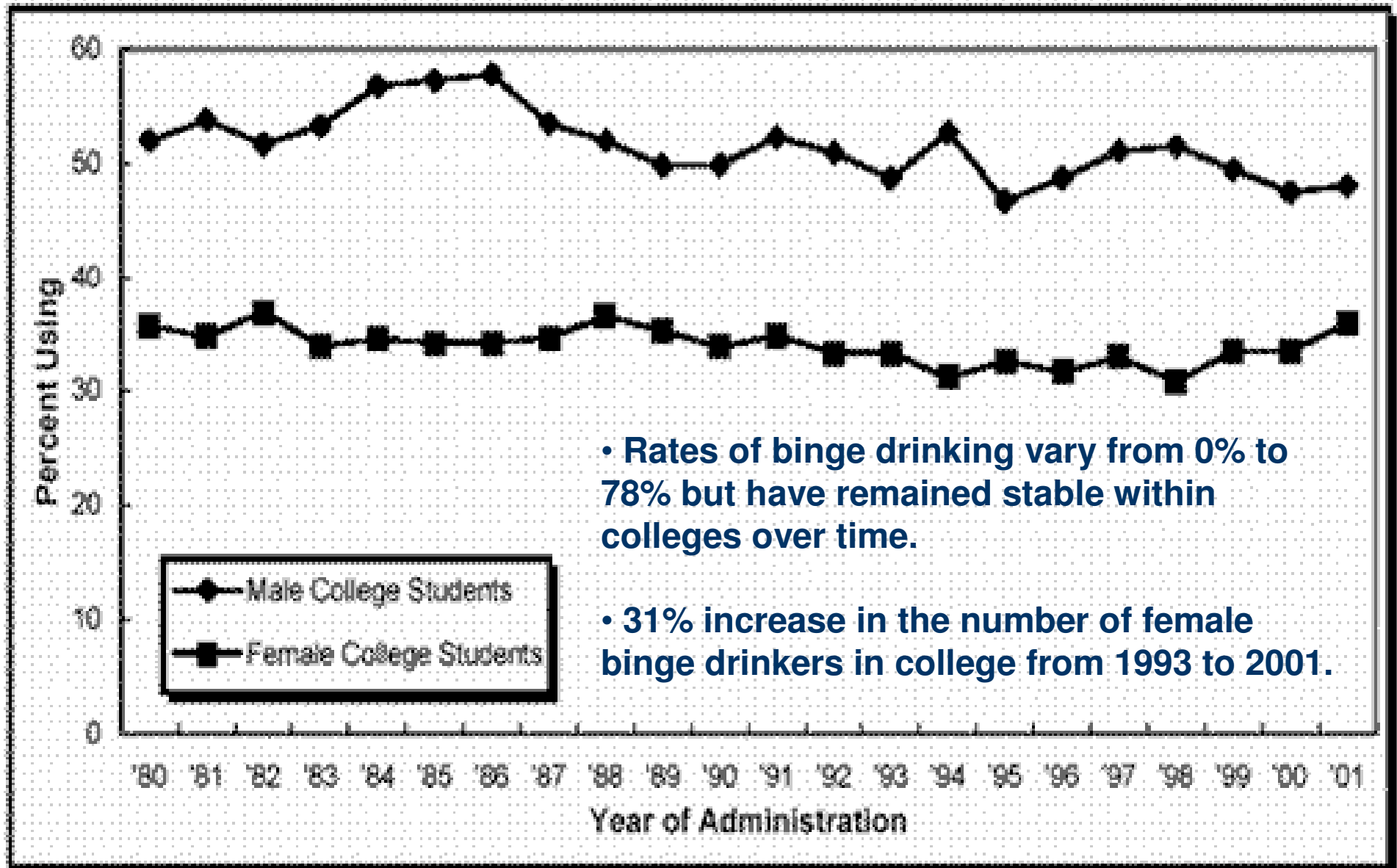
Undergraduate Binge-Drinking Rates: A Comparison of Studies

Harvard School of Public Health College Alcohol Study



- A survey of over 14,000 students at 120 four-year colleges in 40 states.
- The CAS examines key issues in college alcohol abuse.
- 2 out of 5 young adults in college binge on alcohol.
- Approximately 1 out of every 4 young adults in college drinks frequently, bingeing at least 3 times in 2 weeks.

Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among Male vs. Female College Students



Undergraduate Binge-Drinking Rates: A Comparison of Studies

Southern Illinois University Core Institute




Southern[™]
Illinois University
Carbondale

	<u>Core Survey 2003 30 Day Prevalence</u> The % of students who reported using each drug listed at least once within the 30 days prior to completing the survey. N= 38,857	<u>Core Survey 2004 30 Day Prevalence</u> The % of students who reported using each drug listed at least once within the 30 days prior to completing the survey. N=68,000	<u>Core Survey 2005 30 Day Prevalence</u> The % of students who reported using each drug listed at least once within the 30 days prior to completing the survey. N= 33,379
Alcohol	74.7%	72.0%	72.8%

Undergraduate Binge-Drinking Rates: A Comparison of Studies

University of Rochester American College Health Association National College Health Assessment

 UNIVERSITY OF ROCHESTER	National Results 2004 N=24,804	ACHA-NCHA 2004 N=491	ACHA-NCHA 2005 N=448
Alcohol use	67%	74%	73%
Binge drinking (5 or more drinks)	36%	43%	33%

The Biological Metabolism of Alcohol

- Alcohol is an addictive depressant that slows the activity of the central nervous system.
- As alcohol is readily a hydrophobic, lipid- soluble substance, it easily passes through the capillary endothelial cell junctions of the blood-brain barrier.
- Alcohol is transported via the systemic system to the brain.

The Biological Metabolism of Alcohol

- N-methyl-D-aspartic acid (NMDA) receptors are a glutamate-gated, voltage gated ion channels permeable to sodium, potassium, and calcium.
- It is hypothesized that alcohol's intoxicating effects are felt due to the inhibition of the NMDA receptor.
- Alcohol inhibits the flow of sodium across and expands the neuronal cell membrane, as well as blocks glutamate receptors, decreases serotonin activity and increases dopamine activity.
- Mechanism of popular sedatives may explain alcohol's ability to lessen anxiety.

The Illness of Depression According to the DSM-IV-TR

- A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning
1. Depressed mood most of the day, nearly every day.
 2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.
 3. Significant weight loss or weight gain or decrease or increase in appetite nearly every day.
 4. Insomnia or hypersomnia nearly every day.
 5. Psychomotor agitation or retardation nearly every day.
 6. Fatigue or loss of energy nearly every day.
 7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day.
 8. Diminished ability to think or concentrate.
 9. Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

The Illness of Depression among Undergraduate Populations

- Incidence of students diagnosed with depression has increased by 4.6% over a four-year time span, from 2004 to 2007.
- 45% of students ages 18-24 reported being so depressed that they had difficulty functioning.
- 94% of undergraduate students reported feeling overwhelmed by everything they had to do.

The Illness of Depression among Undergraduate Populations

- 15-20% of the undergraduate population have been diagnosed with depression.
- Of the 14.9% of students who reported having ever been diagnosed with depression, 25.2% are currently in therapy for depression.
- 38% said they are currently taking medication for depression.
- Suicide is the second leading cause of death for individuals ages 18-24.

The Interaction of Alcohol and the Illness of Depression

- Alcohol alters the production and functioning of transmitters such as dopamine, serotonin, GABA, and endorphins.
- Higher rates of symptoms of depression and anxiety are found during periods of heavy drinking and may contribute to an increased risk of suicide or relapse.
- Alcohol itself is a depressant; a drug that enhances the overall inhibitory affect of GABA-nergic receptors in the nervous system.
- Combining alcohol with their symptoms and prescribed antidepressants is detrimental to the treatment and recovery from depression.

Research at the University of Rochester

- This research study examined the interconnectedness of binge-drinking and depression among the college population at the University of Rochester.
- **HYPOTHESIS:** Increasing rates of binge drinking and diagnoses of depression among college students suggest a correlation between the effects of consistent binge drinking and the illness of depression. The continual consumption of five or more alcoholic beverages in one sitting, on at least 4-7 days within a 30 day period was hypothesized in this study to increase symptoms of depression and to detrimentally affect the recovery from depression once a diagnosis has been established.

Methods

- 13- page self administered questionnaire
 - Alcohol use, other substance use, current emotions, previously diagnosed medical conditions, and demographic information. BDI-II is a clinical tool used to determine the severity of depressive symptoms.
- Beck Depression Inventory - 2nd Edition
 - BDI-II is a clinical tool used to determine the severity of depressive symptoms.
- Distributed information on UCC, UHS, and local and national suicide hotlines information.
- N= 260
- Beck's score is the dependant variable.
- Binge drinking is the independent variable.

Results

N= 260

34% male / 66% female.

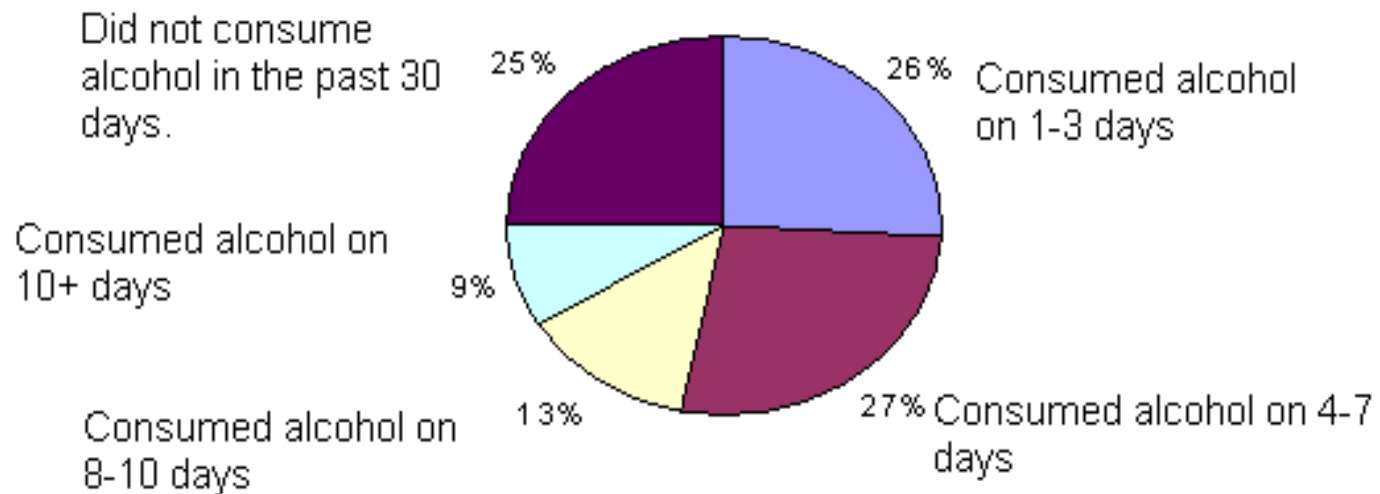
25% freshman

25% juniors

27% sophomores

23% seniors

Number of Days Consuming Alcohol



Results

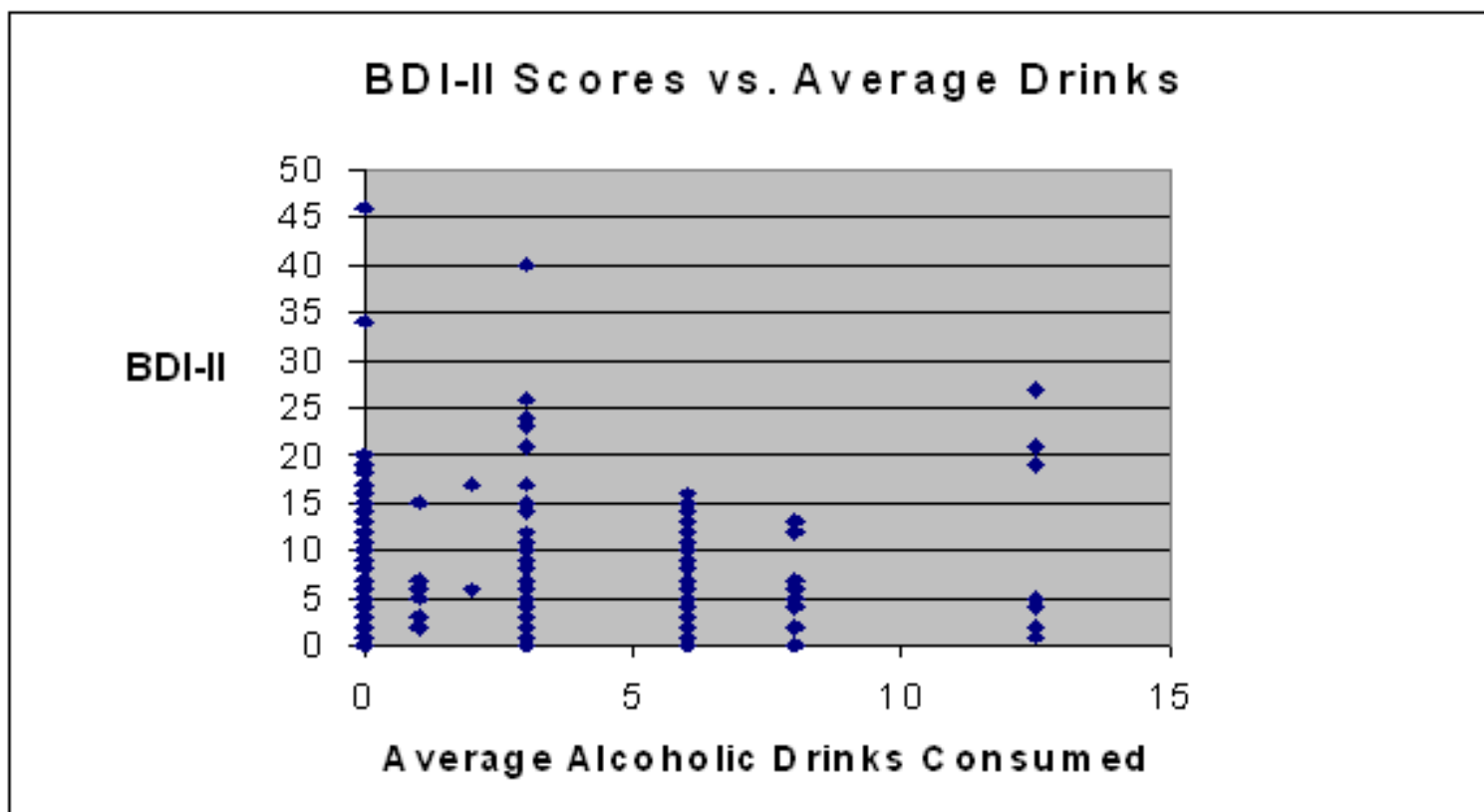
- 17% of participants had scores indicative of symptoms of depression.
- 11% of the survey population had been diagnosed with depression.
- 16.2% of participants diagnosed with depression are still registering as severely depressed on the BDI-II scale.
- 14% of students who are experiencing symptoms of depression according to the Beck Depression Inventory-II scale have not been diagnosed with depression.
- 26% of those registering as depressed on the BDI-II scale report binge drinking in the past 30 days
- 40% of those registering as depressed on the BDI-II scale report drinking on at least 4-7 days over the last 30 days.
- **Only 13% of those with depressive symptoms as scored by the BDI-II engage in frequent binge drinking.**

Discussion

	National Results 2004 N=24,804	Core Survey 2005 N= 33,379	ACHA- NCHA 2004 N=491	ACHA- NCHA 2005 N=448	Current Data 2008 N=260
Diagnosed depression	***	***	13%	14%	11%
Alcohol use	67%	72.8%	74%	75%	75%
Binge drinking	36%	***	43%	33%	33.8%

Discussion

- 13% of those with depressive symptoms as scored by the BDI-II engage in frequent binge drinking.
- Those with the highest BDI-II scores (correlating to severe depressive symptoms) had not frequently binge drank in the past 30 days.



Discussion

- Logical biochemical interactions indicated a correlation between binge drinking and depression.
- Limitations in sample size
- A non-statistically significant correlation.
- A multitude of influencing factors.
 1. Avoidance of social situations and interactions
 2. Medical recommendations
 3. Multivariate factors influencing depression

Questions and Discussion



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