Binge Drinking in a Sample of College-Age Women at Risk for Developing Eating Disorders

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Definitions

- **Binge Drinking**
  - 4 or more drinks in one sitting

- **Eating Disorders**
  - Anorexia Nervosa
  - Bulimia Nervosa

- **At-Risk**
  - High shape and weight concerns
  - Fear of gaining weight
  - Importance of weight in self-evaluation

Wechsler et al. (1995); DSM-IV-TR (2000); Taylor et al. (2006)
Prevalence of Binge Drinking

- 1.5 million US adults
- Young adults (18-25) had the highest rates of binge drinking
  - 17.5 episodes per year per person
- Undergraduate college students had higher rates of binge drinking than same-age peers who were not attending a university

Naimi et al., 2003; Wechsler et al., 1998
Binge Drinking in College

- 44% of students in college were binge drinkers
- 20% of students were frequent binge drinkers
- Gender gap is closing
  - Women are increasing frequency of being drunk and drinking to get drunk

Wechsler et al. (1994)
Women who binge drink…

- …are more likely than men to experience negative consequences
  - Physiological effects
  - Blackouts
  - Academic difficulties and legal problems
  - Sexual assault
  - Use of illegal substances
  - Binge drinking in the future

- Freshman women more likely to binge drink than older female students

Wechsler et al. (1995); Harrington et al. (1997); Jones et al. (2001); Taylor et al. (2006)
Substance Abuse and Eating Disorders

Comorbidity is well documented

Rates of substance use disorders reached:
- 13% in women with restrictive anorexia
- 49% in women with bulimia
- 39% in women with a combination of both

In women with a substance use disorder:
- 10% had anorexia
- 41% had bulimia

Dansky et al. (2000); Holderness et al. (1994)
Possible Correlates of Maladaptive Drinking and Eating Patterns

- Emotion and Avoidant coping strategies
- Negative Affect
- Stressful life events

Marsh & Dale (2005); Luce et al. (2006); Evans & Dunn (1994); Fromme & Rivet (1994); Holderness et al. (1994); Marsh & Dale (2005)
Purpose of Present Study

- Examine prevalence and pattern of binge drinking over time among women in college at risk for developing eating disorders
- Examine longitudinal role of correlates of binge drinking behavior
Sample

- Between 18 and 30 years of age
- BMI between 18 and 32
- High risk for developing an eating disorder:
  - Weight Concerns Scale $\geq 50$
  - Moderately or very afraid of gaining 3 pounds
  - Reported that weight was the most important thing in their life
- Excluded if there was evidence of clinical eating disorder

Taylor et al. (2006); Killen et al. (1996)
Measures

- **Binge Drinking**
  - Reported frequency of binge drinking per week in past month

- **Eating-disordered Behavior**
  - Eating Disorder Examination-Self-Report Questionnaire (EDE-Q)
    - Dietary Restraint Subscale
  - Eating Disorder Inventory (EDI)
    - Bulimia, Drive for Thinness Subscale

- **Psychosocial Measures**
  - Center for Epidemiological Studies Depression Scale (CESD)
  - Brief Cope Inventory
  - Life Events Scale

Taylor et al. (2006); Luce et al. (1999); Garner et al. (1983); Radloff (1977); Carver (1997);
Procedure

- Participants recruited in 3 waves
  - Wave 1 (n=159): assessed annually for 3 years
  - Wave 2 (n=185): assessed annually for 2 years
  - Wave 3 (n=136): assessed at baseline and 1 year
Demographics (N=480)

- Ethnicity:
  - 60% Caucasian, 17% Asian, 10% Hispanic, 2% African American, 11% other/unknown

- Year in school:
  - 31% freshman, 20% sophomore, 22% junior, 18% senior, 8% graduate

- Mean age = 20.8 (range: 17-31; SD = 2.6)
## Rates of Binge Drinking at Baseline and One Year

<table>
<thead>
<tr>
<th>Binge Drinking Frequency</th>
<th>Baseline</th>
<th>One Year</th>
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<tbody>
<tr>
<td></td>
<td>$n$ (%)</td>
<td>$n$ (%)</td>
</tr>
<tr>
<td>0</td>
<td>166 (40.5)</td>
<td>162 (39.5)</td>
</tr>
<tr>
<td>1-2</td>
<td>116 (28.3)</td>
<td>178 (43.4)</td>
</tr>
<tr>
<td>3-4</td>
<td>63 (15.4)</td>
<td>49 (12)</td>
</tr>
<tr>
<td>5+</td>
<td>65 (15.9)</td>
<td>21 (5.1)</td>
</tr>
</tbody>
</table>
- Significant redistribution of binge drinking frequency at one year \[\chi^2 (13, \ N=410) = 182.88, \ p< .001\]
- 30% of students not bingeing at baseline began binge drinking by one year
- 28% of students binge drinking at baseline stopped binge drinking by one year
- More prevalent in white women than in ethnic minority women \[F(1,478)=6.69, \ p=.01\]
- No correlation between age and binge drinking frequency
Spearman Rho Correlations of Baseline Variables and Binge Drinking After One Year

### Binge Drinking Baseline
- Dietary Restraint
  - \((r = .23^{**})\)
- Drive for Thinness
  - \((r = .47^{**})\)
- Coping Substance Use
  - \((r = .38^{**})\)
- Coping Active
  - \((r = -.10^{*})\)

### Binge Drinking One Year
- Binge Drinking
  - \((r = .66^{**})\)
- Bulimia
  - \((r = .19^{**})\)
- Dietary Restraint
  - \((r = .18^{*})\)
- Coping Substance Use
  - \((r = .05^{**})\)

\*\(p < .05\) (two-tailed) \**p < .01\) (two-tailed)
Ordinal Regression Predicting Frequency of Binge Drinking After One Year

- Baseline binge drinking strongest predictor
  - \( b=1.02, \) S.E.\(=.13, p<.001 \)
- Baseline bulimia
  - \( b=.08, \) S.E.\(=.03, p<.01 \)
- Dietary restraint and coping variables did not emerge as significant predictors after controlling for baseline binge drinking
Main Findings

- Alarmingly high rates of binge drinking
  - Remain stable over time
  - Frequent binge drinking more prevalent earlier in college
- Dietary restraint is related to binge drinking over time
- Bulimic behaviors are significant predictors of binge drinking in the future
Limitations

- Substance use was not focus of larger study
- Generalizability
Implications

- First study to examine binge drinking over time in a sample of women at risk for eating disorders
- Crucial need for early interventions targeting binge drinking among college-age women regardless of their current drinking status
- Effective eating disorder interventions should incorporate modules related to binge drinking and vice versa
  - Psycho-education
  - Social support
  - Teaching healthy coping skills
- Women presenting with maladaptive eating patterns should be carefully screened for substance misuse