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Characteristics of Seriously Heavy Binge Drinking Women: A Community Based Study from St. Louis

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Abstract

Background: Binge drinking is an important public health problem in the United States, and is associated with co-morbid psychiatric disorders and HIV risk behaviors.

Methods: The data for this study come from a NIAAA funded two arm intervention study to reduce HIV risk behaviors among female heavy drinkers. Eligible women (18+ years old, sexually active 12 months prior to study and screened positive on the AUDIT score=4+) were recruited from street outreach and HealthStreet. Participants (N=348) were assessed on the Computerized Substance Abuse Module (CSAM), Washington University Risk Behavior Assessment for Women (WU-RBA-W), the Computerized Diagnostic Interview Schedule (C-DIS), Alcohol Expectancy Questionnaire (AEQ) and Drinking related Internal-External Locus of Control Scale (DRIE). Seriously heavy binge drinking was assessed by: “You have more than once drunk more than 20 drinks in one day—that would be about a fifth of liquor, or 3 bottles of wine, or as much as 3 six-packs of beer”.

Results: Results indicated that over one-third of the sample (N=134; 39%) reported seriously heavy binge drinking in their lifetime. Binge drinking women were less likely to be African American (X²=11.05), compared to non-binge drinking women. Binge drinking women were more likely to meet lifetime criteria for alcohol abuse and/or dependence (X²=26.22), cannabis abuse and/or dependence (X²=7.49), and amphetamine abuse and/or dependence (X²=6.42). Victorian women were more likely to trade sex (X²=10.32) and not always use condoms (X²=5.25), they did perceive that they had risky sex (X²=7.24), and alcohol behaviors (X²=5.33) that needed to be changed. In addition, women with binge drinking had higher rates of psychopathology: Post Traumatic Stress Disorder (X²=10.91), Major Depressive Disorder (X²=24.26) and Conduct Disorder (X²=28.53). They also reported less control over their drinking behavior (X²=2.16) and more undesirable alcohol related expectancies (X²=3.59), compared to non-binge drinking women. These findings indicate that women with binge drinking have a constellation of risk factors. The results therefore, have implications for developing community based preventative interventions for these women.

Aim

This analysis explored demographic factors, DSM-IV lifetime substance abuse/dependence, HIV risk behaviors and DSM-IV lifetime psychiatric disorders among women who endorsed seriously heavy binge drinking.

Methods

• NIAAA AA12111, Sister to Sister Study: Peer Intervention to Reduce HIV in Female Heavy Drinkers (Linda B. Cottler, PhD, MPH, PI)
• Fogarty International Center ICOHRTA Training Program in Behavioral Disorders (Grant No. TW05811-08; VA Satyanarayana, Fellow; LB Cottler, PI)

Acknowledgements

Multivariate Logistic Regression

<table>
<thead>
<tr>
<th>Variables (Substances used ≥5 times)</th>
<th>Binge Drinkers</th>
<th>Non-Binge Drinkers</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Abuse/Dependence</td>
<td>93% (N=134)</td>
<td>69% (N=214)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Cannabis Abuse/Dependence</td>
<td>59% (N=100)</td>
<td>41% (N=142)</td>
<td>0.0054</td>
</tr>
<tr>
<td>Amphetamine Abuse/Dependence</td>
<td>60% (N=43)</td>
<td>27% (N=22)</td>
<td>0.011</td>
</tr>
<tr>
<td>Opioid Abuse/Dependence</td>
<td>55% (N=40)</td>
<td>44% (N=23)</td>
<td>0.37</td>
</tr>
<tr>
<td>Cocaine Abuse/Dependence</td>
<td>92% (N=73)</td>
<td>88% (N=57)</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Control over Drinking

Control over Drinking: 6.93 (SD=2.54), 7.53 (SD=2.44), p=0.03

HIV Risk Factors

<table>
<thead>
<tr>
<th>Variables</th>
<th>Binge Drinkers</th>
<th>Non-Binge Drinkers</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Sex-Lifetime</td>
<td>43% (N=134)</td>
<td>27% (N=214)</td>
<td>0.0013</td>
</tr>
<tr>
<td>Trade Sex-Past 12 Months</td>
<td>47% (N=134)</td>
<td>34% (N=214)</td>
<td>0.15</td>
</tr>
<tr>
<td>Multiple Partners</td>
<td>39% (N=134)</td>
<td>32% (N=214)</td>
<td>0.25</td>
</tr>
<tr>
<td>Always used Condoms-Post 4 Months</td>
<td>30% (N=134)</td>
<td>20% (N=214)</td>
<td>0.01</td>
</tr>
<tr>
<td>Had Sex under the influence of Alcohol/Drugs</td>
<td>77% (N=134)</td>
<td>70% (N=214)</td>
<td>0.19</td>
</tr>
<tr>
<td>Perceived Risky Sex Behaviors</td>
<td>43% (N=134)</td>
<td>29% (N=214)</td>
<td>0.007</td>
</tr>
<tr>
<td>Perceived Risky Drug Use</td>
<td>31% (N=134)</td>
<td>22% (N=214)</td>
<td>0.056</td>
</tr>
<tr>
<td>Perceived Risky Alcohol Use</td>
<td>54% (N=134)</td>
<td>40% (N=214)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Alcohol Expectancy

Alcohol Expectancies: 161.34 (SD=49.48), 142.09 (48.05), p=0.0004

Conclusions

• Over one-third of the sample (39%) reported seriously heavy binge drinking in their lifetime
• Demographics: Binge Drinking women were less likely to be African American. They were more likely to have a positive arrest history and to consider themselves homeless
• Substance Abuse/Dependence: Binge drinkers were more likely than non-binge drinkers to meet DSM-IV criteria for lifetime Alcohol abuse/dependence, Cannabis abuse/dependence, and Amphetamine abuse/dependence
• HIV Risk Behaviors: While binge drinking women were more likely to trade sex and not always use condoms, they did perceive that they had risky sex and alcohol behaviors that needed to be changed
• Psychopathology: Binge drinkers compared to non-binge drinkers were also more likely to meet DSM-IV criteria for lifetime Post Traumatic Stress Disorder, Major Depressive Disorder, Antisocial Personality Disorder and Conduct Disorder
• Control over drinking and Alcohol Expectancies: Binge drinking women reported less control over their drinking behavior and worse alcohol related expectations than non-binge drinking women
• The Multivariate Logistic Regression Model confirmed that non-African American women who reported a positive arrest history, met DSM-IV criteria for lifetime Conduct Disorder, Post Traumatic Stress Disorder, Alcohol abuse/dependence or Amphetamine abuse/dependence were significantly more likely to develop binge drinking
• These findings indicate that binge drinking women have a host of other risk factors: drug use, HIV and mental health related risk factors
• The study results have implications for identifying binge drinking women in the community and designing cost-effective alcohol and HIV preventive interventions that also address other risk factors: abuse and dependence to different drugs and co-morbid mental health problems