Assessment of Alcohol Drinking Habits among Secondary School Students in Grenada with Interest on the Impact of Alcohol Advertising Viewership

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Outline

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• Methods
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Aim & Objectives

• **Aim**
  - To better understand the alcohol drinking habits of adolescents in Grenada and the factors that influence them

• **Objectives**
  - Evaluate the prevalence of alcohol use in secondary students based on current alcohol use, drunkenness, problem drinking, and poor perception of alcohol
  - Determine the correlation of exposure to alcohol advertisements with current alcohol use, drunkenness, problem drinking, and poor perception of alcohol
Background & Public Health Significance

- Caribbean shift in disease burden from infectious to social disorders\(^1,2\)
- 47% of Grenadian population under the age of 20\(^3\)
- Adolescent alcohol use harms the:
  - Individual by way of elevated risks for acute and chronic diseases\(^4\)
  - Society by way of decreased economic contribution, automobile crashes, crime, and unplanned pregnancy\(^5,6\)

- Adolescents exposed to alcohol advertisements have been shown to\(^7\):
  - Have more favorable drinking expectancies
  - Believe that drinking is more common among peers and adults
  - Intend to drink more as adults

- Grenada has no current restriction on advertising in place
Methods: Participants & Procedures

- Secondary analysis of the 2008 Grenada Global School-Based Student Health Survey (GSHS)
  - Developed by the World Health Organization (WHO) in collaboration with:
    - United Nations Children Fund (UNICEF)
    - United Nations Educational, Scientific, and Cultural Organization (UNESCO)
    - Joint United Nations Program on HIV/AIDS (UNAIDS)
    - Center for Disease Control and Prevention (CDC)
- Study Population: 11-16 year old secondary school students in Grenada
- A 2 stage cluster sample design
  1. The school response rate: 95%
  2. The student response rate: 82%
  - Overall response rate: 78%
- Given as a self-administered multiple choice questionnaire to be completed in class by students
Methods: Measures

- Frequency data measurements were assessed for 4 variables of alcohol use in Grenadian adolescents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Alcohol Use</td>
<td>Students who consumed at least 1 alcoholic beverage in the past 30 days</td>
</tr>
<tr>
<td>Drunkenness</td>
<td>Students who drank so much alcohol that they felt really drunk at least once during their life</td>
</tr>
<tr>
<td>Problem Drinking</td>
<td>Students who had a hangover, felt sick, got into trouble with family/friends, missed school, or got into a fight at least once as a result of consuming alcohol</td>
</tr>
<tr>
<td>Poor Perception of Alcohol</td>
<td>Students who believe the consumption of more than 2 alcoholic beverages on a single occasion may not be harmful to one’s health</td>
</tr>
</tbody>
</table>
Results: Participants

- In total, the 85 question survey was completed by 1,542 Grenadian secondary school students.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Frequency (n)</th>
<th>Percentage</th>
<th>Frequency (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 – 12</td>
<td>65</td>
<td>121</td>
<td>4.3%</td>
<td>8.0%</td>
</tr>
<tr>
<td>13 – 14</td>
<td>326</td>
<td>443</td>
<td>21.4%</td>
<td>29.1%</td>
</tr>
<tr>
<td>15 - 16</td>
<td>290</td>
<td>276</td>
<td>19.1%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Total</td>
<td>681</td>
<td>840</td>
<td>44.8%</td>
<td>55.2%</td>
</tr>
</tbody>
</table>
### Results: Prevalence of Alcohol Use

Prevalence of alcohol use among secondary students in Grenada

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Current Alcohol Use (%)</th>
<th>Drunkenness (%)</th>
<th>Problem Drinking (%)</th>
<th>Perception of Drinking (%)</th>
<th>Current Alcohol Use (%)</th>
<th>Drunkenness (%)</th>
<th>Problem Drinking (%)</th>
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<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 - 12</td>
<td>31.6</td>
<td>28.1</td>
<td>18.5</td>
<td>76.3</td>
<td>29.9</td>
<td>18.5</td>
<td>14.3</td>
<td>77.1</td>
</tr>
<tr>
<td>13 - 14</td>
<td>44.0</td>
<td>34.7</td>
<td>18.9</td>
<td>74.4</td>
<td>37.9</td>
<td>18.2</td>
<td>11.1</td>
<td>68.2</td>
</tr>
<tr>
<td>15 - 16</td>
<td>67.2</td>
<td>45.7</td>
<td>29.7</td>
<td>74.9</td>
<td>54.0</td>
<td>34.1</td>
<td>19.4</td>
<td>72.3</td>
</tr>
<tr>
<td>Total</td>
<td>52.2</td>
<td>38.7</td>
<td>23.4</td>
<td>74.8</td>
<td>41.8</td>
<td>23.3</td>
<td>14.3</td>
<td>70.8</td>
</tr>
</tbody>
</table>
## Results: How Alcohol was Obtained

<table>
<thead>
<tr>
<th>Method</th>
<th>Male</th>
<th>Female</th>
<th>Total Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not drink alcohol during the past 30 days</td>
<td>46.2%</td>
<td>58.2%</td>
<td>52.9%</td>
</tr>
<tr>
<td>I bought it in a store, shop, or from a street vendor</td>
<td>14.5%</td>
<td>6.4%</td>
<td>10.0%</td>
</tr>
<tr>
<td>I gave someone else money to buy it for me</td>
<td>6.6%</td>
<td>2.6%</td>
<td>4.3%</td>
</tr>
<tr>
<td>I got it from my friends</td>
<td>13.9%</td>
<td>10.2%</td>
<td>11.8%</td>
</tr>
<tr>
<td>I got it from home</td>
<td>8.2%</td>
<td>15.0%</td>
<td>12.0%</td>
</tr>
<tr>
<td>I stole it</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>I made it myself</td>
<td>2.9%</td>
<td>1.0%</td>
<td>1.8%</td>
</tr>
<tr>
<td>I got it some other way</td>
<td>7.0%</td>
<td>5.9%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
## Results: Association with Advertising Viewership

Strength of association of alcohol related variables with advertising viewership based on Kendall’s tau statistical analysis

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Current Alcohol Use (τ)</th>
<th>Drunkenness (τ)</th>
<th>Problem Drinking (τ)</th>
<th>Perception of Drinking (τ)</th>
<th>Current Alcohol Use (τ)</th>
<th>Drunkenness (τ)</th>
<th>Problem Drinking (τ)</th>
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<td>Age (years)</td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 - 12</td>
<td>0.193</td>
<td>0.011</td>
<td>-0.032</td>
<td>-0.184</td>
<td>0.114</td>
<td><strong>0.161</strong></td>
<td>0.155</td>
<td>-0.047</td>
</tr>
<tr>
<td>13 - 14</td>
<td>0.067</td>
<td>0.035</td>
<td>0.047</td>
<td>-0.057</td>
<td><strong>0.240</strong></td>
<td>0.080</td>
<td><strong>0.103</strong></td>
<td>-0.041</td>
</tr>
<tr>
<td>15 - 16</td>
<td><strong>0.188</strong></td>
<td><strong>0.111</strong></td>
<td>0.030</td>
<td>-0.010</td>
<td><strong>0.155</strong></td>
<td>0.060</td>
<td>-0.090</td>
<td>-0.093</td>
</tr>
<tr>
<td>Total</td>
<td><strong>0.110</strong></td>
<td>0.061</td>
<td>0.028</td>
<td>-0.051</td>
<td><strong>0.186</strong></td>
<td><strong>0.077</strong></td>
<td>0.034</td>
<td><strong>-0.060</strong></td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).
Discussion

• Prevalence
  o Nearly $\frac{3}{4}$ believed they could consume more than 2 alcoholic beverages without harmful effects
    • Contrary to 1-2 drink recommendation for adults
    • Does not vary with age and therefore indicates the need for change in alcohol education

• Association to advertising
  o Strengths of association were similar to those found elsewhere\textsuperscript{8}
  o Advertising viewership has a slight association with alcohol use
  o Negative correlation between advertising and poor perception of alcohol in females ($\tau = -0.060; p<0.05$)
    • Possibly due to chance or confounding factors like socioeconomic status
Limitations

• Based on self-reporting
• Based on 2008 data
• Temporality could not be determined
• May not be generalizable to all youths
• No assessment of the different type of advertising exposures
Recommendations

• Improve upon current alcohol education programs for adolescents by emphasizing the danger

• Perform additional investigations to:
  o Determine the short and long term effects of adolescent alcohol use in Grenada
  o Determine the strength of association between the different mechanisms of alcohol advertising and adolescent use in Grenada
Conclusion

• Alcohol use is high among secondary students in Grenada, but advertisements only play a minor role in this trend

• Thus, while governmental restriction on advertising may reduce adolescent use, one must not neglect additional factors

• “Codification and internalization of the messages transmitted by the media falls on both the one who sends the message and the other who receives it”\textsuperscript{9}
Thank You