

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

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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<sup>1,2</sup>
- 47% of Grenadian population under the age of 20<sup>3</sup>
- Adolescent alcohol use harms the:
  - Individual by way of elevated risk s for acute and chronic diseases<sup>4</sup>
  - Society by way of decreased economic contribution, automobile crashes, crime, and unplanned pregnancy<sup>5,6</sup>
- Adolescents exposed to alcohol advertisements have been shown to<sup>7</sup>:
  - 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

Variable	Variable Description
<b>Current Alcohol Use</b>	Students who consumed at least 1 alcoholic beverage in the past 30 days
<b>Drunkenness</b>	Students who drank so much alcohol that they felt really drunk at least once during their life
<b>Problem Drinking</b>	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
<b>Poor Perception of Alcohol</b>	Students who believe the consumption of more than 2 alcoholic beverages on a single occasion may not be harmful to one's health

# Results: Participants

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

	GSHS Participation			
Demographics	Frequency (n)	Percentage	Frequency (n)	Percentage
Age (years)	Male		Female	
11 – 12	65	4.3%	121	8.0%
13 – 14	326	21.4%	443	29.1%
15 - 16	290	19.1%	276	18.1%
Total	681	44.8%	840	55.2%

# Results: Prevalence of Alcohol Use

Prevalence of alcohol use among secondary students in Grenada

Demographics	Current Alcohol Use (%)	Drunkenness (%)	Problem Drinking (%)	Perception of Drinking (%)	Current Alcohol Use (%)	Drunkenness (%)	Problem Drinking (%)	Perception of Drinking (%)
Age (years)	Male				Female			
11 - 12	31.6	28.1	18.5	76.3	29.9	18.5	14.3	77.1
13 - 14	44.0	34.7	18.9	74.4	37.9	18.2	11.1	68.2
15 - 16	67.2	45.7	29.7	74.9	54.0	34.1	19.4	72.3
Total	52.2	38.7	23.4	74.8	41.8	23.3	14.3	70.8

# Results: How Alcohol was Obtained

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

# Results: Association with Advertising Viewership

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

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

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

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

# Discussion

- Prevalence
  - 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
  - Strengths of association were similar to those found elsewhere<sup>8</sup>
  - Advertising viewership has a slight association with alcohol use
  - 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:
  - Determine the short and long term effects of adolescent alcohol use in Grenada
  - 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”<sup>9</sup>

# References

1. Seidell JC. Obesity: a growing problem. *Acta Paediatr Suppl*, 1999;428:46-50.
2. Forrester T, Cooper RS, Weatherall D. Emergence of Western diseases in the tropical world: the experience with chronic cardiovascular diseases. *Br Med Bull*, 1998;54(2):463–473.
3. Pan American Health Organization (PAHO). Health Situation in the Americas, Basic Indicators 2009. Available at [http://www.paho.org/English/DD/AIS/cp\\_308.htm](http://www.paho.org/English/DD/AIS/cp_308.htm) accessed 7/1/2011.
4. Bonomo Y, Coffey C, Wolfe R, Lynskey M, Bowes G, Patton G. Adverse outcomes of alcohol use in adolescents. *Addiction*, 2001;96:1485–1496.
5. Jefferis BJMH, Powwer C, Manor O. Adolescent drinking level and adult binge drinking in a national birth cohort. *Addiction*, 2005;100:543-549.
6. Pitkanen T, Kokko K, Lyyra A-L, Pulkkinen L. A developmental approach to alcohol drinking behaviour in adulthood: a follow-up study from age 8 to age 42. *Addiction*, 2008;103(1):48-68.
7. Chen MJ, Grube JW. TV beer and soft drink advertising: what young people like and what effects? *Alcohol Clin Exp Res*, 2002;26:900-906.
8. Swahn MH, Ali B, Palmier JB, Sikazwe G, Mayeya J. Alcohol marketing, drunkenness, and problem drinking among Zambian youth: findings from the 2004 Global School-Based Student Health Survey. *J Environ Public Health*, 2011;497827.
9. Vendrame A, Pinsky I, Faria R, Silva R. Apreciação de propagandas de cerveja por adolescentes: relação com a exposição prévia às mesmas e o consumo de álcool. *Cad Saude Publica*, 2009;25(2):359-365.



Thank You