



Short Report

Factors associated with attending “open bar” parties amongst early adolescents

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ABSTRACT

Background: “Open bar” parties are events where a flat fee is paid for unlimited alcohol consumption. At these events, alcohol intoxication is frequent amongst attendees. This study explored the prevalence of “open bar” attendance amongst Brazilian youth and the factors associated with this practice.

Methods: Data was collected at the baseline of randomized controlled trial amongst 5,213 8th grade students in three Brazilian cities. Weighted logistic regression was performed.

Results: Mean age was of 13.23 years (SE 0.01) and 17.1% of the students have reported attending “open bar” events in the past year. Attendees were wealthier, had higher odds to engage in binge drinking, to use marijuana, to be exposed to alcohol advertising, and to report more alcohol problems and clinical psychiatric symptoms when compared with non-attendees.

Conclusions: The ban on selling alcohol to minors has not been properly enforced. Legislation to restrict alcohol promotions and advertising in Brazil needs to be implemented and effectively monitored.

Background

Youth drinking and drunkenness is a public health concern since young people tend to engage in binge drinking and risky behaviors more than other age groups (Babor et al., 2010; Chung et al., 2018; Niland et al., 2013). Despite there being no universal definition for binge drinking across diverse people and cultures (Pearson et al., 2016; Rehm et al., 2020), this harmful use of alcohol is commonly defined as consuming five or more standard drinks per occasion in a short period of time for men, and for women four or more (Kuntsche et al., 2004; E., 2017). Recent World Health Organization (WHO) data showed that in 2016, 18.2% of the global population aged 15 years or more reported binge drinking, with regional differences and variations – rates being higher in Europe (26.5%), western pacific (21.9%), and the Americas (21.3%). In Brazil, the rate reached 19.4% (in 2010 it was at 12.7%) (World Health Organization, 2018).

Drinking alcohol seems to be recognized as a socially acceptable behavior in Brazil, since research suggests that people usually begin to drink between ages of 10 and 12 (Malta et al., 2014; Paiva et al., 2015; Reis & Oliveira, 2015). Moreover, it is estimated that 55.5% of Brazilian secondary students aged between 13 and 15 years old have reported consuming alcoholic beverages at least once during their life-

time (Brazilian Institute of Geography & Statistics, 2016). This highlight the importance of understanding the underlying factors influencing the binge drinking pattern, particularly amongst adolescents and students, as these seem more prone to experiencing the negative health, social, and psychological consequences of premature drinking (Conegundes et al., 2020; Sanchez et al., 2013).

The context in which alcohol consumption occurs (e.g., nightlife settings) is thought to contribute to specific problems such as intoxication and use of other drugs (C. Carlini et al., 2017; Sanchez, 2017). Drinking levels are influenced by how convenient it is to purchase or consume it (availability), how cheap it is (affordability), and the social norms surrounding its consumption (acceptability) (World Health Organization, 2018). While the sale of alcohol to youth under the age of 18 is not permitted by law in Brazil,¹ the regulation of alcohol sales is not properly implemented: there are no restrictions regarding selling alcohol to intoxicated individuals, buyer’s age is not checked, prices are quite encouraging, and current policies allow drinking in public settings (e.g., on streets, beaches, and parks), all of which are likely to facilitate consumption (World Health Organization, 2018). Furthermore, Brazil lacks proper legislation when it comes to controlled promotion and advertis-

¹ Bill No 13.106 (March 17, 2015)

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ing of alcohol. Federal bill No. 9.294² regulates this domain, but due to inconsistencies regarding the definition of alcoholic beverage in Brazil (only beverages with more than 13° Gay-Lussac³ are considered alcoholic, i.e., only drinks containing over 13% of alcohol), beer and most wines are excluded, thus there is hardly any control for the advertisement of such.

In Brazil, nightclubs tend to adopt the sale and/or marketing strategy known as “open bar”, in which attendees can drink as much as they like for a fixed entry price all night (Carlini & Sanchez, 2018). Likewise, “open bar” parties tend to be commonly held on Brazilian university campuses for young adults (Noto et al., 2015; Pinsky et al., 2022). At these events, often funded by the alcohol industry (Pinsky et al., 2017), alcohol intoxication is frequent amongst the attendees and the use of illicit drugs is 12 times more likely to occur (C. Carlini et al., 2017). Although there is an age limit for purchasing and being served alcohol in Brazil, this alcohol-sales system is strongly associated with youth drunkenness as they tend to drink as much as they can to justify their expenses (Sanchez, 2017). Despite the need to explore the factors associated with young people’s drinking culture, there is a paucity of literature exploring these issues. To gain deeper knowledge of the individual and societal consequences of harmful alcohol use, particularly amongst the youth from a middle-income country where alcohol policies are flawed, this study aims to explore the prevalence of “open bar” attendance amongst Brazilian adolescents and the factors associated with this practice.

Methods

This study reports a cross-sectional survey that analyzed the baseline data of a cluster Randomized Controlled Trial (RCT) conducted with 5213 students to evaluate the effectiveness of a school-based drug prevention program for adolescents enrolled in the 8th grade (usually aged between 13 and 14 years) across 73 Brazilian public schools. The assessment was conducted before implementation of the program during February and March of 2019 in a representative sample of public-school students in three Brazilian cities. This trial was registered in the Brazilian Registry of Clinical Trials (REBEC) (RBR-8cnkqw). Protocol was both approved by the Federal University of São Paulo’s Research Ethics Committee (protocol#2,806,301) and by the Ethics Committee of the São Paulo Municipal Health Department (protocol#3,099,865). The data were collected via an anonymous questionnaire administered by researchers in the classroom without the teacher’s presence. Consent to participate in the study was obtained from the schools’ directors before randomization, and from students and parents after randomization. Results of the RCT and details about study design have been previously published (Sanchez et al., 2020).

Instrument and variables

The instrument used was designed based on the EU-DAP (European Drug Addiction Prevention Trial) (Faggiano et al., 2010), which was translated and adapted into Brazilian Portuguese (Prado et al., 2016). “Open bar” attendance during the past year was the outcome variable. The prevalence of attending “open bar” parties in the past year (yes vs. no) was assessed in one question: “In the past 12 months, have you participated in open bar parties, that is, in which you can drink as much alcohol as you want after paying a single fee?”.

Sociodemographic, drug use, alcohol use problems, psychiatric symptoms, and exposure to alcohol advertising were the explanatory variables. Sociodemographic variables included city, gender, age, and socioeconomic status. Students’ socioeconomic status was assessed using the Brazilian Association of Research Companies (*Associação Brasileira*

de Empresas de Pesquisa – ABEP) scale⁴ which considers the head-of-household’s education and the goods and services used, with scores ranging from 0 to 100 or in categories from A (highest) to E (lowest). Higher scores indicate a better economic status.

Drug use in the past 12 months (tobacco, marijuana, and binge drinking pattern – the consumption of 5 or more doses of alcohol during a two-hour period) was assessed using questions such as “On the past 12 months have you smoked marijuana?”. Alcohol use problems was collected using a 7-item scale developed by the EU-DAP. The total score of alcohol-problems was achieved by the sum of all items, resulting in a score ranging from 0 to 7 (the higher the score the greater the amount of alcohol use problems). Psychiatric symptoms were assessed with the Strengths and Difficulties Questionnaire (SDQ). The total score was calculated using the following cut-off points: ‘Without Symptoms’ (0–11); ‘Subclinical’ (12); and ‘Clinical’ (13–40) (Fidalgo et al., 2016). Exposure to alcohol advertising was assessed via one question: “In the past 12 months, have you seen any advertisements for beer or other alcoholic beverages?”, in which the interviewed could individual mark all the means of communication from which they were exposed to alcohol advertising: TV, radio, internet, outdoors, and others. The total score was achieved by the sum of all possible answers, ranging from 0 to 5, in which the higher the score, the greater was the amount of exposure to alcohol advertising.

Statistical analysis

Descriptive analyses were conducted, and comparisons were performed using the Pearson’s chi-square test with the Rao-Scott correction. The description incorporated weights to correct the different selection probabilities of the participants, and the results were expressed as weighted values. The sample weights considered school as the primary sampling unit, with stratification by city, the total number of students expected in each class, those present on the day of the survey, and the total number expected in each city according to the national registry of the National Institute of Educational Studies and Research (*Instituto Nacional de Estudos e Pesquisa Educacionais Anísio Teixeira* – INEP). All *p*-values <0.05 were considered statistically significant. The survey (svy) package in Stata14® version was used, which offers procedures for the analysis of complex sample data and allows the incorporation of different weights of observations that may influence the parameter estimates of the total population, it also considers the effect of sampling on the variance estimates. Univariate and multivariate logistic regressions were performed with the exploratory variables affecting the outcome (attending “open bar” parties). Associations were estimated using odds ratios (OR) and their respective 95% confidence intervals (CI).

Results

Overall, the student population accounted for 50.1% of boys, with a mean age of 13.24 (± 0.85) years. Most students were classified as socioeconomic class C (medium) (54.0%) and residents of São Paulo (58.5%). For substance use in the past year, 19.3% reported binge drinking, 6.0% used tobacco, and 5.7% marijuana. The mean score of alcohol use problems was 0.07 (± 0.37) and 24.1% of the students had clinical psychiatric symptoms. Additionally, 17.2% reported attending “open bar” parties and 89.2% reported exposure to alcohol advertising.

There were statistically significant differences between adolescents “open bar” attendees and non-attendees regarding sociodemographic, drug use, alcohol use issues, psychiatric symptoms, and exposure to alcohol advertising. There was a higher prevalence of girls (54.7%) and students from socioeconomic classes B (33.6%) and C (48.9%) attending “open bar” parties. The mean age was 13.5 (± 0.81) years. Amongst “open bar” attendees, 53.9% reported binge drinking in the past year,

² Bill No 9.294 (July 15, 1996)

³ Scale for measuring alcohol content

⁴ Brazilian Association of Research Companies (ABEP) - <http://www.abep.org>

20.4% used tobacco, and 20.5% marijuana. The mean score of alcohol use problems amongst “open bar” attendees was 0.29 (± 0.71) and regarding psychiatric symptoms, 42.7% of the attendees had clinical symptoms. Furthermore, 94.2% reported exposure to alcohol advertising. All variables included in the multivariate analysis (age, city, socioeconomic status, drug use, alcohol use problems, psychiatric symptoms, and exposure to alcohol advertising) remained significantly associated with participation in “open bar” events. Regarding substance use, attendees had higher odds to engage in binge drinking (OR:5.47, CI:4.60–6.50) and to consuming tobacco (OR:2.28, CI:1.65–3.15) and marijuana (OR:2.14, CI:1.55–2.96) when compared with non-attendees. Additionally, “open bar” attendees had 70% higher odds to report more problems derived from alcohol consumption (OR:1.70, CI:1.38–2.10), psychiatric symptoms (OR:2.53, CI:2.15–2.98), and to be exposed to alcoholic drinks advertisements, (OR:2.13, CI:1.63–2.80) when compared to those who did not attend such events (Table 1).

Discussion

This is the first study in a developing country to investigate the associated factors on attending “open bar” events with minors under 18 years of age. One in five adolescents reported attending such events, which were predominantly characterized by middle-class female adolescents. Moreover, teenage “open bar” attendees were more prone to engage in risky behaviors, such as binge drinking, use of other drugs, and be exposed to alcohol advertising. They were also more likely to report alcohol problems and clinical psychiatric symptoms.

This study identified an annual prevalence of 19.3% in the practice of binge drinking amongst adolescents enrolled in the 8th grade (and a prevalence of 53.9% amongst those who reported attending “open bar” parties), with a mean age of 13.2. The high prevalence of binge drinking found in this study was expected and consistent with previous results from the Brazilian National Survey data (Brazilian Institute of Geography & Statistics, 2021; Machado et al., 2018; Malta et al., 2018). In Brazil, while the purchase of alcoholic beverages is legally permitted only after 18 years of age,⁵ underage drinking seems to be commonplace and highly prevalent amongst secondary school students (Conegundes et al., 2020; Guimarães et al., 2022; Rakovski et al., 2022).

The early age of alcohol initiation can lead to a possible harmful drinking pattern (such as binge drinking), which might later on lead to the use of illicit drugs (Sargent & Babor, 2020). Drinking during adolescence can contribute to future experiences of psychiatric disorders (Welch et al., 2013), also, these adolescents who tend to engage in binge drinking are at increased risk for negative psychological outcomes when compared to those who do not (Makela et al., 2015; Miller et al., 2007). Our results showed that the “all you can drink” system found in “open bar” parties was associated not only with binge drinking amongst students in Brazil, but also with the use of other drugs (Carlini et al., 2014; C., 2017; Carlini & Sanchez, 2018).

Exposure to alcohol advertising and content during adolescence can be considered an pivotal risk factor for early onset drinking and intention to engage in binge drinking (Pinsky et al., 2010). Regarding alcohol advertising, our results corroborate other studies that also showed significant association between binge drinking and exposure to alcohol advertising among adolescents (Jernigan et al., 2017). This is a significant finding since it highlights the importance of examining the effects of alcohol advertising exposure on adolescents. The current policy for controlling such advertising in Brazil is based on the self-regulation system overseen by a non-governmental advertising organization (Gordon et al., 2010), however evidence on the effectiveness of self-regulation policy in developing countries such as Brazil is still scant, enabling industry activities that inadvertently normalize drinking (Noel et al., 2017). In the UK, alcohol retailers and advertising have

young people as targets, since they tend to choose places that are dominated by point-of-sale promotions for branded alcohol products (Ross-Houle & Quigg, 2019). Likewise, in Brazil the “all you can drink” system used in “open bar” parties seems to serve the same purpose, considering that such strategy is focused on encouraging the excessive consumption of alcohol (Sanchez, 2017).

In Brazil, greater understanding of the alcohol marketing regulations and restricting purchase by age, as well as their effectiveness, remains vague and social acceptance of alcohol consumption is high (Monteiro, 2020). The effect of alcohol marketing on young people’s drinking habit is an increasing concern considering that alcohol regulations are not properly implemented (Noel et al., 2017; Paulo dos Santos et al., 2021; Sanchez, 2017). The legislators are trying to limit the “open bar” practices in Brazil with no success: at least two recent law projects are waiting to be voted on, in the São Paulo State Chamber of Deputies,⁶ both aimed at prohibiting parties that offer this “all you can drink” system. Moreover, it is important to highlight that in Brazil there is a law project waiting for voting⁷ that includes alcoholic drinks with less than 13% alcoholic in the legal definition of alcoholic drinks. There is international evidence on the interference of the alcohol industry in the process of enacting laws (McCambridge et al., 2018) causing inertia in public health policymaking (Lesch & McCambridge, 2020). Likewise, there is Brazilian evidence on how alcohol industry could be influencing policymaking in the country (Pinsky et al., 2022).

Limitations should be acknowledged. This baseline date of an RCT does not allow determining the temporal sequence of the analyzed events, i.e., we measured lifetime substance use and behavior association with attendance of “open bar” parties. Additionally, data were collected in three cities in Brazil, while it cannot be generalized for the whole country, this research has a myriad of participants and is investigating a behavior not well described in literature. This study highlights loopholes in alcohol policy enforcement in Brazil and the concerns regarding early adolescent attendance of “open bars”, which emphasizes the importance of understanding policy challenges and weaknesses to move alcohol control forward.

Our results suggest that the ban on selling alcohol to minors has not been sufficiently enforced. Legislation restricting alcohol promotions and advertising in Brazil needs to be implemented and effectively monitored as soon as possible to protect young people from the harms of early onset of alcohol use. Future studies are needed to identify which social, cultural, economic, environmental, and policy factors could impact positive changes in binge drinking within nightlife settings in Brazil, particularly amongst young people.

Ethics approval

This trial was registered in the Brazilian Registry of Clinical Trials (REBEC) under the number RBR-8cnkqw. Protocol was both approved by the Federal University of São Paulo’s Research Ethics Committee (protocol#2,806,301) and the Ethics Committee of the Municipal Health Secretariat (protocol#3,099,865) and all applicable ethical standards were followed.

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⁶ Bill Project No 416 (June 7, 2017) and Bill Project No 516 (April 23, 2019)

⁷ Bill project No 4710 (august, 27, 2019)

⁵ Bill No 13.106 (March 17, 2015)

Table 1
Estimates of crude (cOR) and adjusted odds ratios (aOR) for “open bar” attendees according to sociodemographic, drug use behaviours, psychiatric characteristics, and exposure to alcohol advertising in a sample of students participating in the baseline data collection of a study evaluating the effect of the school-based drug-use prevention program “#Tamojunto” (N = 5213).

	Last year open bar						p-value	Univariate analysis			Multivariate analysis		
	Total		Yes		No			cOR	95% CI	p-value	aOR	95% CI	p-value
	N	wgt%	N	wgt%	N	wgt%							
Gender													
Male	2578	50.06	355	45.31	2.079	50.72	0.003	1					
Female	2573	49.94	439	54.69	2.013	49.28		1.24	[1.08;1.43]	0.003	1.04	[0.89;1.22]	0.634
Age		13.24±0.85	780	13.55±0.81	4.042	13.15±0.94	<0.001	1.62	[1.49;1.76]	<0.001	1.59	[1.47;1.72]	<0.001
SES^a							<0.001						
D/E (0–13)	884	14.87	96	10.32	740	15.67		1			1		
C (14–22)	2.809	54.03	388	48.87	2.279	55.16		1.35	[1.16;1.56]	<0.001	1.62	[1.27;2.05]	<0.001
B (23–34)	1.282	27.18	255	33.64	961	25.78		1.98	[1.73;2.27]	<0.001	2.17	[1.71;2.76]	<0.001
A (35–42)	179	3.91	53	7.17	121	3.38		3.22	[2.52;4.12]	<0.001	2.94	[2.14;4.03]	<0.001
City							<0.001						
São Paulo	2.376	58.53	442	67.94	55.33	1.751		1					
Fortaleza	2.051	30.36	301	26.7	31.81	1.671		0.68	[0.60;0.78]	<0.001	0.65	[0.54;0.78]	<0.001
Eusébio	786	11.10	62	5.36	12.86	1.751		0.34	[0.27;0.42]	<0.001	0.53	[0.42;0.68]	<0.001
Use in the past year													
Binge drinking (yes)	987	19.28	447	53.90	472	11.58	<0.001	8.92	[7.89;10.09]	<0.001	5.47	[4.60;6.50]	<0.001
Tobacco (yes)	320	5.98	174	20.35	136	3.08	<0.001	8.04	[6.52; 9.91]	<0.001	2.28	[1.65;3.15]	<0.001
Marijuana (yes)	281	5.67	168	20.51	97	2.47	<0.001	10.16	[8.28; 12.48]	<0.001	2.14	[1.55;2.96]	<0.001
Alcohol Use Problems	5.213	0.07±0.37	805	0.29±0.71	4.134	0.03±0.25	<0.001	4.17	[3.52;4.94]	<0.001	1.70	[1.38;2.10]	<0.001
SDQ^b							<0.001						
Without Symptoms	2.197	56.24	213	34.07	1.966	60.82		1			1		
Subclinical	760	19.58	142	23.26	612	18.9		2.20	[1.87;2.58]	<0.001	1.89	[1.53;2.33]	<0.001
Clinical	947	24.18	269	42.67	667	20.28		3.76	[3.20;4.41]	<0.001	2.53	[2.15;2.98]	<0.001
Advertising (yes)	4.624	89.16	758	94.17	3.599	87.51	<0.001	2.40	[1.76;3.26]	<0.001	2.13	[1.63;2.80]	<0.001

^a Socioeconomic classification according to ABEP.

^b Strengths and Difficulties Questionnaire.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRedit authorship contribution statement

Mariana G.R. Santos: Visualization, Writing – original draft, Writing – review & editing. **Juliana Y. Valente:** Validation, Writing – review & editing. **Gabriela A. Wagner:** Methodology, Writing – review & editing. **Zila M. Sanchez:** Conceptualization, Supervision, Validation, Writing – review & editing.

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