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Socioeconomic influences on alcohol use patterns among private school students in São Paulo

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DESCRIPTORS
Alcoholic Drinks;
Students;
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ABSTRACT

Objectives: To describe alcohol use by socioeconomic level and gender among private high school students in the city of São Paulo, Brazil. *Methods:* Cross-sectional study of students in private schools in São Paulo. An anonymous self-administered questionnaire was distributed in the classroom. A total of 2,613 students were selected by the stratification and conglomerate methods. Chi-squared tests, t-tests and ANOVA were used to test for associations between alcohol use and gender and socioeconomic status; for binge drinking, an ordered logistic regression model was developed. *Results:* Overall, 88% of students reported lifetime alcohol use, with 31.6% in combination with energy drinks. Half of the students (51.3%) reported alcohol use in the last month, most frequently beer (35.2%), alcopop (32%) and vodka (31.7%); 33.2% reported binge drinking in the last month (5 drinks per occasion). Most evaluated parameters showed higher rates of use among males and higher social classes. The regression model exhibited an increasing rate of binge drinking with increasing socioeconomic status. *Conclusions:* The results suggest that socioeconomic features help to define alcohol use among São Paulo students. Use behaviors such as binge drinking are more prevalent among students from the upper social classes.

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Influências socioeconômicas no padrão de consumo de álcool entre estudantes de escolas privadas em São Paulo

RESUMO

Objetivos: Descrever o consumo de álcool por nível socioeconômico e gênero entre estudantes de ensino médio da rede privada na cidade de São Paulo. *Métodos*: Estudo transversal com amostra representativa da rede privada de ensino de São Paulo. Foi aplicado em sala de aula um questionário anônimo de autopreenchimento. 2.613 estudantes foram selecionados por método de estratificação e de conglomerados. Para verificar associação entre os padrões de consumo de álcool por gênero e nível socioeconômico, foi utilizado teste do qui-quadrado, teste *t* e ANOVA; para *binge drinking*, foi desenvolvido um modelo de regressão logística ordenada. *Resultados*: O uso na vida de álcool foi referido por 88% dos estudantes, 31,6% já havia associado com energéticos. Metade dos estudantes (51,3%) declarou uso no mês, com predomínio de cerveja (35,2%), ice (32%) e vodka (31,7%); 33,2% referiu *binge drinking* no mês (5 doses por ocasião). A maioria dos parâmetros avaliados apresentou maiores índices de consumo entre os estudantes do gênero masculino e classes sociais mais favorecidas. O modelo de regressão apresentou crescente razão de chance de *binge* com o avanço do nível socioeconômico. *Conclusões*: Os resultados sugerem que aspectos socioeconômicos sejam diferenciais para o consumo de álcool entre estudantes paulistanos, com comportamentos de uso, como *binge*, mais prevalentes em classes mais favorecidas.

Introduction

The consumption of alcoholic drinks by teenagers is a behavior common to different cultures and countries. A study performed in European countries showed that more than 82% of students aged 15 and 16 years old reported using alcohol at least once during the previous year.[1] In the United States, the rate was 52.1% among students in the same age range in 2010.[2]

In Brazil, a country characterized by cultural diversity and social inequality, the pattern of alcohol use is not much different. In 2004, 80.8% of students aged 16 to 18 years old attending public schools in all 27 state capitals reported having used alcohol at least once in their life.[3] Moreover, Brazil has a strong culture of alcohol consumption, as demonstrated by the prevalence of alcohol use, easy accessibility to alcoholic drinks and advertisements.[4]

Data regarding alcohol consumption by Brazilian teenagers has been gathered systematically since 1987.[5] Although no school policies have officially been implemented to reduce alcohol consumption, laws do exist to prevent alcohol use by teenagers. By law, a teenager is not allowed to buy alcoholic drinks in Brazil. However, the law is not enforced. In 2011, the state of São Paulo sanctioned the 698/2011 law stating that establishments that sell alcoholic drinks to teenagers or allow their consumption on site should be fined and closed down. However, there is a shortage of evidence-based educational programs aimed at preventing alcohol abuse among teenagers.

Although most teenagers use alcohol, its effects on their health depend on the pattern and frequency of use. Currently, the pattern of alcohol use among youth that is considered most risky is known as "binge drinking", which is defined as consuming the equivalent of four or five alcoholic drinks in a single occasion.[6] Binge drinking is associated with increased rates of sexual violence,[7] accidents,[8] suicide attempts and future alcoholism.[9] Mixing alcohol and energy drinks has also been described as a pattern that might increase the odds of risky behavior.[10]

The patterns of alcohol use might vary by social class, gender and age.[11-13] In Brazil, gender and age differences in alcohol use have been observed, and the prevalence of both heavy drinking and binge drinking is higher among older and male teenagers.[14-16]

A limitation of studies carried out in Brazil to date is the scarcity of data on teenagers attending private schools, where the upper socioeconomic classes are concentrated. Some studies suggest that alcohol use is higher in this group, but they have not evaluated this behavior in full detail. The study by Carlini-Cotrim et al.[15] stands out among the few studies on this topic.[15] The authors compared private and public elementary and high school students in São Paulo. Private school students more frequently reported binge drinking, which suggests a higher prevalence of this pattern of use among the upper social classes. Nevertheless, the private school network includes a variety of social strata where use behavior has not yet been studied.

The lack of detailed information on the private school network constitutes a significant gap for public policymaking. Therefore, the aims of this study were the following: 1) to describe the pattern of alcohol use among private high school students in the city of São Paulo; and 2) to evaluate the parameters of alcohol use according to socioeconomic status, gender and age.

Methods

Sample

A representative sample of private high school students from the city of São Paulo, Brazil, was selected from a universe of 78,000 students in 578 schools.[17] Estimation was based on

sampling theory, with maximum relative error at the 10% and 95% confidence intervals. To reduce sampling error, schools were divided into two subgroups according to the neighborhood's average income. Sampling was performed in three stages: first, schools were randomly selected, followed by a systematized random selection of classes and a survey of the students in the selected classes. This approach yielded a sample of 2,705 high school students from 28 schools. Questionnaires on which students answered affirmatively on using a fictitious drug (n = 7) were excluded, as were those with contradictory answers (n = 85), leaving a total of 2,613 valid questionnaires. Only 6 students refused to participate in this study. Thus, the participation rate was 99.8%.

Data collection and instrument

A trained team visited the classrooms to collect the data; teachers were not present. Data were collected in 2008 through a self-administered questionnaire comprising closed questions that were adapted from an instrument by the World Health Organization (WHO)[18] and that has been used by CEBRID (Brazilian Center of Information on Psychotropic Drugs).[3] Questions on alcohol use were based on the following parameters: "lifetime use" (at least once in life), "past-year use" (at least once within the past year), "past-month use" (at least once within the 30 days before the study), frequent use (between 6 and 19 days within the 30 days before the study) and heavy use (20 or more days within the 30 days before the study). Data were also collected on location and age of the first use of alcohol, types of drinks consumed during the month before the study, acquisition modes, ease of acquisition, concomitant use with energy drinks and binge drinking. Binge drinking was defined for both genders in this study as the equivalent of 5 drinks or more on a single occasion.[19] Through a didactical graphic, the questionnaire defined an alcoholic drink as a can of beer (330 mL), a glass of wine (90 mL), a shot of vodka or cachaça (30 mL) or one bottle of an alcopop (275 mL). Each of these drinks contains approximately 10 to 12 grams of alcohol.

The instrument also collected demographic data (gender, age and school class). The scale from the Brazilian Association of Research Companies was used to classify students by socioeconomic level.[20] This scale describes eight different levels based on ownership of assets and hiring of household services as well as the educational level of the head of the family. Based on the distribution found in the sample, the analysis was performed using five socioeconomic levels: A1, A2, B1, B2 and C/D/E.

Data analysis

Data were entered twice to avoid processing errors. Inconsistencies were assessed, and mistakes were corrected by hand and/or questionnaires excluded as needed.

Data were subjected to a Chi-square test, analysis of variance (ANOVA) or Student's *t*-test according to the nature of the variables, with significance established at 5%. An ordered logistic model corresponding to a generalization of logistic regression for ordinal polytomous responses was used to establish associations between the frequency of binge drinking and some demographic variables. Some explanatory variables were initially included in the model: age, gender, socioeconomic class and their second-order interactions.

Binge drinking within 30 days before the study was defined as the dependent variable and classified in five categories (never, once, twice, 3 to 5 times, 6 or more times). Analysis was performed using the statistical software SPSS 17.0.

Ethics

This study was approved by the Research Ethics Committee of the *Universidade Federal de São Paulo*, UNIFESP (n° 0930/07). Free and informed consent forms were signed by the school leaders, with a guarantee of anonymity for students and schools. Participants were instructed about the voluntary nature of this study and their freedom to stop participating or to leave answers blank.

Results

Characterization of the sample

Among the 2,613 students, 52% (95%CI: 49-55) were female and 91.3% were 15 to 17 years old (mean = 16 years old, SD = 0.98). In terms of socioeconomic class, 45.6% (95% CI: 37.1-54.4) belonged to classes A1 and A2 and 49.8% (95% CI: 42.2-57.4) to classes B1 and B2. Classes C, D and E (4.6%; 95% CI: 3.0-6.9) were analyzed together because they represented a small proportion of the total number of questionnaires.

History of use

Lifetime use of alcohol was reported by 88% (95% CI: 84.8-90.5) of students and past-year use by 74% (95% CI: 69.8-77.8; Table 1). The average age of onset was reported as 13.5 years (SE = 0.10), mostly in the household setting and offered by relatives (33%; 95% CI: 29.7-36.5) or friends (28.9%; 95% CI: 25.4-32.7). Only 21.3% (95% CI: 18.6-24.4) obtained their first drink independently. Excluding participants older than 18 years, 58% (95% CI: 54.8-61.2) reported having already bought an alcoholic drink themselves. Of the full sample, 31.6% (95% CI: 28.2-35.5%) reported having used alcohol and energy drinks together at least once in life.

Past-month use was reported by half of the sample (51.3%; 95% CI: 45.9-56.6), mostly 1 to 5 days a month (Table 1). A pattern of behavior remarkably high in frequency in this study was past-month binge drinking, reported by 33.2% (95% CI: 28.5-37.2) of students.

Gender differences

Despite no significant gender differences in lifetime use and past-year use, several past-month parameters tended to be higher among males (Figure 1; Table 1). Boys reported a higher prevalence of frequent use, binge drinking, consumption of beer and vodka and the combination of alcohol with energy drinks. There was a small statistical difference (p = 0.03) in the average age of first use, which was earlier for boys (mean = 13.3; SE: 0.14) than girls (mean = 13.6 years, SE: 0.09).

Socioeconomic class differences

Table 2 and Figures 2 and 3 show the data on behavior according to socioeconomic class. No differences were observed for use in life, context or source of first use. There were also no differences

Table 1 Patterns of alcohol use, first use and purchase of alcoholic beverages according to gender among 2,613 students from private high school. São Paulo, 2008

	Male (n = 1,189)		Female (n = 1,382)			Total		
	%	CI 95%	%	CI 95%	p value	n	%	CI 95%
Past-year use	74.7	69.1-79.7	73.6	69.6-77.2	0.62	1,948	74.0	69.8-77.8
Past-month use (days)					0.01			
1 to 5	40.2	35.1-45.4	41.7	38.1-45.4		1,085	41.0	37.1-44.9
6 to 19	**10.6**	7.7-14.3	**6.0**	3.8-9.4		236	8.1	5.9-11.1
20 or more	2.3	1.3-3.9	2.1	1.2-3.7		44	2.2	1.3-3.6
Past-month binge drinking					< 0.01			
Once	9.8	7.7-12.4	9.2	7.7-10.9		250	9.5	8.0-11.1
Twice	**10.3**	8.4-12.6	**6.6**	5.0-8.7		208	8.3	7.4-9.5
3 to 5 times	**12.3**	9.8-15.4	**7.4**	5.5-9.9		249	9.8	7.9-12.1
6 or more times	**6.8**	5.0-9.0	**4.7**	3.3-6.8		150	5.6	4.3-7.4
Alcoholic beverages (past-month use) [a]								
Beer/draft beer	**40.6**	35.1-46.3	**30.2**	25.7-35.1	< 0.01	925	35.2	30.9-39.7
Alcopop	31.6	28.3-35.1	32.4	28.9-36.1	0.69	848	32.0	29.2-34.9
Vodka	**34.2**	29.4-39.3	**29.4**	24.8-34.5	0.01	818	31.7	27.4-36.4
Cocktails/"*Caipirinha*"	30.8	26.0-36.1	31.7	27.9-35.6	0.72	825	31.1	27.4-35.0
Wine	25.8	22.8-29.1	27.1	23.0-31.7	0.48	679	26.5	23.3-29.9
Whisky	**17.8**	13.9-22.5	**6.0**	4.0-8.8	< 0.01	303	11.7	9.4-14.5
Cachaça	**14.5**	11.5-18.2	**8.9**	6.3-12.3	< 0.01	296	11.6	9.1-14.6
Alcohol with energy drinks (lifetime use)	34.2	30.1-38.5	**29.6**	25.4-34.2	< 0.01	829	31.6	28.2-35.3
Location of the first time use					0.02			
At home	**30.4**	26.8-34.4	**37.8**	34.6-41.0		783	34.3	31.5-37.2
Night clubs, parties, bars	17.2	14.3-20.5	17.0	14.5-19.9		382	16.9	14.5-19.6
Friend's house	26.8	24.1-29.6	24.1	20.6-28.0		564	25.3	22.6-28.1
Others	10.3	8.5-12.3	9.0	7.5-10.8		222	9.7	8.4-11.2
Ever purchased alcohol [b]	59.6	56.0-63.2	54.2	50.0-58.3	0.06	1,413	58.0	54.8-61.2

a: multiple answers. **b:** only for under 18 years old. **bold:** categories with statistical significance in the adjusted standardized residuals, Chi-square test, level of significance 5%.
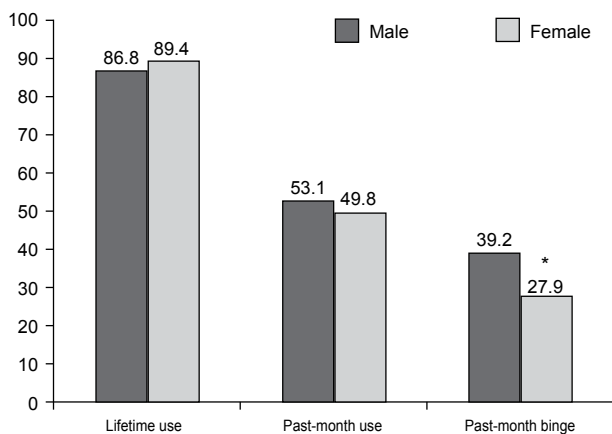

Figure 1 Patterns of alcohol use according to gender (lifetime, past-month use and past-month binge drinking) among 2,571 students from private high school. São Paulo, 2008. The values are indicated in percentage. *p < 0.05, Chi-square test.
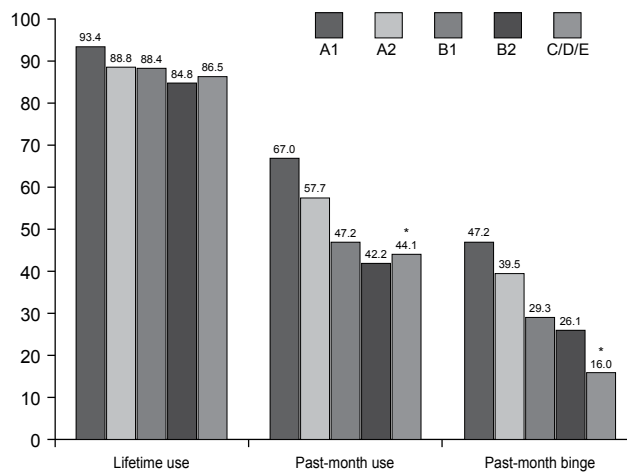

Figure 2 Patterns of alcohol use according to socioeconomic status (lifetime, past month use and past-month binge drinking) among 2,325 students from private high school. São Paulo, 2008. The values are indicated in percentage. *p < 0.05, Chi-square test.

Table 2 Patterns of alcohol use, first use and purchase of alcoholic beverages according to socioeconomic status among 2,613 students from private high school. São Paulo, 2008

	A1 (n = 262)		A2 (n = 812)		B1 (n = 762)		B2 (n = 380)		C/D/E (n = 109)		
	%	IC 95%	%	IC 95%	%	IC 95%	%	IC 95%	%	IC 95%	p value
Past-year use	**84.7**	76.0-90.7	77.3	72.9-81.3	71.8	66.3-76.7	68.1	59.5-75.5	70.3	61.1-78.2	0.01
Past-month use (days)											< 0.01
1 to 5	**51.1**	41.8-60.4	43.3	38.4-48.3	40.2	35.3-45.3	**33.2**	29.2-37.4	41.8	32.1-52.1	
6 to 19	**15.1**	9.2-23.7	9.9	7.0-13.9	**6.0**	3.8-9.3	6.5	4.0-10.3	**2.3**	0.9-6.2	
20 or more	**0.8**	0.2-2.9	**4.5**	1.9-10.5	**0.9**	0.4-2.4	2.5	1.0-6.1	-	-	
Past-month binge drinking											< 0.01
Once	8.6	5.8-12.5	11.3	9.2-13.9	8.8	6.1-12.6	8.6	5.3-13.7	9.3	4.6-17.6	
Twice	**15.0**	10.6-20.7	9.0	7.0-11.5	**6.3**	4.3-9.1	7.6	4.9-11.6	**3.2**	1.1-9.4	
3 to 5 times	**15.3**	10.1-22.7	11.0	8.1-14.8	10.1	6.9-14.5	**5.0**	2.7-9.2	**3.0**	1.1-8.0	
6 or more times	8.3	5.1-13.1	8.2	4.8-13.5	**4.1**	2.5-6.7	4.9	2.4-9.4	**0.5**	0.1-4.1	
Alcohol with energy drinks (lifetime use)	**45.5**	37.5-53.7	**40.3**	33.7-47.4	**26.6**	22.4-31.2	**19.8**	14.0-27.2	**17.7**	11.0-27.2	< 0.01
Location of the first time use											0.40
At home	37.4	30.7-44.6	31.3	26.8-36.2	35.0	29.5-40.9	36.7	30.7-43.0	36.6	22.4-53.5	
Night clubs, parties, bars	19.9	15.5-25.1	19.5	14.9-25.1	15.0	11.0-20.0	15.5	12.3-19.4	15.8	8.9-26.5	
Friend's house	26.9	20.1-34.8	25.8	21.7-30.3	26.0	22.1-30.2	23.2	18.8-28.2	26.3	18.3-36.2	
Others	8.1	4.7-13.6	10.9	8.9-13.2	10.8	8.3-14.0	7.9	4.6-13.3	6.0	2.3-14.8	
Ever purchased alcohol [b]	62.7	52.8-71.7	59.8	54.5-64.9	56.9	51.5-62.1	51.6	42.7-60.4	50.6	38.8-62.5	0.13

a: multiple answers. **b:** only for under 18 years old. **bold:** categories with statistical significance in the adjusted standardized residuals, Chi-square test, level of significance 5%.
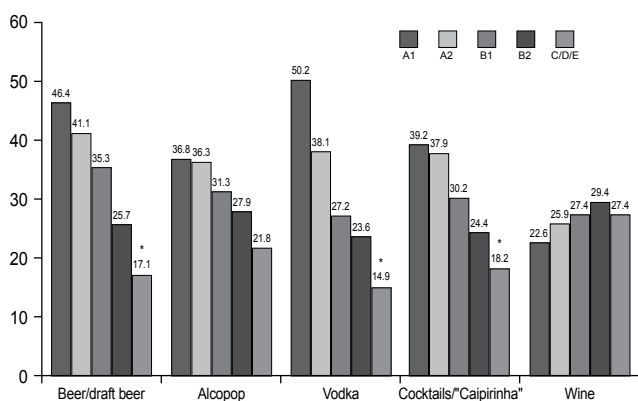

Figure 3 The five most related alcoholic beverages used in past month according to socioeconomic status among 2,325 students from private high school. São Paulo, 2008. The values are indicated in percentage. *p < 0.05, Chi-square test.

in alcohol purchase by participants younger than 18 years old. However, there were gradual increases in the prevalence of past-year and past-month use and frequency of use with increasing socioeconomic status, with the highest rates reported by class A1.

The highest rate of past-month binge drinking (Figure 2) was also reported by the highest socioeconomic class (p < 0.001). Whereas 16% (95% CI: 9.9-25) of students of classes C/D/E reported binge drinking in the past month, this index increased gradually with socioeconomic class to 47.2% (95% CI: 37.2-57.4) in class A1. The number of binge drinking episodes was also greatest in the highest socioeconomic class.

Mixing alcohol and energy drinks was also most common in students from class A1 (45.5%) and decreased gradually with socioeconomic class to 17.7% in classes C/D/E.

Figure 3 shows that vodka and beer were the most commonly consumed types of drinks by class A1. The other classes – A2, B1, B2 and C/D/E – displayed a lower preference for these beverages and tended to consume others, such as *caipirinha* (*cachaça* – a sugarcane brandy - with lemon and sugar) and fruit cocktails, alcopop and wine. Wine was particularly popular in classes C/D/E.

Differences observed by ordered logistic regression

In the ordered logistic regression model for past-month binge drinking, the second-order interactions of the following covariates were not significant: gender and age (p = 0.2), gender and socioeconomic class (p = 0.3) and age and socioeconomic class (p = 0.6). Therefore, a new model was adjusted only for the main effects of gender, age and socioeconomic class (Table 3). The probability of boys exhibiting past-month binge drinking episodes was 64% greater than the probability for girls when all other characteristics were controlled. Moreover, the odds for students in socioeconomic classes A1 and A2 to report a larger number of binge drinking episodes than students in class B1 were 2.1 and 1.6 times, respectively. Students in class B2 showed no difference compared to those in class B1. However, students in classes C/D/E exhibited a 55% lower chance of reporting a greater number of binge drinking episodes compared to students in

Table 3 Estimates from ordered logistic regression to binge drinking among 2,325 students from private high school. São Paulo, 2008

Parameters	OR	p value	CI 95%
Gender			
Male	1.64	< 0.01	[1.27 ; 2.13]
Female (ref.)	1.00	---	---
Age (years)	1.42	< 0.01	[1.23 ; 1.64]
Socioeconomic status			
A1	2.14	< 0.01	[1.34 ; 3.43]
A2	1.59	< 0.01	[1.17 ; 2.17]
B1 (ref.)	1.00	-	-
B2	0.86	0.315	[0.64 ; 1.16]
C/D/E	0.45	< 0.01	[0.28 ; 0.72]

class B1. For the age range investigated, the odds of reporting a larger number of binge drinking episodes increased 42% for every year of age.

The ordered logistic model assumes proportionality of odds ratios. This assumption was tested, and there was no evidence of model inadequacy (p = 0.9).

Discussion

Among the main results of this study, we highlight the high prevalence of risky behaviors such as binge drinking and combining alcohol and energy drinks among adolescents attending private schools in São Paulo. The higher prevalence of these behaviors among males in this sample suggests that they require special attention. Our results corroborate well-documented findings both internationally[19, 21, 22] and for Brazil.[23,24]

In addition to gender differences, our analysis revealed significant variations in use according to socioeconomic status. These differences were confirmed by the ordered logistic regression model for binge drinking, thus increasing support for the conclusion that vulnerability to risky alcohol use is higher in the upper socioeconomic classes in the studied sample.

Nevertheless, these results must be taken with caution due to limitations inherent to the cross-sectional design representative of the private school networks of São Paulo. Socioeconomic classes A and B were over-represented in our sample. Moreover, due to the cost of private school tuition, it was not expected to find a large number of students from classes D and E. Therefore, the results of this study cannot be generalized to Brazilian teenagers attending public school or no school at all. Broader studies are needed to determine whether our findings can be replicated in other contexts.

Although few Brazilian studies have addressed binge drinking in teenagers, the observed past-month rate of 33.2% can be considered high for the age range of the sample and is higher than the rates reported by previous Brazilian studies. A study conducted in private and public elementary and high schools by Vieira et al.[25] reported a 17.3% rate of past-month

binge drinking.[25] The difference in age range prevents comparison with our study. Carlini-Cotrim et al.[15] found binge drinking in 25% of students (12 to 18 years old) in private schools compared to 10% in public schools, supporting the hypothesis that binge drinking is indeed a more worrisome phenomenon in the private school setting[15].

However, this relationship is inverted for frequency of use. Heavy use was reported by 2.2% of students in our study, whereas the rate in the public schools of São Paulo in 2004 was 6.6%.[3] This difference suggests that private schools students drink less often, but when they do, they seem to consume larger amounts. It is possible that public school students exhibit different long-term risk behaviors that need to be investigated longitudinally. Nevertheless, this comparison must be approached with caution due to the age difference between the participants in the two studies.

Although other Brazilian studies have also reported higher rates of alcohol use among members of higher socioeconomic classes,[26,27] in the international context, this association seems to vary according to the social context of each individual country. Our results demonstrate the opposite pattern of use when compared to those identified by Huckle et al.[27] in New Zealand, where more frequent use among members of the higher socioeconomic classes and larger amounts used per occasion in members of the lower socioeconomic classes was observed.

Richter et al.[13] observed the highest rates of alcohol use among students in the highest socioeconomic classes, in countries where the drinking culture is stronger and the monthly income of the population is lower.[13] However, there was no difference in alcohol use by socioeconomic status in countries where the drinking culture is strong and the monthly income of the population is higher. According to our results, Brazil exhibits an association similar to the one suggested by Richter et al.,[13] as a country with a strong alcohol culture and low average family income.

For teenagers in the higher socioeconomic classes, the availability of financial resources might facilitate spending more money on alcoholic drinks, which in turn might favor higher rates of use in this population.[29] Other mediating variables might be involved in this association, e.g., parental behavior and monitoring, use of alcohol by peers, socioeconomic status of the neighborhood and related cultural factors.[30,31] Brazilian parents from different socioeconomic classes might enforce different rules on alcohol use, as Spijkerman et al.[32] found in the Netherlands, possibly indicating that parental monitoring varies by socioeconomic status. Household studies have also found lower rates of binge drinking among members of the lower socioeconomic classes,[26,27] which might indicate that the association observed in this study is not restricted to a given age range. These variables need to be investigated in future studies.

Another important result of our study is the high rate of lifetime use of alcohol combined with energy drinks (31.6%). In a literature review, Reissig et al.[33] document the increasing use of energy drinks in the U.S.A., whereas Malinauskas et al.,[34] in a study of university students, related the use of energy drinks to attend parties or nightclubs. According to Ferreira et al.,[10] the use of energy drinks mixed with alcohol minimizes the perception of the negative aspects

of alcohol intoxication, but not all of its effects. O'Brien et al.[35] propose that this fact might explain the use of larger amounts of alcohol in conjunction with energy drinks and, consequently, the higher risk of adverse consequences. Thus, the increasing rates of binge drinking and use of energy drinks among teenagers from a higher socioeconomic level increase the relevance of preventive actions focused on this pattern of risky behavior among students belonging to the higher socioeconomic classes.

Despite being banned by Brazilian law, many students under 18 years old in this study reported buying alcoholic drinks; this result corroborates the ease of access reported by Vieira et al.[25] These results highlight the need for increased attention from officials and increased awareness of businesses regarding their responsibility of not selling alcohol to minors.

Despite some differences in the association between the type of alcoholic drink used and socioeconomic status, beer seems to cross most consistently over the different levels and is also the most used beverage, following trends previously observed in national[16,24,36] and international studies.[19] Nevertheless, high beer consumption is still neglected in public policies, which leaves room for a lack of restrictions e.g., in advertising.[4]

Our results corroborate the strong culture of alcohol use among private school students in São Paulo and the socioeconomic differences that influence it. These findings must be confirmed and elaborated by future studies because they constitute important foundations for prevention programs. Indeed, the altered patterns of alcohol use displayed by private school students should strongly influence the preventive approaches adopted by professionals in those schools, as well as researchers and public policy-makers. In particular, more attention should be given to alcohol intoxication and the countless risk behaviors associated with it, such as aggressive behavior and accidents.

Disclosures

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