

Consumo frequente de bebidas alcoólicas por adolescentes escolares: estudo de fatores associados

Frequent consumption of alcohol by school age adolescents: study of associated factors

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Resumo

Objetivo: Analisar fatores associados ao consumo freqüente/pesado de bebidas alcoólicas por adolescentes em Feira de Santana, Bahia. **Método:** estudo transversal, com amostra aleatória, estratificada por conglomerado, totalizando 10 escolas de portes diferenciados, com uma amostra de 1409 alunos, sendo nesse estudo foram incluídos 776 estudantes com o padrão de consumo estudado, de ambos os sexos, na faixa etária 14 a 19 anos, assegurando representatividade das escolas e alunos. O instrumento auto-aplicável foi elaborado segundo OMS e questionários validados em outros estudos. A coleta garantiu procedimentos para anonimato e sigilo. Foram considerados expostos, adolescentes que referiram consumo freqüente/pesado de bebidas alcoólicas (todo final de semana). **Resultados:** O consumo freqüente/pesado mostrou associações significantes com sexo masculino, consumo precoce, parceiro sexual pouco conhecido, problemas com SPAs na família, coabitação com companheiro, renda própria, tráfico de drogas, consumo com amigos, atividades na escola, motivações (ansiedade, animação/prazer); e conseqüências (outras SPAs, brigas, inadimplência ao trabalho/escola). **Conclusões:** o conhecimento dos fatores pessoais, interpessoais, familiares e ambientais associados ao consumo de bebidas alcoólicas por adolescentes devem ser considerados na implementação de programas escolares e políticas públicas de prevenção, visando comportamentos que minimizem a exposição ao risco associado.

Palavras-chave: adolescência, consumo de bebidas alcoólicas, fatores associados.

Abstract

Objectives: To analyze heavy /frequent/ of alcohol use and to identify factors associated among adolescents in Feira de Santana, Bahia. **Methods:** Cross-sectional study with random samples, stratified by conglomerates, totaling 10 schools of different sizes. Although 1,409 students were included in the sample, only 776 of both genders, aged 14 to 19 years who reported alcohol use were included in the analysis,, ensuring representativeness of schools and students. The data collection instruments were a self-administered questionnaire developed according to OMS recommendations and other validated instruments from similar studies. Anonymous confidential data collection was assured. There were considered exposed adolescents who reported heavy/ frequent alcohol use (at least every weekend). **Results:** The frequent / large alcohol use was associated with male gender; early initiation of alcohol use; little-known sexual partner; problems with other drugs in the family; living with a partner (RP 4.73, CI 1.69–13.27); own income; drug trafficking; consumption with friends, activities at school, motivations (anxiety, excitement/pleasure) and consequences (other PDs, fights, bad debts to work/school) **Conclusions:** Knowledge of personal, interpersonal, family and environmental factors associated with alcohol use in adolescents should be considered in the implementation of school programs and public policies for alcohol use prevention focusing on behaviors that could minimize exposure to risk.

KEY WORDS: adolescence, consumption of alcohol, associated factors.

Introduction

The production and use of psychoactive drugs (PDs) including alcohol have been described in social situations in different historical times. The advent of the industrial revolution and increased production and marketing of PDs have brought about a significant growth in their use.¹

It is estimated that around 2 billion people consume alcohol, and approximately 76.3 million have problems associated to its use.² In Brazil, it is difficult to translate the findings of epidemiological studies into intervention strategies due to the country's large territorial extensions with marked social, economic and cultural diversity.

Alcoholic beverages are often an important **part of social** events as it is socially and legally accepted and even highly valued in some cultures. Adolescence is regarded as a phase of life characterized by physical and psychological changes and a series of discoveries in the search for greater social autonomy.³ These factors may contribute to greater vulnerability during adolescence, including engaging in alcohol abuse.⁴ There is a concern of heavy/frequent alcohol use among adolescents with an impact on family and social relationships and morbidity and mortality associated with violence and external causes.^{5,6}

Epidemiology has a key role in describing alcohol use among adolescents and there are many related studies with various methodologies, notably those conducted in major cities of southern and southeastern Brazil.^{7,8,9,10,11,12,13} Among the epidemiological surveys involving adolescent students in Brazil it is remarkable a multicenter series carried out by the Brazilian Psychoactive Drug Information Center (CEBRID) in several Brazilian capitals between 1997 and 2004. Alcohol was reportedly the most consumed PD and its use is initiated at the youngest age (about 12 years old). A recent study reported frequent alcohol use among 11.7% of the students studied and heavy use among 6.7%.^{14,12}

Among factors associated with alcohol

use among students are notably those associated to family and social environment: separation of parents, conflicts with the mother, permissive parent, being abused, not following a religion, and having a family member who is a drug user.¹⁵ In contrast, Galduróz et al.¹² reported in the Fifth National Survey that having a good relationship with one's parents and peer students is a protective factor for heavy alcohol use among adolescents in Northeast Brazil.

Studies that investigate the association between consequences of alcohol use/abuse and low risk perception are equally relevant as described in events of violence, traffic accidents, unprotected sex, and poor school performance among others. These studies have contributed with more input to bring together different realities allowing the development of more adequate strategies for health promotion.

The objective of the present study was to assess associations between personal, family and social environmental factors and heavy/frequent alcohol use among adolescents attending public schools so that to provide input to the formulation of health policies and actions targeting this young population in the city and semi-arid region of Bahia.

Methods

Cross-sectional study investigating factors associated with heavy/frequent alcohol use among adolescents in public schools in the city of Feira de Santana. Feira de Santana is the second largest city in the state of Bahia with an estimated population of 571,997 inhabitants, of which 66,085 are adolescents.¹⁶ In this area there is the largest highway junction in the North and Northeast region.

Multistage cluster sampling was carried out in high schools of the urban area of the city (32,395 students) including students aged between 14 and 19 years as they are better able to understand and participate in the study. There were selected 10 out of 35 schools: 1 small-, 3 medium-, 4 large-size,

and 2 special schools. The number of school classes and students from each school were then calculated. It was assumed a 10% proportion as reference with a 95% confidence level ($z = 2$) and 2% accuracy; and 20% were added for losses and refusals. The initial sample included 1,409 students ensuring proportionality and representativeness of participants.¹⁷

A pre-tested, confidential, self-administered questionnaire was used for data collection. The instrument was structured in blocks and adapted to address personal information and that related to families and social environment of adolescents. The questionnaire was developed following the World Health Organization (WHO) and the Center for Substance Abuse Treatment and Research (CETAD – Universidade Federal da Bahia) recommendations and based on other validated instruments used in similar studies.

Data collection followed a standard procedure of consecutive stages: preparation of a research manual and local staff training; preparation of schools; information on the study; free choice to participate was ensured; preparation of the collection environment (classrooms) – school desks were lined up and no teacher was in the classroom at the time of collection, researchers refrained from close contact with students and all completed questionnaires were returned in a drop-in box that was sealed and coded ensure anonymity¹⁸ –, preparation of a manual for data entry and validation of the database.

Only those students who reported alcohol experimentation/use were analyzed in the study, totaling 776 adolescents. Exposed students were those who reported heavy/frequent alcohol use and non-exposed were those who reported experimentation/use less than every weekend. The WHO (1981) defines frequent use as alcohol consumption equal to or greater than six times during the 30 days preceding the study and heavy use as alcohol consumption equal to or greater than 20 times during the previous 30 days. In this study, for the purpose of equivalence, heavy/frequent users were

those who reported alcohol use at least every weekend.¹⁹

We calculated the prevalence (P) and prevalence ratio (PR) to assess potential associations between the main variable heavy/frequent consumption and covariables (personal information, characteristics of experimentation/use, family, interpersonal and social environmental factors), assuming an error of 0.05 and 95% confidence interval for statistically significant associations. The study database was created using SPSS 9.0 for Windows.

The present study is part of the Comprehensive Health and Risk Prevention for Adolescents and Youth Project and was approved by the Research Ethics Committee of Universidade Estadual de Feira de Santana (UEFS) (Protocol No. 006/2002) according to Resolution 196/96 of the Brazilian National Health Council.²⁰

Results

The study sample consisted of 766 students aged 14 to 19 years attending state public schools in Feira de Santana. The prevalence of alcohol use was 53.5% among those who reported use equal to or less than once a month; 29% from 1 to 3 times a month; 13.1% frequent use; and 4.4% more than during weekends (Table 1).

Most adolescents were 17 to 19 years (66.2%), females (58%), and were attending the first year of high school (43.7%). They mostly lived with their parents (56.1%) and were provided by them (65.5%). Of all adolescents participating in the study, 90.2% claimed to have good knowledge on PDs and the media was their main source of information (88.2%) (Table 1).

Table 2 shows that frequent/heavy alcohol use was significantly associated with personal, and family covariables and consumption characteristics: age 17 to 19 years (PR 1.20, 95% CI 1.08–1.34); male (PR 1.30, 95% CI 1.08–1.57); early initiation of alcohol use (PR 1.32; PR 1.06–1.66); influence on sex performance (PR 2.12, 95% CI 1.44–3.13); casual sex partner (PR 1.61, 95% CI 1.03–2.51);

alcohol users in the family (PR 1.70, 95% CI 1.33–2.17); other PD users in the family (PR 2.51, 95% CI 1.47–4.3); low maternal schooling (PR 1.50, 95% CI 1.09–2.05); and living with a partner (PR 4.71, 95% CI 1.68–13.20).

Frequent/heavy alcohol use showed a positive (significant) association with some motivations and consequences of use (Table 2): pleasure (PR 1.86, 95% CI 1.22–2.85); amusement (PR 1.53, 95% CI 1.15–2.03); anxiety (PR 2.19, 95% CI 1.18–4.07); to get drunk (PR 2.02, 95% CI 1.62–2.51); aggressive behavior (PR 3.94, 95% CI 2.28–6.81); missing school/work (PR 8.61, 95% CI 3.25–22.82) and use of other PDs (PR 3.61, 95% CI 1.62–8.04).

Table 3 shows there was found a positive (significant) association between environmental factors and heavy/frequent alcohol use such as personal income (PR 1.26, 95% CI 1.04–1.53); drug trafficking in the area (PR 1.36, 95% CI 1.11–1.66); drinking at their friends' home (PR 1.72, 95% CI 1.29–2.28) and nearby school (PR 4.17, 95% CI 2.14–8.11) and in bars, discos and nightclubs (PR 2.06, 95% CI 1.64–2.58). It is worth noting the low impact of prevention activities carried out at school (PR 3.63, 95% CI 1.64–8.01).

Discussion

Studies on substance use often have to address technical-operational issues involving limitations of analysis and potential prevalence bias²¹ as well as issues related to reliability of self-administered questionnaires. This study questionnaire collects self-reported information that is used for assessing exposure, which may be influenced by feelings of embarrassment, attitudes such as lack of attention/seriousness, concerns about confidentiality – all factors that may compromise the respondents' answers and, consequently, the study results.^{9, 10, 22, 4} Thus, data collection in this study followed a careful procedure to control for ethical and sensitive issues, according to recommendations of a reference center specialized PD user care.

The literature shows, based on reports of

Tabela 1 – Características sócio-demográficas, familiares e sócio-ambientais dos adolescentes usuários de bebidas alcoólicas, Escolas Públicas Estaduais e Urbanas, Feira de Santana, Bahia, 2004.

Table 1 - Sociodemographic, social environmental and family characteristics of adolescent users of alcohol, public urban schools, city of Feira de Santana, northeastern Brazil, 2004.

Sociodemographic, social environmental and family characteristics	N	%
Age* (N=760)		
14–16 years old	257	33,8
17–19 years old	503	66,2
Gender* (N = 767)		
Female	445	58,0
Male	322	42,0
School grade * (N =766)		
grade 9	334	43,6
grade 10	239	31,2
grade 11	190	24,8
accelerated learning program	3	0,4
Personal income* (N =769)		
Get money from parents	504	65,5
Work	319	41,5
Get money from relatives	53	6,9
Other	30	3,9
Get money from other people	19	2,5
Current living arrangements* (N=768)		
Both parents	431	56,1
Mother	197	25,7
Other1	132	17,2
Father	32	4,2
Partner	14	1,8
Occupation status of parents or guardians*2 (N=749)		
Employed	624	82,3
Retired	155	20,7
Unemployed	120	16,0
Income from other sources	19	2,5
Good knowledge on drugs (N=747)		
Yes	674	90,2
Source of information on psychoactive drugs (N=774)		
Media	683	88,2
School/seminars/talks	483	62,4
Family	397	51,3
Friends	381	49,2
Church	188	24,3
Other ³	36	4,7
School activities on psychoactive drugs (N=757)		
Yes	571	75,4
Alcohol use (N=776)		
Less than once a month	415	53,5
1 to 3 times a month	225	29,0
Frequent use (every weekend)	102	13,1
More than on every weekend	34	4,4

* Missing information: age (16 respondents), grade (10 respondents), sex (9 respondents), income (7 respondents), living status (8 respondents), occupation status of parents or guardians (26 respondents).

1 Alone, other relatives, other people; 2 Multiple answers; 3 Former users, users, internet, books

Tabela 2 - Razão de prevalência do consumo de bebidas alcoólicas, segundo covariáveis pessoais, familiares e características de iniciação, Escolas Públicas Estaduais e Urbanas, Feira de Santana, Bahia, 2004.

Table 2 - Prevalence of the consumption of alcoholic beverages according to personal and family co-variables and characteristics of initiation, Public and Urban Schools, Feira de Santana, Bahia, 2004.

Personal and family co-variables and initiation characteristics	Alcohol use				PR	95% CI
	Heavy/frequent use		≤ 3 times a month			
	n	%	N	%		
Age						
14–16 years old	31	23,1	226	36,1	0,64	0,46-0,89*
17–19 years old	103	76,9	400	63,9	1,20	1,08-1,34*
Gender						
Male	70	51,9	252	39,9	1,30	1,08-1,57*
Female	65	48,1	380	60,1	0,93	0,77-1,12
Age at initiation						
≤ 13 years old	52	47,3	197	35,7	1,32	1,06-1,66*
14–15 years old	45	40,9	244	44,2	0,93	0,73-1,18
16–17 years old	8	7,3	100	18,1	0,40	0,20-0,80*
18 years old	5	4,5	11	2,0	2,28	0,81-6,44
Interference of alcohol use with sex						
Yes	29	24,4	68	11,5	2,12	1,44-3,13*
Characterization of interference of alcohol use with sex						
Casual sex	15	60,0	25	37,3	1,61	1,03-2,51*
No condom use	7	28,0	12	17,9	1,56	0,69-3,52
Difficult to put condoms on	4	16,0	11	16,4	0,97	0,34-2,78
Sex in exchange for money or drugs	1	4,0	5	7,5	0,54	0,07-4,37
Alcohol abuser in the family						
Yes	55	42,3	154	24,9	1,70	1,33-2,17*
Users of other PDs in the family						
Yes	18	14,0	34	5,6	2,51	1,47-4,30*
Current living arrangements* (N=768)						
Both parents	78	58,2	353	55,7	1,05	0,89-1,23
Mother	33	24,6	164	25,9	0,95	0,69-1,32
Other*	18	13,4	114	18,0	0,75	0,47-1,18
Partner	7	5,2	7	1,1	4,73	1,69-13,27*
Father	3	2,2	29	4,6	0,49	0,15-1,58
Mother's schooling						
Yes	66	64,7	372	74,8	0,86	0,74-1,01
No	35	34,3	114	22,9	1,50	1,09-2,05*
Do not know	1	1,0	11	2,0	0,44	0,06-3,39
Motivations for alcohol use						
Out of curiosity	42	34,7	277	48,8	0,77	0,59-0,99*
Pleasure	24	19,8	65	11,4	1,86	1,22-2,85*
Shyness	18	14,9	105	18,5	0,87	0,55-1,37
Amusement	42	34,7	139	24,5	1,53	1,15-2,03*
Anxiety	13	10,7	30	5,3	2,19	1,18-4,07*
Peer acceptance	4	3,3	18	3,2	1,12	0,39-3,26
Other	13	10,7	79	13,9	0,83	0,48-1,44
Behavior after experimentation						
None	50	41,7	399	65,8	0,59	0,47-0,73*
ot drunk	64	53,3	149	24,6	2,02	1,62-2,51*
Aggressive behavior	21	17,5	25	4,1	3,94	2,28-6,81*
Injured/caused accidents	3	2,5	3	0,5	4,69	0,96-22,98
Missed school/work	11	9,2	6	1,0	8,61	3,25-22,82*
Used another type of PDs	10	8,3	13	2,1	3,61	1,62-8,04*
Other	7	5,8	21	3,5	1,56	0,68-3,60

*Alone, other relatives and other people.

Tabela 3 - Razão de prevalência do consumo de bebidas alcoólicas, segundo covariáveis socioambientais, Escolas Públicas Estaduais e Urbanas, Feira de Santana, Bahia, 2004.

Table 3 - Prevalence of the consumption of alcoholic beverages according to socio-environmental co-variables, Public and Urban Schools, Feira de Santana, Bahia, 2004.

Social environmental factors	Social environmental factors					
	Heavy/frequent use		≤ 3 times a month		PR	IC (95%)
	N	%	N	%		
Personal income						
Get money from parents	72	53,7	432	68,0	0,79	0,67-0,93*
Work	67	50,0	252	39,7	1,26	1,04-1,53*
Get money from relatives	10	7,5	43	6,8	1,10	0,57-2,14
Get money from other people	6	4,5	13	2,0	2,19	0,85-5,65
Other ¹	6	4,5	24	3,8	1,18	0,49-2,84
Violence in the neighborhood						
Thefts/robberies	106	80,9	474	74,8	1,08	0,98-1,19
Homicides	60	45,8	265	41,8	1,10	0,89-1,35
Rapes	44	33,6	185	29,2	1,15	0,88-1,51
Drug trafficking	65	49,6	231	36,4	1,36	1,11-1,66*
Other ²	2	3,8	15	4,7	0,65	0,15-2,79
Place of alcohol use						
Home	44	36,7	163	28,7	1,28	0,98-1,67
Home of friends	44	36,7	121	21,3	1,72	1,29-2,28*
Nearby school	15	12,5	17	3,0	4,17	2,14-8,11*
Bars, discos and nightclubs	61	50,8	140	24,7	2,06	1,64-2,58*
Parties	83	69,2	409	72,1	0,96	0,84-1,09
Other ³	4	3,3	18	3,2	1,05	0,36-3,05
Educational activities performed at school						
Yes	105	80,8	466	74,3	1,09	0,99-1,20
Educational activities at school						
Adds a lot to their knowledge	54	61,4	260	62,7	0,98	0,82-1,17
Adds little to their knowledge	24	27,3	142	34,2	0,80	0,55-1,15
Adds nothing to their knowledge	10	11,4	13	3,1	3,63	1,64-8,01*

¹ Gets Money from boyfriend, husband works sometimes.

² Kidnapping, beating, fights.

³ Concerts, shopping mall, home of relatives.

other researchers in this field of knowledge, that the most widely used approach for indicators and prevalence studies including young people are self-administered questionnaires applied in schools.^{23,11} When consistently applied, this approach ensures the collection of reliable information.²⁴

Adolescence is a life phase characterized by physical, psychological and social changes,^{25,26} but most importantly it is a time of

transition from the family into a broader social environment when adolescents push the limits and question the standards²⁷ seeking to strengthen their behaviors.²⁸ This process involve greater exposure to multiple risks that can affect the basic skills required to their social inclusion.²⁹

With respect to PD use, it is known that alcohol is socially accepted since the Ancient Age.⁵ Alcohol has been identified as

the most commonly consumed substance among adolescents^{1,15,6,30,4} and alcohol abuse has grown in recent decades.²³ There is a growing concern about alcohol use patterns and related behaviors in adolescents based on indicators of social, economic and health impact.^{19,32,33}

Alcohol use by adolescents can be associated to a number of implications, especially greater peer acceptance, increased alcohol use, low-risk perception, greater risk of injuries, violence, sexually transmitted diseases, among others.³⁴

In Brazil, the prevalence of alcohol experimentation and use among adolescents varies depending on the context studied. In Feira de Santana, the prevalence of use "less than once a month" was 20.7% in younger (14–16 years old) and 33% for older adolescents (17–19 years old), which is lower than that reported for "lifetime use and use in a year" in other recent studies with Brazilian students living in medium-size and large cities.^{23,8,9,10,35,12,36,13}

As for heavy/frequent use, the study findings were consistent with those reported in the city of Pelotas (5% and 16.8%, respectively) and São José do Rio Preto (1.4% and 15.1%)⁹ and corroborate the findings of Galduróz et al.¹² in a study conducted with adolescents in schools in 27 Brazilian cities (6.7% and 11.7%).

Adolescents reported good knowledge on PDs and they had access to information especially in the media (television, radio, magazines and newspapers). It evidences the media influence and involvement in determining youth behaviors, suggesting the need for actions promoting rational and educational media use and increased regulation of alcohol advertising.

Some authors point to the influence of social environments for an increased prevalence of alcohol use, highlighting the importance of taking into consideration sociodemographic factors in the planning of policies and prevention programs.^{9,37,23}

The literature shows different patterns of alcohol use by gender and age.¹ In the present study, there was found a signifi-

cant association between late adolescence (17–19) and heavy/frequent alcohol use with rates proportional to age; older adolescents reported 1.20 times higher consumption than younger ones. These results corroborate similar studies conducted in schools in large Brazilian cities.^{7,9,10,36} Heavy/frequent alcohol use was also significantly more prevalent among males, and the measure of association (PR) was 1.3. Similar studies with students^{9,7,38,39} in different cities in South and Southeast Brazil also found the same association. Similar results were reported by Horta, Horta and Pinheiro⁴⁰ in a household survey with adolescents in the city of Pelotas.

The present study also found a positive association between heavy/frequent use and early experimentation (younger than 13). These findings corroborate other studies conducted with public and private school students, such as that carried out in the city of Paulínia, Southeastern Brazil, that found a significant association between early initiation of alcohol use, more episodes of alcohol intoxication, and use of tobacco and other PDs.¹³

Despite sale of alcohol to adolescents are prohibited according to the Brazilian Statute for Children and Adolescents,⁴¹ in Brazil young people experiment alcohol at early ages, which affects their pattern of use and exposure to risk factors and have an impact on morbidity and mortality rates from external causes and injuries.⁴²

Injuries are the second leading cause of death among Brazilian adolescents, following homicides, with greater impact on males.^{42,43,44} Alcohol use is the main cause of injuries and the Institute of Applied Economic Research (IPEA) estimated an economic impact of about R\$ 24 billion in 2006.⁴³

Personal income also was positively associated with heavy/frequent alcohol use among adolescents in Feira de Santana, which corroborates the findings of Galduróz et al.,¹² Souza, Areco and Silveira Filho⁴⁵ and Souza and Silveira Filho.³⁵ A study conducted in Campinas, southeastern Brazil, found a risk of heavy alcohol use 2.2 times higher

among working adolescents.

The authors studying the relationship between work and PD use argue that stress may be a potential factor explaining this association due to working conditions and consequent early work commitment with socialization patterns linked to work, adult world and economic independence.^{46,47} These arguments contrast with the social acceptance of work and the notion that reducing leisure time may represent a protective factor for heavy/frequent use of PDs.

Carvalho and Carlini-Cotrim⁴⁷ explained that the association between PD use and leisure time follows a prevention model, known for offering alternatives. These authors investigated more than 16,000 school adolescents in 15 Brazilian cities and concluded that alcohol prevention programs developed to merely, often involuntarily, involve people in leisure-time activities have actually little effect. And rather than just keeping adolescents busy these programs should be an opportunity for them to develop their potentialities.

An interesting finding of the original study on which the present study was based³⁰ concerns the association between alcohol use and vulnerability and risk factors, illustrated by the finding of a positive association between alcohol use and casual sex. Epidemiological studies focusing on adolescence also reported similar findings, pointing to the relationship between sexual risk behavior and PD use.^{8,48,49} There is a consensus in the literature regarding the association between early sexual initiation and use of PDs, suggesting a need for integrated prevention actions for STD/AIDS and PD use.

Pechansky et al.¹⁵ stress among factors associated with alcohol use in students those related to the family structure such as separation of parents, parental conflicts, excessive permissiveness, abuse, no religious practice, and drug users in the family. Some studies points to the importance of taking into consideration the family and social and cultural environments in the implementation of policies and prevention and intervention programs with the involvement of

different actors that influence behaviors and lifestyle habits among young.

With regard to family factors, adolescent health programs have to consider family structure, living environment and housing conditions. Some authors underline the importance of the family as either a risk or protective factor for alcohol abuse, dependent on trust relationship, communication between members, and parent behavior model.^{32,50,51,52,53}

Studies on use of PDs among adolescents that investigated family habits have concluded that certain patterns of family structure and habits seem to play a role in the development of behaviors.⁵⁴ A study carried out in a reference center for PD dependent adolescents in Rio de Janeiro showed that the prevalence of PD use in families of adolescent users was four times higher than that seen in population-based studies in Brazil.⁵⁵

There is a consensus that PD use in the family seems to have a negative effect as it interferes in a conflicting manner with affective bonds, and authority, and may result in excessive permissiveness, and poor monitoring, among others. In contrast, healthy family relationships act as protective factors in setting standards for social behaviors such as use of PDs. However, based on their experience, some authors⁵² point out that alcohol abuse by parents and their children is not a one-dimensional relationship.

The present study also found that low maternal schooling was more prevalent among adolescents reporting heavy/frequent alcohol use. Souza, Areco and Silveira Filho⁴⁵, in a study conducted with adolescents from state schools in Cuiabá, central-western Brazil, reported a positive association between recent alcohol use and low schooling of family head. These results seem to indicate greater role of the mother in child rearing as more than 25% of adolescents said they lived with one parent (mother) only.

Of the environmental factors studied, frequent/heavy alcohol use was associated with living with a partner, area of residen-

ce, drug trafficking in the neighborhood, drinking at their friends' home, in bars and nearby school. According to Schenker and Minayo,⁵⁰ the family is a prime locus for primary socialization and although adolescents are expected to focus their attention on their peers, outside the family, to understand them it is crucial to examine their integration into the environment family where they learn how to socially interact. A study conducted with adolescents in a university health service (RJ) found that living with both parents was a protective factor for PD use⁵⁵

Having good knowledge on PDs is supposedly a protective factor for frequent/heavy alcohol use. However, in this study, we can infer that PD prevention activities carried out at school did not contribute much to the students' understanding, showing a positive association with frequent/heavy alcohol use. This finding points out to a need for reviewing the strategies currently used and actions should be implemented with realistic expectations and based on the adolescent's demands and needs.

In conclusion, epidemiological studies on alcohol abuse provide input to support the implementation of policies and prevention actions as well as educational programs targeting adolescents, families and schools.

Conclusions

1. Male adolescents aged 17 to 19 years

who had an early initiation of alcohol use (before the age of 13) had the highest prevalence of heavy/frequent alcohol use;

2. The main reasons for heavy/frequent alcohol use was pleasure, amusement and anxiety;
3. Alcohol and other PD use in the family, low maternal schooling, living with a partner and having a paid job were some of the main personal and family factors associated to frequent/ heavy alcohol use;
4. Environmental factors associated with heavy/frequent alcohol use included drinking with friends and drug trafficking in the neighborhood;
5. The consequences of heavy/frequent alcohol use included casual sex, aggressive behaviors, absenteeism and use of other PDs.

Final comments

Prevalence studies, despite limitations of analysis, can provide valuable input for planning, prevention and injury reduction strategies. To address the issue of excessive intake of alcohol requires both strengthening of policies and programs that promote social awareness and control of supply and access to alcohol as well as awareness in the family environment on the potential protective and risk factors involving parental habits.

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