

Revista de Saúde Pública
ISSN 0034-8910 versão impressa

Rev Saúde Pública 2004; 38(1)

Psychoactive drugs use by school-age adolescents, Brazil

José Luiz Guimarães, Pedro Henrique Godinho, Rubens Cruz, Jair Izaías Kappann and Lairto Alves Tosta Junior

Departamento de Psicologia Experimental e do Trabalho da Faculdade de Ciências e Letras da Universidade do Estado de São Paulo (UNESP). Assis, SP, Brasil

ABSTRACT

To quantify psychoactive drug use and investigate use-related variables among students of Assis, Brazil, a questionnaire was administered to collect sociodemographic data and identify the pattern of non-medical use of psychoactive drugs in 20% of public and private school students. The largest consumption indexes for *lifetime use* were seen for alcohol (68.9%) and tobacco (22.7%). Drugs most often used were: solvents (10.0%); marijuana (6.6%); benzodiazepines (3.8%); amphetamines (2.6%); cocaine (1.6%); and anticholinergics (1.0%).

Keywords

Substance-related disorders, epidemiology. Street drugs. Adolescent. Alcohol drinking, epidemiology. Smoking, epidemiology. Health promotion. Health surveys. Questionnaires. Socioeconomic factors.

INTRODUCTION

Drug consumption has become a major concern in the Brazilian society. Epidemiological research on psychoactive drug use is especially relevant for the development of appropriate and successful public health policies for preventing substance abuse (Bucher,² 1992).

Many studies on psychoactive drug use have been carried out among young students in Brazil (Bucher,² 1992; Muza et al,⁴ 1997). The most comprehensive ones were conducted by the CEBRID – *Centro Brasileiro de Informações sobre Drogas Psicotrópicas* (Brazilian Data Institute on Psychoactive Drugs). The Institute has carried out surveys in 10 different Brazilian capitals in 1987, 1989, 1993, and 1997 (Galduróz et al,³ 1997). The purpose of the present study was to quantify psychoactive drug use among students in the city of Assis, São Paulo, Brazil, and to investigate drug use-related variables.

Methods

Study subjects comprised middle and high school students of Assis in the state of São Paulo. With a population of 87,251 inhabitants, Assis is located 450 km far from the state's capital. The study sample consisted of 20% of total students in 18 city schools and 1,803 questionnaires were administered in public schools and 320 in private schools.

School classes were randomly drawn at the time of questionnaire administration and proportionally to school, term, and school year. Trained university students simultaneously administered questionnaires to all classes in the school to prevent students from knowing beforehand the questionnaires' contents. Students were informed on the study's purposes and asked to participate voluntarily and anonymously. Only students in class at the time of questionnaire application were included in the study. Teachers were asked to leave the classroom to avoid making students uncomfortable.

It was applied a close anonymous self-administered questionnaire, similar to that used by Galduróz et al¹ (1997), which was developed according to World Health Organization criteria. There were 43 questions on pattern of psychotropic use, students' school attendance, and sociodemographic data based on the ABIPEME – *Associação Brasileira dos Institutos de Pesquisa de Mercado* (Brazilian Institute Association of Market Research)¹ socioeconomic rating system. A question with fictitious drug names was included to detect inconsistencies and lack of attention when answering the questionnaire.

Classification criteria for drug use frequency were based on Galduróz et al.,³ 1997. These authors defined five drug use patterns: lifetime, yearly, monthly, regular, and heavy use.*

*Lifetime use: psychoactive drug use at least once in a lifetime; yearly use: drug use in the 12 month-period prior to the study; monthly use: drug use in the last 30 days; regular use: drug use 6 or more times in the last 30 days, and heavy use: drug use 20 times or more in the month prior to the study.

Answers were entered in a data base (Microsoft Excel 2000 electronic table). Data analysis was performed using Statistics 5.0 (1995) and Minitab (1994) software programs. Chi-square test was used for comparison. Significance level was set at $\alpha=0.05$ at 95% confidence interval.

During critical data ascertainment, blank questionnaires, questionnaires with more than three missing answers, and those where a positive answer was given to the fictitious drug question were excluded from the analysis.

Results

Of total participants, there were 46.9% male and 48.7% female students aged 13-15 years (36.1%), 16-18 years (30.0%), and 10-12 years (27.2%). Only 4.4% were over 18. With regard to socioeconomic status, most belonged to Class C (45.9%), followed by Class B (23.7%), Class A (11.5%), Class D (14.3%), and a minority to Class E (1.4%). Of all, 3.2% did not provide information on social class.

Psychoactive drugs mostly used in a lifetime were: alcohol (68.9%), tobacco (22.7%), solvents (10.1%), marijuana (6.6%), benzodiazepines (3.8%), amphetamines (2.6%), and cocaine (1.6%) (Table).

Students who used drugs in a lifetime showed higher school absence (72.5%) than non-users (58.5%) ($p < 0.05$).

As for sex, lifetime use of marijuana, cocaine, and solvents was higher in male students and benzodiazepines in female students. The mostly used benzodiazepine was Diazepam® (41.2%), followed by Lexotan®. Among most commonly referred amphetamines were Inibex® and Hipofagin®.

There was no statistically significant difference in both sex groups regarding other drugs, including tobacco and alcohol.

Table - Lifetime use of psychoactive drugs by 2,123 middle and high school students of public and private schools in Assis, as a percentage, per sex, age, and drug.

Drugs**	Sex (%)		UK	Age/years (%)				UK
	M	F		10-12	13-15	16-18	>18	
Marijuana	8.7	4.8*	4.3	0.7	4.8	11.8	21.3	10.4
Cocaine	2.5	0.9*	1.1	0.2	1.0	2.5	9.6	2.1
Amphetamines	1.8	3.5*	1.1	0.9	2.9	3.4	5.3	2.1
Solvents	12.6	7.9*	6.4	7.1	10.0	12.4	10.6	14.6
Benzodiazepines	2.8	4.9*	1.1	0.5	2.9	7.1	8.5	4.2
Anticholinergics	1.4	0.7	1.1	-	1.6	0.8	4.3	2.1
Barbiturates	0.4	0.6	1.1	0.2	0.4	0.9	1.1	-
Opium products	0.6	0.3	-	-	0.8	0.3	1.1	-
Syrups	0.9	0.4	1.1	0.2	1.3	0.5	-	-
Hallucinogens	0.7	0.3	-	-	0.9	0.3	1.1	-
Appetite stimulants	0.4	0.1	-	-	0.3	0.3	-	-
Total of users**	19.7	16.0*	10.6	9.0	15.8	24.6	33.0	20.8
Tobacco	23.1	22.7	19.1	5.4	21.6	36.6	43.6	25.0
Alcohol	70.7	68.4	55.3	43.7	73.8	84.6	83.0	62.5

*Statistically significant difference between sexes, Chi-Square test, $p < 0.05$.

**Except for tobacco and alcohol.

UK – Unknown.

Comparison between public and private schools

Besides differences associated with socioeconomic variables between public and private school students, it was found that 16.6% of public school students have ever used any drug (except tobacco and alcohol) and 2.4% referred regular use. Drugs most commonly used were: alcohol (67.6%), tobacco (22.2%), solvents (8.9%), marijuana (6.3%), benzodiazepines (3.5%), amphetamines (2.2%), and cocaine (1.7%). Heavy use of marijuana was seen in 1.0%, followed by solvents in 0.6%.

In private schools, lifetime drug use was higher for all drugs 22.5% ($p < 0.05$), solvents, 16.9% ($p < 0.05$), amphetamines, 4.7% ($p < 0.05$). There was no statistical significant difference for other drugs when compared to public schools: alcohol (76.2%), tobacco (25.6%), marijuana (8.4%), benzodiazepines (5.0%), and cocaine (1.2%). Of them 1.9% referred heavy use of solvents and 0.9% of marijuana.

In public schools, higher drug use was seen among students over 16, which could probably be due to more available resources since many public school students at this age stated they had a job. In private schools, drug use in the age group 16-18 was higher in all use patterns. In contrast, drug use in the age group 10-12 was higher in public schools.

DISCUSSION

Male students used more drugs than female students. It is worth noting there was found a clear female preference for licit drugs (prescription drugs such as benzodiazepines and amphetamines) and male preference for illicit drugs, which corroborates the trend identified in other studies (Bucher,² 1992; Galduróz et al,³ 1997; Muza et al,⁴ 1997; Zilberman,⁵ 1998).

A comparison between public and private schools showed a higher prevalence of drug use in public schools, which could be associated to the students' higher social status and more availability of resources to buy drugs.

Further conclusions are hindered due to the scarcity of epidemiological studies in private schools since researchers do not have easy access to data collection. (Bucher,² 1992).

Drug use seen in the schools of Assis is similar to that described in CEBRID studies in the city of São Paulo (19% lifetime use) but it is slightly lower than that found by the same authors in other Brazilian capitals (an average of 24.7% lifetime use) (Galduróz et al,³ 1997), and much lower than that seen in developed countries (Muza et al⁴).

Psychoactive drug use has been ubiquitous in man history with varying drugs, amounts and routes. A more marked use of a given drug at a time suggests specific factors to that time in history. Thus, drug abuse is more a symptom than the cause of problems in today's society and for that it should be tackled taking into account its complexity and magnitude. The most efficient action to lessen the drug problem is to develop specific prevention policies for each social stratum and age group focusing on health promotion and respect for life.

REFERENCES

1. [ABIPEME] Associação Brasileira dos Institutos de Pesquisa de Mercado .Proposição para um novo critério de classificação socioeconômica. São Paulo, 1978. p. 15.
2. Bucher R. Drogas e drogadição no Brasil. Porto Alegre: Artes Médicas; 1992.
3. Galduróz JCF, Noto AR, Carlini EA. IV levantamento sobre o uso de drogas entre estudantes de 1º e 2º graus em 10 capitais brasileiras-1997. São Paulo: Centro Brasileiro de Informações sobre Drogas Psicotrópicas /Escola Paulista de Medicina; 1997.
4. Muza GM, Bettioli H, Muccillo G, Barbieri MA. Consumo de substâncias psicoativas por adolescentes escolares de Ribeirão Preto, SP. I - Prevalência do consumo por sexo, idade e tipo de substância. *Rev Saúde Pública* 1997;31:21-9.
5. Zilberman ML. Características clínicas da dependência de drogas em mulheres [tese de doutorado]. São Paulo: Faculdade de Medicina da Universidade de São Paulo; 1998.

Address to correspondence

José Luiz Guimarães
Av. Dom Antônio, 2.100 Parque Universitário
Caixa Postal 65
19806-900 Assis, SP, Brasil
E-mail: jluiz@assis.unesp.br

Financed by Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP - Processes ns. 99/08304-0 and 99/08305-6).

Received on 5/9/2002. Reviewed on 10/7/2003. Approved on 6/8/2003.

revsp@org.usp.br