

## PROFILE OF THE USE OF LEGAL AND ILLEGAL DRUGS BY COLLEGE STUDENTS AT A PRIVATE UNIVERSITY

*Rizângela Lyne Mendes de Freitas<sup>1</sup>*  
*Danelle da Silva Nascimento<sup>2</sup>*  
*Rivelilson Mendes de Freitas<sup>3</sup>*  
*Gláucio Barros Saldanha<sup>4</sup>*  
*Roberta Mayara de Moura Rocha<sup>5</sup>*  
*Pauline Sousa dos Santos<sup>5</sup>*

The study investigated the prevalence of legal and/or illegal drugs among students enrolled in Health Sciences Courses (HSC) at a university located in the Quixadá municipality, State of Ceará. The study was conducted through a questionnaire administered to 345 HSC students. The resulting profile was of single white females, ages 16-20 years old, unemployed, with a household income of 2-4 minimum wage salaries. The vast majority does not use any legal or illegal drugs. However, 39 and 16% use alcohol and cocaine, especially for the high, and mainly because of peer pressure during social events. The majority of the students self-medicate. The study suggests that alcohol and drug use within this population is alarming and that new surveys need to be conducted.

Descriptors: Epidemiology; Alcohol beverages; Street drugs; Students; Universities.

<sup>1</sup> Doctoral student, Universidade Federal da Bahia, Salvador, BA, Brazil. Assistant Professor, Faculdade Ateneu, Fortaleza, CE, Brazil.

<sup>2</sup> RN, Substitute Professor, Fundação Universidade Estadual do Piauí, Teresina, PI, Brazil.

<sup>3</sup> PhD, Adjunt Professor, Universidade Federal do Piauí, Teresina, PI, Brazil.

<sup>4</sup> Doctoral student, Universidade Federal da Bahia, Salvador, BA, Brazil. Professor, Faculdade Católica Rainha do Sertão, Quixadá, CE, Brazil.

<sup>5</sup> Undergraduate student in Pharmaceutical Sciences, Universidade Federal do Piauí, Teresina, PI, Brazil.

### Correspondence

Rivelilson Mendes de Freitas  
Universidade Federal do Piauí  
Rua Cícero Eduardo, S/N  
Bairro: Junco  
CEP: 64600-000, Picos, PI, Brasil  
E-mail: rivelilson@pq.cnpq.br

## **PERFIL DA UTILIZAÇÃO DE DROGAS LÍCITAS E ILÍCITAS POR UNIVERSITÁRIOS DE UMA INSTITUIÇÃO PRIVADA**

O trabalho investigou a prevalência do uso de drogas lícitas e/ou ilícitas entre os universitários dos Cursos de Ciências da Saúde de uma instituição de ensino superior do município de Quixadá, Ceará. O estudo foi realizado por meio de um questionário aplicado entre 345 universitários dos Cursos de Ciências da Saúde em questão. O perfil dos universitários estudados é de mulheres na faixa etária de 16 a 20 anos, solteiras, brancas, que não exerciam atividade remunerada, com renda familiar de 2 a 4 salários-mínimos. A grande maioria não fazia uso de nenhuma droga lícita ou ilícita. Entretanto, entre 39 e 16% fazia uso do álcool e da cocaína, respectivamente, devido, em especial, à sensação de alegria, e, principalmente, pela influência dos amigos em eventos sociais. A maioria dos universitários pratica automedicação. O estudo realizado sugere que o problema de uso de drogas e álcool nessa população é preocupante e novos levantamentos precisam ser realizados.

Descritores: Epidemiologia; Bebidas alcoólicas; Drogas ilícitas; Estudantes; Universidades.

## **PERFIL DE LA UTILIZACIÓN DE DROGAS LÍCITAS E ILÍCITAS POR UNIVERSITARIOS DE UNA INSTITUCIÓN PRIVADA**

El trabajo investigó la superioridad del uso de drogas lícitas y/o ilícitas entre los universitarios de los Cursos de Ciencias de la Salud (CCS) de una institución de enseñanza superior del municipio de Quixadá, Ceará. El estudio fue realizado por medio de un cuestionario aplicado entre 345 universitarios del CCS en cuestión. El perfil de los universitarios estudiados es de mujeres con banda etaria de 16 a 20 años, solteras, blancas, que no ejercen actividad remunerada con renta familiar de 2 a 4 salarios mínimos. La grande mayoría no hace uso de ninguna droga lícita o ilícita. Mientras, 39 y 16% hace uso del alcohol y de la cocaína, respectivamente, debido en especial a la sensación de alegría, y principalmente por la influencia de los amigos en eventos sociales. La mayoría de los universitarios practica automedicación. El estudio realizado sugiere que el problema de uso de drogas y alcohol en esa población es preocupante y nuevos levantamientos necesitan ser realizados.

Descriptores: Epidemiología; Bebidas alcohólicas; Drogas ilícitas; Estudiantes; Universidades.

### **Introduction**

An estimated 200 million people worldwide use illegal substances, among which about 25 million could be considered as “problematic drug users”. According to the world report on drugs, the most commonly used illegal

drugs in the world are the marijuana, amphetamine-type stimulants, opioids, and cocaine. Worldwide, the illegal drug consumption is not uniform: while in Europe and Asia, the opioids are predominant; in the Americas, there

is a high demand for the treatment of cocaine abuse, and in Africa, the demand is for treatments related to marijuana use<sup>(1)</sup>.

In Brazil, 22.8% of the general population have experimented with psychoactive drugs (excluding alcohol and tobacco), according to a household survey conducted in 2005<sup>(2)</sup>. Among these substances, the highest prevalence was for marijuana, solvents, benzodiazepines, anorexigenics, stimulants, and cocaine. The lifetime use of tobacco, observed in this survey, was about 44%, with higher prevalence among males<sup>(3)</sup>.

Worldwide, it is estimated that approximately 1.3 billion people are cigarette smokers or use other types of tobacco products<sup>(4)</sup>. Tobacco use is a leading cause of illness and premature death in the world<sup>(5)</sup>, contributing to a significant portion of the global burden of disease, and it is rapidly increasing in the developing countries and among women<sup>(6)</sup>. About half of smokers die from conditions associated with smoking. Although the earlier cessation of smoking is the most beneficial, quitting at any time is always advantageous, due to the improved prognosis and quality of life<sup>(7)</sup>.

When comparing different age groups, it can be seen that the ages between 18 and 24 years have the highest prevalence for a lifetime use of marijuana and inhalants, while in the population between 25 and 34, it is more pervasive the lifetime use of cocaine and stimulants/anorexigenics. Women are more likely to abuse prescription drugs, among them stimulants/anorexigenics, benzodiazepines, codeine-based syrups, opiates, and barbiturates<sup>(8)</sup>.

The abuse of psychoactive substances is a public health problem of considerable relevance to universities. In the United States, this behavior is the main cause of injury and death among students ages 18 to 25<sup>(8)</sup>. Alcohol is the main psychoactive substance of choice among American college students; therefore, most of the problems are related to the consumption of alcoholic beverages. However, college students also suffer serious consequences resulting from the use of illegal substances or their use in combination with alcohol, so that the use of other substances, including tobacco, marijuana, and cocaine is significant among this group<sup>(9)</sup>.

According to American epidemiological studies, about 30% of the students reported tobacco use in the last 30 days, about 20% or less reported using marijuana and less than 2% reported using cocaine<sup>(9)</sup>. There is also evidence that these college students are more likely to report misuse of synthetic substances, when compared with young people of the same age<sup>(10)</sup> who were not attending college.

In the general population, this age group presents the highest frequencies for the use of psychoactive substances and the incidence of risk behaviors<sup>(2)</sup>. Thus, requiring studies intended for the specific understanding of the college students' reality (encompassing most of these young people), which will facilitate the development and implementation of effective public policies to deal with the problem<sup>(11)</sup>.

Given the above, it becomes urgent and necessary a study on the drug use in our reality, and it is of the utmost importance the realization of a pharmaco-epidemiological approach and about the consequences of the abuse of legal and illegal drugs among college students. Considering the high prevalence of drug use among college students and the lack of studies, specifically in the Northeast region, the objective of this study was to determine the profile of the use of legal and illegal drugs by college students in a private university located in the municipality of Quixadá, Ceará.

## Material and Methods

Data was collected through a quantitative analytic, prospective, cross-sectional, and observational study using a standardized and validated questionnaire constructed specifically for this study, which was administered to health sciences students from a private school of higher education, in the Sertão Central region located at 165 km from Fortaleza, in the municipality of Quixadá. The school has an enrollment of 2,103 students, divided into 14 undergraduate courses, of these 1,269 are enrolled in health sciences courses; the remaining are enrolled in the fields of exact sciences and humanities. The study was conducted from August to October 2010. The study population was composed of approximately 1,269 students from the 1st to the 9th academic period, and the sample was comprised of 345 students with 239 females and 106 males, attending the following undergraduate courses: 80 from Pharmacy (representing 47% of the students enrolled in the course), 80 from Physiotherapy (40% of the course), 80 from Nursing students (24% of the course), 80 from Dentistry (27% of the course), and 25 from Biomedicine (100% of the course), in a non-probabilistic and random form.

The study included college students of both sexes from the Health Sciences courses (Pharmacy, Physiotherapy, Nursing, Dentistry, and Biomedicine) of the FCRS.

The participation was informed and voluntary. Students were required to sign the Term of Free and Informed Consent form (TFICF) prior to participation in the study. The participation was anonymous and without moral hazard for the students because it dealt primarily with statistical data.

The project was approved by the Ethics in Research Committee of the Rainha do Sertão Catholic School (FCRS), protocol No. 200100075 on 06/18/2010, in accordance with Resolution 196/96 from the National Health Council/Ministry of Health, dealing with research involving human beings.

The information regarding the drug use and other data was collected using an anonymous self-administered questionnaire, composed of objective and subjective questions related to socioeconomic data (age, gender, self-reported skin color, marital status, household income, and housing type); use of legal and illegal drug; types of self-medication, as well as the use of alcohol (alcoholism) and tobacco (smoking). The questionnaires were administered

collectively and kept anonymous. Only the students who were present in the classroom on the day of the interview were allowed to participate in the research, the exclusions were the ones who refused to participate in the survey or did not return the signed Term of Free and Informed Consent Form (TFICF).

The independent variables were the undergraduate course, age, gender, self-reported skin color, marital status, number of children, employment, housing type, household income, religion, use of legal and illegal drugs, and information related to the frequency of drug use, self-medication, and use of prescription drugs with the potential for abuse. The dependent variables were the reason that triggered this habit, the presence of smokers in the family, and the number of cigarettes smoked daily. For the data treatment, a database file was created using the Microsoft Excel program. For analysis and interpretation of our results, we used the existing studies in the literature found in the LILACS, SciELO, and ADOLEC, that were consulted during November 2010. The descriptive statistics with the use of the absolute and percentage frequency was used for the data analysis<sup>(16, 23)</sup>.

## Results

A distribution frequency, among the college students interviewed, was observed in the following health science courses: Pharmacy (23%), Physiotherapy (23%), Nursing (23%), Dentistry (23%), and Biomedicine (8%).

Of the 345 students in the sample, 69.3% (the majority) were female, 57% with ages between 16 and 20 years old, 48% were self-described as of a brown color, and 44% as white. As for marital status, 90% were single, 82% were childless, and 70% lived with parents who owned

their homes. Most students held no jobs (84%), and 63% had a household income of two to four minimum wages monthly salaries. As for religion, 90% were Catholic, 7% Evangelical and 3% Protestants (Tables 1 and 2).

As for the potential drug use, there was a consumption of 39% and 6% for legal drugs such as alcohol and tobacco, respectively, between the students of the health science courses from the studied university. It was also noted that 38% of the use were due to curiosity; 21% to peer pressure during social events, and 18% mainly due to their own volition.

Moreover, it was verified that 16% of them used cocaine and tranquilizers. Moreover, 35% of college students declared no drug use at all, legal or illegal. The students highlighted peer pressure (13%) and the high (21%) caused by drugs as motivating factors for their use, and the vast majority reported infrequent use of alcohol (71%), and 67% declared never drinking in excess.

From the results, it was determined that 69% never missed appointments due to alcohol use, and 85% never drink in the morning, 46% drink without a reason, and 39% consider the college parties as conducive to the alcohol use.

Regarding the tobacco use, 95% declared themselves as nonsmokers and 78% said their parents did not influence them. Of the 16 smokers, 64% declared peer pressure as the motivating factor for smoking (Table 3), and all of them reported smoking less than 10 cigarettes a day (100%).

Based on the findings, in general the students do not use prescription drugs (76%). With respect to self-medication, the results show that 71% of the students use non-prescription drugs, and 65% of them reported use of over the counter anti-inflammatory and analgesics (Table 4).

Table 1 - Part I of the social demographic characteristics of the Health Sciences Courses at a private institution of higher education

Socioeconomic profile	Pharmacy		Nursing		Dentistry		Biomedicine		Physiotherapy		Total	
	N	(%)	n	(%)	n	(%)	N	(%)	n	(%)	n	(%)
Age group												
16-20 years old	12	15	72	90	48	60	17	68	48	60	197	57
21-25 years old	48	60	00	00	32	40	00	00	32	40	112	33
> 25 years old	20	25	08	10	00	00	08	32	00	00	36	10
Total	80	100	80	100	80	100	25	100	80	100	345	100
Self-declared skin color												
White	32	40	24	30	40	50	15	60	40	50	151	44
Black	08	10	08	10	04	05	05	20	00	00	25	08
Brown	40	50	48	60	36	45	05	20	40	50	169	48
Total	80	100	80	100	80	100	25	100	80	100	345	100
Marital status												
Single	64	80	76	95	76	95	18	72	76	95	310	90
Married	16	20	04	05	04	05	07	28	04	05	35	10
Total	80	100	80	100	80	100	25	100	80	100	345	100

(continue...)

Table 1 - (continuation)

Socioeconomic profile	Pharmacy		Nursing		Dentistry		Biomedicine		Physiotherapy		Total	
	N	(%)	n	(%)	n	(%)	N	(%)	n	(%)	n	(%)
Number of children												
0	56	70	68	85	69	86	19	76	69	86	281	82
1	12	15	08	10	09	11	05	20	09	11	43	12
2	12	15	04	05	02	03	01	04	02	03	21	06
Total	80	100	80	100	80	100	25	100	80	100	345	100
Household income												
1 monthly salary	20	25	12	15	20	25	08	32	20	25	80	23
2-4 monthly salaries	40	50	60	75	52	65	15	60	52	65	219	63
5-7 monthly salaries	12	15	08	10	00	00	00	00	00	00	20	05
> 8 monthly salaries	08	10	00	00	08	10	02	08	08	10	26	09
Total	80	100	80	100	80	100	25	100	80	100	345	100

Table 2 - Part II of the social demographic characteristics of the Health Sciences Courses at a private institution of higher education

Socioeconomic profile	Pharmacy		Nursing		Dentistry		Biomedicine		Physiotherapy		Total	
	N	(%)	N	(%)	n	(%)	N	(%)	n	(%)	n	(%)
Gender												
Male	32	40	12	15	35	44	07	28	20	25	106	30
Female	48	60	68	85	45	56	18	72	60	75	239	70
Total	80	100	80	100	80	100	25	100	80	100	345	100
Employment contract												
Yes	16	20	20	25	04	05	08	32	08	10	56	16
No	64	80	60	75	76	95	17	68	72	90	289	84
Total	80	100	80	100	80	100	25	100	80	100	345	100
Lives with parents												
Sim	48	60	32	40	60	75	15	60	36	45	191	55
No	32	40	48	60	20	25	10	40	44	55	154	45
Total	80	100	80	100	80	100	25	100	80	100	345	100
Type of household												
Own	68	85	60	75	56	70	18	72	40	50	242	70
Rent	12	15	20	25	24	30	07	28	40	50	103	30
Total	80	100	80	100	80	100	25	100	80	100	345	100
Religion												
Catholic	72	90	76	95	70	88	19	76	72	90	309	90
Protestant	04	05	00	00	02	02	01	04	06	08	13	03
Evangelical	04	05	04	05	08	10	05	20	02	02	23	07
Total	80	100	80	100	80	100	25	100	80	100	345	100

Table 3 - Research analysis of tobacco use among Health Sciences students at a private institution of higher education

Analysis of tobacco use	Pharmacy		Nursing		Dentistry		Biomedicine		Physiotherapy		Total	
	N	(%)	N	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Classification according to the use of tobacco												
Smoker	04	05	00	00	04	05	04	16	04	05	16	05
Non smoker	76	95	80	100	76	95	21	84	76	95	329	95
Total	80	100	80	100	80	100	25	100	80	100	345	100
Smokers in the family												
No	76	95	56	70	52	65	20	80	68	85	272	78
Smoking father	00	00	08	10	08	10	03	12	04	05	23	06
Smoking mother	04	05	16	20	20	25	02	08	08	10	50	16
Total	80	100	80	100	80	100	25	100	80	100	345	100

(continue...)

Table 3 - (continuation)

Analysis of tobacco use	Pharmacy		Nursing		Dentistry		Biomedicine		Physiotherapy		Total	
	N	(%)	N	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Reason for starting smoking												
Peer pressure	00	00	00	00	04	100	02	50	04	100	10	64
Fad	00	00	00	00	00	00	02	50	00	00	02	12
Effect of advertising	02	50	00	00	00	00	00	00	00	00	02	12
Influence of parents	02	50	00	00	00	00	00	00	00	00	02	12
Own volition	00	00	00	00	00	00	00	00	00	00	00	00
Total	04	100	00	100	04	100	04	100	04	100	16	100
Quantity of cigarettes a day												
< 10	04	100	00	100	04	100	04	100	04	100	16	100
11-20	00	00	00	00	00	00	00	00	00	00	00	00
21-30	00	00	00	00	00	00	00	00	00	00	00	00
> 31	00	00	00	00	00	00	00	00	00	00	00	00
Total	04	100	00	100	04	100	04	100	04	100	16	100

Table 4 - Profile of self-medication and prescription drugs use among Health Sciences students at a private institution of higher education

Analysis of use of medications	Pharmacy		Nursing		Dentistry		Biomedicine		Physiotherapy		Total	
	N	(%)	N	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Regular medication												
Yes	20	25	20	25	20	25	18	72	04	05	82	24
No	60	75	60	75	60	75	07	28	76	95	263	76
Total	80	100	80	100	80	100	25	100	80	100	345	100
Self-medicate												
Yes	60	75	60	75	60	75	20	80	47	59	247	71
No	20	25	20	25	20	25	05	20	33	41	98	29
Total	80	100	80	100	80	100	25	100	80	100	345	100
Major classes of drugs used												
Anti-inflammatories	15	19	15	19	30	38	12	48	23	28	95	28
Analgesics	38	48	40	50	15	19	07	28	27	34	127	37
Antipyretics	13	16	10	12	18	22	06	24	13	16	60	17
Psychoactive drugs	10	12	05	07	04	05	00	00	00	00	19	05
Antibiotics	04	05	10	12	13	16	00	00	17	22	44	13
Total	80	100	80	100	80	100	25	100	80	100	345	100

## Discussion

College students have been the subject of several studies because they form the group most vulnerable to various risk behaviors, among them the consumption of alcohol and other drugs<sup>(12)</sup>. It is known that the college environment is conducive to the use of alcohol and other drugs, because of the many social events that promote and make the use of alcohol and illegal drugs attractive<sup>(13)</sup>.

In another study<sup>(14)</sup>, it was found that the overall prevalence of "illegal drugs" use among college students was of 38.1%, and 18.9% in the last 30 days. In this study, the results do not corroborate the data presented, since it was analyzed the use of "illegal drugs" among the students at least one time in life. In the aforementioned study, it was also reported that alcohol and tobacco are the substances most used, whereas our study detected a higher consumption of alcohol and cocaine among the students. In another study, it was also reported higher levels of alcohol and tobacco consumption<sup>(15)</sup>. Thus, our data do not corroborate the studies available showing that there may

be changes in the harmful lifestyles and habits of college students.

The interesting factor in this approach is the ability to compare the data from a specific population, as in this study, of college students, with the nationwide surveys conducted by the CEBRID and SENAD. In a survey conducted in Alfenas - MG, undergraduate students reported that they had consumed alcohol prior to the college attendance<sup>(16)</sup>. This information is in agreement with the data collected by the SENAD in 2007. In the evaluation of the patterns of alcohol consumption among Brazilians, the youths reported starting the alcohol use between the age of 14.8 and 17.3; therefore, prior to the entry into higher education, which generally occurs after they reach 18<sup>(16-17)</sup>.

In our study, there was a high prevalence of students between the ages of 16 and 20 who reported the use of at least one legal or illegal substance during social events or to relieve stress after the end of a day filled with academic activities; thus, corroborating with other studies<sup>(2-3)</sup>. According to a study conducted with Health Sciences students from a university located in Curitiba - PR, the

consumption of alcohol or drugs, among participants who had prior use of these, is induced primarily by “peer pressure”. This study showed that 65.8% of students in the four courses studied, at least once, have experimented with these substances. As for the main reason that led to the first time use, 13.6% of Physical Education students reported that they began using in the pursuit of “fun or pleasure.” However, 6.4% of the students reported that they started using these substances to “improve their performance” (school, sexual and/or social). Other reasons that induced the first time use of these substances were curiosity (18.7%), and the search for fun and/or easy pleasure (14.1%)<sup>(18)</sup>.

A study involving Nursing students in Passo Fundo-RS revealed that bars, dance clubs, nightclubs (31.5%) and friends/acquaintances homes (18.2%) are the best places for the use of drugs, and, in particular, the alcohol consumption. Friends (49%) and relatives (20%) were responsible for introducing them to alcoholic beverages<sup>(19)</sup>.

As for the cigarette use among the college students investigated in this article, 95% declared themselves as non-smokers, and that they were not influenced by the smoking habits of their families since 78% of the parents are non-smokers.

The results from a study on the drug use among college students in the city of Alfenas - MG with a sample of 1500 students from the two local universities (a federal and private one) demonstrated that 55% of students used some type of drug; however, the sample demonstrated a prior use of alcohol and tobacco. The work suggests that the university environment is not necessarily the starting point for the drug consumption<sup>(14)</sup>. These results agree with our findings since it has detected a low number of smokers among the university students, and those who declared themselves smokers reported having started using tobacco before entering college.

Based on the results found in this study regarding religions, the majority of the student body is Catholic, with a small number of Evangelicals or Protestants among them. It can be assumed that a religious belief is acting as protection against the use of drugs in the population of students studied; similar results are also seen in other works. A study involving students from seven countries in Latin America found that high levels of religiosity were inversely related to early experiences with tobacco and marijuana; the opposite was true for the alcohol use. However, among the students who had the opportunity to experiment with tobacco and marijuana, the levels of religiosity had no influence on the choice for or against the use these substances<sup>(20)</sup>.

The respondents' profile showed the majority of the participants to be female (61.4%)<sup>(21)</sup>, similar to data found in the present study, in which 69.3% of the students are females.

The results obtained in this study allowed for the collection of data related to the gender differences in the prevalence of drug use among college students. Thus, the biggest difference between genders was reported on the drug use in the last 30 days, with a significant increase in tobacco consumption among men (from 19.6 to 23.5%),

marijuana (from 15.8 to 20.5%), amphetamines (from 1.1 to 3.2%), and inhalants (from 4.0 to 7.9%)<sup>(20)</sup>. Our study showed significant consumption of alcohol for men and women (39%), cocaine (16%), tobacco (6%), and tranquilizers (4.0%).

Analgesics, anti-inflammatory, and antipyretics stood out as the most used by the university students. This data agrees with the findings from a study conducted in a public university located in Recife, with students from the health care area<sup>(22)</sup>, in which analgesics and antipyretics were mentioned by the majority of the respondents (24%).

A study conducted in Petersburg, South Africa, verified a probable correlation between the increased use of tobacco and drugs and the students feeling tired, stressed, depressed, or while attending parties, and the alcohol use was higher when the students were partying, on the weekends or when having free time<sup>(23)</sup>. This observation is not consistent with the results obtained in this study, which demonstrated that the users of these substances were not away from home; therefore, more exposed to it, since the vast majority is still living with their parents and a large number has never made use of alcohol, tobacco, or any other legal or illegal drug.

Our data, when compared to other countries, show similarities with respect to the socioeconomic profile and it demonstrates that the consumption of legal and illegal drugs is the leading cause of injury and death among students ages between 18 and 25<sup>(8)</sup>.

Among the researched students, the use of alcohol and “illegal drugs” were related to the higher household income. Likewise, it was observed that students from private schools located in São Paulo reported that lately they have consumed a greater amount of cigarette, alcohol, marijuana, and inhalants, compared to public school students of the same age group<sup>(2)</sup>. Moreover, it was observed that the “upper class” was associated with twice the risk of alcohol use than the lower class among students attending public primary and high schools<sup>(24)</sup>. Our results agree with those reported in the literature since the students followed in this study belong to either the A or B socioeconomic classes, as defined by the number of minimum wage salaries forming the household income.

## Conclusions

The confirmation that the college environment influences the abuse of psychoactive substances imparts greater importance to the creation of institutional preventive measures. Preventing drug abuse is essential to avoid damage to the health and quality of life of university students, as well as to reduce a subsequent chemical and physical dependence. The results underscore the importance of screening for substance use in the educational institutions analyzed, in order to implement prevention programs targeted to the local epidemiology, also corroborated in regional and national studies.

The results of this study have some limitations, since it originated from a private institution, which differs from the others by the number of students and their socioeconomic

profile, although encompassing a representative sample of all the undergraduate Health Sciences courses offered by the FCRS.

## References

1. UNODC - United Nations Office for Drug Control and Crime Prevention. World Drug Report 2007. Disponível em: <http://www.unodc.org/unodc/en/data-and-analysis/WDR2007.html>.
2. Carlini EA, Galduróz JCF, Noto AR, Fonseca AM, Carlini CM, Oliveira LG, Nappo SA, Moura YG, Sanchez ZVM. II Levantamento Domiciliar sobre o uso de Drogas Psicotrópicas no Brasil: estudo envolvendo as 108 maiores cidades do país – 2005. São Paulo: CEBRID – Centro Brasileiro de Informações sobre Drogas Psicotrópicas, Departamento de Psicobiologia, UNIFESP – Universidade Federal de São Paulo, 468 p., 2007.
3. Nicastrí S, Oliveira LC, Wagner GA, Andrade AG. Capítulo 2: Prevalência e padrão do uso de tabaco e outras drogas (exceto álcool): estimativa de abuso e dependência. In: Andrade AG, Duarte PAV, Oliveira LC. I Levantamento Nacional sobre o Uso de Álcool, Tabaco e Outras Drogas entre Universitários das 27 Capitais Brasileiras. SEÇÃO III: uso de álcool, tabaco e outras drogas. Brasília: SENAD, 2010.
4. Guidon G, Boisclair DP. Current and future trends in tobacco use. Health Nutrition and Population Discussion Paper. World Bank Human Development Network, 2003.
5. Harris DS, Anthenelli RM. Expanding treatment of tobacco dependence. *Curr Psychiatry Rep.* 2005; 7: 344- 51.
6. OMS – Organização Mundial da Saúde. Neurociências: Consumo de substâncias psicoativas. Genebra: Organização Mundial da Saúde; 2004.
7. Henningfield JE, Fant RV, Buchhalter AR, Stitzer ML. Pharmacotherapy for nicotine dependence. *CA Cancer J Clin.* 2005; 55: 281- 99.
8. Hingson RW, Heeren T, Winter M, Wechsler H. Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18–24: Changes from 1998 to 2001. *Ann Rev Public Health.* 2005; 26: 259-79.
9. O'Malley PM, Johnston LD. Epidemiology of alcohol and other drug use among American college students. *J Stud Alcohol.* 2002; 14: 23- 39.
10. Johnston LD, O'malley PM, Bachman JG, Schulenberg J.E. Monitoring the Future national survey results on drug use, 1975–2006. Volume 2: College students and adults ages 19-45. Bethesda, MD: National Institute on Drug Abuse; 2004.
11. Andrade AG, Duarte PAV, Oliveira LC. I Levantamento Nacional sobre o Uso de Álcool, Tabaco e Outras Drogas entre Universitários das 27 Capitais Brasileiras. Brasília: SENAD, 2010.
12. Funai A, Pillon SC. Uso de bebidas alcoólicas e aspectos religiosos em estudantes de enfermagem. *Rev. Eletr. Enf.* 2011; 13(1): 24-9.
13. Mardegan PS. Uso de substâncias psicoativas entre estudantes de enfermagem. *J Bras Psiquiatr.* 2007; 4:260-6.
14. Andrade AG, Bassit AZ, Kerr-Corrêa F, Tonhon AA, Boscovitz EP, Cabral M, Rassi R, Potério GM, Marcondes E, Oliveira MPMT, Duailibi K, Fukushima JT. Fatores de risco associados ao uso de álcool e drogas na vida, entre estudantes de medicina do estado de São Paulo. *Rev ABP-APAL.* 1997; 19(4):117-26.
15. Kerr-Corrêa F, Andrade AG, Bassit AZ, Boccuto NMVF. Uso de álcool e drogas por estudantes de medicina da Unesp. *Rev Bras Psiquiatr.* 1999; 21(2):95-100.
16. Fiorini JE, Alves, AL, Ferreira LR, Fiorini CM, Durães SW, Santos RLD, Nascimento LC, Geraldini AMV, Ortiz CF. Use of licit and illicit drugs at the University of Alfenas. *Rev Hosp Clin Fac Med. S Paulo.* 2003; 58:199-206.
17. SENAD - Secretaria Nacional Antidrogas - I Levantamento Nacional sobre Uso de Álcool, Tabaco e Outras Drogas entre Universitários. Brasília; 2010.
18. Chiapetti N, Serbena CA. Uso de álcool, tabaco e drogas por estudantes da área de saúde de uma universidade de Curitiba. *Psicol Reflexão e Crítica.* 2007; 2:303-13.
19. Picolotto E, Libardoni LFC, Migott AMB, Geib LTC. Prevalência e fatores associados com o consumo de substâncias psicoativas por acadêmicos de enfermagem da Universidade de Passo Fundo. *Ciênc Saúde Coletiva.* 2010; 3:645-54.
20. CEBRID – Centro Brasileiro de Informações sobre Drogas Psicotrópicas. São Paulo: Departamento de Psicobiologia, UNIFESP; 2007. p. 468.
21. Aquino DS, Barros JAC, Silva MDP. A automedicação e os acadêmicos da área de saúde. *Ciência & Saúde Coletiva,* 15(5): 2533 – 2538, 2010.
22. Wagner GA, Stempluk VA, Zilberman ML, Barroso LP, Andrade AG. Alcohol and drug use among university students: gender differences. *Rev Bras Psiquiatr.* 2007; 29:123-9.
23. Madu SN, Matla MQ. Illicit drug use, cigarette smoking and alcohol drinking behaviour among a sample of high school adolescents in the Pietersburg area of the northern province, South Africa. *J Adolesc.* 2003; 26:121-36.
24. Baus J, Kupek E, Pires M. Prevalência e fatores de risco relacionados ao uso de drogas entre escolares. *Rev Saúde Pública.* 2002; 36:40-6.



