

## INVESTIGATION OF LICIT AND ILLICIT DRUG USE AMONG COLLEGE STUDENTS (FROM PUBLIC AND PRIVATE INSTITUTIONS) IN THE MUNICIPALITY OF PICOS, PIAUI

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This study has investigated the prevalence of licit and illicit psychoactive substances among college students of Higher Education Institutions (IES) (public and private) of the municipality of Picos. It was conducted through a self-administered questionnaire with 3,600 college students. The students' profile is composed of adult women (61.5%); white (41.6%); single (80.4%); age group from 17 to 22 years old (55.6%) who do not have their own income. Among the students, 74.5% do not practice self-medication nor use of psychotropic drugs, however, in social events they drink alcohol (61.2%) and smoke cigarettes (18.5%), mainly because the influence of friends (27.3%).

Descriptors: Epidemiology; Alcoholism; Drugs; Students.

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## **INVESTIGAÇÃO DO USO DE DROGAS LÍCITAS E ILÍCITAS ENTRE OS UNIVERSITÁRIOS DE INSTITUIÇÕES DO ENSINO SUPERIOR (PÚBLICAS E PRIVADAS), NO MUNICÍPIO DE PICOS, PIAUÍ**

O trabalho investigou a prevalência do uso de substâncias psicoativas lícitas e ilícitas entre os universitários das instituições de ensino superior (públicas e privadas) do município de Picos, PI. O estudo foi realizado por meio de um questionário elaborado de forma estruturado e autoaplicado entre 3.600 universitários. O perfil dos universitários é de mulheres adultas (61,5%), brancas (41,6%), solteiras (80,4%), faixa etária entre 17 e 22 anos (55,6%) e que não exerciam atividade remunerada. Dentre os estudantes, 74,5% não praticava automedicação e nem fazia uso de psicotrópicos, no entanto, em eventos sociais, fazia uso de álcool (61,2%) e de tabaco (18,5%), principalmente pela influência dos amigos (27,3%).

Descritores: Epidemiologia; Alcoolismo; Drogas Ilícitas; Estudantes.

## **AVERIGUACIÓN DEL USO DE DROGAS LÍCITAS Y ILÍCITAS ENTRE LOS UNIVERSITARIOS DE INSTITUCIONES DE LA ENSEÑANZA SUPERIORA (PÚBLICAS Y PRIVADAS) EN EL MUNICIPIO DE PICOS, PIAUÍ**

El trabajo investigó la superioridad del uso de sustancias psicoactivas lícitas e ilícitas entre los universitarios de las instituciones de enseñanza superiora (IES) (públicas y privadas) del municipio de Picos. El estudio fue realizado por medio de un cuestionario elaborado de forma estructurado y auto-aplicado entre 3.600 universitarios. El perfil de los universitarios es de mujeres adultas (61,5%), brancas (41,6%), solteras (80,4%), con banda etaria entre 17 y 22 años (55,6%) que no ejercen actividad remunerada. Entre los estudiantes, 74,5% no practica automedicación y ni hace uso de psicotrópicos, sin embargo, en eventos sociales hace uso del alcohol (61,2%) y del tabaco (18,5%), principalmente por la influencia de los amigos (27,3%).

Descriptores: Epidemiología; Alcoholismo; Drogas ilícitas; Estudiantes.

### **Introduction**

Drug abuse is characterized as a worldwide phenomenon with serious consequences. The consumption of these harmful substances to the human body is particularly worrying in young people due to high social costs. In Brazil, young people between 18 and 24 years, especially college students, have high consumption prevalence for both licit and illicit drugs as<sup>(1)</sup>. The early relation between drug and the user can be found in several studies reported in the literature. Among several factors that point to the growth of distribution and consumption

in the country, there is the young person psychosocial context, who seeks to escape from a difficult reality or for quick and easy pleasure obtained by drugs<sup>(2)</sup>.

Entry into university, even with positive feelings and happiness for reaching a target programmed by high school students, sometimes can become a critical period of vulnerability to the initiation and maintenance of alcohol use and other illicit drugs<sup>(2)</sup>. Factors related to the initiation process of young people in relation to drug use are of increasing interest, since the elucidation of the process

by which this population is exposed to substance use may lead to the development of more effective strategies for prevention and treatment<sup>(2)</sup>.

According to the I Nationwide Survey on Use of Alcohol, Tobacco and Other Drugs among College Students, conducted by the National Anti-Drug Secretary (SENAD) in partnership with the Interdisciplinary Group of Studies on Alcohol and Drugs of the School of Medicine, University of São Paulo conducted in 2009 with 18,000 students from 27 federal capitals of Brazil, it was found that the problem of drug abuse is already alarming in our society, studies have shown that 49% of the college students interviewed experienced some type of illicit drug at least once in life; and in the group of students under 18 years old, 80% of them said they had consumed some type of alcoholic beverage<sup>(3)</sup>.

Moreover, this same study showed that 86% of college students have used alcohol and 47% of tobacco products; 22% of them have presented risk of developing alcohol dependence and 8% marijuana; and approximately 40% of them used two or more drugs in the past 12 months and 43% reported having used multiple and simultaneous drug during their lives. The prevalence of alcohol abuse was higher among college students than in the general population, though the chemical addiction was more prevalent among users of this population<sup>(3)</sup>. These facts show that it is necessary awareness campaigns for these young and upcoming professionals regarding prevention and combating the use of these substances and on their psychosocial consequences.

The literature shows that some of the consequences of drug use among college students are automobile accidents, domestic violence, sexual risk behavior, losses in the learning process, decreased of perception and stress<sup>(4-7)</sup>. Another study also highlights that there is a decrease in life expectancy, since the risk behaviors associated with the consumption of alcohol and drugs can affect the overall sense of "wellbeing"<sup>(8)</sup>.

Considering the high prevalence of drug use among college students and the lack of studies, specifically in the Northeast on this public health problem, this study was conducted with the following objectives: to conduct a survey on drug use among college students in the municipality of Picos, Piauí; to evaluate the risk factors related to drug abuse among college students in the studied population; to determine the pattern of drug use among college students; to verify the degree of association between socioeconomic status and use of alcohol, tobacco, psychotropic drugs and "illicit drugs" among college students; to identify the main medications used in the practice of self-medication and the degree of orientation among college students about drug use and its consequences.

## Material and Methods

### Study design

The results were obtained through an exploratory and descriptive research with a quantitative approach<sup>(9-10)</sup>, by

a directly randomly interview with the college students for approximately 20 minutes before their studies. During interviews with the students ( $n=3,600$ ) enrolled in one of the undergraduate courses offered by all institutions ( $n=3$ ) higher education in the municipality of Picos, Piauí, a self-questionnaire was previously prepared with clear, objective and multiple responses questions. This questionnaire was prepared by the coordinator of the group based on data available from other studies<sup>(4-6)</sup>. In the study were included college students and those enrolled in frequent school activities in all higher education institutions in the municipality of Picos, Piauí. The interviews were conducted from April to November 2009. The students of three institutions that declined not to participate in the project during the questionnaires were not interviewed ( $n=406$ ).

The research protocol has accomplished the ethical principles of the Declaration of Helsinki and the rules of Resolution 196/96 of the National Health Council, and it was approved by the Ethics Committee of the Federal University of Piauí (CAAE: 0086.0.045.000-09).

### Study places

The study sites were all higher education institutions (HEIs) in the municipality of Picos, Piauí, described below: Federal University of Piauí (UFPI); State University of Piauí (UESPI) and Faculdade R. Sá. We used as convenience sample college students in the municipality of Picos, 3,600 students from three participating HEIs of the project from 1st to 9th academic period, these students were from the following undergraduate courses offered by UFPI 1,200 academics - Administration (335 students); Biological Sciences (246 students); Nursing (267 students); Languages (235 students) and Pedagogy (117 students); by UESPI 1,200 academics - Administration (137 students); Biological Sciences (137 students) Accounting (154 students)? Law (256 students); Nursing (152 students); Information Systems (102 students) and Languages (262 students) and by the Faculdade R. Sá 1,200 academics - Administration (292 students); Accounting (218 students); Law (227 students); Information Systems (248 students) and Pedagogy (215 students).

There were selected as independent variable: the habit of licit and illicit drugs use, and as dependent variables: the beginning of use habit, the reason that triggered this habit, and in the case of tobacco, it was verified the amount of cigarettes smoked per day and type of tobacco used. The lifetime pattern use was defined in the study as the habit of licit and illicit drugs at least once in life.

### Data collection

Data were collected from April to November 2009. Data collection was performed by the same Nursing students of the Federal University of Piauí, trained and supervised. The data records of the individuals were identified by the Course/Institution. These recordings were made in specific questionnaires, based on previous studies and adapted to the reality of the region, so that it

can also be used as a basis for further studies both in the municipality itself, as in other cities in the state<sup>(8-10)</sup>. The questionnaire was divided into four parts: socioeconomic data; data related to the consumption of licit or illicit substances; data regarding tobacco consumption and information degree. From the questions in each section we obtained the following information: age, gender, skin color self-reported, marital status, number of children, family income, undergraduate course, type of housing, use of medication with potential for abuse, use of licit and illicit drugs and information related to the frequency of drug use. All students invited to participate were informed about the purpose of the interview and when agreed to participate voluntarily they signed the Informed Consent.

For treatment of the data it was produced a database using the software Microsoft Excel and the statistical program SPSS version 15.0. For analysis and interpretation of our results for the three investigated higher education institutions we used the results in the literature and results of the studies found in the databases MEDLINE, LILACS, SCIELO and ADOLEC during consultations in January

2010. Descriptive statistics with use of absolute frequency and percentage was used to analyze the information. Results were considered significant when  $p < 0.05$ .

## Results

These studied higher education institutions, Picos, Piauí, refer to public and private schools. Thus, these results are limited, but are representative regarding the college students of Piauí. It was observed among the interviewed college students a frequency distribution in the following courses: Administration (21.2%); Languages (13.8%); Law (13.4%); Nursing (11.6%); Biological Sciences (10.6%); Accounting (10.3%); Computer Sciences (9.7%) and Pedagogy (9.4%).

From the 3,600 students, the majority is female (61.5%); 55.6% were from 17 to 22 years old (Figure 1); 41.6% were white and 36.3% were mulatto. Regarding marital status, 80.4% were single and 51.6% had a family income from two to four minimum wages (Figure 2).

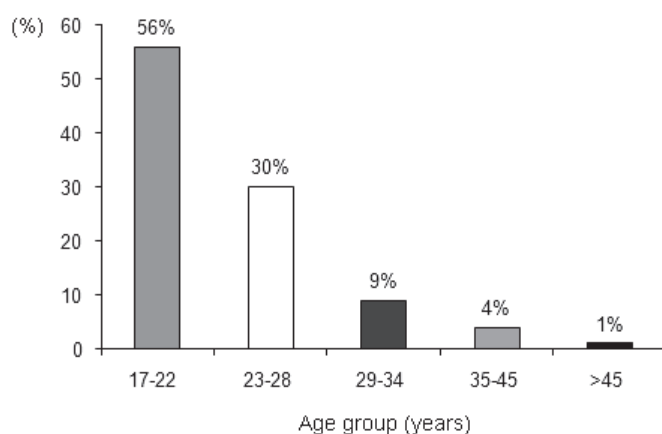


Figure 1 - Distribution of students of higher education institutions in the municipality of Picos according to age group, in years. Picos, PI, Brazil

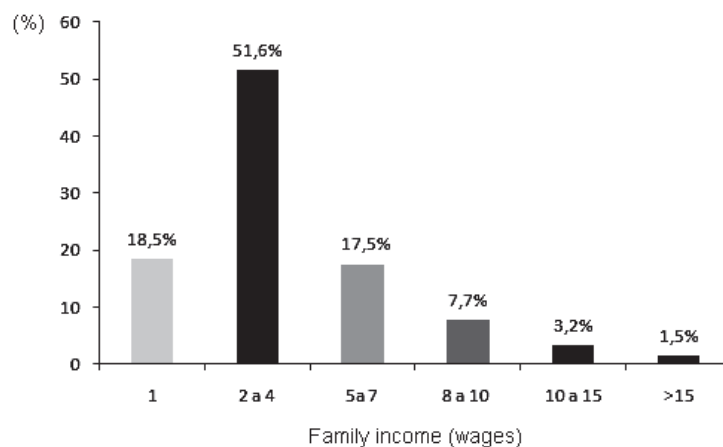


Figure 2 - Distribution of students of higher education institutions in the municipality of Picos according to family income, in minimum wages. Picos, PI, Brazil

As to possible drugs used among college students it was detected a high prevalence of licit drugs such as alcohol (61.2%) and tobacco (18.5%) among students of the three institutions of higher education in the municipality of Picos. It was also observed that 27.3% of the students

use these substances during social events, mainly due to the influence of friends. In addition, there was a high frequency of marijuana use (7.9%) and tranquilizers substance (6.7%) (Figure 3).

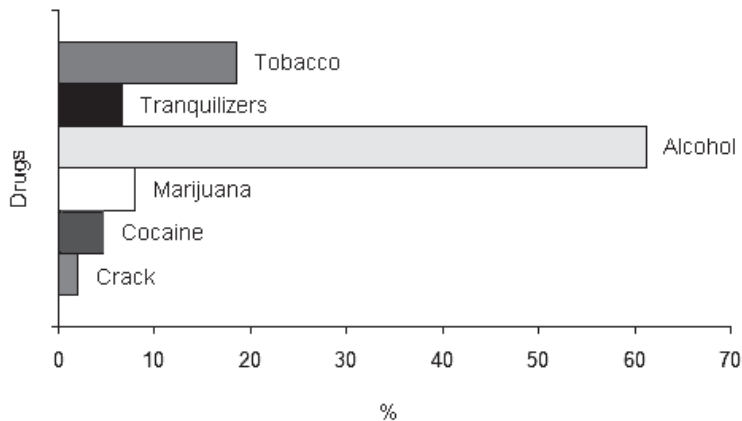


Figure 3 - Distribution of the main licit and illicit substances used among college students of higher education institutions in the city of Picos, PI, Brazil

The students have highlighted the influence of friends (27.3%) and the funny feeling (22.8%) caused by drugs as the main motivation for the use of these substances

(Figure 4), and the vast majority reported not using alcohol frequent, and not exceeding its use (70.5%).

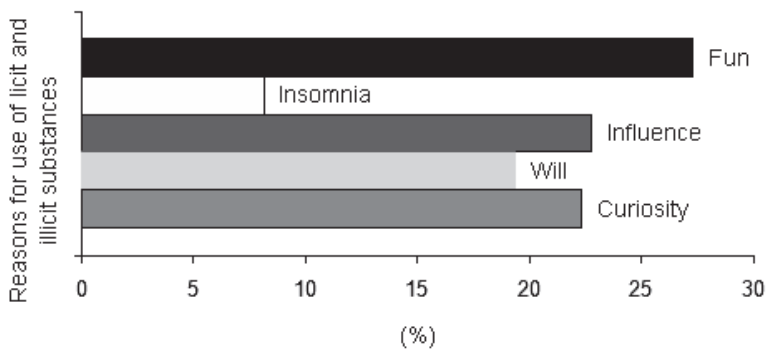


Figure 4 - Distribution of the main reasons for use of licit and illicit substances among college students of higher education institutions in the municipality of Picos, PI, Brazil.

With respect to self-medication, our results have shown that 74.5% of the students do not use medication without prescription. However, 25.5% of them have reported the use of anti-inflammatory and analgesics without prescription.

**Discussion**

Our results for the socioeconomic profile among the students corroborate with other studies involving the

use of licit and illicit drugs among college students. In previous studies there were found similar results to ours for students in the city of Picos, Piauí, to the following variables (gender, age group, skin color self-reported, marital status and family income)<sup>(11-12)</sup>.

With respect to females, the skin color self-reported, marital status and family income, the detected data corroborate with other studies involving the use of licit and illicit drugs among college students. In previous studies there found similar results for the same variables assessed



among college students<sup>(11-12)</sup>. As for possible drugs used among college students, our findings are in agreement with other literature studies<sup>(11-13)</sup>.

According to a study conducted among health students from a university in Curitiba, the consumption of alcohol or drugs among participants who have already used them, is induced primarily by their “colleagues, friends or acquaintances”<sup>(14)</sup>. This study has demonstrated that 65.8% of students of the four studied courses had used of least once these substances. As for the main reason that took them to use it for first time, 13.6% of the students of Physical Education reported that they began using in for “fun or pleasure.” However, 6.4% of the students reported that they made use of these substances for the first time to “improve performance” (school, sexual and/or social). Other reasons that induce the use of these substances for the first time are curiosity (18.7%) and the pursuit of fun or easy pleasure (14.1%)<sup>(14)</sup>.

On these factors that induce the consumption of licit and illicit drugs it can be verified that the university environment becomes favorable for the use of alcohol and other drugs, since there are many social events that promote and make attractive the use of alcohol and other illicit drugs<sup>(15)</sup>.

A study with Nursing students in a university in Passo Fundo has revealed that bars, discos, nightclubs (31.5%) and house of friends/acquaintances (18.2%) are the best places for consumption of drugs and alcohol in particular, friends and family were cited as the main responsible for the introduction of the academic use of alcoholic beverages at a frequency of 49% and 20%, respectively<sup>(16)</sup>.

As to the use of cigarette among investigated college students in the three higher education institutions in the city of Picos, 58.9% reported themselves as non-smokers, also revealing that there is no influence by their family smoking habit, since 72.9% of their parents do not smoke and only 18% of the parent smoke. Again, it is highlighted the influence of friends to start a harmful activity to health. The interviewed students said that the beginning of smoking is mainly due to the influence of friends who were already using tobacco. Our study has found that 40.3% used tobacco due to the influence of friends; it was also observed in this study that 20.5% made use of this substance by the feeling of independence achieved with cigarette<sup>(16)</sup>.

The admission of adolescents in the university environment is an important step in the professional life. It is an undeniable opportunity for professional, social and family development; however, it is also a phase that can be related to several risk factors. Among them there is the substance use and its consequences, as well as easy access to illicit substances promoted by drug trafficking, which sells these substances at the surrounding of the universities, as well as the use in social events.

Among the three institutions of the study it can be found a high degree of consumption of psychoactive substances, especially alcohol, mainly due to the influence of friends in social events, thus, constituting a local social contrast and some improper practices in relation to the consumption of

these substances. The use of these substances can bring consequences, psychosocial damage and even cause death among college students<sup>(17)</sup>. It is possible to infer that drug abuse has caused considerable interference in academic activities and that there is a high risk of addiction, as well as providing a higher incidence of psychiatric disorders and impaired professional performance.

Furthermore, our findings also reveal that the students have knowledge about the consequences for self-medication, because it has a high number of administration errors during dose choice, route and dosage.

It can, thus, be suggested that there is influence of the university environment for the abuse of psychoactive substances, which gives greater importance to institutional preventive measures. Preventing drug abuse is essential to avoid damage to health and quality of life of the college students, as well as to reduce a subsequent addiction. The results obtained emphasize the importance of controlling substance use in educational institutions for insertion of prevention programs directed at the local epidemiology.

### Final Consideration

This quantitative approach research was the result of direct participation in academic activities of college students of higher education institutions in the municipality of Picos, Piauí. Considering IES reference for university education, we were interested in profiling the interviewed students, we believed we could, then, recognize their characteristics and to identify risk factors associated with the use of licit and illicit drugs for future educational interventions can be taken to combat and prevent drug use.

Use prevention programs of drug use in universities may have that information to develop effective strategies that consider the perception of students as a critical element in the process of experimentation and drug use by the students of higher institutions. Further studies will be important to replicate the results and, moreover, to relate the developed programs to correct the students' misperceptions.

The main limitation of this study refers to the fact that the actual profile of illicit drugs may be higher than the results presented in this study, since many students did not properly respond to the questionnaire. Most students are afraid of prejudice, stigma and social justice. Therefore, these three factors clearly limit this study.

### References

1. Lucas ACS, Parente RCP, Picanço NS, Conceição DA, Costa KRC, Magalhães IRS. Uso de psicotrópicos entre universitários da área da saúde da Universidade Federal do Amazonas, Brasil. *Cad Saúde Pública*. 2006;22(3):663-71.
2. Peuker AC, Fogaça J, Bizarro L. Expectativas e beber problemático entre universitários. *Psicol Teoria Pesqui*. 2006;22(2):193-200.
3. Secretaria Nacional de Políticas sobre Drogas, SENAD (BR). I Levantamento Nacional sobre Uso de Álcool, Tabaco e Outras Drogas entre Universitários das 27

- capitais brasileiras. Brasília (DF): SEND; 2010.
4. Silva LVER, Malbergier A, Stempluk VA, Andrade AG. Fatores associados ao consumo de álcool e drogas entre estudantes universitários. *Rev Saúde Pública*. 2006;40(2):280-8.
  5. Pillon SC, O'Brien B, Piedra Chavez KA. The relationship between drug use and risk behaviors in Brazilian university students. *Rev Lat-Am Enfermagem*. 2005;13 Spec No:1169-76.
  6. Pechansky F, Szobot CM, Scivoletto S. Uso de álcool entre adolescentes: conceitos, características epidemiológicas e fatores etiopatogênicos. *Rev Bras Psiquiatr*. 2004;26(1):14-7.
  7. Carlini-Contrim B, Gazal-Carvalho C, Gouveira N. Comportamento de saúde entre jovens estudantes das redes públicas e privadas da área metropolitana do Estado de São Paulo. *Rev Saúde Pública*. 2004;34(6):636-45.
  8. Murphy JG, Mc Devitt-Murphy ME, Barnett NP. Drink and be merry? Gender, life satisfaction, and alcohol consumption among college students. *Psychol Addict Behav*. 2005;19(2):184-91.
  9. Polit DF, Beck CT, Hungler BP. Fundamentos de pesquisa em enfermagem: métodos, avaliação e utilização. 5 ed. Porto Alegre: Artmed; 2004.
  10. Gil AC. Como Elaborar Projetos de Pesquisa. São Paulo: Atlas; 2006.
  11. Oliveira HPJ, Brands B, Cunningham J, Strike C, Wright MGM. Percepção dos Estudantes Universitários sobre o Consumo de Drogas entre seus pares no Abc Paulista, São Paulo, Brasil. *Rev. Latino-Am. Enfermagem*. 2009;17(spec):871-7.
  12. Tockus D, Gonçalves PS. Detecção do uso de drogas de abuso por estudantes de medicina. *J Bras Psiquiatr*. 2008;57(3):184-7.
  13. Fiorini JE, Alves AL. Uso de drogas lícitas e ilícitas no meio universitário de Alfenas. *Rev Univ Alfenas* 1999;5:263-7.
  14. 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;20(2):303-13.
  15. Mardegan PS. Uso de substâncias psicoativas entre estudantes de enfermagem. *J Bras Psiquiatr*. 2007;56(4):260-6.
  16. 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 Colet*. 2010;15(3):645-54.
  17. Carlini EA, Carlini-Contrim B, Silva-Filho AR. Sugestões para Programas de Prevenção ao Abuso de Drogas no Brasil. São Paulo: Centro Brasileiro de Informações sobre Drogas Psicotrópicas (CEBRID). Departamento de Psicobiologia da Universidade Federal de São Paulo; 1990.

