

Prevalence of licit and illicit drugs by college students

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Objective: evaluate the use of licit and illicit drugs by college students, and to investigate its association with sociodemographic variables. **Method:** this is a cross-sectional study, with 429 adults, 18-24 years, answered a questionnaire sociodemographic and Involvement Screening Test with Alcohol, Tobacco and Other Matter. Used to descriptive statistics and chi-square in Fisher. **Results:** the most used drug was the alcohol, followed by tobacco and hypnotics/sedatives. The male was associated with greater use of drugs such as tobacco and marijuana consumption and a suggestive abuse to alcohol. **Conclusion:** it is concluded that alcohol prevails as the most widely used substance, that being male and do not have a religion, live away from their parents or relatives are factors that can influence the use and abuse legal and illegal.

Descriptors: Students; Street Drugs; Epidemiology.

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Prevalência do consumo de drogas lícitas e ilícitas por estudantes universitários

Objetivo: avaliar o consumo de drogas lícitas e ilícitas por estudantes universitários e investigar associação com variáveis sociodemográficas. **Método:** trata-se de um estudo transversal, com 429 estudantes de 18-24 anos, responderam ao questionário sociodemográfico e o Teste de Triagem do Envolvimento com Álcool, Tabaco e outras Substâncias. Utilizou-se estatística descritiva, testes do qui-quadrado de Fischer. **Resultados:** as drogas mais utilizadas foram álcool, derivados do tabaco e hipnóticos/sedativos. O sexo masculino teve associação com maior uso de drogas como tabaco e maconha e consumo sugestivo de abuso para álcool. **Conclusão:** conclui-se que o álcool prevalece como substância mais utilizada, pertencer ao sexo masculino e não possuir religião, morar longe dos pais/parentes são fatores que podem influenciar no uso/abuso de drogas lícitas e ilícitas.

Descritores: Estudantes; Drogas Ilícitas; Epidemiologia.

La prevalencia de drogas lícitas e ilícitas por estudiantes universitarios

Objectivo: evaluar el uso de drogas lícitas e ilícitas por estudiantes universitarios e investigar la asociación con variables sociodemográficas. **Método:** se trata de un estudio transversal, 429 alumnos de 18-24 años, respondió al cuestionario sociodemográfico y Participación test de cribado con alcohol, tabaco y otras sustancias. Se utilizó estadística descriptiva, pruebas de chi-cuadrado Fischer. **Resultados:** los fármacos más utilizados fueron el alcohol, el tabaco y los hipnóticos sedantes. El macho se asoció con un mayor uso de fármacos tales como el consumo de tabaco y la marihuana y sugestivos de abuso de alcohol. **Conclusión:** se concluye que el alcohol prevalece como sustancia más utilizada, ser hombre y no tener religión, que viven lejos de sus padres / familiares son factores que pueden influir en el uso / abuso de drogas lícitas e ilícitas.

Descriptores: Estudiantes; Drogas Ilícitas; Epidemiologia.

Introduction

The consumption of licit and illicit drugs is very recurrent in today's society, and the exacerbation of such consumption has been considered a social problem, especially due to the health damages that it causes⁽¹⁻²⁾. Drug is defined as any substance, natural or synthetic, which, once introduced into a living organism, can modify one or more of its functions. Licit drugs are those freely and legally marketed, and whose commercialization may or may not be subject to some type of regulation.

Illicit drugs, in turn, are those whose production, commercialization and consumption are considered a crime and are prohibited by specific laws⁽³⁾.

Currently, special attention has been given to the use of drugs among university students, since research shows a higher level of consumption among these individuals than in the general population⁽⁴⁻⁵⁾. Throughout the world studies have addressed the behavior of university students toward the use of these substances and in Brazil the surveys elucidate that the

most affected population is that of university students with ages between 18 and 24 years⁽⁵⁻⁶⁾.

A National Survey on the use of alcohol, tobacco and other drugs among university students in 27 Brazilian capitals showed that 48.7% of the students reported having already used illicit drugs in their lives. It is believed that the autonomy in the life of many students during the years in college is a predictor of vulnerability to start consuming these substances. The greater use by this specific population is related to certain factors already identified such as depression, antisocial personality disorders, low self-esteem, lack of future prospects in life, pursuit of new sensations, availability of drugs, environmental factors such as high crime rates, living away from parents, more idle time during working days, and having no religion⁽⁷⁾.

Drug abuse among students is related to a number of negative implications for the physical and mental health of these young people, as well as for the society as a whole. These negative aspects include lower academic performance, impairment in the development and structuring of cognitive behavioral and emotional abilities, damages to the public patrimony, traffic accidents, violence and homicides⁽⁸⁾.

It has become necessary to identify the factors that contribute to the onset and maintenance of the use of these substances among the young population, since the clarification of the process through which this population is exposed can guide the creation of prevention strategies. Health care students are a target of special attention in this respect, i.e. drug use, and this differentiated approach is due to the fact that these individuals will in the future develop the duty of passing on knowledge about basic health to the community⁽⁹⁾.

In this sense, the objective of the present study was to evaluate the consumption of licit and illicit drugs among university students in the health area of a public university in the countryside of Bahia, as well as verify its association with sociodemographic variables.

Methodology

This is a descriptive-analytical study with a cross-sectional design carried out from August to November 2014. The research scenario was the campus of the State University of Southwest Bahia (UESB) in the city of Jequié-Bahia. The sample comprised 429 young adult students of Physiotherapy (163), Medicine (42), Physical Education (36), Pharmacy (50), Dentistry (99) and Nursing (39), which were randomly selected. Inclusion criteria were as follows: university students

with ages ranging from 18 to 24 years who agreed to participate in the study by signing the Informed Consent Form (ICF), and who were duly enrolled in the university.

The data were collected through an anonymous self-filling questionnaire subdivided into two sections. The first section addressed sociodemographic data, including the variables sex, age, marital status (single, married, divorced, widowed, separated), ethnicity (brown, white, black, yellow, indigenous), religion, year of enrollment (beginning of the course) and type of domicile (student house, parents' house, relatives' house, boarding house, alone, other). The second section on the evaluation of the consumption of licit and illicit drugs was carried out through the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).

The ASSIST was developed in a multicenter project coordinated by the World Health Organization (WHO). The Portuguese version of the ASSIST was used. This instrument is structured in eight questions on the use of nine classes of psychoactive substances (tobacco, alcohol, marijuana, cocaine, stimulants, sedatives, inhalants, hallucinogens, and opiates)⁽¹⁰⁾.

ASSIST questions address the frequency of use in life and in the last three months, problems related to use, concern about the use by people close to the user, loss of performance in expected tasks, unsuccessful attempts to cease or reduce the use, feeling of compulsion and use of injectable drugs. Each response results in a score ranging from 0 to 4, and the total sum can vary from 0 to 20. The score range from 0 to 3 is considered as indicative of occasional use, from 4 to 15 as indicative of abuse, and from 16 to 20 as suggestive of dependence⁽¹⁰⁾.

For data analysis, the median was adopted as reference in the categorization of the variable age (≤ 21 years, > 21 years). Data were tabulated and analyzed in the Statistical Package for the Social Sciences (SPSS) - version 20.0. Initially, the sociodemographic variables and the data on drug use were subjected to descriptive statistics, providing absolute and relative frequency in the case of categorical variables, and means and standard deviation (SD) in the case of quantitative variables.

Associations between dependent (drug use) and independent (sociodemographic) variables were tested with the Chi-square test (X^2) and Fischer's exact test (for expected values less than 5), with statistical significance indicated by p-values < 0.05 .

This research complied with the norms of Resolution nº 466/2012 of the National Health Council that regulates

the conduct of research in humans and was approved by the Research Ethics Committee of the State University of the Southwest of Bahia, under protocol nº 703,385, CAAE 31685314.9.0000.0055.

Results

The analysis of the sociodemographic data showed that the average age of the students interviewed was 20.77 (± 1.73) years, and 67.2% had ages equal to or less than 21 years. The majority of the individuals were female (72.4%), single (96.9%), brown (56.8%), Catholic (52.8%) and lived in student houses (38.4%) (Table 1).

Table 1 - Distribution of sociodemographic variables of health students, Jequié, BA, Brazil, 2014 (n = 429)

Variables	% response	N	%
Sex	98.8		
Female		307	72.4
Male		117	27.6
Age group	98.1		
≤ 21		283	67.2
> 21		138	32.8
Marital status	98.8		
Single		411	96.9
Married		11	2.6
Divorced/separated		2	0.5
Religion	99.8		
Catholic		226	52.8
Protestantism		115	26.9
Other Religion		58	13.6
Spiritist		11	2.6
Atheist		9	2.1
Candomblé		7	1.6
Umbanda		2	0.5
Type of domicile	99.5		
Student houses		164	38.4
Parents' house		127	29.7
Alone		55	12.9
Other		43	10.1
Relatives' house		19	4.4
Boarding house		19	4.4

With regard to the use of licit and illicit drugs during life, the most commonly used drug was alcoholic beverages (78.1%), followed by tobacco derivatives (9.1%) and hypnotics/sedatives (8.4%) (Figure 1).

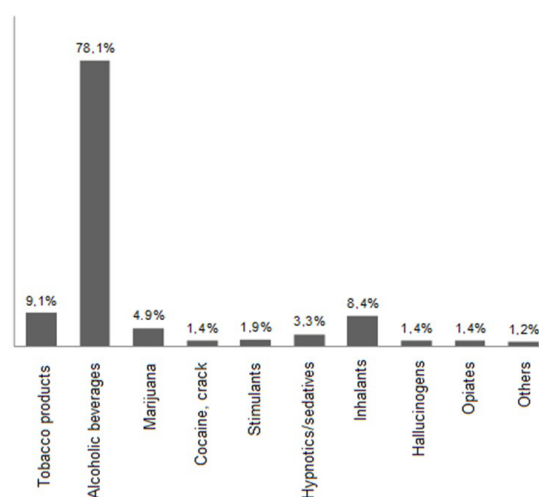


Figure 1 - Licit and illicit drug use by health students, Jequié, BA, Brazil, 2014

As for the scores of each substance according to the ASSIST, 76.9% of those who used tobacco, did it so occasionally, and 23.1% used it with a frequency suggestive of abuse. Regarding the use of alcohol, 74.6% of the participants made occasional use and 25.4% consumed alcohol with a frequency that suggested abuse. Regarding the use of marijuana, 85.7% made occasional use and 14.3% used it with a frequency that suggested abuse. As for the use of sedatives, 88.9% made occasional use and 11.1% used them with a frequency that suggested abuse (Figure 2). The other substances used by the academics such as cocaine/crack, stimulants, inhalants, hallucinogens, opioids and others were classified as occasionally used.

In the analysis of the relationship between sociodemographic variables and consumption of licit and illicit drugs, it was observed that tobacco was used with more frequency by males ($p = 0.000$), and by students who declared to be atheists ($p = 0.000$). The use of alcoholic beverages was more frequent among university students of the Catholic religion and atheist ($p = 0.000$), and among those who lived in student houses or alone ($p = 0.038$).

The use of marijuana had a higher percentage among males ($p = 0.009$), and among those who declared to be atheists ($p = 0.000$). Regarding the use of inhalants, the highest percentage was found among individuals who declared to be atheists ($p = 0.000$), and students of the Pharmacy course ($p = 0.015$).

Regarding the relationship between ASSIST scores and sociodemographic variables, it was observed that the suggestion of abuse of alcoholic beverages was more frequent among male students ($p = 0.010$), and among students of the Physical Education course ($p = 0.004$) (Table 2).

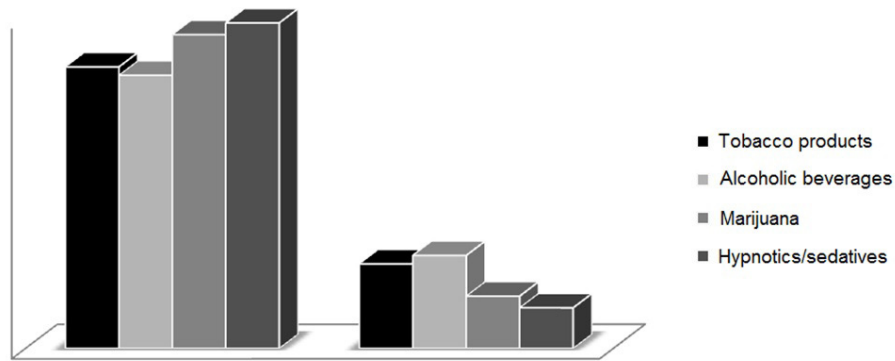


Figure 2 - Score of the use of licit and illicit substances by health academics, Jequié, BA, Brazil, 2014

Table 2 - Association between sociodemographic variables and use of licit and illicit drugs among health students, Jequié, BA, Brazil, 2014

Use and Type of drugs	Sociodemographic variables	p valor
Use of tobacco products	Male sex	0.000*
Use of tobacco products	Atheist	0.000*
Use of alcoholic beverages	Catholic/atheist	0.000*
Use of alcoholic beverages	Type of domicile students house/alone	0.038*
Use of marijuana	Male sex	0.009*
Use of marijuana	Atheist	0.000*
Use of inhalants	Atheist	0.000*
Use of inhalants	Pharmacy course	0.015*
Suggested abuse of alcoholic beverages	Male sex	0.010*
Suggested abuse of alcoholic beverages	Physical education course	0.004*

* Significant statistical difference at 5% level

Discussion

With regard to the sociodemographic characteristics of university students in the health area, a higher prevalence of young people aged 18 to 21 years was evidenced in the present study. This profile was also observed in a study conducted to verify the prevalence of smoking and alcohol consumption among students from the Federal University of Pelotas, mostly under 20 years of age⁽¹¹⁻¹²⁾. The finding regarding the age group may be related to the fact that nowadays students are seek higher education at ever younger ages.

Of the total of subjects investigated in the present study, 72.4% belonged to the female sex. A survey carried out to analyze the relationship between drug use and the norms perceived by Medical and Nursing students among peers in the São Paulo ABC found similar results to our present study, where 70.4% of the individuals were female. Similarly, a study carried out with the objective of tracing the profile of alcohol and tobacco use among undergraduate Psychology students at the Federal University of Espírito Santo found that 81% of the students were female. This predominance

was expected because health courses are still more often sought by women^(4,6,13).

Regarding marital status, 96.9% of the individuals in the present study declared to be unmarried. This percentage is similar to the percentage of unmarried individuals, which was of 97.9%, in a study comparing alcohol consumption and drinking expectations between men and women, with young university students of the course of Medicine and Physiotherapy of the Faculty of Medicine of Ribeirão Preto⁽¹⁴⁾. This fact is mainly due to the young age of the research participants.

The brown skinned population was the most frequent in the sample, with a percentage of 56.8%. A study aimed at evaluating the association between smoking, alcoholic beverage consumption, use of illicit drugs and family protection factors in high school students found that most individuals declared to be white skinned with a percentage of 40.1%⁽¹⁵⁾. Another study about the frequency of use of licit and illicit drugs among adolescents from public schools in the city of São Paulo found a percentage of 47.9% participants declaring to be white skinned⁽¹⁶⁾. These data differ from our study, regarding the classification of ethnicity. The self-classification criterion used in the instrument in many

cases depends on the perception that each individual has about himself, which can make this information suggestible, compromising the result of this variable in the present study.

Regarding religion, Catholics had a higher percentage (52.8%), in agreement with studies where 51.5% of the participants declared to be Catholic. However, there was disagreement with another study, which had as objective to verify the knowledge of the adolescents in Rio de Janeiro about licit and illicit drugs, in which the highest prevalence was of the evangelical religion (40%). In another study, 51.1% of college students were non-followers of any religion. More than 80% of published studies investigating the relationship between religiosity and drug use found an inverse correlation between these variables^(2,4,14,16).

Regarding the type of domicile, the most frequent in this study was student houses, which was the case of 38.4% of the sample. In other studies, 69.6% of the students did not live with their parents or relatives, while in another 66.8% of the students lived with their parents or relatives, pointing out in the literature that the presence of parents or relatives at home has a protective effect regarding the use of drugs^(12,14).

With regard to the use of licit and illicit drugs during life, it was evidenced in this study that the most commonly used drugs were alcoholic beverages (78.1%) followed by tobacco products (9.1%) and hypnotics/sedatives (8.4%). This finding is similar to that of a study where the most used substances were alcohol (85.07%), tobacco (33.03%) and tranquilizers (20.81%)⁽⁴⁾.

Other studies presented data similar to the present study, such as the profile of the use of psychoactive substances among university students of the Dentistry course of the Federal University of Espírito Santo which reported a rate of alcohol consumption of 87.9% and of tobacco consumption of 27%. Another study that determined the epidemiological profile of alcohol consumption and related factors among higher education students in the health area in a city in the Northeast of Brazil showed that 90.4% of the individuals had used alcohol and 27.8% had used tobacco in life^(11,13).

Alcohol is one of the substances consumed early by young people. This is due to the fact that alcohol is a legalized drug, easy to obtain, of low cost and widely publicized, thus facilitating its early and widespread consumption. This use is associated with several negative consequences and is one of the main causes of morbidity and mortality among university students. Its sale is restricted to individuals above the age of majority but this strategy is not yet enough to reduce its consumption by young people^(2,7).

As for the ASSIST score, most of the students of the health area were classified as occasional consumers, according to the level of risk detected by the questionnaire, but there was a suggestive abuse of alcohol (25.4%), tobacco (23.1%), marijuana (14.3%) and sedatives (11.1%).

Due to the scarcity of studies using the ASSIST, it was not possible to correlate the results other scores with those found in the present study. However, in a study that used the AUDIT questionnaire, it was observed problematic alcohol use among 30.6% and 14.6% of men and women, respectively⁽¹⁴⁾.

A study found a (moderate to high) risk pattern for use of alcohol (16.3%) and tobacco (4.07%). Another study observed a risk for alcoholism among students who reported alcohol consumption; 6.2% of these had a positive result. Regarding smoking, 11.4% of the male students reported that they smoke regularly or at weekends^(4,12).

In the analysis of the relationship between sociodemographic variables and the consumption of licit and illicit drugs, it was observed that religion had an inverse relation with the use of these substances. In fact, there was an association between alcohol, tobacco, marijuana and inhalants users with individuals who were not following any religion and who declared themselves atheists. Some studies highlight religion as a protective factor against drug use, because individuals who have a belief or engage in religious activities are less predisposed to becoming users.

Another association observed was between the male sex and the use of drugs such as tobacco, marijuana and suggestive alcohol abuse. This is in line with a study that verified the use of psychoactive substances throughout life where consumption of tobacco (36.9%) and marijuana (23.1%) was higher among males. Men presented a prevalence of alcohol abuse almost three-fold higher than women with a percentage of 18.3%. Thus, men represent a risk group compared to women. Men seek for factors that facilitate social interaction, gain in self-confidence, social disinhibition and increased physical/sexual attractiveness^(8,11,13).

The use of alcoholic beverages also had an association with the type of domicile of the individuals; the majority of individuals who consumed this substance lived in student houses or alone. The association of the use of these substances with the place of residence can be explained by the fact that these students are having for the first time the experience of living away from the parents and this causes a possible rupture of some habits and the adoption of new ones⁽¹²⁾.

It is important to emphasize that the study presented limitations related to the epidemiological design

employed, because cross-sectional studies do not allow the establishment of cause and effect relationships. Another limitation was the age group stipulated as inclusion criteria, since this caused a reduction of the sample.

Conclusion

The start of academic life is an important transition phase in the lives of young people, but also related to risk factors that may lead these youth to engage in behaviors that compromise their health such as increased consumption of alcohol, tobacco and other drugs. This happens because the university environment cooperates with the situation through the propaganda and apology to drugs, whether they are lawful or not.

Considering the results found and the equivalence of these with other studies, it was concluded that alcohol prevailed as the most used substance among young people, possibly due to its ample advertisement and easy access. Furthermore, the study found that being male, having no religion and living away from parents or relatives are factors that may influence the use and abuse of licit and illicit drugs.

On the other hand, further research is important to identify the factors and to understand the motivations that lead university students to consume these substances at an earlier age, in order to subsidize preventive actions in this population, sensitizing and informing young people about the consequences of their use and about dependence.

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