

Use of psychoactive substances among nursing and medical students

Abstract

Introduction: The use of psychoactive substances has been a worldwide problem that also affects university students. This study aimed to raise patterns of psychoactive substances used among Nursing and Medical students of a public institution of higher education.

Materials and methods: Cross-sectional study of quantitative approach, conducted between September and November 2020 in the context of a public higher education institution in southern Bahia, Brazil. The sample consisted of 202 university students. Data were collected using an online questionnaire and the scale of screening for the use of Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). The descriptive statistical analysis was performed.

Results: Most university students from nursing and medical courses (77.7%, n=156) have already used any of the PAS in lifetime. Among those who have used some substances, the highest frequency of use was alcoholic beverages (nursing 56%; medicine 43.4%), followed by marijuana (nursing 17.6%; medicine 23.6%) and tobacco (nursing 13.7%; medicine 10.4%). There was no use of hallucinogens and cocaine/crack by nursing students.

Conclusion: The high incidence of PAS use (alcohol, tobacco, marijuana and hypnotics/sedatives) among students, in isolation or poly-use, represents risks that should be considered as a warning to the necessity of developing mental and academic health strategies regarding the use of PSA.

Keywords: students, health occupations, psychotropic drugs, hypnotics and sedatives, alcohol drinking in college, marijuana use, students, medical, students, nursing

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Introduction

The use of psychoactive substances (PAS) has been a worldwide problem that affects all ages, especially young people. Among university students, the trend to increase the consumption of these substances reflects academic experiences, especially those related to the search for better results.¹

The increased PAS consumption in the last decades of the 20th century has been a cause of concern for the society and the scientific community. In 2014, a study² interviewed nursing students and found that 31.3% used alcohol in association with psychotropic drugs, even though they received guidance about equivalent risks. A more recent survey³ with 567 university students found that 501 (88.4%) of them already had alcohol associated with another substance, at least once in their lives, in the past month or year.

In an attempt to know what drives university students to use PAS, a research⁴ identified, among others, as the main factors: curiosity, fun, self-will, socialization, depression, search for relaxation, psychiatric prescription, anxiety, experiencing the sensations provoked in the body and mood motives, fleeing reality, dissatisfaction in the family environment, search for comfort and existential emptiness.

Regarding access to substances, whether legal or illicit, a study⁵ shows that the older students are, greater are the possibilities of facilitated access or experimentation, which may lead to problematic use or dependence, related to the training type adopted by higher education institutions (HEIs) and lifestyles at the university.

The COVID-19 pandemic also affected the mental health of students, influencing the increased PSA consumption. During this period, a study⁶ of dependence level found that the health students got a high percentage of "occasional use" and "suggestive abuse" for

alcohol, followed by marijuana, besides an association with lower academic performance.

Considering that the COVID-19 pandemic may have aggravated consumption related to the use of Alcohol and Other Drugs, this study aimed to raise standards of PSA use among nursing and medical students from a public higher education institution.

Methods

This cross-sectional, quantitative and descriptive study is part of the research on "Psychological distress and academic profile in health education", realized in a public Higher Education Institution in southern Bahia, Brazil. To form the sample for convenience, the student should be regularly matriculated in the Nursing and Medical courses of that institution and accept freely and consented to participate in the research. The invitation was sent to all students of those courses (N=481), by their e-mail address, with information about the used instruments, the ethical aspects of the research and the informed consent form. The response rates were 69.4% among those studying Nursing and 13.4% Medicine. Students without presential experience in the course (n=50) were excluded from the sample, making a total of 202 students.

According to the power sample size calculation performed later,⁷ considering the prevalence of psychoactive substance use of 81.7%,⁸ 95% confidence intervals, 5% error and a 10% replacement rate, the recommended sample would be 194 participants. Thus, our final sample of 202 is representative of the population studied.

The data were collected from September to November 2020, from a self-administered questionnaire, electronically, through Google Forms, containing questions that included sociodemographic characteristics (gender, age, affiliation and marital status, among

others) and the screening instrument “Alcohol, Smoking and Substance Involvement Screening Test” (ASSIST).

ASSIST is a screening instrument developed by the World Health Organization and validated in Brazil⁹ to detect problems associated with the use of psychoactive substances throughout the user’s life and in the past three months. It consists of eight questions and ten Likert type subscales that also measure the level of dependence related to the use of the following substances: Tobacco, Alcoholic Beverages, Cannabis, Cocaine, Amphetamine-type stimulants, inhalants, hypnotics or sedatives, hallucinogens, opioids and others. The risk indicative are classified in low risk (0-3), moderate risk use (4-15) and suggestive of dependence or high risk (>16).¹⁰ The consistency of this instrument, used online among Brazilian university students, was considered good to moderate (Cronbach’s alpha = 0.85 for tobacco, 0.73 for alcohol and 0.87 for marijuana), with acceptable sensitivity (66-84%) and specificity (92-99%) for tobacco, alcohol, marijuana and cocaine.¹¹

The results were analyzed using descriptive statistics of the distribution of absolute and relative frequencies, using the Software Statistical Package for the Social Sciences for Windows (SPSS, version 20.0).

This study complied the ethical requirements of research with human beings in Brazil and obtained approval (CAAE n. 03159318.4.0000.5526) of the Research Ethics Committee (REC) of the investigated HEI.

Results

Most students are women (84.2%), single (88.6%), without children (92.1%) and self-reported as brown or black (73.2%). The mean age was 23.6 years. The highest number of respondents occurred in the nursing course (72.3%) (Table 1).

Table 2 and 3 present results of ASSIST evaluation by group of students. Most nursing and medical students (77.7%) have already used or use any PAS. Of these, the highest frequency of use was alcohol (nursing 56.0%; medicine 43.4%), followed by marijuana (nursing 17.6%; medicine 23.6%) and tobacco (nursing 13.7%; medicine 10.4%). There was no use of hallucinogens and cocaine/crack by nursing students.

Table 1 Sociodemographic Profile of Nursing and Medical Students (n=202)

Variables	Nur		Med		Total	
	N	%	n	%	n	%
Sex						
Female	129	88.4	41	73.2	170	84.2
Male	17	11.6	15	26.8	32	15.8
Marital status						
Single	124	84.9	55	98.2	179	88.6
Stable union	9	6.2	0	0	9	4.5
Married	8	5.5	1	1.8	9	4.5
Divorced	5	3.4	0	0	5	2.5
Children						
None	133	91.1	53	94.7	186	92.1
Yes	13	8.9	3	5.3	16	7.9
Ethnicity						
Brown	66	45.2	26	46.4	92	45.5
Black	48	32.9	8	14.3	56	27.7

Variables	Nur		Med		Total	
	N	%	n	%	n	%
White	25	17.1	22	39.3	47	23.3
Indigenous	4	2.7	0	0	4	2
Yellow	2	1.4	0	0	2	1
Unknown	1	0.7	0	0	1	0.5

Source: Created by the authors.

Table 2 Risk classification for substance use, nursing students (n=146)

Substance	Low Risk		Moderate Risk		High Risk		Total	
	f	%	f	%	f	%	f	%
Tobacco	19	76	6	24	0	0	25	13.7
Alcoholic beverages	67	65.7	33	32.4	2	2	102	56
Marihuana	3	9.4	29	90.6	0	0	32	17.6
Cocaine/Crack	0	0	0	0	0	0	0	0
Amphetamines	1	33.3	2	66.7	0	0	3	1.6
Inhalants	2	100	0	0	0	0	2	1.1
Hypnotics/Sedatives	0	0	12	100.0	0	0	12	6.6
Hallucinogens	0	0	0	0	0	0	0	0
Opioids	3	50	3	50	0	0	6	3.3

Source: Created by the authors.

Table 3 Risk classification for substance use, medical students (n=56)

Substance	Low Risk		Moderate Risk		High Risk		Total	
	f	%	f	%	f	%	f	%
Tobacco	9	81.8	2	18.2	0	0	11	10.4
Alcoholic beverages	38	82.6	6	13	2	0	46	43.4
Marihuana	11	44	10	40	4	16	25	23.6
Cocaine/Crack	0	0	0	0	0	0	0	0
Amphetamines	0	0	0	0	0	0	0	0
Inhalants	0	0	0	0	0	0	0	0
Hypnotics/Sedatives	10	66.7	5	33.3	0	0	15	14.2
Hallucinogens	0	0	0	0	0	0	0	0
Opioids	7	77.8	2	22.2	0	0	9	8.5

Source: Created by the authors.

The low risk was the predominant pattern of use in both groups (nursing 52.2%; medicine 70.8%). High risk occurred for alcoholic beverages (nursing 2.0%) and marijuana (medicine 16.0%). The moderate risk in the use of hypnotics and sedatives was identified in all those who used these substances in the nursing course (100.0%). The same risk was presented among medical students, but to a lesser extent (33.3%).

Discussion

By surveying the pattern of use of PAS in nursing and medical students, this study found a high incidence in the use of licit substances, such as alcoholic beverages, tobacco and hypnotics/sedatives. Alcohol

is the most consumed psychoactive substance in the world¹² and this consumption can be facilitated by the easy distribution and affordable cost. When related to young university students, consumption and factors are intensified by many various reasons, among others, the access to establishments that serves for fraternizations, parties, buying for daily consumption; the necessity to feel belonging to a particular social group; distancing parents or guardians.¹³

Although most students present a low-risk pattern for alcoholic beverages, the high frequency of use and the identification of moderate and high risks in both groups suggest a problematic use of this substance. These data should be observed considering the risk of dependence and the high percentage of damage that alcohol consumption can bring, since traffic accidents to pathologies, resulting from continuous use. In many cases, the alcohol use is also considered the gateway to other most harmful substances, thus characterizing polyconsumption,¹⁴ causing great damage to the academic life and mental health of those students.

Another legal psychoactive substance that presented a prevalence of moderate risk for nursing and medical students was tobacco. In addition to being widely consumed in the world, tobacco also presents an important risk and in the long term can trigger circulatory diseases, cancers and chronic respiratory diseases, being one of the main causes of preventable deaths.^{15,16}

The use of hypnotics/sedatives in the sample studied drew attention, because despite being in a smaller number in relation to the use of other substances, it presents a moderate risk presented in most of the sample, being for all nursing, indicates continuous use and possible dependence, besides the possible manifestation of associated health problems. The students' search for those substances may occur due to the conditions of psychic suffering that the academic environment provides, such as excessive workloads of studies, increased stress, pressure related to academic performance, among others.^{17,18}

Marijuana, considered the third most used drug in the world, was the second most used among the students interviewed and had a high-risk prevalence among medical students. Such consumption may be influenced by the abrupt change in the routine of studies and social interaction, the influence of third parties such as friends, roommates or loving partners, the distancing from family/hometown, the search for momentary pleasure and/or relaxation, or the attempt to relieve stress and anxiety caused by all academic collection and excessive workload of the curriculum. In addition, access to these substances is relatively easy and can be done through friends, acquaintances or students from the HEI campus itself.^{19,20}

The use of Hallucinogens and Cocaine/Crack has not been recorded and these data are consistent with the literature that says that academic students avoid the use of substances that carry a social stigma, such as cocaine/crack, besides being afraid to become dependent and to be judged by the researchers, despite all the ethical rigor in research conducted with humans. However, further research is necessary to understand if there is a non-consumption or underreporting for these substances.^{18,19}

As limitations of this study, the taboo in relation to the theme of psychoactive consumption, the fear of coercion, punishment or judgments may cause the interviewee not to report his/her real consumption, producing underestimated answers; the low-adherence of medical students to the research may have produced a smaller number than expected; less attention to the gender variable may have influenced this result, since the pattern of consumption among women may be different between each other and between genders.²¹

In general, the data of this study may have been influenced by the COVID-19 pandemic period, as has been demonstrated in some studies,^{6,22} which have found a significant increase in the use of alcohol, tobacco and marijuana and worsening in the life quality of university students in the pandemic.

Conclusion

University life, the pandemic and the various factors involving the psychic suffering of nursing and medical students can explain the various patterns of PAS consumption found in this study. This research found a high incidence in the use of PAS such as alcohol, tobacco, marijuana and hypnotics/sedatives among students and this consumption, in isolation or concomitantly with other substances, presents imminent risks that should be considered a warning to the necessity of developing strategies to improve mental and academic health concerning the use of PAS.

When reflecting on the profile of students and their pattern of PAS consumption, there is a question about the psychic suffering associated with university life and that, recently, may have been aggravated by the COVID-19 pandemic and how much these and other variables may be associated with increased consumption and risk related to this consumption, suggesting that other studies may bring new responses to the better quality of life of those students.

This study is expected to contribute to the construction of policies, programs and strategies to prevent the indiscriminate use of PAS among young university students, considering the higher consumption related to licit substances, the strategy of harm reduction, attention to the management of psychic suffering in the context of nursing and medical education, and, consequently, the improvement of the quality of life of those students.

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Conflicts of interest

The author declares there is no conflict of interest.

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