


Anxiety and depression and psychoactive substance abuse in university students


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Objective: to identify the frequency of anxiety, depression and use of psychoactive substances in university students. **Method:** cross-sectional study. Data were collected using the Anxiety and Depression Hospital Scale and questions on the use of psychoactive substances. **Results:** students from the first to the six terms of a private college specialized in health care in the northeastern region in Brazil were interviewed. A sociodemographic questionnaire was used to characterize the population and the use of psychoactive substances, in addition to the Hospital Anxiety and Depression Scale. One hundred and sixteen students participated, and 51.72 % reported using some psychoactive substance, especially alcohol. Anxiety symptoms were present in 28.45% of the participants and depression in 16.38%. **Conclusion:** the study showed data that were in agreement with those in other studies on this type of population, identifying a higher frequency of substance use by students with anxiety symptoms.

Descriptors: Substance Abuse; Students; Anxiety; Depression.

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Ansiedade e depressão e uso de substâncias psicoativas em jovens universitários

Objetivo: identificar a frequência de ansiedade, depressão e uso de substâncias psicoativas em universitários. Método: estudo transversal. Os dados foram coletados utilizando a escala hospitalar de ansiedade e depressão e questões sobre o uso de substâncias psicoativas. Resultados: foram entrevistados estudantes do primeiro ao sexto período de uma faculdade privada especializada em saúde no nordeste do Brasil. Foi utilizado um questionário sociodemográfico, para caracterizar a população e o uso de substâncias psicoativas, e a Escala Hospitalar de Ansiedade e Depressão. Participaram 116 estudantes e 51,72% responderam fazer uso de alguma substância psicoativa, principalmente do álcool. Sintomas de ansiedade estiveram presentes em 28,45% e de depressão em 16,38%. Conclusão: a pesquisa apresentou dados compatíveis com os de outros estudos com esse tipo de população, identificando maior frequência de uso de substâncias em estudantes com sintomas de ansiedade.

Descritores: Abuso de Substâncias; Estudantes; Ansiedade; Depressão.

Ansiedad y depresión y abuso de sustancias psicoactivas en estudiantes universitarios

Objetivo: identificar la frecuencia de ansiedad, depresión y uso de sustancias psicoactivas en universitarios. Método: estudio transversal. Los datos se recopilaron a través de la Escala Hospitalaria de Ansiedad y Depresión y preguntas sobre el uso de sustancias psicoactivas. Resultados: fueron entrevistados estudiantes del primero al sexto período de una facultad privada especializada en salud en el nordeste de Brasil. Se utilizó un cuestionario sociodemográfico para caracterizar la población y el uso de sustancias psicoactivas y la Escala Hospitalaria de Ansiedad y Depresión. Participaron 116 estudiantes y el 51,72% respondió hacer uso de alguna sustancia psicoactiva, principalmente del alcohol. Los síntomas de ansiedad se presentaron en un 28,45% y la depresión en un 16,38%. Conclusión: la investigación presentó datos compatibles con otros estudios con ese tipo de población, identificando mayor frecuencia de uso de sustancias en estudiantes con síntomas de ansiedad.

Descriptorios: Abuso de Sustancias; Estudiantes; Ansiedad; Depresión.

Introduction

Illicit drug use reaches its peak between the ages of 18 and 25. Almost 20% of the individuals in this age group report having used illicit drugs in the previous month. When young adults settle down, get married and take responsibility for their future, they tend to discontinue drug use and rates drop dramatically during the second decade of their lives. Then, they continue to decrease, albeit more slowly, as people reach late adulthood and old age⁽¹⁻²⁾.

Young adults' mental health is a major concern and, among the various mental disorders, depression is one of the most common at this stage of life. Fifteen to 25% of people may have a depression crisis at least once in their lives, with the first depressive episode occurring most often before the age of eighteen⁽³⁾. Anxiety disorders, in turn, represent one of the most common and debilitating forms of psychopathology in childhood and adolescence⁽⁴⁾. Depression is known as the Malady of the Century, a psychic mood disorder that strikes more and more people in modern society.

The World Health Organization⁽⁵⁾ defines depression as a common mental disorder, characterized not only in the form of sadness but also by irritability, loss of interest or pleasure in daily activities, loss of concentration or memory, decreased self-esteem, altered sleep or appetite, among other symptoms. This disorder may have genetic, environmental and psychosocial causes and the psychotherapeutic treatments associated with the use of medications yield better results.

Anxiety is defined as an uncomfortable mood, negative apprehension about the future and unpleasant inner unrest. It includes somatic and physiological manifestations, such as sweating, tremors, dizziness and tachycardia as well as psychic manifestations, namely, inner restlessness, apprehension and mental discomfort⁽⁶⁾.

The use of psychoactive substances can initially minimize or moderate symptoms, but abstinence and chronic use typically exacerbate them in the medium term. Psychoactive substances are drugs that are capable of altering brain functioning, causing changes in the mental state, the psyche, and are, therefore, called psychotropic drugs or psychoactive substances. Some examples of such drugs are marijuana, cocaine, opioids, tobacco, caffeine, benzodiazepines, LSD and amphetamines, among others⁽⁷⁾.

University students are considered a risk group for the development of mental disorders such as depression⁽⁸⁾. Problems that may arise during the transition period and throughout one's academic experience, such as geographical changes, academic

rigor, new responsibilities, separation from family, a new interpersonal environment, pressure and concerns about the future, financial difficulties, accommodation difficulties, among others, are situations that students have to adapt to. However, while many view this new context naturally and positively, without experiencing major adjustment difficulties, for a significant number of university students, all of these changes can produce high levels of stress that underlie a set of psychological problems⁽⁹⁾.

Thus, this study aimed to describe psychosocial characteristics and identify the frequency of anxiety and depression symptoms and the use of psychoactive substances in university students of a psychology program.

Method

This is a quantitative cross-sectional study conducted at a private college specialized in health care in northeastern Brazil. The study population consisted of 116 students who were enrolled in the psychology program. Data were collected from April to June 2016 and then entered on an Excel database. The means and frequencies were analyzed by the Epi-Info 7 software.

Collection took place when the students entered their classrooms, thus ensuring that all of them had the opportunity to answer the questions in the instrument used. The research protocol was given to the students for completion of the survey, and it consisted of a structured questionnaire containing information on sociodemographic characteristics, data related to their program and the use of psychoactive substances as well as from the Hospital Anxiety and Depression Scale (HADS)⁽¹⁰⁾. HADS is a symptom-screening scale with 14 items, seven of which are for anxiety assessment (HADS-A) and the other seven for depression (HADS-D). It is a 4-point measurement scale, 0-1-2-3, and each scale can reach 21 points. Zigmond and Snaith⁽¹¹⁾ recommend ≥ 9 as a cut-off point for both subscales and attribute: HADS-anxiety/depression: no anxiety between 0 and 8, with anxiety ≥ 9 ; HADS-anxiety/depression between "8" and "10" - "mild"; HADS-anxiety/depression between "11 and 14" - "moderate"; HADS-anxiety/depression between "15" and "21" - "severe".

The questionnaire aimed to describe the sociodemographic profile of the young individuals in terms of: gender, age, income and program term. Regarding anxiety and depression, it aimed to determine the frequency, use of medication, type of follow-up and family history as well as to identify the types of

psychoactive substances used, the amount, time of use, frequency and reasons for use. Finally, the relationship between anxiety and depression and the use of psychoactive substances was analyzed.

Results

The study population consisted of 116 students enrolled in the psychology program in 2016. The sample was calculated using the Epi-Info 6.04 software.

A total of 116 psychology students from the 1st to the 6th terms at a private college were interviewed. Table 1 shows the students' sociodemographic characteristics.

Table 1 - Sociodemographic characteristics of students from a college specialized in health care. Recife, PE, Brazil, 2019

Variables	N	%
Number of participants		
First term	50	43,86
Second term	11	9,65
Third term	4	3,51
Fourth term	17	14,91
Fifth term	23	20,18
Six term	9	7,89
Gender		
Female	95	82,61
Male	17	16,52
Indifferent	1	0,87
Number of people residing with the students		
From one to three people	2	1,72
From four to seven people	66	56,90
From eight to ten people	47	40,52
Own house	96	82,76
Rented house	20	17,24
Rural area	2	1,72
Urban area	113	97,41
Indigenous community	1	0,86
Father's education		
1 st to 4 th grade	7	6,09
5 th to 8 th grade	15	13,04
High school graduate	39	33,91
College graduate	28	24,35
Post-graduation	19	16,52
Did not attend school	1	0,87
Could not answer	6	5,22
Mother's education		
1 st to 4 th grade	4	3,45
5 th to 8 th grade	13	11,21
High school graduate	37	31,90
College graduate	37	31,90
Post-graduation	22	18,97
Did not attend school	3	2,59
Family income		
10 minimum wages or higher	52	45,22
Six to nine minimum wages	23	20,00
Three to six minimum wages	19	16,52
One to three minimum wages	17	14,78
Up to one minimum wage	4	3,48
Personal income		
None	64	56,14
Up to one minimum wage	26	22,81
One to three minimum wages	13	11,40
Three to six minimum wages	6	5,26
Six to nine minimum wages	2	1,75
10 minimum wages or higher	3	2,64

Fifty (43.86%) students from the first term, 11 (9.65%) from the second, 04 (3.51%) from the third, 17 (14.91%) from the fourth, 23 (20.18%) from the fifth and 09 (7.89%) from the sixth participated in the study. Only one was a foreigner. Of the respondents, 95 (82.61%) were females; 17 (16.52%) were males and 01 (0.87%) reported that gender was indifferent. Age ranged from 17 to 51 years, with a mean of 22.9 years. Of the 114 students who answered this question, 50 (43.86%) were in the first term, 11 (9.65%) in the second, 04 (3.51%) in the third, 17 (14.91%) in the fourth, 23 (20.18%) in the fifth and 09 (7.89%) in the sixth (Table 1).

Regarding the number of people residing with the students who answered the questionnaire, 02 (1.72%) lived alone; 66 (56.90%) lived with one to three people; 47 (40.52%) reported living with four to seven people, and 01 (0.86%) lived with eight to ten people. Of these, 96 (82.76%) had their own house, and 20 (17.24%) rented one; 02 (1.72%) lived in rural areas, 113 (97.41%) in urban areas, and 01 (0.86%) in an indigenous community.

As to the father's level of education, 07 (6.09%) attended school from the 1st to the 4th grades; 15 (13.04%) from the 5th to the 8th grades; 39 (33.91%) graduated from high school; 28 (24.35%) were college graduates; 19 (16.52%) attended graduate school; 01 (0.87%) did not attend school, and 06 (5.22%) could not provide that information (Table 1).

Concerning the mother's level of education, 04 (3.45%) attended school from the 1st to the 4th grades; 13 (11.21%) from the 5th to the 8th grades; 37 (31.90%) attended high school; 37 (31.90%) were college graduates; 22 (18.97%) attended graduate school, and 03 (2.59%) could not answer it (Table 1).

Of the 115 students who answered about family income, the majority, that is, 26 (22.61%) had a high income of more than 15 minimum wages, followed by 23 (20.00%) with an income of six to nine minimum wages; 19 (16.52%) from three to six; 17 (14.78%) from one to three; 15 (13.04%) approximately nine to twelve minimum wages; 11 (9.57%) from twelve to fifteen; 02 (1.74%) one minimum wage, and 02 (1.74%) no family income. As regards the students' personal income, 64 (56.14%) had no income; 26 (22.81%) were paid up to one minimum wage; 13 (11.40%) from one to three; 06 (5.26%) from three to six; 02 (1.75%) from six to nine and 01 (0.88%) from nine to twelve, the same percentage as that of those who reported to earn from twelve to fifteen and more than fifteen minimum wages (Table 1).

Table 2, below, shows information on the use of psychoactive substances, its frequency and their use by college students.

Table 2 - Use of psychoactive substances and the main reasons leading to their use in university students from a college specialized in health care. Recife, PE, Brazil, 2019

Variables	N	%
Psychoactive substances		
Alcohol	51	43,97
Marijuana	21	18,26
Nicotine	11	9,48
Anxiolytics	11	9,48
Antidepressants	5	4,31
LSD*	5	4,31
Ecstasy	2	1,72
MDMA†	2	1,72
Other substances (<i>loló</i> - poppers)‡, cocaine, glue, special k, mushrooms, snuff)	6	5,20
Frequency of use		
Daily	11	18,64
Two to three days a week	3	5,08
On weekends	20	33,90
Monthly	10	16,95
Seldom	15	25,42
Time of use		
Less than a year	5	8,47
One year	3	5,08
Two years	7	11,86
Three years	7	11,86
For years	5	8,47
Five years and over	32	54,20
Main reasons for use		
Curiosity	8	14,29
Entertainment	4	7,14
Free will	3	5,36
Socialization	2	3,57

*LSD = Lysergic acid diethylamide; †MDMA = Methylenedioxy methamphetamine.

‡*Loló* is a volatile product composed of chloroform, ether and scented essence. It is part of the group of drugs classified as inhalants, since they are absorbed by the lungs after aspiration through the mouth or nose.

Among the study participants, 60 (51.72%) reported using some psychoactive substance. Alcohol use prevailed, with 51 (43.97%) answers, followed by marijuana, with 21 (18.26%). Nicotine and anxiolytics showed the same percentage - 11 (9.48%). Antidepressants and LSD also had the same score - 05 (4.31%), as well as ecstasy and MDMA - 02 (1.72%), followed by *loló* - 01 (0.88%), cocaine - 01 (0.87%), glue - 01 (0.87%), special K - 01 (0.86%), mushrooms - 01 (0.86%) and snuff - 01 (0.86%). The frequency of use was 11 (18.64%) for daily use and 03 (5.08%) from two to three days a week. Twenty (33.90%) reported using substances only on weekends, 10 (16.95%) on a monthly basis and 15 (25.42%) almost never (Table 2).

Regarding the time of use, 05 (8.47%) reported having been using psychoactive substances for less than a year; 03 (5.08%) for one year; 07 (11.86%) for two years, the same score reported by those

who had been using it for three years; 05 (8.47%) for four years and 32 (54.20%) for five years or longer. Among the reasons for use were curiosity - 08 (14.29%), entertainment - 04 (7.14%), free will - 03 (5.36%) and socialization - 02 (3.57%). Other reasons mentioned to justify the use were depression, search for relaxation, psychiatric prescription, anxiety, experiencing the sensations caused in the body and moods, escaping from reality, dissatisfaction in the family environment, search for comfort, existential emptiness, among others, and totaled 1.79% (corresponding to one participant) (Table 2). Table 3 shows information on students' family history, anxiety and depression.

Table 3 - Family history, anxiety and depression in university students from a college specialized in health care. Recife, PE, Brazil, 2019

Variables	N	%
Family history		
Anxiety	13	11,30
Depression	26	22,61
Both	39	33,91
Personal history		
Consider themselves to be anxious	83	71,55
Have been diagnosed with depression	22	18,97
Had used or were using anxiety and/or depression medication	33	28,45
Had had or were having some type of psychological support	67	57,76
Showed anxiety symptoms (HADS-A*)	33	28,45
Showed depression symptoms (HADS-D*)	19	16,38

* HADS-A = Hospital Anxiety and Depression Scale

Regarding family history of anxiety and/or depression, 39 (33.91%) reported the occurrence of both disorders whereas 37 (32.17%) reported neither one; 26 (22.61%) reported only depression, and 13 (11.30%) only anxiety. Approximately 83 (71.55%) students considered themselves to be anxious and, among them, 22 (18.97%) had been diagnosed with depression; 33 (28.45%) had taken or were using medication for depression and/or anxiety. Some sort of psychological support was reported by 67 (57.76%); 33 (28.45%) showed anxiety symptoms, and 19 (16.38%) had depressive symptoms (Table 3).

Discussion

Sociologically, people can be considered adults when they are responsible for themselves or choose a career, get married or establish a meaningful relationship, or start a family. Psychological maturity, however, depends on achievements, such as discovering one's identity, becoming independent of one's parents, developing a value system and establishing relationships⁽¹¹⁾. Other authors also report that adulthood is marked not only by external criteria,

but also by internal indicators such as the feeling of autonomy, self-control and personal responsibility, that is, it is more a state of mind than an isolated event⁽¹¹⁾. Thus, entering university can result in a wide range of adaptive needs in the lives of students around the world.

A study on 1,743 first-year university students in France found a prevalence of psychological distress associated with increased risk for anxiety and depression, which was estimated for 15.7% of young males and 33% of females⁽¹²⁾. In Turkey, results for the university population show a worrying situation. In terms of depression, anxiety and stress, moderate or high severity levels were found in 27.1%, 47.1% and 27% of respondents, respectively⁽¹³⁾.

In Brazil, medical students from the Federal University of Uberlândia, evaluated by the Beck Inventory, showed 79% prevalence of depressive symptoms, of which 29% were considered to be mild, 31% moderate and 19.25% severe⁽¹⁴⁾. Another study, which analyzed the symptoms of depression and anxiety in 200 students from a private university in Rio Grande do Sul, found that women had significantly higher levels than men for both anxiety and depression. In relation to the program term, freshmen showed significantly higher depression rates than seniors, with no differences for anxiety. Students majoring in Languages, Literature and Psychology showed higher levels of depression than the others and, regarding anxiety, there was no statistically significant difference, but the students in the Language and Literature programs also showed higher rates⁽¹⁵⁾.

In this study, it was found that of the 22 students who reported having been diagnosed with depression, 18 (81.81%) were females, which is similar to the findings in the abovementioned study. Another finding that is in agreement with those in the study above is related to the program term, as 17 (34.00%) of the fifty students in the first period showed signs of anxiety or depression, a considerable number that prevails over other periods.

Depression affects women on a larger scale. Studies show that this is due to a correlation between advancing puberty and depressive symptoms. Other possible factors are the way girls are socialized and their greater vulnerability to stress in social relationships. Some other risk factors for depression are anxiety, fear of social contact, stressful events, chronic illness, parent-child conflict, abuse or neglect, alcohol or drug use and having a parent with a history of depression. These factors are gender independent⁽¹⁾. Analyses of the results from previous studies on the

subject have found that anxiety also affects women on a larger scale.

In the literature review, we came across several articles relating psychoactive substance abuse to anxiety and depression, which may motivate individuals to use drugs in order to alleviate their own uneasiness. A study on 407 students aged 14 to 18 years, which was conducted in Maceió (AL)⁽¹⁶⁾ and related the use of psychoactive substances to anxiety, found that 82.10% reported having used psychoactive substances; 71% had used it for at least one year and 31.40% for one month; 12.8% used it frequently and 13.5% used it heavily. Only 17.4% of the respondents reported never having consumed any psychoactive substance. In our study, it was found that 60 (51.72%) participants reported using some psychoactive substance.

Psychoactive substance use drops dramatically in the second decade of one's life, which possibly explains this divergence⁽¹⁾. Regarding anxiety, the participants from Maceió⁽¹⁶⁾ showed a distribution of 24.8% for the minimum level, 23.6% for mild, 28% for moderate and 23.6% for severe anxiety. Finally, it was concluded that those who answered affirmatively about the use/frequency of substances, such as alcohol, cigarettes, solvents and energy sources, showed a higher prevalence of moderate anxiety. In our study, 28.45% had anxiety symptoms, which was observed by the cut-off point of the scale, but the self-reported information that 71.55% of them considered themselves to be anxious is noteworthy.

Research has shown that college students comprise a vulnerable population that is more likely to develop mental disorders, which, in turn, can lead to psychoactive substance abuse. Given this fact, it is hoped that this study can contribute to the investigation of the possible relationship between anxiety and depression and psychoactive substance abuse by college students, and thus detect and prevent this type of problem at an early stage. As limitations of this study, we point out that no statistical analyses were performed to correlate the variables, and that the data correspond to a cross-sectional view.

Conclusion

This study aimed to describe the frequency of anxiety and depression symptoms and psychoactive substance use in college students and found that most students who had anxiety symptoms were using some psychoactive substance, whether licit or not. These data are in agreement with those in other studies conducted on this population.

Among the psychoactive substances mentioned by students, alcohol was the most frequently used, probably because it is legal, easily accessible, culturally used and accepted. The second was marijuana, a substance that is increasingly gaining ground in the media and in scientific studies, and finally tobacco, ranked third with the use of anxiolytics.

The characterization of psychosocial aspects, mental health and the frequency of psychoactive substance use in a vulnerable population can serve as an important source for the development of future prevention and health care programs for university students. With regard to psychoactive substance use, anxiety and depression, psychoeducational programs can be an important alternative, as they can demystify what the symptoms of anxiety and depression actually are and thus provide adequate support.

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Authors' contribution


Study design and planning: Leopoldo Nelson Fernandes Barbosa. Data collection: Gabriela Catel Abrahamian Asfora e Marina Carvalho de Moura. Data analysis and interpretation: Leopoldo Nelson Fernandes Barbosa, Gabriela Catel Abrahamian Asfora e Marina Carvalho de Moura. Manuscript writing: Gabriela Catel Abrahamian Asfora e Marina Carvalho de Moura. Critical review of the manuscript: Leopoldo Nelson Fernandes Barbosa.

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