

# Non-prescribed use of psychotropic drugs among medical and dental students

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## ABSTRACT

**Introduction:** Psychotropic drugs are compounds that act on the central nervous system, modifying psychic functions and producing changes in behavior, mood and cognition. Their use has increased markedly in recent decades and non-prescribed consumption is very common. **Objective:** This study aimed to know the profile of medical and dental students who use psychotropic drugs without medical guidance, identify which drugs are the most used, understand the reasons for use, and analyze the perception of the students about the risks and impacts on academic performance. **Method:** This is a cross-sectional study with a triangulation mixed methods approach carried out with students regularly enrolled in the medicine and dentistry courses of two universities, one public and the other private. Data were produced in two distinct stages: the first consisted of a structured questionnaire applied as a screening method for the next stage, which consisted of an interview. The material produced in the interviews was transcribed in its entirety and analyzed. **Results:** It was observed that the practice of self-medication is common and trivialized among the medical and dental students interviewed; there is easy access to psychotropic drugs; the perceptions of benefits and harms of psychotropic drug usage are distorted; and there is a false perception of risks. Improvement of academic performance and high self-expectations were the main reasons boosting and contributing the perpetuation of use and the knowledge of the students about the substances was superficial. It was observed that most students were using substances in a concomitant and harmful way and that they were resistant to seeking help. **Conclusion:** Further knowledge on the indiscriminate psychoactive drug usage among university students is necessary, especially because these students will become health professionals, generating a reflection on the risks of self-medication in their personal and social lives and in their future professional activities.

**Keywords:** Psychotropic drugs, Students, Education, Prescriptions.

## INTRODUCTION

Psychotropic drugs are compounds that act on the central nervous system, modifying psychic functions and producing changes in behavior, mood and cognition. They are used for the treatment of mental disorders such as depression, anxiety, psychosis, affective disorders, and are also used for sedation in surgeries and painful medical procedures<sup>1</sup>.

Psychotropic drug use has increased

markedly in recent decades, what has been attributed to a higher frequency of diagnoses of psychiatric disorders in the population, the introduction of new drugs in the pharmaceutical market, and new indications for symptom reduction in multiple disorders<sup>2</sup>.

The consumption of different prescription drugs without a doctor's prescription has increased among young people due to both facilitated access and the mistaken idea that they do not pose risks to health<sup>3-5</sup>.

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Non-prescribed psychotropic medication usage is very common. Stimulants and anxiolytics induce stability, relief and even pleasure, but the excessive use of these drugs can be harmful and their indiscriminate use can cause physical dependence or serious toxic side effects, including fatal overdoses<sup>6</sup>.

University students are susceptible to psychological distress and development of mental disorders due to numerous factors, such as the distance from the family nucleus, new interpersonal and romantic relationships, decisions about priorities, insecurity during graduation, dissatisfaction with professional choice, expectations of insertion in the labor market, difficulty in reconciling leisure and academic activities, and management of the financial life<sup>7,8</sup>.

Due to the full-time load of undergraduate courses in the health area such as medicine and dentistry, students are required to dedicate much effort, which may compromise their social life and physical and mental well-being. These students also need to deal, in their practical activities, with the provision of care at an early moment in the course and the anxieties and distress of patients and their caregivers. In these professions, there is little tolerance for error, contributing to higher stress and anxiety, ultimately leading to the practice of self-medication<sup>9,10</sup>.

The objective of this study was to know the profile of medical and dental students who use psychotropic drugs without professional guidance in order to identify which drugs are most used, understand the reasons that lead students to use these drugs and, finally, analyze the perception of the students about the risks and their impacts on academic performance.

## METHOD

This is a cross-sectional study with a triangulation mixed methods approach<sup>11</sup> carried out with students regularly enrolled in the medicine and dentistry courses of two higher education institutions (HEIs), one public and the other private, between December 2018 and October 2019, on the *campuses* of Maceió, capital of the state of Alagoas.

For data collection, after authorization from the coordinators of the courses, teachers were contacted in order to schedule a date and time for application of a structured questionnaire to be answered by the students present at the moment, at the beginning or end of classes. Of the 1,874 students enrolled in the courses of the two universities, 1,111 students accepted to participate and answered the questionnaire. Of these students, 33 met the inclusion criteria: they had used psychotropic drugs in the last month, on a daily or weekly basis or only during tests, without medical indication.

In the qualitative stage of the study, 14 interviews guided by a semi-structured form were conducted and recorded in audio. The participants were eight medical students and six dental students. The saturation criterion for qualitative research was used to set the number of interviewees.

The material produced in the interviews was transcribed in its entirety and followed Yin's five-phase analysis cycle for qualitative studies<sup>12</sup>. The first phase consisted of the compilation of the database. The transcribed material underwent an analytical review and the first operational process of data organization was initiated. Then, in the second phase, the data were

decomposed from codifications by themes and memoranda, in which the records and even the field notes were conceptually considered and articulated with the research questions. In the third phase, the data were recomposed from the definition of themes at a deeper classification level, with hierarchical arrangements. Finally, after this, the last two phases, interpretation and conclusion, took place.

The research was approved by the Research Ethics Committee (REC) through Opinion number 2.993.783 and CAAE 99423618.2.0000.0039. All students who answered the structured questionnaire and participated in the interviews signed the Informed Consent Form. To safeguard the identity of the participants, they were identified by letters of the alphabet.

## RESULTS AND DISCUSSION

Regarding the academic profile of students who used non-prescribed psychotropic drugs in the month preceding the interview on a daily or weekly basis or only during exams, the study identified a slight predominance of use among students of the private HEI (54.5%) and enrolled in the medical course (54.5%), as shown in Table 1. There was greater use among students in the eighth semester of the course (24.2%), followed by the second (21.2%) and third (15.2%). Regarding education prior to enrollment in the courses, it was found that most students (69.7%) had no other higher education degree.

It is noteworthy that the use of psychotropic drugs without medical prescription was not identified among the students of the last two semesters of the courses who participated in the study.

TABLE 1. Academic profile of students who used psychotropic drugs

Variable	Number	Percentage
Institution		
Private HEI	18	54.6%
Public HEI	15	45.4%
Semester of the course		
First	1	3.0%
Second	7	21.2%
Third	5	15.2%
Fourth	2	6.0%
Fifth	1	3.0%
Sixth	4	12.1%
Seventh	2	6.0%
Eighth	8	24.2%
Ninth	0	0
Tenth	3	9.1%
Eleventh	0	0
Twelfth	0	0

Course		
Medicine	18	54.6%
Dentistry	15	45.4%
Schooling prior to enrollment		
Secondary education	23	69.7%
Tertiary education	9	27.3%
Specialization	1	3%

Source: Prepared by the authors

The most used pharmacological classes reported by the study participants are shown in Table 2. Herbal medicines (72.7%), anxiolytics (45.4%) and psychostimulants (36.3%) were the most cited. Antipsychotics were the least mentioned class and 5 students (15.1%) chose not to answer the question.

TABLE 2. Pharmacological class used by medical and dental students

Variable	Number	Percentage
Pharmacological class		
Herbal medicines	24	72.7%
Anxiolytics	15	45.4%
Psychostimulants Antidepressants	12	36.3%
Mood stabilizers	4	12.1%
Antipsychotics	2	6.0%
Others	1	3.0%
I prefer not to answer	2	6.0%
	5	15.1%

Source: Prepared by the authors

Among the reasons for use, presented in Table 3, improvement of academic performance was listed as the main reason for use among the students (60.6%), followed by focus enhancement (57.6%) and difficulty sleeping (48.4%). The use of psychotropic drugs was predominant during tests (51.5%), with the most common precipitating factor being the academic demands of the course (75.7%). It is important to note that 6 (18.2%) participants reported using these medications daily. Most students reported being aware of the risks related to self-medication (93.9%) and only 5 (15.1%) of the students reported a previous psychiatric diagnosis.

TABLE 3. Data related to the use of psychotropic drugs by medical and dental students

Variable	Number	Percentage
<b>Reason for use</b>		
Academic performance	20	60.6%
Concentration enhancement	19	57.6%
Difficulty sleeping	16	48.5%
Curiosity	7	21.2%
Recreation	4	12.1%
Other	5	15.1%
<b>Frequency of use</b>		
Only in the week of exams		
Every week	17	51.5%
Daily	10	30.3%
	6	18.2%
<b>Awareness of the risks</b>		
Yes	31	93.9%
No	2	6.1%
<b>Precipitating factors</b>		
Demands of the course	25	75.8%
Family problems	8	24.2%
Relationship problems	5	15.1%
Others	9	27.3%
<b>Psychiatric diagnosis</b>		
No	26	78.8%
Yes	5	15.1%
I prefer not to answer	2	6.1%

Source: Prepared by the authors

Self-medication has been a widely reported practice among university students<sup>13-17</sup>. The present analysis corroborates other studies conducted with this population, in which the psychotropic drugs most used in self-medication are anxiolytic and tranquilizer drugs, psychostimulants and antidepressants<sup>17-20</sup>.

The reasons for use of these psychotropic drugs by university students are in line with literature data. They include academic performance enhancement, fight against the fatigue and stress recurrent in the context of higher education courses, recreation, or treatment of the difficulty to sleep<sup>20-23</sup>.

The data produced in the analysis of the interviews were classified into thematic categories and discussed below. To ensure the anonymity of the participants, the speeches' authors will be presented using the letter S (student) followed by a letter in the order of the alphabet.

## Easy access to non-prescribed psychotropic drugs

When asked about the source of the psychotropic drug(s) used, the participants answered that they obtained them within the family nucleus or through friends and/or acquaintances, as identified in the speech of the student SA: "it's my father's [...] he doesn't even know that I use it", or as in the speech below:

*I got it from a girl in the class, she had no indication to take it, she would buy it, and she wasn't even the one who would buy it, it was her boyfriend who got it. Then, that's how, I would use it, she sells and resells it! She resells a packet for 110 reais [Brazilian currency], she would split the packet in two parts*

*and sell it, and would make some money from that (laughs). (SF)*

It is important to stress that the drugs were predominantly obtained outside the family environment, mostly from other colleagues who also use it without medical indication, drugstores that sell them clandestinely, and through social networks (Instagram, WhatsApp groups and web pages). Even drugs not marketed in Brazil, such as **Adderall®**, were mentioned by the interviewee SH:

*I buy it on the black market [...] well, when you go digging, getting references from others, you end up getting someone who can even get stronger drugs [...] this last month I got Adderall, which is an American drug. On some websites they use pseudonyms in ads, but now I see it more often in a WhatsApp group. (SH)*

Some participants effectively demonstrated the paths taken on the internet to acquire the medications and the expenses incurred in clandestine transactions. It is noteworthy that sale prices in the illegal trade are higher than the maximum prices for consumers practiced in the pharmaceutical market<sup>20</sup>.

## Trivialization of the use of psychotropic drugs

The indiscriminate intake of medicines is pointed out as frequent among Brazilian university students from different fields. In most Brazilian studies, self-medication is predominant in students of the health area who gain deep knowledge of the pharmacokinetics and pharmacodynamics of drugs during their academic training and use it as a basis for this practice<sup>24-26</sup>.

*Before college, I didn't even know that Ritalin existed. I told my mom that there was a drug that the guys in my class were using as water [...] I was shocked because there is a whole black market behind that, I know a friend who started inhaling Ritalin because it no longer had an effect on him. (SA)*

The most commonly used psychiatric drugs were benzodiazepines (BZDs) and psychostimulants. The class of BZDs is among the most used worldwide for its remarkable effects and a wide therapeutic index. However, individuals who abuse them do so to deal with everyday problems and stress reactions<sup>27-29</sup>.

*I take Rivotril during the week I'm taking tests; I take it on the last day to balance my sleep of the week. I also use it when I have any stress, not only related to tests. (SC)*

*I often use Rivotril because I take two different courses, and sometimes I get so stressed in the clinic, with one thing and another. (SC)*

The use of psychostimulants to enhance performance and cognition was an important and frequent finding:

*When the tests start [...] I think it is a very strong trigger [...] you get the habit of always taking it to study. I took it when I needed, I thought it was a need in that moment [...] I had a lot to do and little time. It's more of a state of focus, you know [...] it's a kind of despair! (SD)*

During the interviews, it was possible to note that a significant part of the participants believed that the consumption of psychotropic drugs without professional guidance and the ways of distribution of these substances was a frequent and quite acceptable practice in the academic environment.

## Distorted perceptions of benefits

The study showed a wide nature of experiences related to the use of psychotropic drugs. It is clear that many drugs have been used as a magic formula to solve the anxieties and pains of life<sup>30</sup>. Using psychotropic drugs to negate displeasure, what sometimes masks the suffering and concerns of daily life, is strongly appealing. Health, then, becomes another consumer good to be acquired through medicines<sup>31</sup>.

The attempt to control unpleasant feelings can be exemplified with the lines below.

*I had symptoms of depression; I felt I had no wish to do anything, my life kinda devoid of any meaning. Why should I study? Why should I do anything at all? Why get out of bed? I didn't even have the energy to go to college. Anything. I took the medicine because I was trying to control something like that. (SH)*

*This urge to smoke, along with anxiety and binge eating [...] if I stop smoking I take Lexotan [...] I already know that I will be anxious, start eating, so I take sibutramine. I have no intention of taking everything together, I see at the moment what will be better, Lexotan, sibutramine or cigarette. (SC)*

Regarding the perception of benefits, some students experienced an increase in concentration when they used psychostimulants, while others said they used the drugs to cope with the large amount of subjects to cover in times of tests, even though they did not perceive a real benefit in their performance. The use of BZDs was associated with the objective of improving the anxiety related to different spheres of life and the restlessness after using psychostimulants and to regularize the sleep.

*If I could describe the effect I felt, it would be a pleasure to be there, tired, but you have a certain pleasure in sitting there and studying... you put on some music and keep reading and when out of the sudden you realize you read a lot in 30 minutes, you read a book that you were not willing to read. (SD)*

*When the effect started, I felt happier, I felt confident studying, I felt that I was going to make it. It's a subjective thing, it seems that when you take it, you feel not only cheerful, I don't know, it takes away a kind of sadness or fear of the test, you feel confident, you feel that your time studying is paying off. (SH)*

The speeches demonstrate a certain fascination with the positive effects of using these substances, indicating that they resort to these effects not only when dealing with extreme situations such as depression or anxiety episodes, but also in trivial situations, such as when they need to read a book or face the fear of a test.

It is important to note that the students who felt some benefit from the use of the medication also recognized detrimental effects on their health or even a placebo effect.

*Maybe more placebo than a real effect; you can concentrate for an hour, studying, but maybe I could do the same if I wasn't so tired. And I did not perceive any benefit in relation to the fatigue itself. (SD)*

*By the time the effect was over, I would feel exhausted, which is why I preferred to use it at night, because then I would go straight to bed, and then in the next day, I would take the one of the day. (SH)*

## Negative results of use

Although self-medication can provide relief from unpleasant symptoms, undesirable effects can be experienced, including iatrogenic diseases, masking of evolutionary diseases, intoxications, adverse reactions, drug interactions, and allergic reactions<sup>32</sup>.

All interviewees reported different adverse effects with at least one of the psychotropic drugs used and yet continued using them, persisting in the practice of self-medication, although with other drug classes.

*In the next day I wake up very sleepy, slow. As if things were happening and I see everything in slow motion. (SB)*

*The day I tripled the dose (30 mg), I felt a very strong sensation of anxiety, I felt restlessness, I lost all my appetite, I didn't eat anything. After the effect wore off, it felt like I had been beaten [...] I got very tired, I don't know if it was rebound, but it's very strong, it's impossible not to lie down to sleep. (SD)*

The influence of friends or even curiosity, self-confidence, the easy access, and the knowledge the students have about the drugs are factors listed as reasons for the practice of self-medication<sup>15,20</sup>. The literature shows that students have an exaggerated positive perception of the use of drugs by their peers and this factor influences them, prompting them to practice self-medication<sup>33</sup>.

*I took Risperidone out of curiosity. They said: - I'm taking it, everything got better in my life, then I said: - ah, let me try it. (SH)*

In the attempt to manage their academic life, resorting to self-medication to find a quick solution for their problems, so-



metimes the students end up developing mental disorders<sup>17,34,35</sup>. The interviewee SK sought the use of psychostimulants to improve his cognitive performance, but as he continued using the substances, symptoms compatible with a mental disorder of the mood spectrum and anxiety were triggered.

*As I went on using it, I couldn't sleep [...] I started to have depression and very strong panic attacks. (SK)*

It is important to highlight that the time when the person enters the university is considered a phase conducive to the appearance of prodromes or precursors of mental disorders<sup>36</sup>. Thus, the proximity and ease of access to psychotropic drugs can mask more serious mental pathologies.

## Main reasons that boost and contribute to perpetuate the use

Many interviewees reported that the continuous use of the drugs occurs due to the need to remain attentive and with good academic performance.

*When I am, for example, in a war mode, that is, during the tests [...] I mean, we were inserted at a moment when either you do it or you do it, no way out, you know? I believe that this high pressure on us, together with the strong stigma of the medical profession, which I feel is already imposed on us since the beginning of the course, creates a feeling that I should always be studying or producing something. I think this is due to the fact that if we stop to think in the huge amount of subjects necessary to have a minimum knowledge applicable in several areas, that would be enough content to study 24 hours a day for more than 6 years. (SD)*

Different studies have already indicated that when entering college, students are exposed to a considerable amount of stress, mainly due to personal demands, family expectations, high workload and content to study, among other factors<sup>7,8,16,33,37,38</sup>.

The self-demanding attitude associated with the objective of achieving a good academic performance were the main reasons cited for the perpetuation of use of psychotropic drugs among the participants. Other consequent reasons include the distance from family life and friends, expectations about the future after finishing college, financial difficulties, and even the compromise of their physical and mental health.

*I am very tough with myself for not being able to achieve what I wanted to achieve [...] when I'm not going well in college, my self-esteem gets very low, I keep thinking that people think I'm not smart enough, I keep thinking that everyone is thinking that I am not able to do it. (SB)*

Another factor that heightens the academic stress is the expectations of family members regarding the professional future of these students. The need to meet the expectations of parents generates anxiety, what, in turn, is associated with the triggering of psychological disorders, especially in medical students<sup>39,40</sup>.

*My mother is the one who expects a lot from me. She was an excellent student herself; she went from the second year of high school straight to medical school. She has very high standards. But even this high demands, she stopped, because it was not good for me. (SB)*

*My parents were always very strict with the issue of education, so that unintentionally in my head I was imagining this: - they want me to*

*become a doctor [...] after they noticed that I was suffering and they saw something was different, they called me and said: - we don't want you to take any specific course, we want you to do whatever you want and makes you happy. (SK)*

The use at times the students deemed necessary to meet academic demands was another reason pointed out in the interviews. Students of health courses are one of the main groups vulnerable to abusive consumption of drugs because they have a greater curricular workload and a wide range of information to absorb<sup>41,42</sup>.

*[...] I saw that for this test I needed to use Ritalin, I am able to study with greater concentration. (SE)*

*I bought it and used it during tests, I used to take it to prepare before the exams, but then later I grew insecure, and I started using it also to make the tests. (SF)*

## Poor knowledge about the risks of using psychotropic drugs

Although many students reported being aware of the risks related to self-medication (93.9%) in the questionnaire (applied in the first stage of the study), during the interviews it was observed that most of them do not actually have good sense when it comes to these risks. Although they are students of the health area, the little knowledge about the indications, mechanisms of action, side effects, and adverse effects of psychotropic drugs was an alarming and significant finding.

*I know that Sibutramine inhibits appetite, I know that it is bad for the heart [...] I know little [...], but about Lexotan I don't know anything, if you can take Sibutramine and Lexotan, mix them with alcohol, I don't know. (SC)*

*Well... I've read about it, but to be honest, I don't remember [...] I've read everything, but I don't remember now, at this moment, I'm not going to lie to you [...] and what I knew before using it was that it improved the oxygenation of the brain and you get more alert [...] through people who told me. Regarding the risks, I am not aware [...] I'm even afraid to learn. (SF)*

*I knew it was a hypnotic drug and that it induced sleep, but harms?! [...] the package insert is gigantic, I haven't read it. Is there a lot of bad stuff there?! I saw it in the pharmacology class, but I don't remember much. (SI)*

The findings in this study are different from those of others that report that most students who practice self-medication are aware of the risks, especially students of health courses who are more familiar with the mechanisms of action of the drugs<sup>20,43</sup>.

One of the interviewees used several classes of psychotropics without professional monitoring, such as nootropics, antidepressants, antipsychotics, psychostimulants, sleep inducers, anticholinesterases, and oral BZDs in addition to intramuscular antihistamines. Despite demonstrating scientific knowledge, he minimized the adverse effects and risks of using psychotropic drugs and continues consuming the various classes without medical guidance. He said he uses them to treat anxiety, depressive symptoms, or as cognitive enhancers, and even out of curiosity.

*I used it on a regular basis, but the side effects did not disappear as the package insert said they would [...] I would take Clonazepam at night and Ritalin in the morning to study [...] I would take Clonazepam when I felt I needed to sleep fast, or Ritalin at night, to study when I was feeling sleepy [...] antidepressants I would take when I was feeling depressed [...] I would even take Risperidone too*

*(laughs) [...] with Modafinil I did not feel concentrated, I felt very angry, it was horrible for me in every way... it was the opposite of what I had read people saying, that the drug calms the person down [...] with Donepezil, a drug to treat Alzheimer's disease, I felt more side effects, blurred vision and nausea. (SH)*

The above statement indicates a very serious problem: many students who self-medicate do not know or ignore the fact that the concomitant use of psychotropic drugs without professional supervision can potentiate the risks of intoxication and drug interaction, generating serious damages to health.

Entering college may favor the adoption of unhealthy coping mechanisms, such as the consumption of psychoactive substances (among other risk behaviors) which, in turn, may end up compromising the physical/mental health and academic performance of the students<sup>36,44</sup>.

Most respondents reported having used more than one substance, and even simultaneously, depending on their objective at the time. The misuse or abuse of other licit substances, such as alcohol and tobacco, and of illicit substances was also observed.

*I have been a smoker for many years and I try not to smoke; whenever I stop smoking, I feel euphoria to the point of not recognizing myself. So I looked for a way to help me with this. I had too many problems, the stressful academic routine, with my mouth so dry because of the cigarettes, impatient, so much so that I looked for a friend who uses marijuana, and asked him some [...] marijuana gives me peace of mind, it gives me a moment when I don't need to smoke every half hour, as it happens with cigarettes. (SC)*

*There was a time, I mean, that for not to take medicine (Clonazepam) all the time, at 8 o'clock in the morning I would take a beer in college [...] one, two cans. I've talked this over with psychiatrists [...] I'm pretty sure I'm a drug addict. There were times when I was even drinking to sleep [...] I was a little out of control. (SL)*

During the interviews, some speeches brought the possibility that some of the students were in a situation of substance dependence and others showed evidence of this dependence.

*Today, I want to stop, but I can't let it go. Today I know it's addictive. (SC)*  
*I started using it, let us say, once a week, and today I take it practically every night. It's been about 2 years, on weekends I can sleep better, I forget about the problems, I go out, then I don't take it, but on weekdays... (SI)*  
*I use it quite often; three to four times a week [...] I always took a little, at most five drops. I've been using it since the middle of the course until now. (SJ)*

## Resistance to seeking help

Many of the participants realized that the psychological symptoms they felt caused negative effects on their academic and personal lives and agreed that the use of these medications should be prescribed and monitored by a qualified professional, yet they were resistant to seek professional help, whether psychiatric or psychological.

According to Yiu<sup>45</sup>, one of the obstacles that lead to minimize the seriousness of this situation is the fact that the students themselves, especially those in medical schools, do not seek specialized help to

deal with their problems. Many would rather seek help and support from their family members and friends than seek support at their own university. The justification for this behavior is the feeling of discomfort in talking to strangers, who do not know them, in addition to the stigma associated with mental health in the teaching environment<sup>46</sup>. Another explanation is that because these are students from the health area who theoretically have knowledge of psychotropic drugs, they feel more confident to self-medicate. Thus, they avoid seeking medical care because they think they are able solve their own health problems<sup>15</sup>.

*Well, it is because the gym is like therapy for me, like going to the psychiatrist, to the psychologist. Now I don't see myself going to therapy, maybe I need it and I see myself doing it professionally later, when I'm older, you know, but for now I think there is no need. (SD)*

*Honestly, it's been a long time since I went to a doctor, to be honest [...] that thing, the cobbler's children are the worst shod [...] I have been always receiving this suggestion, but I never tried to do it. (SH)*

An important aspect to be highlighted is that the two institutions in which the study was developed have psychological and/or psychiatric care services and, despite of that, the participants did not feel the need to seek these services.

Given the above, the intrinsic relationship between HEIs and processes of mental suffering that are installed upon entering the academic environment is an important subject that needs to be discussed. From this perspective, other important questions emerge: What actions could be applied specifically to these students? How the detected reality can be prevented or mitigated? What measures should be deve-

loped in the short, medium and long term that could become positive propositions? What are the effects of the indiscriminate use of psychotropic drugs on future professionals? What are the effects of this practice on professional performance, that is, on the care these professionals will provide to others? The present study does not bring the answers to these questions, but indicates the need to look for them.

## CONCLUSION

The analysis of the interviews revealed that self-medication is a common practice in the academic environment. Factors such as ease of access to psychotropic drugs, trivialization of use, certain level of knowledge, self-confidence, distorted perception of risks, third-party counseling, need for quick relief, early responsibilities, possibility of enhancing academic performance and, in some cases, the precariousness of health services, significantly interfere with the adoption of self-medication.

The study of the indiscriminate use of psychotropic drugs by health students is important because the perception and detection of patients with similar problems can be influenced by the personal experiences of students who abuse these substances. It is necessary to understand the motivations for psychotropic drug misuse in order to fully understand the risks associated with this practice.

It is essential that college students become aware of the risks of self-medication while they are undergraduates so that they may become professionals who propagate health care among the population and are able guide their patients on the correct use of medicines.

The student assistance services of universities must be attentive to the risky behaviors addressed in this study, providing and stimulating the use of medical and psychological care, as well as creating preventive educational measures aimed at student stress and raising awareness about the rational use of drugs, bringing the theme into the classroom, so that the prevalence of self-medication is reduced.

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### **Authorship Contribution**

Plúvia Cristalina de Góis e Melo and Aída Felisbela Leite Lessa Araújo: conception, data collection and analysis, discussion of results, manuscript preparation.

Maria Clara Santos de Oliveira and Giovanna Leite Araujo: data collection, manuscript preparation, and compliance with publication standards.

Claudio José dos Santos Júnior and John Victor dos Santos Silva: critical review of the manuscript, formatting, and compliance with publication standards.

Mara Cristina Ribeiro and Aleska Dias Vanderlei: conception, methodological design, discussion and analysis of results, and critical review of the manuscript.

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