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Indiscriminate Use of Psychostimulants Among University Students: Motivation, Consequences, and Associated Factors

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Abstract:
Introduction:
The indiscriminate use of psychostimulants among university students has significantly increased, driven by academic pressure, a culture of productivity, and easy access to stimulant medications. Although intended for the treatment of specific clinical conditions, these drugs are being used without prescription to improve attention, concentration, and academic performance. In this context, the present study aimed to analyze the usage profile, motivations, knowledge about risks, and the students' perception of the role of pharmacists in guiding the rational use of psychostimulants.
Materials and Methods:
This is a field research study, descriptive in nature with a qualitative approach, conducted with 87 students from a higher education institution located in Patos, Paraíba. A structured questionnaire was applied, ensuring anonymity and confidentiality for the participants. The data collected were organized and analyzed descriptively using Microsoft Excel software, allowing for the identification of consumption patterns and perceptions related to the use of psychostimulants.
Results:
The findings indicated that 28.7% of the students use psychostimulants without a medical prescription. The main motivations reported were improved concentration, memory optimization, and meeting academic demands. Despite the supposed benefits, adverse effects such as insomnia, anxiety, and appetite loss were mentioned, highlighting risks to both physical and mental health. A comparison with the literature shows that this behavior is increasing among university students, posing a significant public health issue.
Conclusion:
It is concluded that the indiscriminate use of psychostimulants is a multifactorial phenomenon, involving ethical, social, and health components. The study underscores the importance of pharmaceutical involvement and institutional actions focused on education, prevention, and psychological support, as well as suggesting the need for future research to deepen the understanding of the phenomenon and develop effective intervention strategies.
Keywords: *Self-medication; Side Effects; Adverse Reactions; Risk Factors; Public Health.*

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I. Introduction

Since the second half of the 20th century, the consumption of medications has increased significantly, driven by the strengthening of the biomedical paradigm, the expansion of the pharmaceutical industry, and the greater availability of pharmacological treatments. This scenario has supported a culture of medicalization in everyday life, where medicines have come to be perceived as immediate solutions to physical, cognitive, and emotional challenges[1].

Among the medications most involved in this phenomenon are psychostimulants, prescribed for conditions such as Attention Deficit Hyperactivity Disorder (ADHD) and narcolepsy. However, the use of these substances has exceeded clinical settings and is becoming more frequent among university students who use them without prescriptions to improve concentration, performance, and resistance to academic fatigue[2,3].

Recent studies reveal the extent of this problem. Souza and Baiense[3] identified that 32.1% of university students have used psychostimulants to enhance their performance during exams. Similar results were found by Farias et al.[2], who observed a prevalence close to 30% among nursing students. In medical courses, Ferreira et al. (reference not included) reported a percentage of 34.9% among students, a finding that also appears in students of dentistry and pharmacy during exam periods.

The main motivations include performance pressure, sleep deprivation, academic overload, and competitiveness. However, unsupervised consumption increases risks such as anxiety, irritability, insomnia, tachycardia, appetite loss, and potential symptoms of addiction. Thus, the trivialization of medical prescriptions and the confusion between therapeutic use and instrumental use of these drugs grows[9],[13].

In Brazil, the problem is exacerbated by the ease of improper access, often through sharing among peers. Souza and Baiense[3] indicate that more than half of users acquire psychostimulants through informal channels, highlighting gaps in enforcement and the lack of educational strategies to promote rational drug use among young people.

In this context, Pharmaceutical Care plays a central role. Pharmacists guide the safe use of medications, identify self-medication practices, monitor adverse effects, and develop educational actions that prevent inappropriate consumption. Their role is particularly relevant in educational institutions, where they can contribute to building a culture of safety and responsibility in the use of psychoactive substances[6].

Thus, the indiscriminate use of psychostimulants among university students represents a public health problem that involves social, ethical, and psychological dimensions. In addition to reflecting performance pressure, it threatens the physical and mental health of students and requires integrated responses from healthcare professionals, educational institutions, and regulatory bodies.

Therefore, this study aims to analyze the profile of psychostimulant use among university students, investigating their motivations, the level of knowledge about associated risks, and the participants' perception of the importance of the pharmacist's role in guiding rational drug use. The research seeks to contribute to the strengthening of Pharmaceutical Care and policies that promote rational drug use, preventing improper consumption and safeguarding students' health.

II. Material And Methods

This study is characterized as a field research, descriptive in nature, with a quali-quantitative approach, aimed at understanding the use of psychostimulants among university students. The objective was to identify and interpret data that supported the analysis of the phenomenon, considering both objective aspects and the perceptions and experiences reported by the students.

According to Gil[5], field research involves obtaining information directly from the investigated population, allowing the researcher to observe and understand the phenomenon in its natural environment. Marconi and Lakatos[7] state that the quali-quantitative approach integrates the numerical description of results with the interpretive analysis of the meanings attributed by the subjects, providing a broader view of the studied reality. Descriptive research, as noted by Prodanov and Freitas[10], aims to observe, record, and analyze the characteristics of a given group without the researcher's intervention, enabling the understanding of relationships between variables.

The research was conducted at a Higher Education Institution (HEI) located in the city of Patos, Paraíba. The target population consisted of students from different undergraduate programs at the institution. The sampling was non-probabilistic, based on convenience, and comprised the first 87 volunteers who spontaneously agreed to participate, after signing the Free and Informed Consent Form (FICF), as outlined by Resolution No. 510/2016 of the National Health Council.

Inclusion criteria were: students aged 18 years or older, regularly enrolled, and who formally consented to participate. Individuals with inactive enrollment, no valid identification, or who had erased information on the FICF were excluded. These measures were implemented to ensure the quality of the data and the ethical compliance of the study.

It is acknowledged that potential risks included the possibility of refusal to respond to the questionnaire or discomfort when reflecting on the use of stimulant substances. On the other hand, the benefits included the expansion of scientific knowledge on the subject and the closer alignment between pharmaceutical practice and the academic reality regarding the rational use of medications.

The data collection instrument consisted of a structured questionnaire (Appendix C), comprising 15 objective questions, with "yes," "no," and "I don't know" response options. The instrument was adapted from questionnaires already validated in the literature on the use of psychostimulants among university students, including items based on studies by Pires et al.[9], Farias et al.[2], and Silva Fernandes[14]. This adaptation aimed to tailor the content to the local academic context and ensure the relevance of the questions for the investigated population. The application was conducted in person throughout 2025, ensuring anonymity and confidentiality for the participants.

Subsequently, the collected data were tabulated using Microsoft Excel software and subjected to descriptive statistical analysis, allowing the creation of graphs and tables that summarize the results and their frequencies. The interpretation of the findings was complemented by a qualitative analysis in light of the literature, establishing connections between the empirical data and the current landscape of psychostimulant use in the academic environment.

In accordance with ethical principles, the study was submitted to the Research Ethics Committee (CEP) of the University Center of Patos – UNIFIP and approved under opinion No. 7.752.709. Data collection only began after approval. All participants were informed about the objectives, risks, and benefits of the study and signed the FICF in two copies.

III. Result

The research was conducted with 87 university students from different courses at a Higher Education Institution located in the city of Patos, Paraíba, with the aim of understanding the participants' profile, their academic habits, motivations, and perceptions regarding the use of psychostimulants.

Perfil dos participantes

The study observed a predominance of students aged between 18 and 24 years (75%), with a variation from 18 to 54 years, demonstrating a diverse age range. Regarding gender, the majority were female (80.5%). Concerning academic courses, the highest participation was from students of Pharmacy (43.7%), followed by Physiotherapy, Law, and Nursing, while other courses accounted for less than 5%.

The students were distributed across the 1st to the 10th academic periods, with the highest concentration in the intermediate periods, indicating progress in their studies. Additionally, 58.6% reported working while studying, suggesting a more intense routine among those balancing study and work. These data help characterize the sociodemographic and academic profile of the sample, which is summarized in Table 1.

Table 1 – Characterization of the Participants' Profile

Variable	Category / Description	Percentage (%)
Age Group	18 to 24 years (predominant); variation between 17 and 54 years	75.0
Gender	Female	80.5
	Male	19.5
Academic Course	Pharmacy	43.7
	Physiotherapy	10.3
	Law	5.7
	Nursing	4.6
	Others (Administration, Medicine, Biomedicine, Nutrition, Civil Engineering, etc.)	< 5.0 each
Academic Period	1st to 10th period, with a concentration between the 5th and 8th	—
Work Activity	Work while studying	58.6
	Do not work while studying	41.4

Source: Research Data (2025).

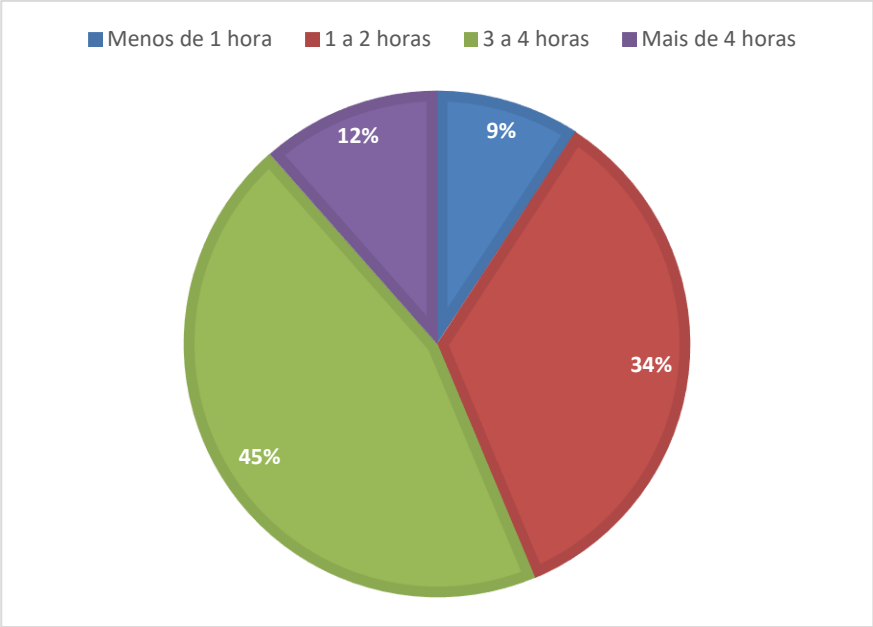
The profile presented in Table 1 indicates that the sample is predominantly young, female, and enrolled in health-related courses, which may influence their familiarity with and perceptions of psychostimulants. The significant presence of students in intermediate and final academic periods, coupled with a high number of participants who work, suggests a more demanding academic routine that may increase performance pressure. These aspects help interpret the potential factors influencing the motivations and behaviors investigated in the study.

Given this predominantly young, female profile, enrolled in health courses, an academic context is observed that may directly influence how these students manage the demands of their education. This initial characterization allows for a better understanding of the environment in which the participants are situated and serves as a foundation for analyzing the academic habits presented below.

Academic Habits

Graph 1 shows the average daily study time of the research participants, highlighting different study schedules and their potential impacts on academic life.

Graph 1 – Average Daily Study Time



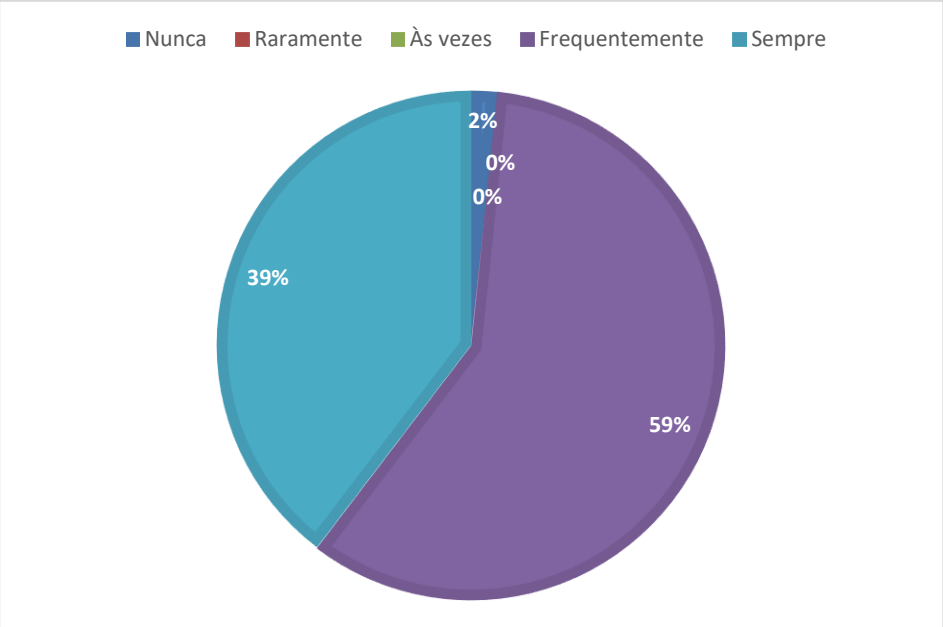
Source: Research Data (2025).

In Graph 1, 44.8% reported studying between 3 and 4 hours a day, 34.5% between 1 and 2 hours, 9.2% less than one hour, and 11.5% more than 4 hours. This study schedule pattern, combined with those who work, suggests a significant time commitment and an increased risk of academic stress. The literature supports this association, as Oliveira et al.[9] note that students with an intermediate workload and additional responsibilities often experience higher levels of exhaustion and vulnerability to compensatory strategies, such as psychostimulant use.

These findings align with Moraes et al. [8], who highlight that study overload is one of the main triggers for self-medication among university students, especially during exam periods. Thus, the limited time for rest and self-care, as reflected in the data from Graph 1, not only reflects the intense routine of these students but also constitutes a determining factor in increasing their vulnerability to psychostimulant use, a phenomenon widely discussed and recognized in contemporary literature.

In Graph 2 – Academic Pressure and Anxiety, 39.1% reported feeling anxious "frequently," and 26.4% "always," indicating high levels of psychological distress among the participants. This finding correlates with Miranda et al.[10], who report high anxiety rates in university populations and associate this condition with an increased demand for substances that promise improved performance. Therefore, the data suggest that high anxiety levels are one of the contextual factors that amplify the use of psychostimulants in the academic environment[8,9].

Graph 2 – Academic Pressure and Anxiety



Source: Research Data (2025).

The presence of high anxiety levels among university students has been widely discussed in contemporary literature, which points to the overload of activities, competitiveness, and the demand for high performance as determining factors for emotional suffering in this population. Moraes et al.[8] emphasize that the accumulation of academic demands, coupled with little time for rest, contributes to the development of persistent anxiety symptoms, which, if not managed properly, can lead to risky behaviors such as self-medication and the use of stimulating substances.

These findings align with this study's results, where a significant proportion of participants reported frequent anxiety, suggesting that this emotional component contributes significantly to the vulnerability to psychostimulant use and reinforcing the need for institutional strategies for psychological care.

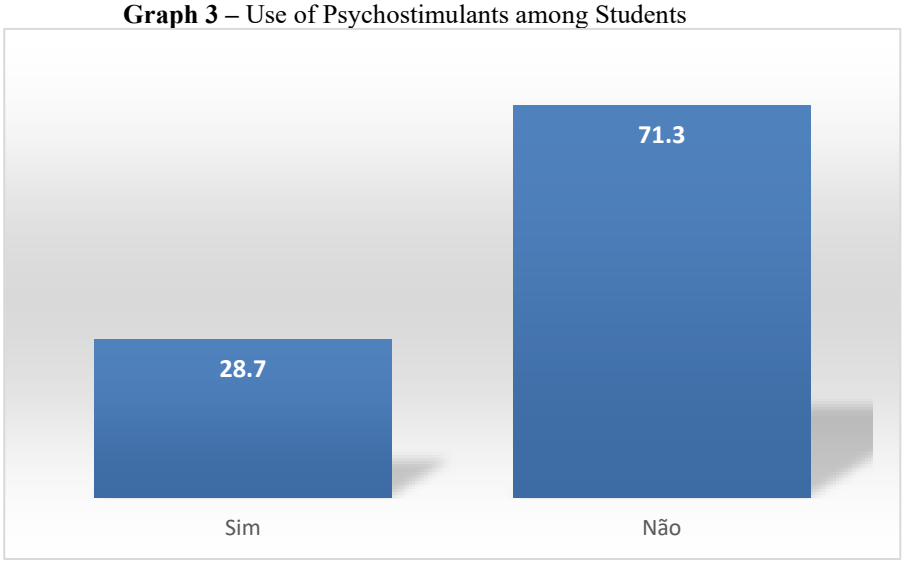
Use of Psychostimulants

In Graph 3 – Use of Psychostimulants among Students, 28.7% of respondents reported using psychostimulants at some point. This percentage is close to the figures reported by Farias et al.[2], who found around 30% in a study with nursing students, and Souza and Baiense (2023), who reported a prevalence of 32.1% in a university sample.

The convergence of these findings reinforces the interpretation that the non-prescribed use of stimulants is a widespread phenomenon among students from different courses and institutions, emerging as a response to academic demands. The prevalence observed in this study follows a trend already identified in recent studies investigating the use of psychostimulants in university settings. Silva Fernandes[18] highlights that the pursuit of increased focus and performance has driven the expansion of this behavior, especially in courses with higher reading loads and pressure for results.

Similarly, Ramos et al.[15] suggest that the exhausting routine and fast-paced academic activities contribute to students turning to stimulants as a way to cope with the overload, demonstrating that the phenomenon is present in different contexts and academic profiles. This behavior emerges as a strategy to deal with the overload, manifesting in various academic contexts and profiles.

Graph 3 – Use of Psychostimulants among Students

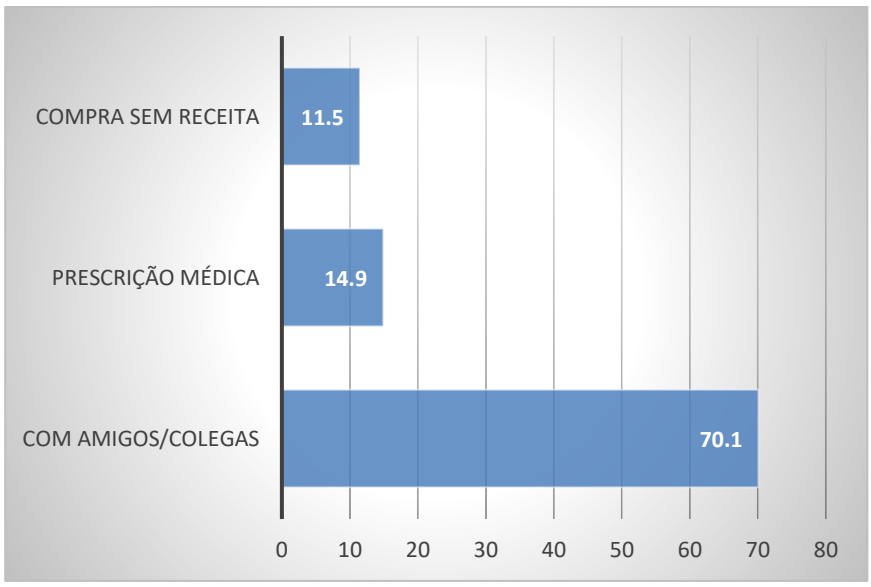


Source: Research Data (2025).

Additionally, Moraes et al.[8] emphasize that the normalization of stimulant use among peers can directly influence students' decisions, reinforcing self-medication practices and reducing the perception of risk. These findings correlate with the prevalence found in this study and with other national works, suggesting that the use of psychostimulants without prescription does not occur in isolation but is part of a broader context of coping with academic and emotional demands in university life.

In Graph 4 – Method of Obtaining Psychostimulants, 70.1% reported obtaining the substance from friends/colleagues, 14.9% through a medical prescription, and 11.5% through non-prescribed purchase. This finding confirms a pattern already described in the literature, where Paiva et al.[16] and Silva Fernandes[18] highlight informal sharing and access through unregulated channels as facilitators of student self-medication.

Graph 4 – Method of Obtaining Psychostimulants



Source: Research Data (2025).

The high proportion of students obtaining psychostimulants through friends or colleagues emphasizes the central role of informal networks in the circulation of these medications within the academic environment. Studies by Ramos et al.[15] and Moraes et al.[8] point out that peer sharing is driven by trust and the minimization of perceived risks, which favors self-medication and increases the availability of these substances outside legal channels.

Moreover, Oliveira et al.[9] emphasize that the ease of access through unregulated channels reflects gaps in institutional control and pharmaceutical oversight, contributing to the normalization of non-prescribed use. Thus, the data gathered in this study align with the literature by showing that social and structural practices sustain the irregular flow of psychostimulants among university students, underscoring the need for more effective educational and regulatory strategies.

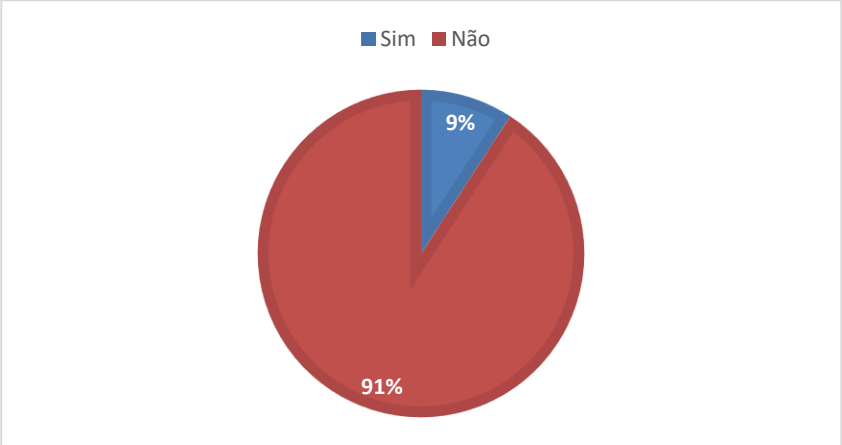
The dynamics of access to psychostimulants among university students is a crucial component in understanding the complexity of non-prescribed use of these substances. Before analyzing the specific methods of acquisition, it is important to highlight that the literature points to a context shaped by multiple influencing factors, ranging from performance pressure to the normalization of consumption among peers. In this perspective, the academic environment serves as a space where informal practices of sharing and circulating medications develop and consolidate, often outside regulatory norms[8],[9].

Several studies have shown that as the use of stimulants becomes socially accepted in certain university groups, access mechanisms increasingly operate independently of formal channels. This process reinforces the idea that the acquisition of psychostimulants should not be analyzed only from an individual perspective but understood as a collective phenomenon sustained by social trust networks, productivity expectations, and a reduced perception of risk. Thus, investigating how students obtain the medications allows for the mapping of behaviors and also the identification of institutional and sociocultural weaknesses that favor such practices[9],[10].

By examining the methods of obtaining psychostimulants reported by the participants, it becomes possible to understand how informal flows directly influence self-medication and increase the availability of these substances in academic life. Analyzing these data helps contextualize the patterns found and reinforces the need for critical reflection on the role of educational institutions, healthcare services, and student social networks in maintaining this scenario[10].

The data presented in Graph 5 – ADHD Diagnosis among Participants show that only 9.2% of respondents reported having a formal diagnosis of ADHD or any associated disorder. This data reveals a significant gap between the actual clinical prevalence and the consumption pattern observed in the previous graphs, suggesting that most of the use is not due to medical indication.

Graph 5 – ADHD Diagnosis among Participants



Source: Research Data (2025).

This finding reinforces the understanding that psychostimulants are predominantly used in an instrumental manner, linked to increased productivity and the management of academic demands. This phenomenon supports the trend reported by Moraes et al.[8], who describe the expansion of off-label use in universities, especially among students subjected to high-pressure routines.

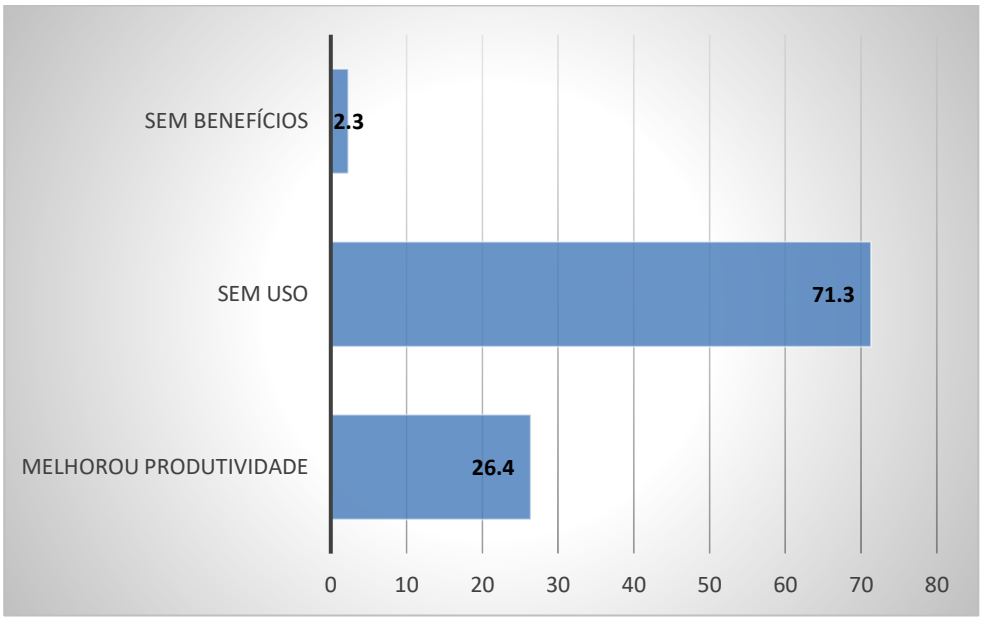
Additionally, the contrast between formal diagnoses and access to the medication indicates a possible normalization of consumption, a phenomenon also discussed by Batista and Nascimento[1], who point out that the perception of risk decreases as use becomes socially shared.

Thus, despite low diagnostic prevalence, consumption becomes socially legitimized in certain academic groups, creating a scenario where self-medication outweighs clinical recommendations. These data highlight the

gap between therapeutic need and perceived demand, reinforcing the importance of educational policies on risks, limits, and appropriate stimulant use[12]. Therefore, Graph 5 contributes to understanding not only who uses but also why they use, connecting subjective, social, and institutional elements.

The data presented in Graph 6 – Perception of Performance Improvement with Use show that 26.4% of participants reported feeling increased productivity after using psychostimulants, while only 2.3% claimed not to notice any benefit, and 71.3% stated they did not use these substances. These results demonstrate that the subjective perception of gain is concentrated among a minority who use the medication, reinforcing the idea that the appeal of stimulants is primarily linked to performance expectations[13].

Graph 6 – Perception of Performance Improvement with Use



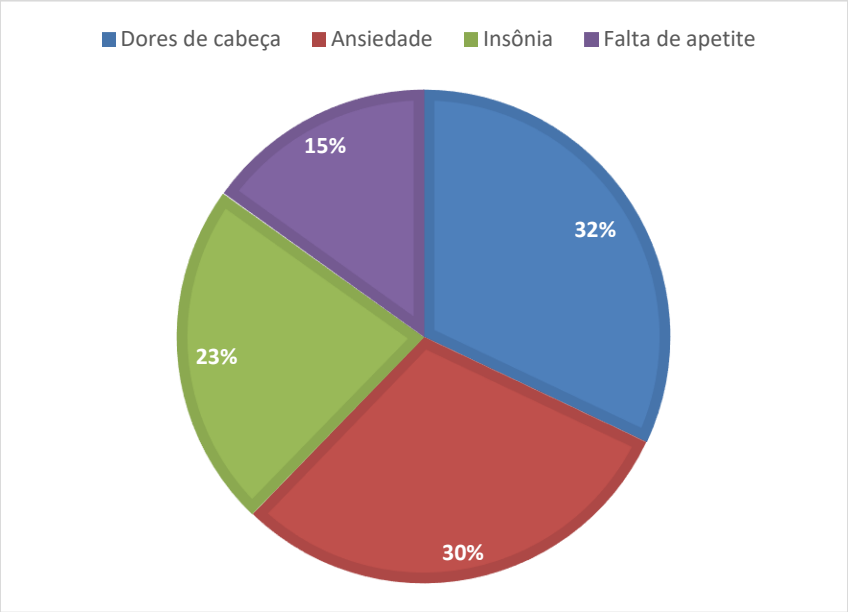
Source: Research Data (2025).

Although this perception is common, it is criticized by Cândido et al.[4], who argue that the immediate feeling of enhanced focus does not necessarily correspond to a consistent improvement in academic performance. Moreover, the literature points out that these perceived effects may represent more of a feeling of efficiency than a real improvement in cognitive ability, a crucial distinction highlighted by Silva and Martoni[17] when discussing non-therapeutic use among university students.

This mismatch between sensation and actual performance suggests that consumption may be influenced by psychological and social factors, such as pressure for productivity, academic competitiveness, and shared beliefs about "shortcuts" to success. Thus, Graph 6 illustrates how the perception of benefit, even when not supported by evidence of prolonged efficacy, becomes a driver for continued use, contributing to self-medication practices and the symbolic maintenance of the idea that such substances function as performance tools[13].

The findings presented in Graph 7 – Adverse Effects Reported by Users show that students who use psychostimulants experience significant negative effects, with the most common being headaches (32%), anxiety (30%), insomnia (23%), and appetite loss (15%). The presence of these symptoms confirms that unsupervised consumption involves significant risks, especially when done continuously or in conjunction with intense study routines[14].

Graph 7 – Adverse Effects Reported by Users



Source: Research Data (2025).

These results align with those described by Souza and Baiense[3], who emphasize that side effects occur even with doses considered low, affecting both physical and emotional well-being. Additionally, the occurrence of symptoms such as insomnia and anxiety reveals an important paradox: substances used to improve performance can simultaneously compromise the ability to concentrate and emotional stability, a result already highlighted by Pires et al.[13] when analyzing non-prescribed use among university students.

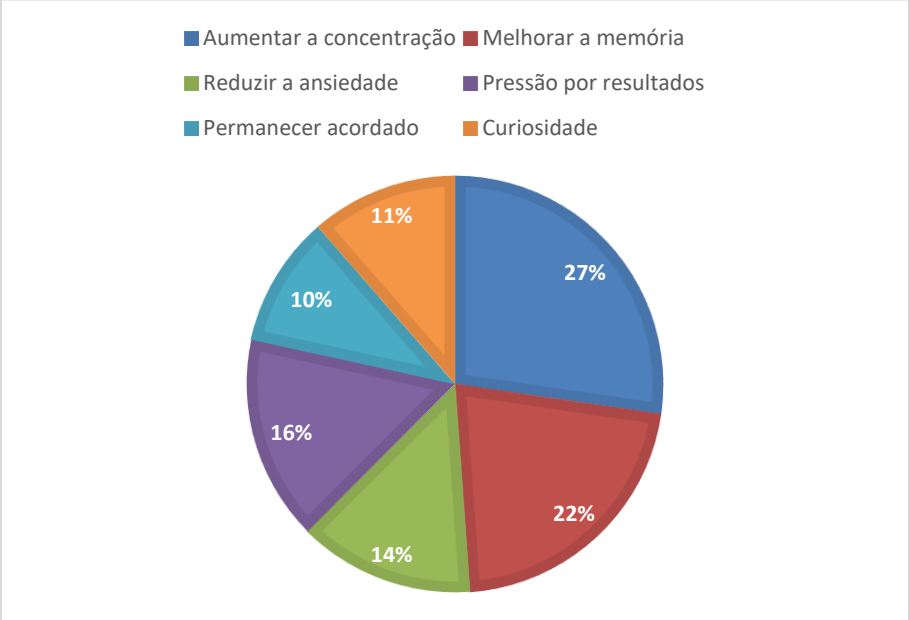
Considering that the perception of benefit may not correspond to real performance results, and that such expectations directly influence the continuation of use, it becomes essential to also evaluate the harm associated with the consumption of these psychostimulants. Analyzing the negative effects reported by students allows for understanding the scope of the risks involved and countering the belief that stimulants are harmless productivity tools.

In this sense, the following presents the main adverse effects mentioned by users[14].

Motivations for Use

The data in Graph 8 – Motivations for Psychostimulant **Use** reveal a diverse range of reasons supporting consumption among students, with the most significant being increased concentration (27.6%), improved memory (21.8%), pressure for results (16.1%), reduced anxiety (13.8%), the need to stay awake (10.3%), and curiosity (11.5%). The variety of these motivations indicates that use is not reduced to a single factor but results from a combination of intense academic demands and subjective perceptions of performance.

Graph 8 – Motivations for Psychostimulant Use



Source: Research Data (2025).

This multiplicity aligns with findings from Oliveira et al.[9], who describe instrumental use as a behavior driven by cognitive expectations of immediate improvement. Moreover, the significant presence of motivations linked to emotional management, such as anxiety, stress, and performance pressure, reinforces the idea that psychostimulant use functions, for some students, as an emotional regulation resource.

Such an interpretation aligns with Moraes et al.[8], who emphasize the psychosocial nature of these choices and advocate for intervention strategies that go beyond mere pharmacological information. The results suggest the need for institutional actions that integrate psychological support, pedagogical monitoring, and health promotion, recognizing that emotional motivations are central determinants for consumption.

These findings suggest that the pursuit of better cognitive and academic performance constitutes the main incentive for use, reinforcing the influence of a competitive and exhausting context in university life[8,9].

Perceptions on the Use and the Role of Pharmacists

The results presented in Graph 9 – Perception of Safety in the Use of Psychostimulants reveal a striking contradiction between what students know and what they actually do. While 77% claim not to consider unsupervised use safe, 66.7% acknowledge knowing peers who use them irregularly, and 90.8% perceive this behavior as common in the university environment.

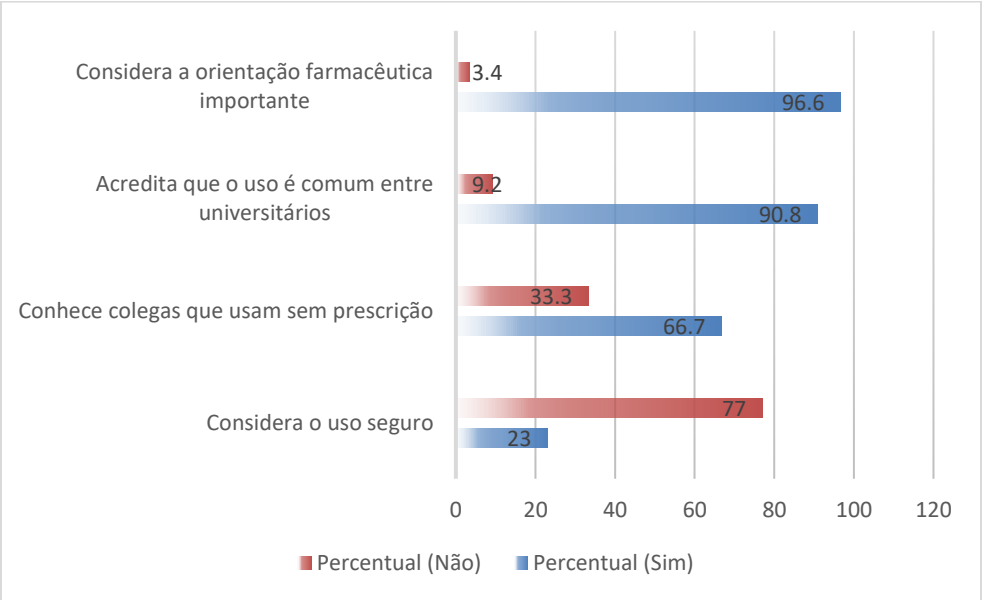
This dissonance between risk perception and the maintenance of unsafe practices is a phenomenon already discussed by Ramos et al.[15], who highlight that knowledge of dangers does not necessarily translate into behavioral change, especially when academic pressures and social dynamics reinforce the use of such substances.

Another relevant finding is that 96.6% of participants recognize the role of pharmacists in preventing and advising on the proper use of psychostimulants. This appreciation of professional involvement indicates an opportunity for effective interventions within the university context[16].

As discussed by Madriaga and Senna[6], Pharmaceutical Care strategies can help identify inappropriate uses, provide qualified information, and promote continuous educational actions, strengthening healthcare and reducing risk behaviors among students[15,16].

In interpretive terms, the results indicate that the use of psychostimulants among university students is influenced by a combination of contextual factors (performance pressure, study and work schedules) and individual factors (anxiety, need for concentration), which interact with easy informal access.

Graph 9 – Perception of Safety in the Use of Psychostimulants



Source: Research Data (2025).

The convergence of the percentages with recent studies strengthens the hypothesis that the phenomenon goes beyond the local level and constitutes a national issue in the academic environment. Furthermore, the combination of perceived benefits with reports of adverse effects and a low proportion of clinical diagnoses suggests that interventions should integrate prevention, regulation, and psychosocial support[17].

Finally, significant limitations are recognized, such as the sample being restricted to a single HEI, potential self-report bias, and the cross-sectional design, which prevents causal inference. It is recommended that future investigations expand the sample, adopt a longitudinal design, and include in-depth qualitative interviews to capture motivational nuances and usage trajectories[18].

IV. Conclusion

The study revealed that the use of psychostimulants among university students is motivated by the desire for better academic performance and the attempt to cope with anxiety and emotional overload. The majority of participants obtained the medications through informal channels, which increases vulnerability to self-medication and the risks of dependence and adverse effects. Despite awareness of the dangers of unsupervised use, the practice remains common in academic settings, indicating the urgent need for educational actions and professional monitoring, with emphasis on the pharmacist's essential role in guiding and promoting rational medication use.

The research aimed to analyze the profile of psychostimulant use, investigating motivations, the level of knowledge about risks, and practices for obtaining these medications. The results confirmed that the pursuit of performance and academic pressure are determining factors for use, underscoring the need to implement institutional prevention policies, psychopedagogical support programs, and to strengthen interdisciplinary efforts, focusing on students' mental health and well-being.

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