

## Depressive and anxious symptoms in university students: A study in a university in a state in the Northern region of Brazil



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### ABSTRACT

This study aimed to describe the existence of symptoms of depression and anxiety in

undergraduate students at a Public University in a state in the North of Brazil. The methodology used was quantitative and descriptive cross-sectional research with the participation of 362 students from this Educational Institution. The Beck Anxiety and Depression Inventories and a Sociodemographic Questionnaire were used as instruments, which were sent via electronic form. Of the 362 students who participated in the survey, 14% had a minimum level of anxiety, 30% a mild level, 35% a moderate level and 22% a severe level. Regarding depressive symptoms, the data shows that 32% of students presented a level considered Moderate to Severe, 10% Severe, 32% Minimal and 46% Mild to Moderate. It is concluded that the university population studied experiences clinically significant anxious and depressive symptoms, and may experience mental disorders that, if not addressed, may worsen.

**Keywords:** Depression, Anxiety, University Students.

## 1 INTRODUCTION

Mental disorders represent a critical challenge for public health, especially anxiety and depressive symptoms, which have a high prevalence in the academic environment. It is noted that such disorders substantially affect the quality of life and decrease the university performance, in order to further exacerbate existing disorders due to the feeling of powerlessness. (Maltoni et al., 2019)

The transition to higher education is permeated by psychosocial challenges, which include family distancing, insecurity and fear. This set of factors tends to create an environment conducive to triggering anxiety and depressive disorders or even exacerbating existing ones. It is also worth noting that adaptation depends on intrinsic and extrinsic factors to the individual, such as sociodemographic variables, quality and support provided by institutions, and resilience capacity. (Silva et al., 2021)

According to the DSM-5, anxiety disorders often have characteristics of excessive fear and anxiety, as well as related behavioral disorders. In the university context, social interaction and



academic demands can intensify these symptoms, while lack of leisure and expectations of success amplify the risk. And when pathological anxiety is not treated, it becomes a relevant risk factor for triggering other diseases, such as depressive disorder.

According to the DSM-5, depression is characterized by sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the person's ability. It is worth noting that among the mental disorders, the one that is most related to suicidal ideation is major depressive disorder. Such a situation is worrisome and must be intervened before ideation takes place.

And the context of the pandemic accentuated these inconveniences in university students, since the suspension of classes due to the state of emergency installed, the adaptation to remote teaching, the uncertainties about the future and the need for social isolation to protect themselves. Therefore, it is important to assess the psycho-emotional implications of this situation. (Maia et al., 2020)

## 2 MATERIALS AND METHODS

The present study adopted a cross-sectional approach of a quantitative and descriptive nature, carried out with 362 students from a University located in the South of the State of Tocantins, Brazil, between the periods of April and May 2023.

The inclusion criteria established for participation in the research were: being a student and being enrolled in one of the undergraduate courses; agree to participate in the research; be aware, agreeing and digitally signing the Free and Informed Consent Form; Have a valid e-mail address and fully respond to the questionnaires. Students who partially answered the forms were excluded from the analysis and who did not meet the inclusion criteria mentioned.

Data collection was carried out through an electronic form of Google Forms, in which the objectives of the research were explained and the research instruments, which were the Beck Depression Inventory and the Beck Anxiety Inventory, were used as assessment instruments.

The Beck Depression Inventory (BDI). Beck, Rush, Shaw and Emery self-report scale, 1982, validated in Brazil (Cunha, 2001). It consists of 21 symptom groups with four possible alternatives, ranging from scores 0 to 3 in ascending order of symptom worsening. It reflects the symptomatology of the individual's last seven days. The application of the BDI is indicated for individuals between 17 and 80 years of age. The total score, based on the sum of the items, may indicate different levels of depression intensity among the levels: minimal (0-11 points), mild (12-19), moderate (20-30) and severe (36-63).

The Beck Anxiety Inventory (BAI). A scale consisting of 21 items referring to anxiety symptoms experienced in the last seven days, with responses ranging from 0 to 3, reflecting levels of severity in ascending order. The instrument created by Beck, Epstein, Brown and Steer in 1988 is also adapted to the Portuguese (Cunha, 2001).



Both scales were corrected according to the guidelines of their respective manuals, and the data were quantitatively analyzed by means of descriptive analysis (frequency and percentage) using the SPSS software – Statistical Package for the Social Sciences version 20.0 for Windows. The study followed the guidelines established by Resolution 466/2012 of the National Health Council and was submitted to a Human Research Ethics Committee, which was approved according to CAAE: 66897923.0.0000.5518 and opinion No. 5,940,836.

### 3 RESULTS AND DISCUSSION

Initially, the sociodemographic profile of the participants will be characterized, followed by the results of the evaluation of the scores of the Beck Anxiety and Depression Inventories applied to the 362 students.

Table 1. Sociodemographic profile of students

<b>Sociodemographic variables (n=480)</b>	<b>No. of students</b>	<b>Percentage</b>
<b>Gender</b>		
Male	72	80,3%
Female	290	19,7%
<b>Marital status</b>		
Married	54	15%
Stable union	18	5%
Single	285	74,4%
Divorced	7	1,9%
Widower(a)	-	-
<b>Monthly income</b>		
1 to 2 minimum wages	62	17,5%
2 to 3 minimum wages	76	21,4%
3 to 4 minimum wages	58	16,3%
4 to 10 minimum wages	122	34,4%
≥ 10 minimum wages	-	-
<b>Employment Status</b>		
Just study	135	37,6%
Study and work informally	64	17,8%
Studied and worked formally	160	44,6%
<b>Who you live with</b>		
Alone	69	19,2%
Parents	141	39,3%
Other family members	25	7%
Friends	53	14,8%
Companion	71	19,8%
<b>Do leisure activities</b>		
All the time	105	29,1%
Sporadically	110	30,5%
Rarely	146	40,4%
<b>She has already undergone psychological treatment</b>		
Yes	157	43,7%
No	169	47,1%
In progress	33	9,2%
<b>Has already undergone psychiatric treatment</b>		
Yes	78	21,6%
No	261	72,3%
In progress	22	6,1%
<b>Degree of Satisfaction with the course</b>		

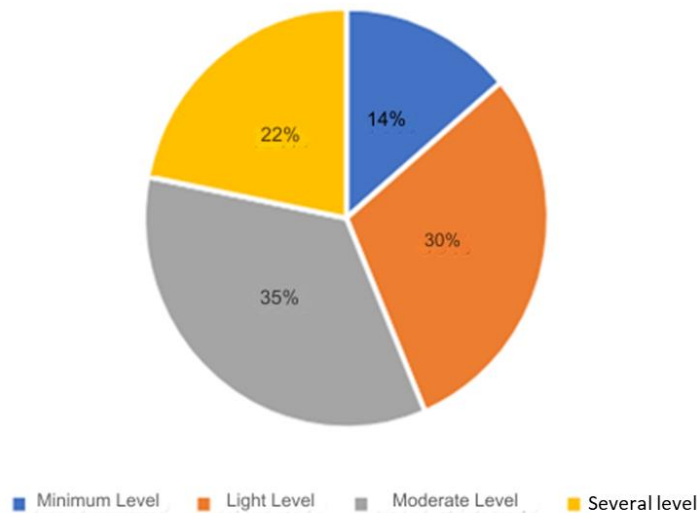


Lousy	6	1,7%
Spacious	20	5,5%
Reasonable	90	25,2%
Good	172	47,6%
Excellent	72	19,9%

Source: Sociodemographic questionnaire prepared by the authors

Of the students who participated in the study, 80.3% were female and 19.7% were male; 74.4% are single, 15% are married, 5% are in a stable union and 1.9% are divorced. Regarding monthly income, the majority (34.4%) reported receiving more than 4 minimum wages, while the minority (16.3%) had an income between 3 and 4 minimum wages. Still, the survey data indicate that 44.6% study and work formally, while 37.6% only study and 17.8% study and work informally. Regarding the housing relationship, 39.3% reported living with their parents, others, 19.8% lived with their partner, while 19.2% reported living alone. Only 14.8% live with friends, and 7% live with other family members. When asked if they perform any type of leisure activity, 30.5% reported that only sporadically, 29.1% always and 40.4% rarely. In addition, 47.1% stated that they do not undergo psychological treatment, 43.7% do, and 9.2% are in progress. Regarding psychiatric treatment, 72.3% said no, 21.6% said yes and 6.1% were in progress.

Graph 1. Anxiety Levels  
ANXIETY LEVELS



Source: Research results from the application of the Beck Anxiety Inventory.

Of the 362 students who participated in the research, 14% had a minimal level of anxiety, 30% had a mild level, 35% had a moderate level, and 22% had a severe level. The data found in the study reinforce a publication by the World Health Organization (WHO) (WHO, 2020) pointed to a 14.9% increase in the global rate of anxiety disorders between 2005 and 2020, when the figure of 264 million people suffering from this mental illness on the planet was reached. The same document presents a



comparative table in which Brazil is highlighted as the country with the highest prevalence of anxiety in the world, reaching 9.3% of its population. as the country with the highest prevalence of anxiety in the world, reaching 9.3% of its population.

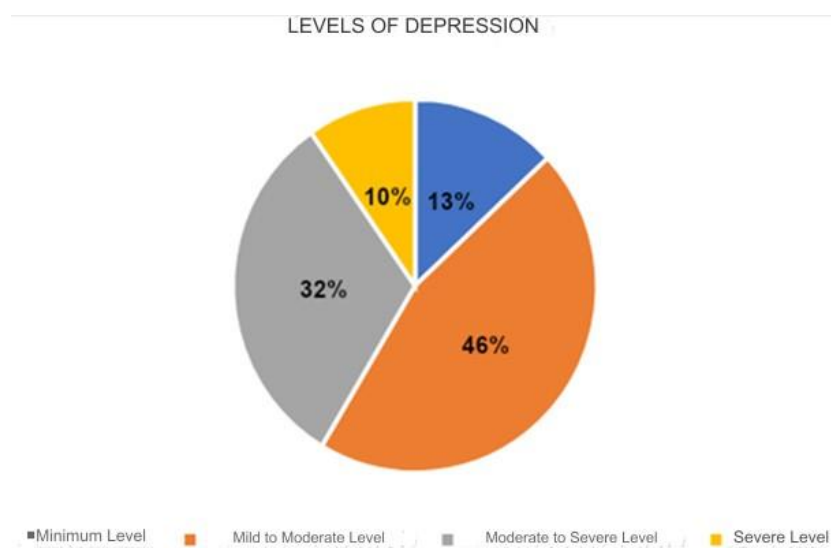
Another study, carried out with 460 university students in Portugal between 2018 and 2020, pointed to a significant increase in psychological disorders in the last year, specifically in the pandemic period. Among the disorders, stress and anxiety stand out (Maia; Dias, 2020).

In a study conducted by Wang et al. (2020), conducted with 1,210 participants aged 21 to 30 years, in 194 cities in China, 53.8% of the sample classified the psychological impact as moderate or severe, reporting moderate or severe symptoms of anxiety (28.8%), depression (16.5%), and stress (8.1%), with significant differences for females (Wang et al., 2020).

It is extremely important to investigate the levels of the impacts of COVID-19 on the academic community, so the present study also aimed to investigate depression scores in the academic community.

Regarding depressive symptoms, the data indicate that 32% of the students had a level considered Moderate to Severe, 10% Severe, 32% Minimal and 46% Mild to Moderate.

Graph 2: Levels of Depression



Source: Research results from the application of the Beck Depression Inventory.

In a study conducted by Dos Santos et al, (2021), in a Private Higher Education Institution in the Federal District, conducted with 521 students, a predominance of depressive symptoms was observed in females. The prevalence of these symptoms was distributed in 31.3% with mild depression, 23.4% with minimal depression, 13.1% with moderately severe depression, 9.6% with severe depression, and 9.2% with moderate depression (Dos Santos et al, 2021). In this study, variables were



correlated and it was identified that family income and semester were associated factors for the severity of depression.

Within the present study, it is important to note that, in the previous results, the levels considered moderate to severe in anxiety symptoms were 6%. Compared to current research, we see a 26% increase in depressive symptoms that are considered Moderate to severe. Considering that 19.2% of the interviewed population live alone and far from their families, these factors can be cited as aggravating factors. Since, the lack of a support network can further mitigate the psychological distress of academics.

#### 4 CONCLUSIONS

The data show that the studied university population experiences clinically significant anxiety and depressive symptoms, and may present some type of anxiety or depressive disorder.

Even though sociodemographic variables were not correlated with the results of symptom scores, the literature consulted to support the discussion of the study pointed out that in other regions of Brazil and in other countries, the socioeconomic factor may have been an aggravating factor in the pandemic context.

It is believed that, by disseminating the results of this study, both the internal and external community will be able to perceive the relevance of broadening the discussion on the theme of mental health of university students.

The data obtained by studies such as this should be considered by higher education institutions so that they seek to improve reception and care programs – not only psychological – especially for students at the beginning of the course.



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