

## Depressive and anxiety symptoms in university students: a study at a university in a state in the northern region of Brazil.

*Sintomas depressivos e ansiosos em estudantes universitários: um estudo numa universidade num estado da região norte do Brasil*

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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

### RESUMO

Este estudo objetivou descrever a existência de sintomas de depressão e ansiedade em estudantes dos cursos de graduação de uma Universidade Pública num estado da região Norte do Brasil. A metodologia empregada foi pesquisa transversal quantitativa e descritiva que contou com a participação de 362 estudantes dessa Instituição de Ensino. Como instrumentos foram utilizados os Inventários de Ansiedade e Depressão de Beck e um Questionário Sociodemográfico que foram encaminhados através de formulário eletrônico. Dos 362 estudantes que participaram da pesquisa, 14% apresentavam nível mínimo de ansiedade, 30% nível leve, 35% nível moderado e 22% nível grave. Já em relação aos sintomas depressivos, os dados apontam que 32% dos estudantes apresentaram nível considerado Moderado a grave, 10% Grave, 32% Mínimo e 46% Leve a Moderado. Conclui-se que a população universitária estudada experimenta sintomas ansiosos e depressivos clinicamente significativos, podendo experimentar de transtornos mentais que, se não intervistos, podem se agravar.

**Palavras-chave:** Depressão; Ansiedade; Estudantes Universitários

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## 1. INTRODUCTION

Mental disorders represent a critical challenge for public health, especially anxious and depressive symptoms, which are highly prevalent in academia. It is noted that such disorders substantially affect quality of life and reduce university performance, further exacerbating existing disorders due to the feeling of impotence. <sup>1</sup>

The transition to higher education is permeated by psychosocial challenges, which include family distance, 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 highlighting that adaptation depends on factors intrinsic and extrinsic to the individual, such as sociodemographic variables, quality and support provided by institutions, and resilience capacity. <sup>2</sup>

According to the DSM-5<sup>3</sup>, anxiety disorders usually present characteristics of excessive fear and anxiety, in addition to related behavioral disorders. In the university context, social interaction and academic demands can intensify these symptoms, while the 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<sup>3</sup>, depression is characterized by a sad, empty or irritable mood, accompanied by somatic and cognitive changes that significantly affect the person's functioning. It is worth highlighting that of the mental disorders the one most closely related to suicidal ideation is major depressive disorder. This situation is worrying and must be intervened before the ideation takes place.

And the context of the pandemic accentuated these disorders among university students, since the suspension of classes due to the installed state of emergency, 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.<sup>4</sup> 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.

## 2. MATERIALS AND METHODS

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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 April and May 2023.

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

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

The Beck Depression Inventory (BDI). Self-report scale by Beck, Rush, Shaw and Emery, from 1982, validated in Brazil <sup>5</sup> It consists of 21 groups of symptoms with four possible alternatives, ranging from scores of 0 to 3 in increasing order of worsening of symptoms. It reflects the individual's symptoms over the last seven days. The application of the BDI is recommended for individuals between 17 and 80 years of age. The total score, made from the sum of the items, can indicate different levels of depression intensity between the levels: minimum (0-11 points), mild (12-19), moderate (20-30) and severe (36- 63). The Beck Anxiety Inventory – BAI). Scale consisting of 21 items referring to anxiety symptoms experienced in the last seven days, with answers ranging from 0 to 3, reflecting severity levels in ascending order. The instrument created by Beck, Epstein, Brown and Steer, in 1988, is also adapted into Portuguese.<sup>5</sup>

Both scales were corrected according to the guidelines in their respective manuals, and the data were analyzed quantitatively through 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 an Ethics Committee for Research with Human Beings, being approved according to CAAE: 66897923.0.0000.5518 and opinion no. 5,940,836.

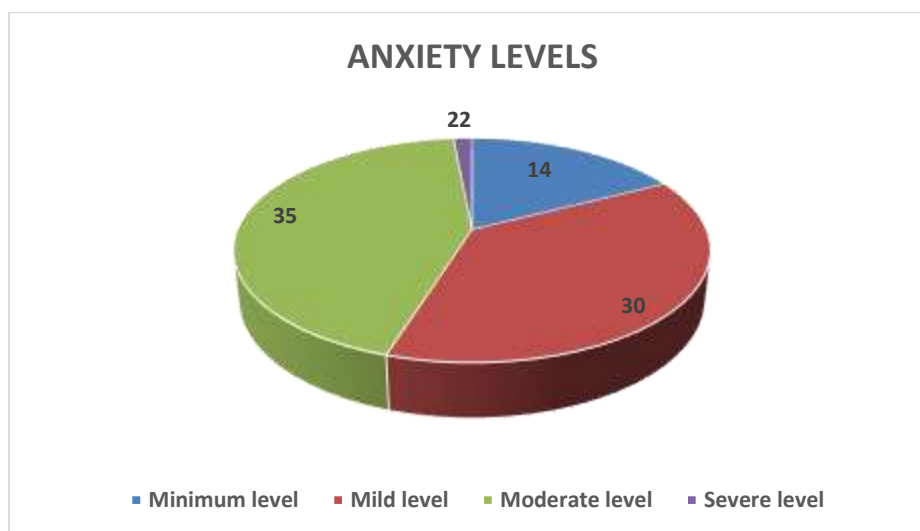
### 3. RESULTS AND DISCUSSION

Initially, the sociodemographic profile of the participants will be characterized and then the results of the evaluation of the Beck Anxiety and Depression Inventory scores applied to the 362 students will be presented.

Sociodemographic variables	Nº de students	Percentage
<b>Sex</b>		
Masculine	72	80,3%
Feminine	290	19,7%
<b>Estado civil</b>		
Married	54	15%
Stable Union	18	5%
Single (a)	285	74,4%
Divorced(a)	7	1,9%
Widower(a)	-	-
<b>Renda mensal</b>		
1 a 2 minimum wages	62	17,5%
2 a 3 minimum wages	76	21,4%
3 a 4 minimum wages	58	16,3%
4 a 10 minimum wages	122	34,4%
≥ 10 minimum wages	-	-
<b>Employment situation</b>		
Just study	135	37,6%
Study and work informally	64	17,8%
Study and work formally	160	44,6%
<b>Who do you live with</b>		
Alone	69	19,2%
Parents	141	39,3%
Other family members	25	7%
Friends	53	14,8%
Partner (a)	71	19,8%
<b>Do leisure activities</b>		
Ever	105	29,1%
Sporadically	110	30,5%
Rarely	146	40,4%
<b>Have you ever had psychological treatment</b>		
Yes	157	43,7%
No	169	47,1%
In progress	33	9,2%
<b>Have you ever had psychiatric treatment?</b>		
Yes	78	21,6%
No	261	72,3%
In progress	22	6,1%

Of the students who participated in the study, 80.3% were female and 19.7% male; 74.4% are single, 15% married, 5% in a stable relationship and 1.9% divorced. Regarding monthly income, the majority (34.4%) declared that they receive more than 4 minimum wages, while the minority (16.3%) have income between 3 and 4 minimum wages. Furthermore, the survey data shows 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% declared to live with their parents, others, 19.8% live with their partner, while 19.2% declared to live alone. Only 14.8% live with friends, and 7% live with other family members. When asked whether they carry out any type of leisure activity, 30.5% report only sporadically, 29.1% always and 40.4% rarely. Furthermore, 47.1% declared that they do not undergo psychological treatment, 43.7% do and 9.2% are ongoing. Regarding psychiatric treatment, 72.3% declared no, 21.6% yes and 6.1% ongoing.

**Graph 1. Anxiety Levels**



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. The data found in the study reinforces a publication by the World Health Organization (WHO)<sup>6</sup> that pointed out the 14.9% increase in the global rate of anxiety disorders between 2005 and 2020, when the figure was reached of 264 million people who suffered from this mental illness on the planet. The same document presents a comparative table in which Brazil is highlighted as

the country with the highest prevalence of anxiety in the world, affecting 9.3% of its population. as the country with the highest prevalence of anxiety in the world, reaching 9.3% of its population.

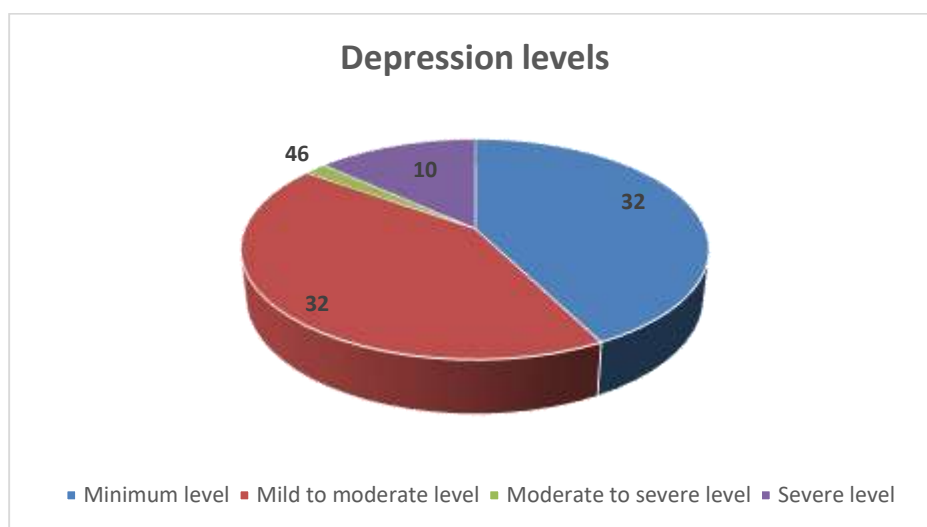
Another study, carried out with 460 university students in Portugal between 2018 and 2020, showed a significant increase in psychological disorders in the last year, specifically during the pandemic period. Among the disorders, stress and anxiety stand out.<sup>4</sup>

In a study carried out by Wang et al.<sup>7</sup>, carried out 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.<sup>7</sup>

It is extremely important to investigate the levels of 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 students presented a level considered Moderate to Severe, 10% Severe, 32% Minimal and 46% Mild to Moderate.

**Graph 2. Depression Levels**



In a study carried out by Dos Santos et al,<sup>8</sup> in a Private Higher Education Institution in the Federal District, conducted with 521 students, a predominance of depressive

symptoms in females was observed. 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.<sup>8</sup> In this study in question, variables were correlated and it was identified that family income and the semester attended were factors associated with the severity of depression.

Within the present study, it is important to highlight that, in 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 considered Moderate to Severe. Considering that among the population interviewed, 19.2% live alone, and away from their family, we can cite these factors as aggravating factors. Since the lack of a support network can further alleviate the psychological suffering of academics.

## 5.CONCLUSIONS

The data demonstrate that the university population studied experiences clinically significant anxious 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 study's discussion 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 realize the relevance of expanding the discussion on the topic of mental health among university students.

The data obtained from studies like this should be considered by higher education institutions so that they can seek to improve reception and service programs – not just psychological – especially for students starting the course.

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