

# Depressive symptoms and suicidal ideation in medical students

## Síntomas depresivos e ideación suicida en estudiantes de medicina

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### ABSTRACT

**Introduction:** Depressive symptoms affect a large part of the world's population as well as health professionals, especially medical students. These symptoms are also considered to be one of the risk factors for suicidal ideation and attempts. To this end, this study aims to identify the prevalence of depressive symptoms and suicidal ideation among medical students at the university. **Method:** A cross-sectional descriptive study carried out using a proportional stratified sample of 257 participants. Descriptive analyses were used to analyze the data in the general sample, by gender and period, with a 95% CI. **Results:** Female students had a higher prevalence of depressive symptoms in the first cycle of medical training. **Final considerations:** The importance of implementing strategies aimed at the prevention and promotion of student health in the final years of the medical course is highlighted.

### KEYWORDS

Depression; Suicidal Ideation; Medicine.

### RESUMEN

**Introducción:** Los síntomas depresivos afectan a una gran parte de la población mundial, así como a los profesionales de la salud, especialmente a los estudiantes de medicina. Estos síntomas también se consideran uno de los factores de riesgo de ideación e intento de suicidio. Para ello, este estudio tiene como objetivo identificar la prevalencia de síntomas depresivos e ideación suicida entre los estudiantes de medicina de una Universidad. **Método:** Estudio descriptivo transversal realizado con una muestra estratificada proporcional de 257 participantes. Se utilizaron análisis descriptivos para analizar los datos en la muestra general, por sexo y período, con un IC del 95%. **Resultados:** Las mujeres estudiantes presentaron una mayor prevalencia de síntomas depresivos en el primer ciclo de formación médica. **Consideraciones finales:** Se destaca la importancia de implementar estrategias dirigidas a la prevención y promoción de la salud de los estudiantes en los últimos años de la carrera de medicina.

### PALABRAS CLAVE

Depresión; Ideación Suicida; Medicina.

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## Introduction

Depression is a psychiatric disorder that has a high prevalence rate in the general population, with a high morbidity and mortality rate. 28% of Brazilians between the ages of 18 and 24 have depressive symptoms and in 70% of cases, this condition can lead to suicide, especially in young people (Bolsoni-Silva & Loureiro, 2016) and there is a gap in relation to studies about social skills associated to depression. The objective of this study was to compare the social skills and the perceptions of consequences in interactions of students with depression (n=64. This disorder affects more than 322 million people worldwide and is characterized by changes in mood, interfering with family and social relationships (Santos et al., 2011).

In this context, the clinical symptoms of depression, according to the Diagnostic and Statistical Manual of Mental Disorders - DSM-5 (APA, 2014) are: depressed mood, loss of interest or pleasure in activities, deep sadness, weight loss or gain, insomnia or hypersomnia, agitation or psychomotor retardation, feelings of worthlessness, loss of energy, excessive guilt, suicidal ideation and attempts.

Depression also affects university students, who because of the disorder experience numerous symptoms that have a direct impact on the way they see the world. It is estimated that medical students are at greater risk of developing depressive symptoms than the general population, due to factors to which they are exposed throughout the course, such as fatigue, a heavy study load, dealing with pa-

tients and recurrent contact with death (E. N. de Oliveira, 2013).

In addition to the symptoms already identified in the DSM-5 (APA, 2014), some manifestations considered milder, such as anguish, irritability, constant tiredness, forgetfulness, difficulty concentrating and making decisions, are also common among medical students, which are called common mental disorders. These are risk indicators for the development of a more serious mental illness since the disorders become incapacitating without adequate medical and psychological follow-up (Dâmaso et al., 2019).

Medical school is six years long and can be divided into three phases: 1) the basic cycle, which covers the first and second years; 2) the clinical cycle, which covers the third and fourth years; and 3) the internship, which corresponds to the fifth and sixth years. During these six years, students can experience different psychic experiences, including: a) initial euphoria, which is felt by the student when they enter university; b) the high demands and enormous challenge of the course can lead to disappointment; c) in the final phase, the internship, and the competitiveness in selection processes for residency generate concern and adaptation (Fiorotti et al., 2010).

The stress experienced during this period affects students cognitively and physiologically, which compromises their learning and can also influence both their training and their performance in internships (Oliveira & Araujo, 2019). In this sense, symptoms such as nervousness and excessive worry end up being frequent for medical students, generating

an adaptation - even if inappropriate - to the phenomena experienced during the academic period (Lima et al., 2016).

Due to the complexity of medical school, students are exposed to consecutive stress factors throughout their training, facing changes in their routine, such as little leisure time with family and friends, emotional exhaustion, and hopelessness (Oliveira & Araujo, 2019). Such situations can generate a feeling of not belonging, loneliness and low self-esteem (Almeida, 2014).

Issues such as the stigma attached to the illness, the fear of breaching the confidentiality of psychiatric treatment and the apprehension of possible negative repercussions on their professional capacity, cause students to silence their illness, serving as barriers that prevent them from seeking specialized help (Vasconcelos et al., 2015).

Depressive symptoms and suicidal ideation are complex and wide-ranging phenom-

ena, requiring efforts to identify, track and create strategies for the development of effective therapeutic support. The study therefore sought to verify the prevalence of these symptoms among medical students to help develop preventive health strategies.

### Method

This is a descriptive, cross-sectional and quantitative study. The research followed ethical procedures with human beings (CAAE 54266021.6.0000.5219) and the Strengthening the Reporting of Observational Studies in Epidemiology- STROBE protocol.

Participants were selected from a population of 857 students enrolled between the 1st and 8th terms in 2022 on the Medicine course at the University, using a proportional stratified sample by gender and term, resulting in a final sample of 257 participants.

For data collection, the participants were contacted through the list of enrolled students,

Table 1

*Description of the variables and measures involved in the study.*

Study variables	Measure
Gender	1 - Male; 2 - Female
Course period	1 - 1 <sup>st</sup> period; 2 - 2 <sup>nd</sup> period; 3 - 3 <sup>rd</sup> period; 4 - 4 <sup>th</sup> period; 5 - 5 <sup>th</sup> period; 6 - 6 <sup>th</sup> period; 7 - 7 <sup>th</sup> period and 8 - 8 <sup>th</sup> period
Lack of appetite <sup>1</sup>	
Poor sleep <sup>1</sup>	
Feeling of sadness <sup>1</sup>	
Constant crying <sup>1</sup>	
Dissatisfaction with tasks <sup>1</sup>	
Difficulty making decisions <sup>1</sup>	1 - Yes; 2 - No
Disability in life <sup>1</sup>	
Constant tiredness <sup>1</sup>	
Suicidal ideation <sup>2</sup>	

1- Variables considered for analyzing depressive symptoms.

2- Variable used to analyze suicidal ideation.

previously provided by the coordination of the Medicine course. Data was collected through rapport and application of the Common Mental Disorders Identification Questionnaire (Self Reporting Questionnaire - SRQ - 20, 1994) (WHO, 1994), which has a Cronbach's alpha of 0.80 (Santos et al., 2011). The questionnaire consists of 20 dichotomous questions aimed at identifying symptoms of mental health risk, acting as a screening for psychiatric morbidity.

Of the 20 questions, four assess physical symptoms and 16 assess psycho-emotional alterations, among which questions assessing depressive symptoms and suicidal ideation were used, as shown in Table 1.

The data analysis method used was descriptive analysis and the chi-square test for the general group, by gender and period, using the SPSS program, version 27, with a significance level of  $p < 0.005$ .

Table 2

*Distribution of depressive symptoms and suicidal ideation in medical students, by gender. Brazil, 2021.*

Variables	Total	Male	Female	p
	%(n)	%(n)	%(n)	
Courseperiod	100(257)	39.3(101)	60.7(156)	0.222
BasicCycle	53.7(138)	22.9(59)	30.7(79)	
ClinicalCycle	46.3(119)	16.3(42)	30(77)	
Lackofappetite				0.046
Yes	22.3(57)	15.8(16)	26.5(41)	
No	77.7(199)	84.2(85)	73.5(114)	
Poorsleep				0.658
Yes	51.8(133)	53.5(54)	50.6(79)	
No	48.2(124)	46.5(47)	49.4(77)	
Feelingsad				0.295
Yes	40(102)	36(36)	42.6(66)	
No	60(153)	64(64)	57.4(89)	
Constantcrying				<0.001
Yes	27.2(70)	13.9(14)	35.9(56)	
No	72.8(187)	86.1(87)	64.1(100)	
Dissatisfactionwithtasks				0.292
Yes	48.6(125)	44.6(45)	51.3(80)	
No	51.4(132)	55.4(56)	48.7(76)	
Difficultymakingdecisions				0.060
Yes	46.9(120)	39.6(40)	51.6(80)	
No	53.1(136)	60.4(61)	48.4(75)	
IDisabilityinlife				0.035
DYes	24.9(64)	17.8(18)	29.5(46)	
No	75.1(193)	92.2(83)	70.5(110)	
Constanttiredness				0.015
Yes	65.4(168)	56.4(57)	71.2(111)	
No	34.6(89)	43.6(44)	28.8(45)	
Suicidalideation				0.894
Yes	3.1(8)	3(3)	3.3(5)	
No	96.9(246)	97(98)	96.7(148)	

## Results and discussions

Table 2 shows the distribution of depressive symptoms and suicidal ideation among the participants, by gender and period. Most of the sample was made up of first cycle students (57.3%) and females (60.7%). The female students showed a lack of appetite (26.5%), feelings of sadness (42.6%), constant crying (35.9%), dissatisfaction with tasks (51.3%), difficulty making decisions (51.6%), inability in life (29.5%), feelings of uselessness (23.9%), constant tiredness (71.2%) and suicidal idea-

tion (3.3%). Male students were more likely to have difficulty sleeping (53.5%).

Table 3 shows depressive symptoms and suicidal ideation by period (cycle) of the medical course. Participants in the basic cycle had a higher prevalence of poor appetite (24.8%), difficulty sleeping (54.3%) and dissatisfaction with tasks (52.2%). In the clinical cycle, the prevalence was higher for feelings of sadness (43.2%), constant crying (32.8%), difficulty in making decisions (49.2%), incapacity in life

Table 3

*Distribution of depressive symptoms and suicidal ideation in medical students, by period (cycles). Brazil, 2021.*

Variables	Total%(n)	BasicCycle%(n)	Cliclifecycle%(n)	p
Lackofappetite	100(257)	100(138)	100(119)	0.292
Yes	22.3(57)	24.8(34)	19.3(23)	
No	77.7(199)	75.2(103)	75.2(103)	
Sleepsbadly				0.370
Yes	51.8(133)	54.3(75)	48.7(58)	
No	48.2(124)	45.7(63)	51.3(61)	
Feelingofsadness				0.330
Yes	40(102)	37.2(51)	43.2(51)	
No	60(153)	62.8(86)	56.8(67)	
Constantcrying				0.064
Yes	27.2(70)	22.5(31)	32.8(39)	
No	72.8(187)	77.5(107)	67.2(80)	
Dissatisfactionwithtasks				0.222
Yes	48.6(125)	52.2(72)	44.5(53)	
No	51.4(132)	47.8(66)	55.5(65)	
Difficultyinmakingdecisions				0.500
Yes	46.9(120)	44.9(62)	49.2(58)	
No	53.1(136)	55.1(76)	50.8(60)	
Disabilityinlife				0.693
Yes	24.9(64)	23.9(33)	26.1(31)	
No	75.1(193)	76.1(105)	73.9(88)	
Constantfatigue				0.015
Yes	65.4(168)	56.4(57)	71.2(111)	
No	34.6(89)	43.6(44)	28.8(45)	
Suicidalideation				0.838
Yes	3.1(8)	2.9(4)	3.4(4)	
No	96.9(246)	97.1(132)	96.6(114)	

(26.1%), constant tiredness (71.2%) and suicidal ideation (3.4%).

A higher prevalence of depressive symptoms was observed among medical students in the clinical cycle. This data is confirmed in another study and is attributed to the accumulation of stress during the student's academic life (4).

A higher prevalence of depressive symptom factors was also observed in female participants; This has been attributed in other studies to being up to twice as high as male students (Oliveira, 2013).

In relation to the female sample in the study, the highest frequency of depressive symptoms was identified as tiredness, constant crying, difficulty in making decisions and feelings of sadness. State that women find it more difficult to cope with everyday situations and are more likely to develop depression (Aquino et al., 2019).

As for the aspect of suicidal ideation, it was observed that in both sexes and periods of the medicine course they had a low prevalence in the study.

### Final considerations

In this study it was possible to identify that at the end of the course - the clinical cycle of medical training - students have a higher prevalence of depressive symptoms when compared to students in the basic cycle, as well as a higher prevalence in females. This highlights the importance of implementing strategies aimed at preventing and promoting student health.

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