

# CUIDADO É FUNDAMENTAL

Escola de Enfermagem Alfredo Pinto – UNIRIO

ORIGINAL ARTICLE

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## FACTORS ASSOCIATED WITH SUICIDAL BEHAVIOR IN UNIVERSITY STUDENTS FROM THE HUMANITIES CAMPUS OF A FEDERAL INSTITUTION

*Fatores associados a comportamento suicida em universitários de campus de humanas de instituição federal*  
*Factores asociados al comportamiento suicida entre estudiantes universitarios del campus de humanidades de una institución federal*

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### RESUMO

**OBJETIVO:** analisar fatores que causam sofrimento e comportamento suicida em universitários do campus de humanas de instituição federal. **Método:** pesquisa quantitativa, realizada com 67 universitários de seis cursos de humanas. Utilizou-se Teste Exato de Fisher entre as variáveis sociodemográficas, saúde mental e comportamento suicida. **Resultados:** maioria do sexo feminino, solteiro, sem religião, cisgêneros, sofreu violência física, psicológica ou sexual, histórico de tratamento em saúde mental na família, usava álcool, fez ou fazia acompanhamento em saúde mental; 22% tinham comportamento suicida na família, 33,40% tinham diagnósticos de transtornos ansiosos, 29,60% de transtornos de humor, 55,24% faziam uso de psicofármacos, 8,94% tentaram suicídio, 19,39% apresentaram comportamento suicida no último mês e 4,48% pretendiam se suicidar no futuro. **Considerações finais:** a orientação sexual, sofrer violência e ter familiar com comportamento suicida estão significativamente associadas a maior possibilidade de tentativa de suicídio.

**DESCRITORES:** Saúde mental; Comportamento autodestrutivo; Estudantes; Sofrimento psicológico; Ensino superior; Tentativa de suicídio.

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## ABSTRACT

**OBJECTIVE:** to analyze factors that cause suffering and suicidal behavior in university students from the humanities campus of a federal institution. **Method:** a quantitative survey of 67 university students from six humanities courses. Fisher's exact test was used between sociodemographic variables, mental health and suicidal behavior. **Results:** majority female, single, no religion, cisgender, suffered physical, psychological or sexual violence, history of mental health treatment in the family, used alcohol, had or was undergoing mental health monitoring; 22% had suicidal behavior in the family, 33.40% had diagnoses of anxiety disorders, 29.60% of mood disorders, 55.24% used psychotropic drugs, 8.94% attempted suicide, 19.39% had suicidal behavior in the last month and 4.48% intended to commit suicide in the future. **Final considerations:** sexual orientation, suffering violence and having a family member with suicidal behavior are significantly associated with a greater chance of attempting suicide.

**DESCRIPTORS:** Mental health; Self-destructive behavior; Students; Psychological distress; Higher education; Suicide attempt.

## RESUMEN

**OBJETIVO:** analizar los factores que provocan sufrimiento y comportamiento suicida en estudiantes universitarios del campus de humanidades de una institución federal. **Método:** encuesta cuantitativa a 67 estudiantes universitarios de seis programas de humanidades. Se utilizó la prueba exacta de Fisher entre variables sociodemográficas, salud mental y comportamiento suicida. **Resultados:** mayoría mujeres, solteros, sin religión, cisgénero, sufrieron violencia física, psicológica o sexual, antecedentes de tratamiento de salud mental en la familia, consumieron alcohol, tuvieron o estaban en seguimiento de salud mental; 22% tuvieron conducta suicida en la familia, 33.40% fueron diagnosticados con trastornos de ansiedad, 29.60% con trastornos del estado de ánimo, 55.24% consumieron psicofármacos, 8.94% habían intentado suicidarse, 19.39% tuvieron conducta suicida en el último mes y 4.48% tenían intención de suicidarse en el futuro. **Consideraciones finales:** la orientación sexual, sufrir violencia y tener un familiar con conducta suicida se asocian significativamente con una mayor probabilidad de intentar suicidarse.

**DESCRIPTORES:** Salud mental; Comportamiento autodestructivo; Estudiantes; Angustia psicológica; Educación superior; Intento de suicidio.

## INTRODUCTION

In Brazil, the past decade has seen a rise in suicide rates, reaching 15,507 deaths in 2021, with a general rate of 7.45 per 100,000 inhabitants. In the age groups of 15 to 19 and 20 to 29, the incidence was 6.90 and 5.56 per 100,000 inhabitants, ranking as the third and fourth leading causes of death, respectively.<sup>1</sup>

University students experience a sense of disruption as they leave high school and late adolescence, transitioning into adult life, with family separation, relocation, and personal conflicts. The pressures, challenges, and daily academic relationships can lead to mental health issues.<sup>2</sup>

A Norwegian study involving over 50,000 university students found that 4.2% (2,112) of participants reported a suicide attempt, with 51% of those reporting multiple attempts.<sup>3</sup>

In Brazil, research conducted among students at a Federal Institution of Higher Education (IFES) in Paraíba identified depressive symptoms ranging from mild to severe in 71.96% of students, with 22.54% reporting suicidal ideation.<sup>4</sup>

Studies addressing this subject within Brazilian university settings are limited, despite the need to discuss it to understand the causes of suicidal behavior and invest in prevention and support to detect and avert such behavior.

This study aims to analyze the factors causing distress and suicidal behavior among university students at the humanities campus of a federal institution.

## METHOD

This is a quantitative, exploratory-descriptive study conducted on the humanities campus of the Federal University of São Paulo, located in Guarulhos/SP.

The study population included all students on the humanities campus, selected through non-probabilistic and convenience sampling.

Inclusion criteria: participants had to be over 18 years old, enrolled, and attending courses offered on the campus at the time of data collection. Exclusion criteria: after participating in the study, participants could request to withdraw their data before the publication of results.

The study adhered to the guidelines of the National Health Council Resolutions 466/12 and 510/16. Data collection began after obtaining authorization from the university's administration, represented by the campus director, and approval from the Institutional Research Ethics Committee under CAAE: 40325420.5.0000.5505, with an approval report number 5,508,762 dated January 25, 2021.

Data were collected through a semi-structured questionnaire developed by the researchers, covering sociodemographic aspects, mental health information, and suicidal behavior. Due to the suspension of in-person classes caused by the COVID-19 pandemic, the questionnaire was administered online via Google Forms in March 2021. The questionnaire was distributed to all undergraduate students on the campus with assistance from the institutional email list provided by the academic administration.

Sociodemographic data were analyzed by comparing current national and international literature on the topic

with the responses gathered through the questionnaire. Data processing and analysis were conducted using the Statistical Package for the Social Sciences (SPSS 26). A double-entry system was used to ensure data accuracy, including range checks and analysis for inconsistencies.

Fisher's Exact Test was used to determine whether percentage distributions differed significantly between groups, with a p-value of less than 0.05 considered statistically significant, corresponding to a 95% confidence level. The analyses were performed using JMP® Pro version 13 - SAS Institute Inc., Cary, NC, USA, 1989-2019.

## RESULTS

The study included 67 participants from seven courses offered.

Table 1 presents the sociodemographic profile of the participants according to their course of study.

## Course

Course														
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy	Total							
	8	11,94%	12	17,91%	8	11,94%	14	20,90%	13	19,40%	12	17,91%	67	100%
Race/Color														
White	5	7,46%	5	7,47%	3	4,48%	8	11,94%	9	13,43%	8	11,94%	38	56,72%
Brown	1	1,49%	5	7,46%	1	1,49%	3	4,48%			3	4,48%	13	19,40%
Black			1	1,49%	1	1,49%	3	4,48%	4	5,97%			9	13,43%
Asian	2	2,99%									1	1,49%	3	4,48%
Other			1	1,49%	2	2,99%							3	4,48%
Did not answer					1	1,49%							1	1,49%
Age														
15-20			4	5,98%	2	2,98%	2	2,98%	4	5,98%	3	4,48%	15	22,39%
21-25	2	2,98%	2	2,98%	4	5,98%	5	7,46%	4	5,98%	3	4,48%	20	29,86%
26-30	2	2,98%	2	2,98%			2	2,98%	1	1,49%	5	7,46%	12	17,91%
31-35	2	2,98%	2	2,98%	1	1,49%			2	2,98%	1	1,49%	8	11,94%
36-40					1	1,49%	3	4,48%					4	5,97%
41-45	1	1,49%	2	2,98%			2	2,98%	1	1,49%			6	8,95%
45-50									1	1,49%			1	1,49%
Did not answer	1	1,49%												1,49%
Marital Status														
Single	6	8,96%	9	13,43%	7	10,45%	11	16,42%	11	16,42%	10	14,93%	54	80,61%

Course									
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy	Total		
Lives with partner	1 1,49%	3 4,48%	1 1,49%	3 4,48%	1 1,49%	1 1,49%	10	14,92%	
Married	1 1,49%						1	1,49%	
Divorced					1 1,49%		1	1,49%	
Widowed						1 1,49%	1	1,49%	
Gender									
Female	6 8,96%	7 10,45%	6 8,96%	10 14,93%	8 11,94%	12 17,91%	49	73,15%	
Male	2 2,98%	5 7,46%	2 2,98%	4 5,97%	5 7,46%		18	26,85%	
Sexual Orientation									
Bisexual	3 4,49%	8 11,94%	5 7,46%	4 5,98%	6 8,95%	2 2,99%	28	41,81%	
Heteros sexual	1 1,49%	4 5,97%	3 4,48%	7 10,45%	4 5,97%	8 11,94%	27	40,30%	
Homos sexual	2 2,98%			2 2,98%	3 4,48%		7	10,44%	
Pansexual	1 1,49%			1 1,49%		1 1,49%	3	4,47%	
Other	1 1,49%					1 1,49%	2	2,98%	
Total							67	100%	

Source: Data provided by the authors.

Table 2 contains data on school background, family housing, family income, place of origin, current residence, leisure activities, type of disability, and experienced violence, categorized by course.

**Table 2** - Sociodemographic characterization of participants regarding type of school attended, type of family housing, family income, place of origin, current residence, leisure activities, type of disability, and violence experienced. Guarulhos/SP, 2022

Course															
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy	Total								
Type of School Attended	8	11,94%	12	17,91%	8	11,94%	14	20,90%	13	19,40%	12	17,91%	67	100%	
	Only public school	2	2,98%	4	5,97%		6	8,96%	3	4,48%	9	13,44%	24	35,83%	
	Mostly public school	1	1,49%	3	4,48%	6	8,96%	2	2,98%	3	4,48%	2	2,98%	17	25,37%
	Only private school	2	2,98%	3	4,48%		5	7,47%	2	2,98%	1	1,49%	13	19,40%	
Mostly private school	3	4,49%	2	2,98%	2	2,98%	1	1,49%	5	7,46%		13	19,40%		
Family Income															
Up to 1 minimum wage			5	7,47%	3	4,48%	1	1,49%	2	2,98%	2	2,98%	13	19,40%	
1 to 3 minimum wages	5	7,47%	2	2,98%	2	2,98%	6	8,96%	3	4,48%	8	11,95%	26	38,82%	
3 to 6 minimum wages	1	1,49%	4	5,97%	2	2,98%	4	5,97%	4	5,97%	2	2,98%	17	25,36%	
6 to 9 minimum wages	1	1,49%	1	1,49%	1	1,50%	3	4,48%	3	4,48%		9	13,44%		
9 to 12 minimum wages	1	1,49%										1	1,49%		
More than 12 minimum wages									1	1,49%		1	1,49%		
Leisure Activities															
Reading	1	1,49%	5	7,46%	3	4,48%	4	5,98%	5	7,46%	1	1,49%	19	28,36%	
Physical activity	2	2,99%	3	4,48%			3	4,48%	4	5,97%	6	8,96%	18	26,88%	
Internet	2	2,99%	3	4,48%	4	5,97%	1	1,49%	3	4,48%	4	5,97%	17	25,38%	
Cultural activities	1	1,49%					3	4,48%	1	1,49%		5	7,46%		
No			1	1,49%	1	1,49%					1	1,49%	3	4,47%	
Other	2	2,98%					1	1,49%				3	4,47%		
Bars							2	2,98%				2	2,98%		
Type of Disability															
No	6	8,96%	10	14,93%	6	8,96%	13	19,41%	12	17,91%	11	16,42%	58	86,59%	

Course							
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy	Total
Visual	1	1,49%	1	1,49%	1	1,49%	3 4,47%
Physical		1	1,49%		1	1,49%	2 2,98%
Mental	1	1,49%	1	1,49%			2 2,98%
Auditory				1	1,49%		1 1,49%
Other			1	1,49%			1 1,49%
Types of Violence Experienced							
Yes	8	11,94%	6	8,95	5	7,46%	11 16,41 10 14,92% 10 14,92% 50 74,60%
Psychological	2	2,89%	3	4,48%	1	1,49%	6 8,95% 2 2,98% 3 4,49% 17 25,37%
Physical, psychological, and sexual	3	4,49%	1	1,49%	1	1,49%	4 5,98% 2 2,98% 2 2,98% 13 19,41%
Psychological and sexual				1	1,49%	1	1,49% 3 4,48% 2 2,99% 7 10,45%
Physical and psychological		2	2,98%			2	2,98% 4 5,96%
Physical, psychological, sexual, and other	2	2,98%		1	1,49%		3 4,47%
Sexual	1	1,49%				2	2,98% 3 4,47%
Physical			1	1,49%		1	1,49% 2 2,98%
Sexual and other					1	1,49%	1 1,49%
No		6	8,95%	3	4,49%	3	4,49% 2 2,98% 17 25,40%
Total							67 100%

Source: Data provided by the authors.

Table 3 presents the participants' characteristics regarding the presence of mental health treatment in the family, types of treatment, and family history of suicidal behavior, organized by course.

It was observed regarding the type of admission that 50.72% entered through the quota system, 91.06% were enrolled in the program they desired, 82.10% felt that the course met their expectations, and 65.69% were dissatisfied with their own academic performance.

**Table 3 -** Characterization of participants concerning family mental health treatment, types of treatment, and family history of suicidal behavior: Guarulhos/SP, 2022

<b>Course</b>										
	<b>Philosophy</b>	<b>History</b>	<b>Art History</b>	<b>Letters</b>	<b>Social Sciences</b>	<b>Pedagogy</b>	<b>Total</b>			
	8	11,94%	12	17,91%	8	11,94%	14	20,90%	13	19,40%
							12	17,91%	67	100%
<b>Family Mental Health Treatment</b>										
Yes	4	5,97%	7	10,45%	5	7,46%	6	8,96%	37	55,23%
No	3	4,48%	4	5,97%	3	4,48%	8	11,94%	27	40,30%
Did not answer	1	1,49%	1	1,49%			1	1,49%	3	4,47%
<b>Type of Treatment</b>										
None	4	5,97%	5	7,47%	3	4,48%	8	11,95%	4	5,97%
Medication	3	4,48%	5	7,46%	3	4,48%	4	5,97%	6	8,95%
Psychotherapy	1	1,49%	2	2,98%	2	2,98%	2	2,98%	3	4,48%
<b>Family Suicidal Behavior</b>										
No	5	7,47%	7	10,45%	6	8,96%	12	17,92%	11	16,42%
Yes	2	2,98%	4	5,97%	2	2,98%	2	2,98%	2	2,98%
Did not answer	1	1,49%	1	1,49%			1	1,49%	3	4,47%
<b>Total</b>									<b>67</b>	<b>100%</b>

Source: Data provided by the authors.

Table 4 presents the characteristics of participants regarding tobacco use, alcohol consumption, use of other psychoactive substances, mental health follow-up, diagnosis, psychotropic medication use, and psychotherapy, organized by course.



**Table 4 -** Characterization of participants regarding tobacco use, alcohol consumption, use of other psychoactive substances, mental health follow-up, diagnosis, psychotropic medication use, and psychotherapy. Guarulhos/SP, 2022

Course														
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy	Total							
Tobacco Use	8	11,94%	12	17,91%	8	11,94%	14	20,90%	13	19,40%	12	17,91%	67	100%
	5	7,46%	11	16,42%	6	8,96%	14	20,90%	11	16,42%	12	17,91%	59	88,07%
	3	4,48%	1	1,49%	1	1,49%			2	2,98%			7	10,44%
1 to 2 packs per day													1	1,49%
Alcohol Use														
Yes	4	5,97%	9	13,43%	5	7,46%	5	7,46%	6	8,96%	6	8,96%	35	52,24%
No	4	5,97%	3	4,48%	3	4,48%	9	13,44%	7	10,44%	6	8,95%	32	47,76%
Other Psychoactive Substance Use														
No	5	7,46%	8	11,94%	6	8,96%	8	11,94%	9	13,43%	10	14,93%	46	68,66%
Yes	3	4,48%	4	5,97%	2	2,98%	3	4,48%	4	5,97%	1	1,49%	17	25,37%
Did not answer							3	4,48%			1	1,49%	4	5,97%
Mental Health/Psychiatric Follow-Up														
Yes	5	7,46%	6	8,95%	3	4,48%	7	10,45%	11	16,42%	9	13,44%	41	61,20%
No	3	4,48%	3	4,48%			5	7,47%	2	2,98%	2	2,98%	15	22,39%
Did not answer			3	4,48%	5	7,46%	2	2,98%			1	1,49%	11	16,41%
Diagnosis														
Anxiety disorders	1	1,85%	3	5,55%	1	1,85%	4	7,40%	5	9,35%	4	7,40%	18	33,40%
Mood disorders	3	5,55%	3	5,55%	2	3,70%	1	1,85%	4	7,40%	3	5,55%	16	29,60%
Did not answer	1	1,85%	2	3,70%			2	3,70%	2	3,70%	3	5,55%	10	18,50%
Personality disorders					1	1,85%			1	1,85%	1	1,85%	3	5,55%

	Course					
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy
Total						
Obsessive-compulsive disorder						
Autism spectrum disorder	1	1,85%	1	1,85%	1	1,85%
Eating disorder						
Skin-picking disorder						
Post-traumatic stress disorder						
Premenstrual dysphoric disorder						
Psychotropic Medication Use						
Yes	3	4,48%	7	10,45%	6	8,96%
No	5	7,46%	5	7,46%	2	2,98%
Psychotherapy						
Did not answer	1	1,49%	3	4,48%	5	7,47%
Yes	5	7,47%	2	2,98%	1	1,49%
No	2	2,98%	7	10,45%	2	2,98%
Total						

Source: Data provided by the authors.

Table 5 displays the characteristics of participants related to suicide attempts, number of attempts, method used, suicidal behavior in the last month, and intention to attempt suicide in the future, organized by course.

**Table 5** - Characterization of participants regarding suicide attempts, number of attempts, method used, suicidal behavior in the last month, and intention to attempt suicide in the future. Guarulhos/SP, 2022

[illegible]

Course							
	Philosophy	History	Art History	Letters	Social Sciences	Pedagogy	Total
Fall from height	Fem.		1	4,54%			2
	Male.				4,54%		9,5%
Run over by vehicle	Fem.			1	4,54%	1	2
	Male.						4,8%
Exogenous poisoning	Fem.					1	1
	Male.				4,54%		4,8%
Other	Fem.					1	1
	Male.					4,54%	4,8%
Did not answer	Fem.		1	4,54%			1
	Male.						4,8%
Suicidal Behavior in the Last Month							
Thoughts	Fem.	1	1,49%	4	5,97%	1	1,49%
	Male.		1	1,49%		2	2,9888%
Planning	Fem.					1	1,49%
	Male.						1,49%
Trying	Fem.						
	Male.						
Intention to Attempt Suicide in the Future							
Yes	Fem.	1	1,49%	1	1,49%	1	1,49%
	Male.					3	50%
Maybe	Fem.	1	1,49%				1
	Male.						16,7%
Unsure	Fem.			1	1,49%		1
	Male.					1	1,49%
Total						6	100%

Source: Data provided by the authors.

The following statistical analyses are relevant for the data in Table 5, correlated with other variables, to assess whether the percentages differed among the groups. The Bisexual and Other groups showed a higher percentage of suicide attempts (over 50%) compared to other groups, with a significant difference between groups ( $p$ -value = 0.0104). Regarding experiences of violence, there were several notable differences, especially for participants who did not experience any type of violence, as none of them reported a suicide attempt.

Groups that experienced only sexual violence or three to four different types of violence had a high percentage of attempts (over 60%), with a significant difference between groups ( $p$ -value = 0.0005). Physical violence: The group with physical violence had a higher percentage of attempts (54.5% compared to 20.5%), with a significant difference between groups ( $p$ -value = 0.0104). Psychological violence: The group with psychological violence had a higher percentage of attempts (40.9% compared to 13.6%), with a significant difference between groups ( $p$ -value = 0.0282). Sexual violence: The group with sexual violence had a higher percentage of attempts (55.6% compared to 15.4%), with a significant difference between groups ( $p$ -value = 0.0010).

Analysis of suicide attempts in relation to violence showed a significant correlation with all types of violence—physical (54%), psychological (40.9%), and sexual (55.6%)—while those who did not experience violence reported no suicide attempts. In terms of family suicidal behavior, participants with a family history of suicidal behavior showed a higher percentage of attempts (60.0% compared to 21.3%), with a significant difference between groups ( $p$ -value = 0.0087).

For the frequencies and percentages of suicide attempts by number of attempts for each study characteristic, it was observed that psychological violence: participants without violence were concentrated in two attempts, whereas those with violence were distributed across various attempt frequencies.

The difference between groups was significant ( $p$ -value = 0.0218). Family mental health treatment: participants with family mental health treatment showed a higher number of attempts (with 50.0% attempting four or more times), with a significant difference between groups ( $p$ -value = 0.0197).

Family suicidal behavior: participants with a family history of suicidal behavior were concentrated in a single attempt, while those without such a history were spread across various attempt frequencies, with a significant difference between groups ( $p$ -value = 0.0367).

High recurrence of suicide attempts was observed, as 66.6% of participants who attempted suicide reported more than

one attempt; 57.1% of women and only 9.5% of men reported more than one attempt, with 33.3% of women indicating four or more attempts. Regarding the frequencies and percentages of suicide attempt methods for each study characteristic, it was observed that monthly income: medication ingestion was more common among groups earning above 6 minimum wages and between 1 to 3 minimum wages, with a significant difference between groups ( $p$ -value = 0.0060).

## DISCUSSION

When comparing our findings with data from the Fifth National Survey on the Socioeconomic and Cultural Profile of Undergraduates at Federal Higher Education Institutions (IFES), conducted in 2018, there were divergences in self-declared race, with a majority identifying as white in our study, whereas the national survey indicated that 43.3% of students self-identified as white; the majority single marital status and predominance of females in our study align with national data, which showed 85.5% of students were single and 54.6% were female, respectively. In terms of age, in our study, 52.25% of participants were between 15 and 25 years old. The national survey indicated that 18.6% of undergraduate students were under 20, and 49.3% were between 20 and 24, in line with our numbers. Regarding the presence of some type of disability, the IFES profile survey demonstrated that these students represented less than 5% of all undergraduates at IFES in Brazil, which matches the reality revealed by our study. Concerning violence, the national investigation revealed that, among the difficulties reported by students impacting performance, 3.7% reported situations of psychological violence/bullying, 0.8% reported physical violence, and 0.7% reported sexual violence, while our study found that 74.60% of participants reported having experienced some form of violence.<sup>5</sup>

Factors related to suicidal ideation in university students can arise at different points in academic life and in the process of personal, social, professional, and academic development, with situations requiring maturity, autonomy, and decision-making in the face of pressures, demands, and adversities, particularly those related to the rigidity of the academic environment. Suicidal behavior may emerge at any moment of adversity faced by students, and suicide has been the “solution” for some to problems experienced in university life.<sup>6</sup>

The influence of marital status on suicide risk is demonstrated in studies such as one conducted in South Korea, which found an association between suicide and single young

adults, with higher risk among single women, particularly divorced women aged 25 to 34; divorced and unemployed or economically inactive men, especially between ages 24 and 35, had the highest suicide risk.<sup>7</sup>

The global age-standardized incidence of suicide is higher among men, with a rate 2.3 times greater compared to women, with an age-standardized global incidence of 12.6 per 100,000 for men and 5.4 per 100,000 for women. In some countries, rates exceed 10 per 100,000 among women and 45 per 100,000 among men.<sup>8</sup>

However, globally, attempts are more frequent among women.<sup>9</sup>

Regarding the majority self-identifying as bisexual, we highlight that this is essentially a reflection of the study participants. Addressing suicidal behavior among LGBTQIA+ university students, it is concluded that by opposing heteronormative configurations, individuals are marginalized, suffer daily violence, leading to harm to their mental health and potentially precipitating suicidal behavior.<sup>10</sup>

By examining each campus individually, it is possible to observe that while the Guarulhos campus had 57.5% of new students who had completed high school exclusively in public schools and 4.2% who had mostly studied in public schools, a similar rate to that found in the national context, the São Paulo campus, which houses the medical and other health courses, and the São José dos Campos campus, home to engineering courses, had only 48.9% and 49% of their new students, respectively, who had completed high school exclusively in public schools.<sup>11</sup>

This reality shows that despite the implementation of mechanisms to broaden access to higher education in Brazil, further strategies are still needed to truly enable access for these young people, especially in institutions and courses perceived as elitist.

A study with adolescents in southern Brazil found that among the factors reported by participants as triggers for depression and reasons for suicide attempts were family conflicts and physical, psychological, and sexual abuse.<sup>12</sup>

Regarding psychological violence, situations of harassment among students at the University of Brasília were identified that put their continuity at risk, promoted depressive and anxious symptoms, and increased suicide risk.<sup>13</sup>

The data indicate that on the Humanities campus of UNIFESP, violence rates were higher, as the majority of participants reported having suffered some type of aggression. However, it should be noted that the small number of participants, and the characteristics of this participant group, consisting primarily of women, Black/brown individuals, and bisexuals, who are considered vulnerable groups most affected by violence, may bias this index.

Regarding admissions, in 2018, even with the Quota Law (Law No. 12,711/2012), admissions through open competition represented 58.1% of entrants, while the quota system accounted for only 41.9%.<sup>5</sup>

A study in higher education identified learning difficulties, admission form, excessive shyness, significant or emotional difficulty, and an excessive workload of academic work as variables that interfere with academic performance, when adjusted for insomnia, eating problems, abusive alcohol use, other difficulties, mental confusion, and financial difficulties.<sup>14</sup>

Stressors such as excessive content, lack of time for leisure, and high levels of institutional demands can contribute to the development or intensification of suicidal thoughts in those already at risk, as well as negatively affect academic performance and cause feelings of self-deprecation, further aggravating an unresolved situation.<sup>15</sup>

Regarding family history of mental disorders and treatment, a study with university students reveals high figures, as seen at the Federal Institute of Higher Education in Cubatão/SP, where 58.82% of family members had mental disorders.<sup>16</sup>

An investigation with students from various health undergraduate programs at a public institution in Minas Gerais found that 27.6% of participants were at suicide risk, with 27.7% reporting a family member with suicidal behavior and 12.3% a family death by suicide.<sup>17</sup>

In Denmark, a study found an increased association of suicide attempts in children exposed to parental suicide attempts during childhood and adolescence. Those exposed before age two had the highest rates, as did those exposed to maternal suicide attempts.<sup>18</sup>

Similarly, a study with adolescents found that participants reporting suicide attempts had more parental history of suicide attempts or deaths.<sup>19</sup>

Regarding tobacco, alcohol, and other psychoactive substances, we found significant and worrying numbers among participants.

A study with university students found a significant association between suicidal ideation and alcohol, tobacco, and other drug use. Suicidal ideation was present in 22% of participants, 90.3% of whom used alcohol, 54.8% tobacco, and 54.8% other drugs, with increases of 7.11%, 9.15%, and 11.03%, respectively, in the likelihood of suicidal ideation.<sup>20</sup>

Another study also observed a higher prevalence of psychoactive substance use among students reporting suicidal ideation compared to those without ideation.<sup>21</sup>

The findings regarding mental health problems were significant, with most participants having sought or currently seeking mental health support.



The high prevalence of mental disorders is not exclusive to the participants on this campus, as a study by Barros with students from a federal university in northeastern Brazil found a rate of 71.52% for common mental disorders.<sup>22</sup>

Additionally, health students with depressive symptoms, low self-esteem, diagnosed mental disorders, using psychotropic drugs, and dissatisfied with social support were more likely to be at suicide risk.<sup>17</sup>

Students diagnosed with mental disorders and experiencing moderate/severe symptoms of depression or anxiety or both showed a higher prevalence of non-suicidal self-harm, ten times the likelihood of suicidal ideation, 28 times the likelihood of suicidal ideation with planning or attempts, and 47 times the likelihood of suicidal ideation with planning and attempts compared to students without a mental disorder diagnosis or minimal symptoms of depression or anxiety or both.<sup>23</sup>

Regarding psychotropic drug use, a study with 320,817 university students across more than 320 academic institutions found that, when comparing results from 2007 and 2018/2019, the use of almost all medications increased, specifically, the use of antidepressants, anxiolytics, and mood stabilizers doubled, the use of antipsychotics and psychostimulants tripled, and the prevalence of polypharmacy increased from 28.2% to 40.8% among students who had used psychotropic drugs in the past 12 months.<sup>24</sup>

A study conducted in the United States with 67,308 undergraduates from 108 colleges found that 24.9% had a psychiatric diagnosis, 9.8% seriously considered suicide, 1.5% had attempted suicide, and 7.1% reported self-harm behaviors.<sup>25</sup>

In China, an investigation with 6,836 university students found that 18% of students exhibited high suicidal ideation, 14.5% were at suicide risk, 18.8% had suicide plans, and 1% had attempted suicide.<sup>26</sup>

Regarding suicide attempt recurrence, a study with individuals who had attempted suicide, aimed at identifying risk factors for attempt recurrence, revealed that 70.8% had previously made other attempts, with higher risk among people aged 20 to 47, with negative family relationships, mental disorders, non-communicable chronic diseases, and no family history of suicide attempts.<sup>27</sup>

Previous suicide attempts are significantly associated with new attempts in both genders, as are each 10-year increase in age, psychiatric consultations in the month preceding the attempt, being unmarried, and using a drug overdose in the current attempt.<sup>28</sup>

A review study indicates that one in five individuals is at risk of attempting suicide following a previous attempt, with the risk of recurrence increasing linearly with time after the

initial attempt. The highest risk of recurrence was associated with female gender, self-cutting in the initial attempt, and the presence of a mental disorder.<sup>29</sup>

Regarding the method used for suicide attempts, according to the Brazilian Ministry of Health, there was a predominance of exogenous poisoning (67.1%), sharp objects (17.9%), and hanging (6.6%) among both genders. Men showed higher rates of hanging (12.9%) and firearm use (1.4%), which were 3.3 and 7.2 times greater, respectively, than those observed in women.<sup>1</sup>

## STUDY LIMITATIONS

There were limitations in data collection, as the semi-structured questionnaire was administered online due to the pandemic; the sample size, which does not allow for generalization, and the lack of studies on the subject with this specific population.

## STUDY CONTRIBUTIONS

The knowledge gained is original and unique to the institution under study and provides a foundation for campus and university administrators to implement policies aimed at changing the outlook on students' suicidal behavior.

## FINAL CONSIDERATIONS

The majority of participants are female, self-identified as LGBTQIA+, non-religious, report having experienced physical, psychological, and sexual violence, are dissatisfied with their academic performance, have a history of tobacco and alcohol use, mental health treatment in the family, have a mental disorder diagnosis, with a prevalence of anxiety and mood disorders, and use psychotropic medications. Additionally, a considerable portion reports family suicidal behavior, use of other psychoactive substances, and suicide attempts involving medication ingestion.

Regarding risk factors with statistical associations for suicidal behavior, sexual orientation (bisexual and other), experiencing violence (sexual, physical, and psychological), and having a family member with suicidal behavior are significantly associated with a higher likelihood of suicide attempts. Psychological violence, family psychiatric treatment, and family suicidal behavior were associated with a higher number of suicide attempts. A monthly income of 1 to 3 minimum wages and above 6 minimum wages was associated with the method of medication ingestion.

## DECLARATION OF FINANCIAL AND/OR AFFILIATION CONFLICT OF INTEREST

The authors, João Fernando Marcolan and Evandro Benedito Abate, of the manuscript titled “Factors Associated with Suicidal Behavior in Humanities Campus University Students at a Federal Institution,” declare that there are no personal, commercial, academic, political, and/or financial conflicts of interest in the review and publication process of the article.

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