

# Risk of suicide among university health students and associated factors

## Risco de suicídio entre universitários da área da saúde e os fatores associados

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### Abstract

**INTRODUCTION:** Suicide is considered the fourth cause of death among young people aged 15 to 29 years. In this age group are university students, who may experience a period marked by anguish, uncertainty, challenges, and suffering in their academic life, which, together with other factors, may favor the risk of suicide. **OBJECTIVE:** To identify risk factors for suicide (sociodemographic, educational, clinical, hope, major depression, and self-esteem factors) among university students in the health field. **MATERIALS AND METHODS:** Study with a quantitative approach, developed with university students enrolled from the 5th period onwards in undergraduate courses in Biomedicine, Nursing, Pharmacy, Physiotherapy, Medicine, Nutrition, and Dentistry at a public institution of higher education located in the south of Minas Gerais. Five instruments were self-applied: sociodemographic, educational, and a clinical questionnaire; Suicide Risk Assessment; Herth Hope Scale; Major Depression Inventory and Rosenberg Self-Esteem Scale. To evaluate possible associations between variables, statistical analysis was performed using Pearson's chi-square test and Spearman's correlation; and to quantify the association between suicide risk and independent variables, the logistic regression model. **RESULTS:** 747 university students participated in the study, in which 27.6% were at risk of suicide. Suicide risk predictors were having depressive symptoms, low self-esteem, diagnosis of mental disorder, use of psychotropic drugs, and dissatisfaction with social support. **CONCLUSION:** The study identified the prevalence of suicide risk among university students in the health area and associated factors, such as depressive symptoms, low self-esteem, use of psychotropic drugs, lack of religious belief, family member or friend with suicidal behavior, among others. Furthermore, the results may provide a framework for interventions, investigations, and public policies to support university students and prevent suicide in this population.

**Keywords:** suicide attempt. suicide. students, health occupations.

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## Resumo

**INTRODUÇÃO:** O suicídio é apontado como a quarta causa de morte entre jovens na faixa etária de 15 a 29 anos. Nesta faixa etária encontram-se os universitários, que podem vivenciar em sua vida acadêmica um período marcado por angústias, incertezas, desafios e sofrimentos que somados a outros fatores podem favorecer o risco de suicídio. **OBJETIVO:** Identificar os fatores de risco para o suicídio (fatores sociodemográficos, educacionais, clínicos, esperança, depressão maior e autoestima) entre estudantes universitários da área da saúde. **MATERIAIS E MÉTODO:** Estudo de abordagem quantitativa, desenvolvido com estudantes universitários matriculados a partir do 5º período nos cursos de graduação em Biomedicina, Enfermagem, Farmácia, Fisioterapia, Medicina, Nutrição e Odontologia de uma instituição pública de ensino superior localizada no Sul de Minas Gerais. Foram autoaplicados cinco instrumentos: Questionário sociodemográfico, educacional e clínico; Avaliação do Risco de Suicídio; Escala de Esperança de Herth; Inventário de Depressão Maior e Escala de Autoestima de Rosenberg. Para avaliar possíveis associações entre as variáveis, realizou-se análise estatística por meio do teste Qui-Quadrado de Pearson e correlação de Spearman; e para quantificar associação entre risco de suicídio e variáveis independentes, o modelo de regressão logística. **RESULTADOS:** Participaram do estudo 747 universitários, 27,6% apresentavam risco de suicídio. Os preditores de risco de suicídio foram ter sintomas depressivos, baixa autoestima, diagnóstico de transtorno mental, uso de psicofármacos e insatisfação com o apoio social. **CONCLUSÃO:** O estudo permitiu identificar a prevalência de risco de suicídio entre estudantes universitários da área da saúde e fatores associados, tais como, sintomas depressivos, baixa autoestima, uso de psicofármacos, ausência de crença religiosa, familiar ou amigo com comportamento suicida, entre outros. Ademais, os resultados poderão subsidiar referencial para intervenções, investigações e políticas públicas para o apoio aos estudantes universitários e para a prevenção do suicídio nessa população.

**Palavras-chave:** tentativa de suicídio. suicídio. estudantes de ciências da saúde

## Introduction

According to the World Health Organization (WHO), more than 700,000 people die by suicide each year, and it is the fourth leading cause of death in the 15 to 29 age group. Suicide attempts outnumber suicides, and considering that these events are underreported<sup>1</sup>.

In Brazil, from 2010 to 2019, there were 112,230 deaths by suicide, an annual increase of 43%, from 9,454 in 2010 to 13,523 in 2019. A significant increase in the incidence of suicide was evidenced for all age groups, with adolescents standing out, with an 81% increase in this period. Regarding the notifications of self-harm violence, there was an increase of 46.3% for the age group between 20 and 39 years, and of 23.3% between 15 and 19 years<sup>2</sup>.

Therefore, suicide is considered a serious public health problem and global interventions need to be planned and conducted in order to reduce mortality from this phenomenon, in addition to the need to acquire resources and invest efforts in prevention and research on this matter<sup>1,2,3</sup>.

Suicidal behavior is complex and involves suicide intention and ideation, when there is a desire to die and to be the agent who provokes one's own death; the suicide plan, when there is planning to take one's own life, which may contain a date, place, etc.; the suicide attempt, when there is an attempt to provoke one's own death, with a non-fatal outcome; and suicide, characterized by self-caused death. This behavior is not an isolated act and is associated with several risk factors<sup>2,3,4,5</sup>.

Among the associated factors, social isolation, loneliness, hopelessness, helplessness, low self-esteem, anxiety, depression, mental disorders, substance use disorders, drug abuse, history of sexual abuse, lack of social support, previous suicide attempts, family history, and family conflict, among other stressors, stand out<sup>1,5,6,7,8,9,10</sup>. Suicide attempts and suicidal ideation represent important predictors of subsequent suicide, especially in the absence of preventive measures. Therefore, it is essential to conduct research on prevention strategies and effective assistance to people with suicidal behavior



in order to minimize the consequences of this problem.<sup>1,11</sup>

It is important to highlight that college students experience a period of uncertainty, suffering, and anguish during their academic life, which may favor the manifestation of mental disorders and also suicidal behavior. Besides that, they experience several stressors, living away from home and away from their parents, failure, expectations regarding the chosen course, added to new responsibilities, loneliness, and homesickness<sup>8, 12, 13, 14</sup>.

A study conducted with 451 health students from a university in the state of Maranhão, with the intention of evaluating their mental health profile regarding suicide risk, showed that 27.3% of the students reported having suicidal thoughts less than once a week, 17.8% said they had difficulty controlling their suicidal thoughts, and 12.4% thought about how to take their own lives<sup>8</sup>.

Therefore, higher education institutions need to know and intervene on the factors that influence the risk for suicidal behavior, so that prevention measures among university students are effective<sup>15</sup>. University faculty, staff, and managers should not neglect the emotional suffering of students and need to promote a welcoming environment that facilitates supportive relationships<sup>16</sup>.

This study used different instruments to assess the factors associated with suicide risk and was carried out with college students from different health majors, i.e., future professionals who will provide assistance to people with suicidal behavior, highlighting the importance of addressing this issue during undergraduate studies. Moreover, regional research of this kind broadens the knowledge about the factors involved in the risk of suicide among college students in the health field, making it possible to provide a framework for interventions, investigations, and public

policies to promote the mental health of college students and to prevent suicide in this population. Given the above, this study aimed to identify the risk factors for suicide (sociodemographic, educational, clinical, hope, major depression, and self-esteem factors) among college health students.

## Resources and Methods

### Sample and study type

This is a descriptive, cross-sectional study with a quantitative approach<sup>17, 18</sup>. It was developed with undergraduate students in the health field of a state higher education institution located in southern Minas Gerais. The institution has about 5,600 students in undergraduate courses, face-to-face and online learning, offering 33 courses in the applied sciences, humanities, and health fields, as well as Lato and Stricto Sensu post-graduation programs.

The population of health undergraduates in the studied period totaled 1,090 academics, 343 of whom did not participate in the survey; therefore, the sample was composed of 747 undergraduates who were enrolled from the 5th semester on in undergraduate programs such as Biomedicine, Nursing, Pharmacy, Physiotherapy, Nutrition, Medicine, and Dentistry.

The study was approved by the Research Ethics Committee of the proponent institution (Opinion No. 2392.345) and the coparticipating institution (Opinion No. 2398.238).

### Research design

The coordinators of the eligible undergraduate courses were contacted to explain the research objectives, and the instruments that would be used and request authorization so that the collection could be initiated with students enrolled as of the 5th period. After the acceptance, it was requested the indication of a teacher of each



period of the investigated courses, in order to facilitate the contact. The suggested teacher was contacted to make it possible to schedule the day and time for the collection. The collection was performed at the beginning or end of classes so as not to hinder the development of activities, in the period from May to June 2018.

### **Inclusion and Exclusion Criteria**

The study included undergraduate students in the health area from the 5th period of in-class undergraduate courses in Biomedicine, Nursing, Pharmacy, Physiotherapy, Nutrition, Medicine, and Dentistry. This approach is justified by the fact that students from the last semesters have more contact with users of health services with a risk or attempted suicide, as well as more contact with this topic. Students under 18 years old, absent at the time of data collection, or who filled out less than 50% of the instruments were excluded.

### **Procedures**

The university students who agreed to participate voluntarily in the study received a copy of the Free Informed Consent Form and the printed data collection instruments.

All instruments were self-applicable and the completion time was up to 20 minutes, including a script for collecting sociodemographic, educational, and clinical data of the study population - containing 16 questions that contemplated the following variables: age, sex (biological), gender identification, sexual orientation, major course, course term, participation in events, courses and/or lectures on suicide prevention, participation in a discipline on psychiatry and/or mental health, family member or close friend with suicidal thoughts or suicide attempts or who died by suicide, diagnosis of mental illness, treatment with psychotropic drugs or if they do any monitoring, therapy or mental health

care, religious belief or spirituality, and support from people with whom they live.

For the evaluation of Suicide Risk, we used module C of the M.I.N.I. PLUS (Mini International Neuropsychiatric Interview), Brazilian version, translated and adapted by Amorim (2000), which contemplates five questions: During the last month (C1 to C5) - *Have you thought it would be better to be dead or wish you were dead? Did you want to harm yourself? Have you thought about suicide? Have you thought of a way to kill yourself? Have you ever made a suicide attempt?* And in your lifetime (C6) - *Have you ever made a suicide attempt?* with dichotomous answers (yes or no). The score ranges from 1 to 33 points, for each answer marked as YES, with scores (C1 -1, C2 -2, C3 -6, C4 -10, C5 -10, and C6 -4). In the end, the total number of points for the YES responses should be added up and the suicide risk specified - 1 to 5 points (low), 6 to 9 points (moderate), and greater than or equal to 10 points (high). Answers marked NO were not scored<sup>19</sup>. The MINI can be used for epidemiological, longitudinal, and clinical trial studies<sup>20</sup>. The scale was recategorized into "no risk" (a category proposed by the instrument, when the score is zero) and "with risk" (which gathered the options: low, moderate, and high risk).

The Herth Hope Scale (HSS), an instrument translated and validated for the Brazilian setting by Sartore and Grossi in 2008, measures the level of hope of individuals. The interviewee must indicate how much he/she agrees with the statement at the moment. The total score ranges from 12 to 48 points, and the higher the score, the higher the level of hope.<sup>21</sup>

The Major Depression Inventory (MDI) was validated and adapted for the Portuguese language by Parcias and collaborators in 2011 and allows the assessment of the presence of depressive disorder and its magnitude. The instrument



was developed with the intention of covering the universe of symptoms of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) for major depression and the International Classification of Diseases and Health Problems (ICD-10) system for mild, moderate, and severe depression. It consists of a self-administered questionnaire that contains ten symptoms from the ICD-10 for depression and DSM-IV. The instrument is composed of 10 affirmative questions, which refer to how the participant has been feeling over the past two weeks, with scores ranging from 0 (not at all) to 5 (all the time) for each item, ranging from 0 to 50 points, the higher the score, the greater the presence and magnitude of depressive symptoms. It is coded as the presence of depressive symptoms (with a score greater than or equal to 16) and no depressive symptoms (with a score of less than 16 points)<sup>22</sup>.

The Rosenberg Self-Esteem Scale (RAS) was translated and validated for the Brazilian setting by Hutz and Zanon in 2011. It contains ten statements related to feelings of self-esteem and self-acceptance that assess global self-esteem. The total score ranges from 10 to 40 points; the higher the score, the higher the self-esteem<sup>23</sup>. It can be categorized as satisfactory or high (more than 31 points), medium (between 21 and 30 points), and unsatisfactory or low (less than 20 points).<sup>24</sup>.

After the instruments were applied, the data were coded and double-typed into a database in an electronic spreadsheet, in the Excel Software, and then any possible coding or typing errors were checked, compared and corrected, and imported and analyzed in the SPSS (Statistical Package for Social Science) program version 21.0<sup>25</sup>.

Descriptive analysis was performed, with absolute and relative frequency, mean, median, standard deviation, and interquartile range for the presentation of

sociodemographic, educational, and clinical variables, family or close person history of suicidal behavior, self-esteem, screening for depressive symptoms, and suicide risk.

To evaluate the association between suicide risk and the other variables, Pearson's chi-square test was used. The Spearman correlation coefficient was used to evaluate the association between suicide risk, depressive symptoms, hope, and self-esteem. Spearman's correlation coefficient assumes values from -1 to +1, with a positive value indicating a direct correlation and a negative value an inverse correlation<sup>26</sup>. Furthermore, it can be classified as weak ( $0 < r < 0.4$ ), moderate ( $0.4 < r < 0.7$ ), and strong ( $0.7 < r < 1.0$ )<sup>27</sup>.

The logistic regression model was used to quantify the association between suicide risk variables and each independent variable since this model allowed the association of one or more independent variables with a binary response variable<sup>28</sup>. For the analysis, a 5% significance level was considered, i.e., the data were statistically significant for  $p < 0.05$ .

## Results

The sample included 747 health students, most of them were from dentistry, medicine, and pharmacy degrees (56.2%), between the 5th and 7th terms (67.1%), had attended courses such as Psychiatry and/or Mental Health (64.3%), had read material about suicide (58.4%), and 56.2% had not attended events related to suicide prevention. The majority were female (72.8%), younger than 25 years old (73.4%), heterosexual (88.4%), with religious beliefs (88.4%), and were satisfied with the support they received from family and friends (77.3%).

Regarding the clinical variables, 22.5% of the undergraduates were



diagnosed with a mental disorder, 18.6% were treated with psychiatric drugs, and 14.2% were in therapy.

As for family history, 27.7% reported having someone in the family with suicidal behavior and 12.3% had died by suicide in the family. In the context of close people (friends, colleagues), 36.8% of undergraduates had contact with people with suicidal behavior and 12.9% reported having a friend who died by suicide.

Regarding the results of the scales, in the risk of suicide (MINI PLUS - Module C), 206 participants (27.6%) presented some risk, being (12.5%) classified as low, and (15.1%) moderate or high. As for hope (HHS), a mean of 36.7 (SD = 6.1) and a median (37.0) were observed; considering that the instrument has a total score that ranges from 12 to 48 points. Regarding depressive symptoms (MDI), in which the total score ranges from 0 to 50 points, a mean of 22.9 (SD = 10.0) and a median (21.0) were obtained; still, most participants had depressive symptoms (77.4%). In self-esteem (EAR), considering that the total score of the instrument varies from 10 to 40 points, a mean of 29.7 (SD = 5.8) and a median (30.0) were obtained; to most of the

undergraduates (359) self-esteem was classified as being average (48.1%), 343 with high self-esteem (45.9%) and 45 with low self-esteem (6%).

Risk of suicide was associated with the absence of religious belief ( $p=0.005$ ) and dissatisfaction with social support ( $p<0.001$ ), having a family member ( $p=0.006$ ) or friend ( $p<0.001$ ) with suicidal behavior and a friend killed by suicide ( $p<0.001$ ), reading material about suicide ( $p<0.001$ ), mental disorder ( $p<0.001$ ), psychopharmaceuticals ( $p<0.001$ ), mental health therapy ( $p<0.001$ ), depressive symptoms ( $p<0.001$ ), and self-esteem ( $p<0.001$ ).

Spearman's correlation test was used to assess the association between suicide risk and the quantitative variables, depressive symptoms, hope, and self-esteem. Suicide risk had a moderate magnitude positive correlation with depressive symptoms ( $r=0.479$ ;  $p<0.001$ ) and moderate magnitude negative correlation with hope ( $r=-0.467$ ;  $p<0.001$ ) and self-esteem ( $r=-0.481$ ;  $p<0.001$ ), therefore, suicide risk was higher when there were more depressive symptoms, low self-esteem and less hope (table 1).

**Table 1** - Correlation between suicide risk, depressive symptoms, hope and self-esteem, 2018, (n=747).

	Depressive symptoms*	Hope**	Self-esteem
	r (p-value)	r (p-value)	r (p-value)
<b>Risk of suicide</b>	.479 (<.001)	-.467 (<.001)	-.481 (<.001)

Source: Authors, \*(n=745); \*\* (n=746); r - Spearman's Coefficient

All variables were entered into the logistic regression model, with suicide risk as the response variable. Students with depressive symptoms (OR=4.487;  $p<0.001$ ), low self-esteem (OR=3.356;  $p<0.001$ ), diagnosed with mental disorders (OR=2.097;  $p=0.005$ ), using psychiatric

drugs (OR=1.926;  $p=0.019$ ) and dissatisfied with social support (OR=2.051;  $p=0.002$ ) were more likely to be at risk of suicide. Students who did not read specific material about suicide (OR=0.445;  $p<0.001$ ) were 2.24 less likely to have suicide risk (table 2).



**Table 2** - Analysis of factors associated with suicide risk, according to logistic regression model, 2018.

Variable	Parameter	Standard Error	p valor	OR	95% CI(OR)	
Reading material about suicide (no)	-0.810	0.223	<.001	0.445	0.287	0.689
Mental Disorder (yes)	0.740	0.264	.005	2.097	1.249	3.519
Psychopharmaceuticals (yes)	0.655	0.280	.019	1.926	1.112	3.334
Satisfaction with support (no)	0.718	0.234	.002	2.051	1.297	3.242
Depressive symptoms (yes)	1.501	0.431	<.001	4.487	1.928	10.446
Self-esteem (low)	1.211	0.252	<.001	3.356	2.027	5.501
Constant	2.342	0.423	<.001	0.036		

Source: Authors. Logistic regression model; OR - Odds Ratio; CI - confidence interval

## Discussion

In the present study, students with depressive symptoms, low self-esteem, diagnosed with mental disorders, taking psychotropic drugs, dissatisfied with social support, no religious beliefs, and a family member or close friend with suicidal behavior were more likely to be at risk for suicide. Students who did not read specific material about suicide were less likely to be at risk for suicide. A literature review on suicide risk in the university environment identified that the main risk factors were self-reported depression, traumatic life events, sleep disturbances, hopelessness, perceived overwhelm, loneliness, and frustrated belonging while the most relevant protective factors were having reasons to live (purpose, life projects) and hope<sup>29</sup>.

Gender did not show an association with suicide risk, as found in some previous studies<sup>30,31,32</sup>. However, in several countries, suicidal behavior presents differently between genders, with non-lethal behaviors being more frequent in females while deaths from suicide are more common among males<sup>2,5</sup>.

The absence of religious belief increased the chances of suicide risk among

college students. In a study developed with college students from a private institution in São Paulo, the absence of religious belief was also a risk factor for suicidal behavior<sup>33</sup>. An investigation conducted with Islamist college students concluded that religion can act as a protection mechanism, favoring the finding of meaning in life<sup>34</sup>, in this case, reducing the risk of suicide. However, in another study conducted with young adults, religion had no influence on suicidal behavior<sup>31</sup>.

Dissatisfaction with the available social support was a predictor of suicide risk. An international study of university students found that poor social support was associated with a greater chance (1.66) of suicidal behavior<sup>35</sup>. A study conducted with university students in Chile found that the greater the perception of social support from family and friends, the lower the risk of suicide<sup>36</sup>.

Family support can contribute to the development of social skills, self-worth, and the ability to seek help<sup>16</sup>. Furthermore, social support can promote well-being<sup>37</sup>, avoid social isolation, and be a protective factor against suicidal behavior<sup>31,38,39</sup>. Therefore, social support is a relevant tool to reduce the negative effects of stress experienced by college students<sup>40</sup>.



Students report that the main sources of support are the mother figure and friends<sup>41</sup>. It is also necessary to investigate the social relationships established in the university context and also implement strategies that contribute to strengthening supportive relationships<sup>42</sup>. It is added that teachers and university coordinators should create environments that favor healthy interpersonal relationships among university students<sup>39</sup>.

In this study, the risk of suicide was associated with having a relative or friend with suicidal behavior and a friend who died by suicide. These data are consistent with the research that detected that college students who had family members or friends who had attempted suicide were more likely to present this behavior<sup>30</sup>. Another study from Ethiopia showed that college students with a family history of suicide attempts were four times more likely to engage in suicidal behavior<sup>35</sup>. Mourning for the suicide of a close person is associated with negative repercussions, such as feelings of guilt, shame, and sadness, among others<sup>43</sup>. Thus, grieving for suicide can represent a situation of vulnerability that cannot be neglected<sup>44</sup>.

As for reading material on suicide behavior prevention, this variable is not commonly addressed in studies with college students, which makes comparisons difficult<sup>16, 30, 34, 35</sup>. Although exposure to the topic of suicide can be worrying due to the risk of imitative behavior or contagion in vulnerable people<sup>45</sup>, there is also the possibility of the occurrence of the Papagene effect, which can exert a protective effect against suicide, as it is linked to adequate information that promotes literacy and search for support<sup>46</sup>.

In this study, the diagnosis of mental disorders and the use of psychotropic drugs were predictors of suicide risk. Psychopathologies and their outcomes contribute as a risk factor for ideation,

suicide attempt and suicide itself. However, suicide is a complex phenomenon and mental disorders cannot be considered as a single associated factor; moreover, not all people with this diagnosis present suicidal behavior<sup>11</sup>. The excessive use of psychotropic drugs was also associated with higher risk of suicidal behavior among higher education students in Portugal<sup>47</sup>. The use and abuse of psychotropic drugs, especially without medical prescription, have increased among college students and involve complications such as dependence, addiction, abstinence, and tolerance, contributing to the risk of suicide<sup>48</sup>.

Suicide risk had a moderate-magnitude negative correlation with hopelessness, although this variable was not a predictor of higher suicide risk. The presence of depressive symptoms intensifies hopelessness and increases suicide risk in students<sup>49</sup>. Hopelessness contributes to suicide being considered a viable option in the lack of future prospects and disbelief about ways out or ways to ease suffering<sup>50</sup>. On the other hand, hope and reason for living reduce the risk of suicide among college students<sup>29, 51</sup>. Hope also contributes to better coping, well-being, reduction of depression, negative feelings, and negative life events<sup>52</sup>.

Investigations conducted in Brazil and abroad with college students found associations between depressive symptoms and suicide risk<sup>30, 53, 54</sup>. This study revealed the magnitude of this association. Students with depressive symptoms were approximately four times more likely to present the risk of suicide. Studies developed with college students with depressive symptoms report fewer reasons to live and may have greater knowledge to employ more lethal methods<sup>12, 54, 55</sup>.

College students with low self-esteem were three times more likely to be at risk for suicide. A study of Chinese students found that those with higher self-esteem



scores had a lower risk of suicide<sup>56</sup>, which has also been reported in studies of adolescents<sup>57,58,59,60,61</sup>. Individuals with higher levels of self-esteem generally believe in themselves and are able to deal more effectively with the "obstacles" of everyday life, whereas the opposite, people with low self-esteem and negative beliefs about themselves, have difficulties in facing adversity, making suicide still an "alternative" for problem-solving<sup>62</sup>.

It is also relevant that risk and protection factors are considered by university managers for the planning and implementation of actions linked to the family and the psychosocial care network, from the first semester of the academic degree<sup>12,53</sup>. These actions are especially relevant for health students, who will be involved in the protection of other lives and will experience situations that can result in suffering<sup>13,32</sup>.

In this context, it is evident the importance of interventions that contribute to promoting self-care, appreciation of life, psychological and emotional well-being, increase hope, stimulate a sense of purpose, search for social support, and problem-solving, as means to prevent suicidal behavior<sup>12,13,13,49,50,54,63</sup>. The literature also recommends that higher education institutions implement suicide prevention in their programs for positive outcomes<sup>56</sup>.

## Conclusion

This study allowed the identification of the prevalence and factors associated with suicide risk in college health students.

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The predictors of greater chance of suicide risk were having depressive symptoms, low self-esteem, diagnosis of mental disorder, use of psychotropic drugs, and dissatisfaction with social support. Students who did not read any literature on suicide were less likely to be at risk for suicide. In addition to these variables, the absence of religious belief and family and/or friend with suicidal behavior and the death of a friend by suicide were associated with suicide risk.

Some limitations of this study need to be considered, such as the cross-sectional design, which does not allow establishing a cause-and-effect relationship among the variables; the use of self-applied instruments, in the sense that some self-reported variables, such as "diagnosis of mental disorder" and "use of psychiatric drugs", from the clinical point of view, were not assessed in the patient's medical record or by means of clinical and/or psychiatric interview; and for having been carried out with undergraduates from the 5th semester of the health area courses onward, excluding university students who were in the initial periods of the degree courses, since it is believed to be necessary to map the risk of suicide during the entire university pathway for the interventional measures to be implemented from the beginning of university life.

The contributions listed in this study can provide subsidies for public policies to support college students. It is important to emphasize the importance of this topic being included in the curricular components to promote better assistance to these individuals with suicidal behavior.



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