

# Suicide literacy and attitudes toward psychological help-seeking: a cross-sectional study of students

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## Abstract

**Objective:** Higher education students express high levels of suicidal ideation. However, data on students' knowledge of suicide and attitudes toward seeking professional psychological help are lacking. Therefore, a cross-sectional study was conducted to evaluate students' suicidal ideation, suicide literacy and attitudes toward seeking professional psychological help, and to assess whether these variables were interrelated.

**Methods:** Higher education students completed an online survey that consisted of 12 questions on suicide literacy (based on the Literacy of Suicide Scale), the Attitudes Toward Seeking Professional Psychological Help Scale and the Suicidal Ideation Attributes Scale.

**Results:** A total of 2004 students completed the survey. Female students and biomedical students showed the highest suicide literacy and most positive help-seeking attitudes. Higher study year was associated with more positive help-seeking attitudes. Art students expressed the highest levels of suicidal ideation. Suicide literacy had a weak positive correlation with help-seeking attitudes (Spearman's  $\rho = 0.186$ ).

**Conclusions:** Suicidal ideation, suicide literacy and help-seeking attitudes may differ according to student's gender, study year and study field. Better suicide literacy may promote psychological help-seeking behavior.

## Keywords

Attitude, psychological help-seeking, suicide literacy, student, suicidal ideation, survey, cross-sectional

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## Introduction

According to a 2019 report by the World Health Organization, suicide is the fourth leading cause of death worldwide among people aged 15 to 29 years.<sup>1</sup> Many young adults study at higher education institutions such as universities and colleges. Research indicates that higher education students are prone to suicidal ideation and behavior.<sup>2,3</sup> As the epidemiological situation regarding suicide rates in Lithuania is exceptionally poor, extensive research has been conducted on suicide in Lithuanian students.<sup>4-6</sup>

Increasing suicide literacy in terms of the nature, risk factors, signs and treatment of suicide is an important part of suicide prevention strategies, as suicide literacy tends to positively affect attitudes and help-seeking intentions.<sup>7-9</sup> However, less is known about the relationship between suicide literacy and help-seeking attitudes and intentions in the higher education setting, where suicidality levels are high. Further, scientific data on suicide literacy mainly focuses on medical students, who are particularly prone to mental health issues.<sup>10,11</sup>

Therefore, the aim of this study was (1) to evaluate students' suicidal ideation, suicide literacy and attitudes toward seeking professional psychological help and (2) to measure whether students' suicide literacy is related to attitudes about seeking psychological help.

## Materials and methods

### Participants

Participants were students from higher education institutions (universities and colleges) in Lithuania.

### Design and procedure

According to the data provided by the Official Statistics Portal of Lithuania, approximately 104,000 individuals were

studying at universities and colleges in Lithuania during the academic year 2020 to 2021.<sup>12</sup> Thus, approximately 2% of students from higher education institutions in Lithuania participated in the present study. A non-probability sampling technique was used to distribute an online questionnaire from 21 October 2021 to 24 November 2021. This method was used to increase the reach and sample size of the survey. The survey materials were all in Lithuanian. The survey was distributed to different groups of students via social media (e.g., biology students from X university/college, all students from X university/college, 2019 literature students, all students from X city). A list of higher education institutions in Lithuania was used to identify existing student social media groups, so students from a range of universities and colleges were invited to participate in the study.<sup>13</sup> The size of these groups varied from 12 to more than 1000. Students were politely asked to complete the online survey and to share the questionnaire with their acquaintances through various social media channels. It was clearly stated that the survey was only applicable to current students (some students who have graduated remain members of student social media groups). The questionnaire took approximately 12 minutes to complete and was completely anonymous. All questions had to be answered to submit the form. Respondents could exit the survey at any point during the response process. As no inclusion or exclusion criteria were used, all students who saw the invitation to complete the survey were able to participate. The only exceptions were exchange and foreign students who had insufficient language skills to complete the questionnaire in Lithuanian. Owing to the use of the random snowball sampling technique it was not calculate the survey response rate.

This study was approved by the institutional review board of Vilnius University Faculty of Medicine as minimal risk

research that used data collected for educational purposes, and was regarded as a social investigation (anonymous online questionnaire for adults). All participants were adults who voluntarily agreed to complete the anonymous online questionnaire. Because of the anonymous nature of the survey, formal consent was not sought; submission of the survey form constituted consent. At the front of the questionnaire, there was a description of the study, and all respondents were informed about the purpose of the study and their right to decline participation. Respondents were also informed that the information they provided was anonymous, would be treated with complete confidentiality and that participation would not cause them any harm. All study procedures were in accordance with the ethical standards of the Declaration of Helsinki (1964) and its later amendments.

This was a cross-sectional study. The study reporting conforms to the STROBE guidelines.<sup>14</sup>

All participant details were deidentified. Data were analyzed using Microsoft Excel Version 16 (Microsoft Corp., Redmond, WA, USA) and IBM SPSS Statistics for Windows, Version 26 (IBM Corp., Armonk, NY, USA). The minimum required sample size for the study was calculated using G\*Power (Heinrich-Heine-Universität, Düsseldorf, Germany)<sup>15</sup> for a one-way analysis of variance with six groups (i.e., six fields of study) with  $\alpha=0.05$ ,  $1-\beta=0.95$  and  $f=0.25$ , and was  $n=324$ .

The reliability of the instruments used was tested using Cronbach's  $\alpha$  and was acceptable both for the Attitudes Toward Seeking Professional Psychological Help Scale short form (ATSPPH-SF) (Cronbach's  $\alpha=0.79$ ) and the Suicidal Ideation Attributes Scale (SIDAS) (Cronbach's  $\alpha=0.83$ ).

The normality of the variable distribution was assessed using the Kolmogorov–Smirnov test. The Mann–Whitney U test, the Kruskal–Wallis (H) test and Spearman's

correlation were used for between-group (e.g., men vs. women vs. other gender identity, students from different study fields) comparisons and correlation analysis. The level of statistical significance was  $p < 0.05$ .

### Instruments

We used an assessment protocol that consisted of questions about demographic and study-related characteristics (gender, age, study field and study year). Students also answered 12 questions on suicide literacy. Questions from the Literacy of Suicide Scale (LOSS) were used. To facilitate interpretation of the results, only “Yes” or “No” responses were included; the original LOSS questionnaire includes an additional option “Don't know”.<sup>16</sup> The survey form used in the study is provided as a supplement S1.

To measure attitudes toward seeking professional psychological help, we used the ATSPPH-SF developed by Fischer and Farina.<sup>17</sup> The scale measures respondents' attitudes toward seeking professional psychological help and expresses two dimensions: openness to seeking professional help for emotional problems (items 1, 3, 5, 6 and 7; item scores range from 0 (disagree) to 3 (agree)) and value and need in seeking professional help (items 2, 4, 8, 9 and 10; items are scored in reverse (0 = agree and 3 = disagree)). The total scale score ranges from 0 to 30; higher scores indicating a more positive help-seeking attitude.

To measure suicidal ideation, we used the SIDAS, which is designed to screen individuals for the presence of suicidal thoughts and assess the severity of those thoughts.<sup>18</sup> It consists of five items, each targeting an attribute of suicidal thoughts: frequency, controllability, closeness to attempt, level of distress associated with the thoughts and impact on daily functioning. Responses are measured on a 10-point scale. Items are coded so that a higher total

score reflects more severe suicidal thoughts; scores higher than 20 points reflect a high risk of suicide.

## Results

A total of 2004 students participated in the study. The characteristics of the respondents are shown in Table 1. The mean SIDAS score for the sample was 7.51 (standard deviation [SD] 10.94). The score distribution was highly positively skewed; 47% of participants had ideation scores of 0, 25.4% scored between 1 and 10, and 13.1% scored between 11 and 20. Of participants, 290 (14.5%) were assessed as having high risk for suicide (SIDAS score  $\geq 21$ ). Students who selected "other gender identity" were most suicidal, compared with those who reported female or male gender ( $M_{\text{other id.}} = 13.55 \pm 15.15$ ,  $M_{\text{female}} = 7.65 \pm 10.93$ ,  $M_{\text{male}} = 6.91 \pm 10.73$ ,  $H(2) = 5.45$ ,  $p = 0.065$ ). Arts and humanities students had the highest scores on the SIDAS; mean suicidal ideation scores for students in different study fields are shown in

Figure 1. SIDAS scores did not differ according to study year.

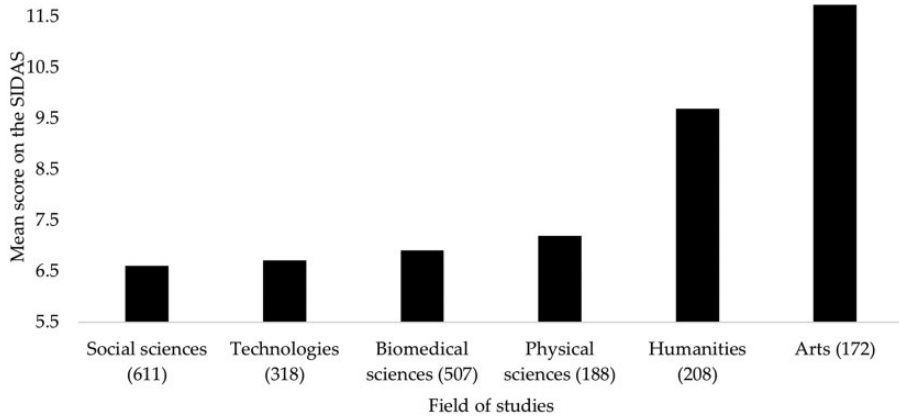
The mean score on the 12 suicide literacy questions was 9.56 (SD 1.59). The responses to the questions indicated that students were more aware of treatment and the prevention of suicidal thoughts compared with the signs and symptoms of suicidal ideation. The percentages of correct answers to the suicide literacy questions are shown in Table 2.

Female students expressed the greatest knowledge of suicide ( $M_{\text{female}} = 9.64 \pm 1.6$ ,  $M_{\text{male}} = 9.36 \pm 1.6$ ,  $M_{\text{other id.}} = 9.50 \pm 1.36$ ,  $H(2) = 12.67$ ,  $p = 0.002$ ). Suicide literacy was highest among biomedical students ( $9.84 \pm 1.63$ ), whereas technology students were least literate about suicide ( $9.36 \pm 1.56$ ) ( $H(5) = 36.68$ ,  $p < 0.001$ ) (Figure 2).

The mean score on the ATSPPH-SF questionnaire was 20.52 (SD 5.59). Female students expressed significantly more positive attitudes toward seeking professional psychological help than male students and those who selected "other gender identity" ( $M_{\text{female}} = 21.71 \pm 4.94$ ,  $M_{\text{male}} = 17.38 \pm 5.94$ ,

**Table 1.** General characteristics of study participants.

Characteristics	Categories	Value
Age (mean (standard deviation))		21.54 (4.82)
Gender (n,%)	Female	1447 (72.2)
	Male	537 (26.8)
	Other gender identity	20 (1.0)
Year of study (n,%)	First	893 (44.6)
	Second	430 (21.5)
	Third	264 (13.2)
	Fourth	216 (10.8)
	Fifth or first of Master's	125 (6.2)
	Sixth or second of Master's	69 (3.4)
	Doctoral	7 (0.3)
Field of study (n,%)	Biomedical sciences	507 (25.3)
	Physical sciences	188 (9.4)
	Humanities	208 (10.4)
	Social sciences	611 (30.5)
	Technologies	318 (15.8)
	Arts	172 (8.6)



**Figure 1.** Suicidal ideation among students from different academic fields. SIDAS, Suicidal Ideation Attributes Scale.

**Table 2.** Percentage of correct responses to suicide literacy questions (n = 2004).

Question	% of correct answers
1. Seeing a psychiatrist or psychologist can help prevent someone from attempting suicide (T) <sup>a</sup>	96.2
2. People who have thoughts about suicide should not tell others about it (F) <sup>a</sup>	94.5
3. Talking about suicide always increases the risk of suicide (F) <sup>b</sup>	90.6
4. Not all people who attempt suicide plan their attempt in advance (T) <sup>d</sup>	84.3
5. A suicidal person will always be suicidal and entertain thoughts of suicide (F) <sup>b</sup>	83.8
6. Very few people have thoughts about suicide (F) <sup>b</sup>	83.7
7. If assessed by a psychiatrist, everyone who kills themselves would be diagnosed as depressed (F) <sup>b</sup>	80.7
8. Men are more likely to die by suicide than women (T) <sup>c</sup>	77.9
9. Most people who attempt suicide are psychotic (F) <sup>c</sup>	71.6
10. There is a strong relationship between alcoholism and suicide (T) <sup>c</sup>	69.4
11. People who talk about suicide rarely kill themselves (F) <sup>d</sup>	65.5
12. People who want to attempt suicide can change their mind quickly (T) <sup>d</sup>	58.0

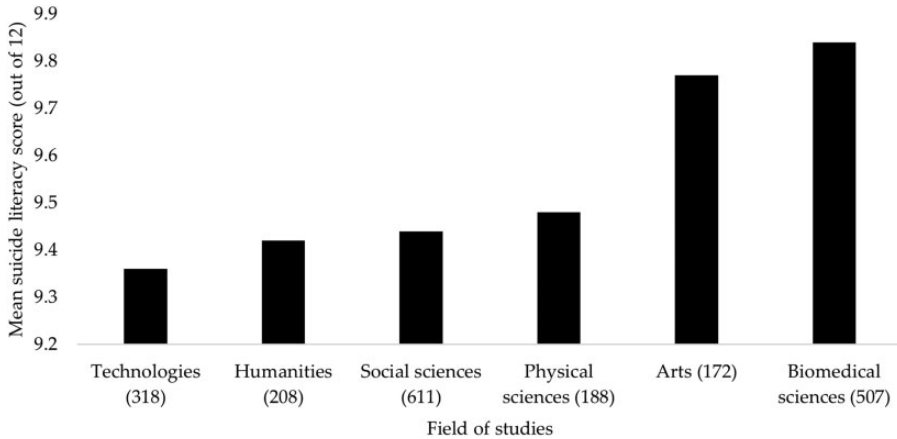
Note. Statements are ordered based on percentage of correct answers. T, correct statement/true; F, incorrect statement/false.

<sup>a</sup>Treatment/prevention; <sup>b</sup>Cause/nature; <sup>c</sup>Risk factors; <sup>d</sup>Signs/symptoms.

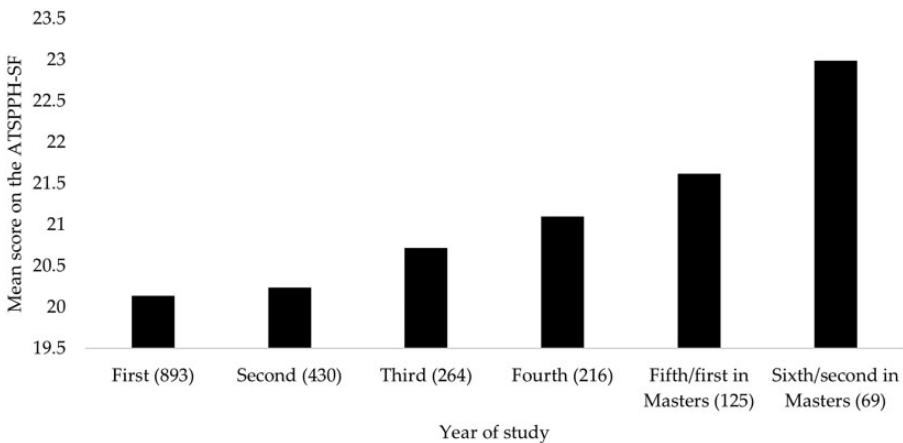
$M_{\text{other id.}} = 18.60 \pm 6.51$ ,  $H(2) = 221.14$ ,  $p < 0.001$ , post hoc  $p < 0.001$  and  $p = 0.022$ , respectively). Biomedical students expressed the most positive attitudes toward psychological health services and their scores were significantly higher than for students of all other fields except for arts ( $p = 0.071$ ). The mean ATSPPH-SF score consistently increased

with higher study year, and sixth year students expressed the most positive attitudes toward seeking psychological help ( $H(6) = 27.37$ ,  $p < 0.001$ ) (Figure 3).

Suicide literacy score had a weak positive correlation with more positive attitudes toward psychological help (Spearman’s  $\rho = 0.186$ ,  $p < 0.001$ ). Higher suicide



**Figure 2.** Knowledge about suicide among students from different academic fields.



**Figure 3.** Attitudes toward psychological help-seeking based on students' year of study. ATSPPH-SF, Attitudes Toward Seeking Professional Psychological Help Scale short form.

Note. As only seven respondents were doctoral students, their data were excluded from the graph.

literacy was positively associated with suicidal ideation (Spearman's  $\rho = 0.064$ ,  $p = 0.004$ ). Suicidal ideation was negatively correlated with attitudes toward seeking psychological help (Spearman's  $\rho = -0.040$ ,  $p = 0.074$ ).

## Discussion

### Suicidal ideation

In this study, we found relatively high scores on the SIDAS among higher

education students in Lithuania. Less than half of respondents did not express suicidal ideation, compared with 92.9% of respondents in one sample of university students in China.<sup>19</sup> Furthermore, none of the students in the latter study expressed high risk of suicide, compared with 14.5% of students in the present sample.<sup>19</sup> The mean SIDAS score was higher among students in the present study compared with their counterparts from Australia (7.51 vs. 6.56).<sup>18</sup>



These findings are in accord with previous research indicating higher levels of suicidality among students in Lithuania compared with the estimates of a meta-analysis of studies on college students.<sup>3</sup> A similar discrepancy is apparent when comparing overall suicide rates in Lithuania and other European countries.<sup>6</sup> Thus, it is reasonable to assume that the onset of suicidality in Lithuania (manifesting first as suicidal ideation then later as suicidal behavior) occurs during the middle or high school years. Higher education institutions should take a leading role in trying to prevent such progression of suicidality in students at the beginning of their studies.<sup>20,21</sup>

Scores on the SIDAS were highest for respondents who did not wish to identify themselves as either men or women. These results support those of previous studies indicating that students of sexual minority groups tend to experience worse mental health. For example, some studies suggest that students of sexual minorities encounter unique stressors that lead to worse mental health and even changes in academic and career decisions.<sup>22,23</sup> Rankin et al. emphasize that sexual minority college students are often deliberately ignored and often experience harassment and physical violence; they therefore feel less comfortable with the overall campus climate.<sup>23</sup> Little is known about mental health and suicidality among students of sexual minorities in higher education institutions in Lithuania. Future research should address this knowledge gap.

The present findings indicate that academic field of study may be another relevant variable when considering mental health problems and manifestations of suicidality in students. Differences in students' mental health across study fields may be affected by both pre-existing risks and stressors common to each field.<sup>24</sup> The present study indicates that humanities and arts students scored highest on the SIDAS,

a finding similar to that of Lipson et al.<sup>24</sup> For art students, the competitive environment, requirements of originality and innovation and loneliness owing to specific study conditions may be substantial stressors.<sup>25</sup> However, data on the relationship between students' suicidality and academic field are lacking, and most studies have focused on medical students.<sup>26</sup> Thus, more in-depth observations on suicidality based on students' academic field are urgently needed.

### *Suicide literacy*

Students in this sample most often incorrectly answered questions on recognizing signs of suicidality. This is in line with results from other community-based samples and studies on medical students.<sup>11,27,28</sup> Such results highlight the potential to implement suicide awareness programs in a high school setting, especially given the evidence that such programs can be effective.<sup>29</sup>

Furthermore, female students correctly answered more questions about suicide than their male counterparts. However, previous data on knowledge of suicide based on sex or gender are heterogenous, as some studies indicate that women are more literate,<sup>27,30</sup> whereas others do not indicate such gender differences.<sup>31,32</sup> In addition, biomedical students showed the highest suicide literacy compared with students of other specialties. Conversely, technology and humanities students showed the lowest suicide literacy. To the best of our knowledge, no previous studies have compared suicide literacy among students based on their academic fields. Future research should clarify the causes of such differences.

As we adapted the original LOSS instrument to measure suicide literacy, it was not possible to compare our participants' suicide literacy results with data from other studies.

### *Attitudes toward seeking professional psychological help*

Our Lithuanian sample scored higher on the ATSPPH-SF than students in some previous studies from other countries.<sup>33,34</sup> Further, one meta-analysis has estimated that female students have more positive attitudes than their male counterparts.<sup>35</sup> The present findings seem consistent with this pattern, as we found that female students scored higher on the ATSPPH-SF. The difference between male and female scorers on the ATSPPH-SF may reflect detrimental stereotypes suggesting that men should be tough and inexpressive.<sup>36</sup>

Research suggests that students of different academic disciplines may express different attitudes toward seeking psychological help.<sup>24</sup> According to one study by Lipson et al., social work students were more likely to use mental health services than business or engineering students.<sup>24</sup> The results of the present study partly support this pattern: technology students (most of who were engineering students) scored lowest on the ATSPPH-SF. Further, biomedical students scored highest on this scale. Although we did not differentiate medical students from those studying biomedical sciences (e.g., biochemistry or biology), it is reasonable to assume that most respondents who reported their subject as biomedical sciences were medical students. Thus, our finding that biomedical students scored highest on the ATSPPH-SF may be because medical students are exposed to mental health issues in their curricula.

Finally, the present study showed that students of higher academic years showed more positive attitudes toward seeking psychological help, which is consistent with previous research.<sup>37,38</sup>

### *Suicidality, literacy and attitudes*

Despite research on the demographic, academic and mental health-related factors

that may affect students' attitudes toward seeking professional psychological help, less is known about the relationships between attitudes, suicide knowledge and suicidality itself. We found a positive correlation between suicide literacy and attitudes toward seeking psychological help. This finding is consistent with findings from previous studies.<sup>8,39</sup> This highlights the potential of targeted psychoeducational campaigns to improve mental health service utilization. However, other variables that may affect help-seeking attitudes, such as mental health stigma, should not be underestimated.<sup>40</sup> Further, contrary to expectations, the present findings indicate that students who scored higher on suicidal ideation scored lower on attitudes toward seeking professional psychological help. A previous study demonstrated similar findings and suggested that individuals with suicidal intentions have problem-solving deficits (e.g., passive problem-solving orientation and lack of divergent thinking) and are thus less able to seek help.<sup>41</sup>

### *Limitations*

The present study has several limitations. First, owing to the cross-sectional design, a causal relationship between students' suicide literacy and attitudes toward seeking professional psychological help cannot be inferred. Furthermore, the implementation of self-report scales tends to be biased owing to individual differences in item interpretation, possible inaccuracy and respondents' introspective ability. In addition, despite the high number of responses collected, the students who participated in the study may not be representative of students in all universities and colleges in Lithuania. Thus, the present findings may not comprehensively reflect the whole student population. Finally, the study was carried out during the COVID-19 pandemic,



which may have affected students' levels of suicidality.<sup>42,43</sup>

## Conclusions

This study provided insights about suicidal ideation, suicide literacy and attitudes toward seeking professional psychological help in a student population in Lithuania. Students expressed relatively high levels of suicidal ideation. Suicidality may be most prevalent among arts and humanities students. Male students may be less literate about suicide and their attitudes toward psychological help-seeking seem to be less positive; thus, the latter population may be a target group for psychoeducation. Improving students' suicide literacy may promote more positive attitudes toward seeking professional psychological help.

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## Author contributions

Conceptualization, methodology, E.Ž., S.L.; software, formal analysis, original draft preparation, E.Ž.; review and editing, supervision, S.L.

## Data availability

Raw data are available from the authors upon reasonable request.


## Declaration of conflicting interests


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