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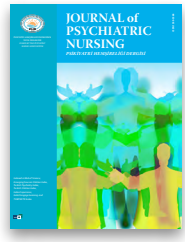

Original Article

Suicide literacy levels of nursing students: A cross-sectional study

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Abstract

Objectives: Health-care professionals have difficulty identifying suicidal people because suicide is a complex phenomenon with multiple causes. Health-care professionals do not know enough about the symptoms and risk factors of suicide, making it hard to diagnose suicidal people. This study aimed to determine the suicide literacy level and factors affecting the suicide literacy of nursing students.

Methods: The descriptive and cross-sectional research was conducted with 463 nursing students studying at a state university. Research data were collected with the Personal Information Form and the literacy of suicide scale (LOSS). Data were evaluated with numbers, percentages, averages, Mann–Whitney U, and Kruskal–Wallis tests.

Results: The total score average of the LOSS of the students participating in the study was 10.93±3.42, and the scores they received from the "Signs/symptoms," "Risk factors," "Causes/triggers," and "Treatment/prevention" sub-dimensions were 1.72±1.21, 3.14±1.33, 3.36±1.95, and 2.92±0.95, respectively. It was determined that there was a statistical relationship between the student's level of knowledge about suicide and their age and that there was a significant difference according to the academic year, receiving psychological support, and knowing someone who had previously considered suicide/attempted suicide ($p<0.05$).

Conclusion: Nursing students have moderate suicide literacy. It is recommended that evidence-based suicide prevention training programs that will help nursing students recognize individuals at risk of suicide and intervene early should be included in detail in the curriculum contents and skills should be gained by applying clinical simulation and standard patient education methods.

Keywords: Knowledge level; nursing; suicide.

The overall global death toll from suicide has risen by nearly 20.000 over the past 30 years. More than 800.000 people commit suicide every year.[1] These numbers show that health-care professionals have a lot on their plates to prevent suicide. One of the most common misconceptions about suicide is that it is always linked to mental illness (schizophrenia, major depression, etc.).[2] Although suicide is associated with mental disorders, it is a complex phenomenon affected by biopsychosociocultural and environmental risk factors.[3] Ahmedani et al.[4] conducted a longitudinal study to investigate whether people who committed suicide (n=5.894) made any health system contacts in the year before committing suicide. The researchers reported three results. First, most people who committed suicide received health care in the year before death (83%). Second, only a quarter had a mental health diagnosis in the 4 weeks before to death (24%). Third, those without a mental health diagnosis mostly visited primary care and medical specialty units in the month

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before to death.[4] Research shows a relationship between physical illness and suicide.[5–8] These results show that all health-care professionals should know enough about suicide to develop suicide prevention strategies. Nurses play a critical role in suicide prevention because they are in constant contact with patients and have the opportunity to observe their moods. Nurses should know how to determine the signs and risk factors for suicide potential and treat and communicate with suicidal people.[9] If nurses notice suicidal thoughts or attempts beforehand, they can take measures that increase patient safety in the early period. Suicide literacy is defined as understanding the causes of suicidality, risk factors, warning signs/symptoms, and proper treatment and prevention.[10]

Nursing education is important in developing clinical skills and maintaining professional development. While the literature emphasizes that nursing students in all fields should know suicide intervention, a study conducted with nursing students determined that students wanted to avoid dealing with people with suicidal behavior and professional initiatives to prevent suicide.[11,12] At the same time, there is limited research on the suicide literacy levels of nursing students.[13] Considering that the education of nursing students is a valuable resource in contributing to suicide prevention, nursing students should be evaluated for the necessary knowledge and skills to evaluate suicidal thoughts, identify suicidal patients, and provide effective care during their student years.[14] Therefore, this study aimed to determine the suicide literacy level and factors affecting the suicide literacy of nursing students.

The following are the research questions:

1. What levels of suicide literacy do nursing students have?
2. The suicide literacy level of nursing students is affected by the age, gender, academic year, and status of mental illness of the students.
3. The suicide literacy level of nursing students is affected by students' previous support from a psychiatrist or psychologist and suicide history.

Materials and Method

Study Design and Sample

This study adopted a descriptive cross-sectional research design to determine nursing students' suicide literacy.

Research Setting and Date

The study was conducted between January and February 2020 in the department of nursing of a public university. Participation was voluntary. Data were collected through face-to-face interviews.

What is presently known on this subject?

- Nurses must be informed about suicide so that they can provide psychosocial care for suicidal patients.

What does this article add to the existing knowledge?

- Overall, nursing students have moderate suicide literacy. The higher the age and academic level, the higher the suicide literacy level. Moreover, nursing students who have previous support from a psychiatrist or psychologist and the status of knowing someone who has considered or attempted suicide before have higher suicide literacy levels than those who do not.

What are the implications for practice?

- It is thought that evidence-based suicide prevention training programs that will help nursing students recognize individuals at risk of suicide and intervene early should be included in detail in the curriculum contents and skills should be gained by applying clinical simulation and standard patient education methods.

Population and Sample

The study population consisted of 684 nursing students from a public university. No sampling was performed because the study was designed to include as many volunteers as possible. The sample consisted of 463 nursing students (67.69%) who agreed to participate in the study and filled out the data collection forms.

Inclusion Criteria

Students enrolled in the nursing department were included in the study.

Exclusion Criteria

Students not willing to participate in the study were excluded from the study.

Measurements

The data were collected using a descriptive characteristics questionnaire and the literacy of suicide scale (LOSS). Before data collection, all students were informed about the research purpose, procedure, and confidentiality. Those who agreed to participate in the study filled out the data collection forms. It took each participant 10 min to fill out the forms.

The Personal Information Form

The personal information form consisted of items on descriptive (age, gender, academic year, mental illness status, and psychological support status) and suicide-related information (suicidal considered/attempts and the thought of the ability to identify suicide).

The LOSS

The LOSS was developed by Calear et al.[15] and adapted to Turkish by Ozturk and Akin.[16] The instrument consists of 27 items and four subscales: "signs/symptoms" (Items 7, 8, 12, 19, 22, and 24), "risk factors" (Items 4, 6, 10, 15, 16, 17, and 18), "causes/triggers" (Items 2, 9, 11, 14, 20, 21, 23, 25, 26, and 27),

Table 1. LOSS scores

	Median (Q1-Q3)	Mod	Mean score (SD)	Scale min-max
LOSS total	11.00 (9.00–13.00)	11	10.93 (3.42)	0.00–20.0
Symptoms	2.00 (1.00–2.00)	2	1.72 (1.21)	0.00–5.0
Risk factors	3.00 (2.00–4.00)	3	3.14 (1.33)	0.00–6.0
Causes/triggers	3.00 (2.00–5.00)	3	3.36 (1.95)	0.00–9.0
Treatment/prevention	3.00 (2.00–4.00)	3	2.92 (0.95)	0.00–4.0

LOSS: Subscales of the literacy of suicide scale; SD: Standard deviation; Min: Minimum; Max: Maximum.

and "treatment/prevention" (Items 1, 3, 5, and 13). The items are rated on a three-point Likert-Type Scale ("True,""False," and "Do not know"). The total score ranges from 0 to 27, with higher scores indicating higher suicide literacy.[15,16] Since the scale consists of true, false and I do not know options, Cronbach's alpha value was not calculated, but the intraclass correlation coefficient was stated as 0.87.[16]

Study Variables

Average scores on the LOSS served as the study's dependent variables. The independent variable in the study was the descriptive characteristics questionnaire (age, gender, academic year, mental illness status, psychological support status, suicidal considered/attempts, and the thought of the ability to identify suicide).

Ethical Considerations

The study was approved by the Ethics Committee of a University (Date: January 06, 2020 and No: BAEK 2019/460). Permission was obtained from the department of nursing of a public university. Informed consent was obtained from all participants. Before using the LOSS scale, permission to use the scale was obtained from the researchers who tested its validity and reliability in Turkish. The study was conducted in accordance with the Declaration of Helsinki.

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences for Windows (SPSS, version 21) at a significance level of 0.05. The Shapiro–Wilk test was used for normality testing. The results showed that the data were non-normally distributed. Percentage and frequency were used for nominal variables. Arithmetic means, standard deviation, and median values were used for ordinal variables. The Mann–Whitney U and Kruskal–Wallis tests were used to determine significant differences.

Results

Students had a mean age of 20.20±1.67 years and 29.4% were in the second grade. The first research question was, "What levels of suicide literacy do nursing students have?" Table 1 shows the results. Students had a mean LOSS score of 10.93±3.42. Less than half the participants had a LOSS score greater than 13 (32.5%; n=150). Participants had a mean LOSS "signs," "risk factors," "causes/triggers," and "treatment/prevention" subscale score of 1.72±1.21, 3.14±1.33, 3.36±1.95, and 2.92±0.95, respectively. Participants answered 41.30% of all LOSS items correctly. They had the highest and lowest number of correct answers in the "treatment/prevention" and "signs/symptoms" subscales, respectively (Table 2).

Table 2. Correct response rates

Sub-scale	Number of items	Correct answer percentage
Symptoms	6	28.75
Risk factors	7	44.90
Causes/triggers	10	29.67
Treatment/prevention	4	73.00
LOSS total	27	41.30

LOSS: Literacy of suicide scale.

The second research question was, "The suicide literacy level of nursing students is affected by the age, gender, academic year, and status of mental illness of the students." No statistically significant difference was found between the mean total LOSS score and students' gender, and status of mental illness ($p>0.05$) (Table 3). A statistically significant difference was found between the mean total "LOSS score," "Symptoms," "Risk factor," "Causes/Triggers," and, "Treatment/Prevention" subscale scores, and the student's academic year ($p<0.05$) (Table 3). In addition, a statistically significant relationship was found between the students' average age and the mean total LOSS score ($p<0.05$) (Table 4).

The third research question was, "The suicide literacy level of nursing students is affected by students' previous support from a psychiatrist or psychologist and suicide history" (Table 3). Receiving psychological support was seen to affect students' "Treatment/Prevention," subscale scores ($p<0.05$). Students who knew someone who had considered or attempted suicide before had a significantly higher mean LOSS score than those who did not ($p<0.05$).

Table 3. Comparison of the descriptive characteristics of the participants with LOSS scores

Variables	n	%	Symptoms subscale median (Q1-Q3)	Risk factor subscale median (Q1-Q3)	Causes/triggers subscale median (Q1-Q3)	Treatment/prevention subscale median (Q1-Q3)	LOSS median (Q1-Q3)
Gender							
Female	371	80.1	2.00 (1.00–2.00)	3.00 (2.00–4.00)	3.00 (2.00–5.00)	3.00 (2.00–4.00)	11.00 (9.00–13.00)
Male	92	19.9	2.00 (1.00–3.00)	3.00 (2.00–4.00)	3.00 (2.00–4.00)	3.00 (2.00–4.00)	11.00 (9.00–13.75)
Test and p-value			U=19.417	U=17.130	U=16.144	U=15.201	U=17.117
p=0.305			p=0.954	p=0.417	p=0.086	p=0.964	
Academic year							
1st	121	26.1	1.00 (1.00–2.00)	3.00 (2.00–4.00)	3.00 (2.00–4.00)	3.00 (2.00–3.00)	10.00 (8.00–12.00)
2nd	136	29.4	2.00 (1.00–3.00)	3.00 (2.00–4.00)	3.00 (2.00–5.00)	3.00 (2.00–5.00)	11.00 (8.00–14.00)
3rd	105	22.7	2.00 (1.00–3.00)	3.00 (2.00–4.00)	3.00 (2.00–4.00)	3.00 (2.00–3.50)	11.00 (8.50–13.00)
4th	101	21.8	2.00 (1.00–2.00)	4.00 (3.00–4.00)	4.00 (3.00–5.00)	3.00 (3.00–4.00)	12.00 (11.00–14.00)
Test and p value			X^2=8.621	X^2=14.363	X^2=16.627	X^2=15.287	X^2=28.903
			p=0.035*	p=0.002*	p=0.001*	p=0.002*	p=0.000*
Having a mental illness							
Yes	46	9.9	2.00 (1.00–3.00)	3.00 (2.00–4.00)	3.00 (3.00–6.00)	3.00 (2.00–3.00)	11.00 (9.00–13.00)
No	417	90.1	2.00 (1.00–2.00)	3.00 (2.00–4.00)	3.00 (2.00–5.00)	3.00 (2.00–4.00)	11.00 (9.00–13.00)
Test and p-value			U=9.673	U=9.905	U=8.516	U=10.484	U=9.344
			p=0.922	p=0.708	p=0.207	p=0.272	p=0.774
Status of receiving psychological support (psychiatrist or psychologist/psychotherapy, etc.)							
Yes	95	20.5	2.00 (1.00–3.00)	3.00 (2.00–4.00)	3.00 (2.00–4.00)	3.00 (2.00–3.00)	11.00 (8.00–14.00)
No	368	79.5	2.00 (1.00–2.00)	3.00 (2.00–4.00)	3.00 (2.00–5.00)	3.00 (2.00–4.00)	11.00 (8.50–13.00)
Test and p-value			U=17.079	U=17.806	U=18.105	U=19.813	U=18.859
			p=0.722	p=0.773	p=0.586	p=0.034*	p=0.233
The state of having suicidal considered/attempts by someone close to you							
Yes	85	18.4	2.00 (1.00–2.50)	3.00 (2.00–4.00)	4.00 (2.50–5.00)	3.00 (2.00–4.00)	11.00 (9.00–13.00)
No	378	81.6	2.00 (1.00–2.00)	3.00 (2.00–4.00)	3.00 (2.00–5.00)	3.00 (2.00–4.00)	11.00 (9.00–13.00)
Test and p-value			U=13.278	U=12.436	U=12.063	U=14.147	U=11.877
			p=0.526	p=0.143	p=0.071	p=0.814	p=0.048*
The thought of not being able to identify suicidal individuals							
I can determine	50	10.8	1.00 (1.00–3.00)	3.00 (3.00–4.00)	4.00 (2.75–5,25)	3.00 (2.00–4.00)	12.00 (10.00–14.00)
I'm undecided	378	81.9	2.00 (1.00–2.00)	3.00 (2.00–4.00)	3.00 (2.00–5.00)	3.00 (2.00–4.00)	11.00 (9.00–13.00)
I can't determine	34	7.3	2.00 (1.00–3.00)	3.00 (2.75–4.00)	3.50 (2.00–5.25)	3.00 (2.00–4.00)	12.00 (10.00–13.25)
Test and p-value			X^2=2.461	X^2=1.461	X^2=4.062	X^2=0.879	X^2=5.825
			p=0.292	p=0.482	p=0.131	p=0.644	p=0.064

U: Mann–Whitney U-test; X^2: Kruskal–Wallis H test; *: p<0.05. LOSS: Literacy of suicide scale.

Table 4. Correlation between age and LOSS

Correlation order	1	2	3	4	5	6
1 Age	1					
2 LOSS total	0.001*	1				
3 Symptoms subscale	0.017*	0.000*	1			
4 Risk factor subscale	0.032*	0.000*	0.000*	1		
5 Causes/triggers subscale	0.021*	0.000*	0.000*	0.004*	1	
6 Treatment/prevention subscale	0.293	0.000*	0.078*	0.000*	0.000*	1

*: p<0.05 spearman correlation test. LOSS: Literacy of suicide scale.

Discussion

Suicide is an important public health issue because it is a preventable behavior with manageable risk factors. Moreover, there are effective approaches to increase protective factors.[17] Nurses are at the forefront of suicide prevention depending on their ability to accurately screen, assess, and manage risk factors.[9] The primary objective of the present study was to determine nursing students' suicide literacy associated with warning signs/symptoms, causes/triggers, risk factors, and treatment and prevention.

The first research question addressed nursing students' suicide literacy levels. Participants had a mean LOSS score of 10.93±3.42, indicating moderate suicide literacy. In the study, the majority of the participants stated that they were unsure they could identify suicidal people. Participants had the lowest number of correct answers in the "signs/symptoms" subscales. Similarly, Kaçan[18] found in their study conducted with nursing students that the level of knowledge about suicide was moderate and was at the lowest level in the dimension of "sign/symptoms." Arafat et al.[19] found that most health-care students did not know much about suicide. Ferrara et al.[14] also reported that nursing students lacked the basic knowledge they needed to assess suicidal people. Research also shows that health-care professionals do not have adequate training or skills to assist suicidal patients.[20–22] Aldalaykeh et al.[20] emphasized that the greatest challenge for nurses was to identify the signs and causes of suicide. Our participants also had difficulty identifying the signs and causes of suicide. Suicide is a complex phenomenon, and therefore, we may not always be able to prevent people from committing suicide, but certain factors can prevent death.[23] The most important step to prevent suicide is to have sufficient information about it.[21] Nursing students are the nurses of tomorrow who will take on important roles in the health-care system. Therefore, we should help them develop suicide literacy to achieve national suicide prevention strategies.

The second research question was about the age, gender, academic year, and status of mental illness affect nursing students' suicide literacy levels. In our study, age and academic year were seen to affect nursing students' suicide literacy levels (p<0.05). The results showed that 4th-year students had the highest LOSS scores, indicating that nursing students become more knowledgeable about suicide as they move up to the next grade level. Vocational education increases with age and helps students gain theoretical and applied skills and awareness. Kaçan reported that the mean total LOSS scores of the 4th-grade students were significantly higher than those who were in the 1st and 3rd grades. Sato et al.[24] found that 5th-year medical students gave more correct answers to questions about suicide than 3rd-year students. Karakaya et al.[22] evaluated nurses' knowledge of suicide and reported that having experience in psychiatry clinics predicted the level of knowledge about suicide. Fourth-year nursing students take the "mental health nursing" and "consultation and liaison psychiatry nursing" courses, making them more knowledgeable about suicide. Nursing students who take those courses are more likely to raise awareness of suicidal cases with mental illness about suicide. In this study, results showed that gender and having a mental illness did not affect suicide literacy levels (p>0.05). Similar to our study, Öztürk et al.[25] found that the frequency of mean score LOSS in female students was higher than in male students but this high was not significant. Kaçan[18] found that female students' total knowledge about suicide scores was found to be significantly higher than male students. In this context, we can say that the level of suicide literacy is high in female students. Although our participants with mental disorders had a higher median LOSS score than those without mental disorders, the difference was statistically insignificant. Some studies indicate that attitudes toward seeking psychological help affect suicide literacy.[25–27] In other words, they report that people who seek psychological help are likely to have higher suicide literacy levels. However, Han et al.[28] determined that increasing suicide literacy might not be sufficient to improve students' help-seeking.

The third research question investigated whether the suicide literacy level of nursing students is affected by stu-

dents' previous support from a psychiatrist or psychologist and the status of knowing someone who had considered or attempted suicide. Kaçan[18] and Öztürk et al.[25] reported that students who applied to a psychiatrist/psychologist and knew someone who had considered or attempted suicide had high levels of suicide knowledge. Similarly, Karakaya et al.[22] determined that having a family member who had attempted suicide before predicted suicide literacy. Ludwing et al.[29] found that people in close contact with those who had considered or attempted suicide before had higher suicide literacy levels. In this study, results showed that students with previous support from a psychiatrist or psychologist had a significantly higher mean "Treatment/ Prevention" subscale score than those who did not. In addition, nursing students who knew someone who had considered or attempted suicide before had a significantly higher mean LOSS score than those who did not. Our results indicate that nursing students in close contact with people who have considered or attempted suicide and support from a psychiatrist or psychologist have higher suicide literacy levels and make sense of suicide more cognitively. For this reason, it can be said that getting professional help and being around individuals who need help contribute positively to the behavior of obtaining information about suicide.

Limitations

The study had limitations. The results cannot be generalized because the sample constituted 68% of the study population and consisted only of nursing students from the faculty of health sciences of a public university. The limited number of independent variables used in the study can be stated as a weakness of the study.

Conclusion

Nursing students have moderate suicide literacy. The higher the age and academic level, the higher the suicide literacy level. Moreover, nursing students who have previous support from a psychiatrist or psychologist and the status of knowing someone who has considered or attempted suicide before have higher suicide literacy levels than those who do not. Nursing students are the nurses of tomorrow who will play a significant role in the fight against suicide. Therefore, it is recommended that evidence-based suicide prevention training programs that will help nursing students recognize individuals at risk of suicide and intervene early should be included in detail in the curriculum contents and skills should be gained by applying clinical simulation and standard patient education methods. It is recommended to increase the number of independent variables in future studies.

Ethics Committee Approval: The study was approved by the Trakya University Faculty of Medicine Scientific Researches Ethics Committee (No: 2019/460, Date: 06/01/2020).

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