

Research Article

SUICIDE IDEATION AND ATTEMPTS AMONG UNIVERSITY STUDENTS

Sulhi Alfakeh^{,#}, Albatool Balkhair^{**}, Felwa Alotaibi^{**}, Ghaidaa Baothman^{**}, Joud Alsolami^{**}, Manar Alzahrani^{**}, Refan Alsaed^{**}, Sarah Sultan^{**}*

^{*}Associate Professor, Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia;

^{**}Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia.

Abstract

Introduction: There are few limited studies on the rate of suicidal thoughts and attempts between students in the Middle East, especially in Saudi Arabia.

Aim: We sought to assess the rate of suicide ideation and attempts between students at King Abdulaziz University in Jeddah, Saudi Arabia

Materials and Methods: We conducted a cross-sectional study between 2019 and 2022, with 3,514 participants aged between 17 and 25 years. Data were obtained using an electronic questionnaire based on the Depression, Anxiety, and Stress Scale-21. All statistical analyses were performed using Statistical Package for the Social Sciences (SPSS) version 21.

Results and Discussion: Of the 3,514 students who completed the questionnaire, 1,324 were male and 2,190 were female; 8.4% had attempted suicide in the past year, and 23.4% had thought of suicide in the past year. We noted a strong relationship between depression level and suicidal thoughts. Over 68 respondents had been diagnosed with severe depression, and 58.8% had attempted suicide in the past year. Suicidal thoughts and attempts were also strongly related to anxiety; 246 students had been diagnosed with anxiety in the previous year.

Conclusion: One of the leading reasons of mortality among adolescents is suicide. Early follow-up can enhance mental health and quality of life. *ASEAN Journal of Psychiatry, Vol. 24 (9) September, 2023; 1-7.*

Keywords: Suicide; Suicide Attempts; Suicide Ideation; College; Students

Introduction

People of all ages are susceptible to depression and anxiety, but those who are exposed to stressful lives that have an impact on their social, emotional, and mental health are more likely to experience it [1]. Prior illnesses as a factor may contribute to impeding the learning of the students.

Uncontrolled stressors can cause sleep issues, a drop in concentration, depression, and emotional disturbances, all of which can harm academic performance [2].

Students face a tremendous amount of stress during their studies, which might harm their mental health [3]. The transition from the preparatory phase to the college phase, with the presence of new people, competition, and a huge number of requirements, as well as feelings of inadequacy, can make the first year of college overwhelming for some students. Previous studies have found that the first year of college, in particular, is related to the presence of such mental health problems that could be related to induced suicide [4]. A large study done among 13,984 first-year university students showed that 32.7%

had suicidal ideation, 17.5% had suicidal plans, and 4.3% tried to commit suicide [5]. Moreover, a cross-sectional study done in 2020 reported a high incidence of depression among medical students, especially first-year medical students [6]. Suicidal ideation is known to be more likely in people who exhibit signs of melancholy by 2.6 times [7].

Several studies have investigated mental health disorders and suicidal behavior among university students. A study done among 1003 university students in Ghana found that 15.2% exhibited suicide ideation, 6.3% attempted suicide, and 6.8% had suicidal plans [8]. Another study assessed factors associated with suicidal ideation among 251 healthcare university students in Brazil and found that the prevalence of suicide ideation between participants was 26.33%. Furthermore, a study involving university students from 12 Muslim-majority countries showed that 22.1% of participants had thoughts of killing themselves and 8.6% reported that they tried at least once to kill themselves, it also reported that Pakistani, Iranian, and Saudi students had the most frequent thoughts about suicide [9].

Moreover, a study conducted among university students in South Korea found that negative attitudes toward the self, confusion regarding meaning in life, anxiety, stress about academic achievement, family problems, hopelessness, depression, and bipolar disorder were the main factors influencing attitudes toward suicide [10]. In addition, a study on suicidality among college students found that greater suicidality was linked to high scores in psychological strain, depression, anxiety, stress, and psych ache, as well as poor scores in self-esteem and life purpose [11].

Although suicide is a major outcome arising from mental health problems, there is little information about suicide locally. Our primary aim was to estimate the rate of suicide ideation and attempts among University students in Jeddah, Saudi Arabia.

Materials and Methods

A cross-sectional study was conducted at King Abdulaziz University (KAU), Jeddah, Saudi Arabia from October 2019 to December 2022. The participants were 3514 (age from 17 to 25 years old, 62.3% female and 37.7% male). An online questionnaire survey translated to Arabic was distributed using the Depression, Anxiety and

Stress Scale-21 (DASS-21) questionnaire. Only students of were of regular classes were included in this study. Data was secured and regular classes only accessible to researchers by secured password.

Data collection

DASS-21 is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria (very unhappy), hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia (inability to feel pleasure) and inertia (tendency to remain unchanged). The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty of relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

Statistical analysis

Statistical Package for the Social Sciences (SPSS 21) was used for data entry and data analysis. Categorical variables including primary variables were described using frequencies. Continuous variables for normally distributed were described using mean and Standard Deviation (SD). Bivariate analysis was conducted for categorical variables using Chi-square test to check for all the possible risk factors. Logistic regression multivariate was used to assess the relations in the study. Odds ratio, confidence interval of odds ratio and the p-value were generated for the side effects. The prevalence was given in percentage with 95% confidence level. Test with a P-value <0.05 was considered significant.

Results

The participants' socio-demographic traits are presented in Table 1. It encompasses 3,514 students (male: 1,324, 37.7%; female: 2,190, 62.3%). The majority of participants were in the age range of 17 to 25 years (3,106, 88.4%). Of the participants, 93.3% resided with their families, 78% were non-smokers, and 68% exercised only once a week. Finally, one-third of the participants had a total

household income of less than 10,000 SR (1,270, 35.7%) and more than 15,000 SR (1,255, 35.7%) per month, whereas one-fourth of the participants had a household income of 10,000-15,000 SR per month (980, 27.9%) (Table 1).

The mental health specialist’s diagnosis of the participating students was evaluated in Table 2. Results showed that more than two-thirds of the participants (>78.9%) have not been diagnosed by mental health specialists to have any suicidal ideation (Table 2).

The association between stress level and suicidal ideation was determined in Table 3. Results showed a significantly higher proportion of those who have thought about suicide over the past year (27.6%, n=227), attempted suicide in their lives in general (29.9%, n=166), and attempt suicide over the past year only (29.4%, n=87), exhibited a severe type of stress in comparison to those who have normal to moderate types (Table 3).

Table 4 showed the association between the anxiety level and suicidal ideation. Significantly higher proportion of those who have thought and attempted of committing suicide during the past year and ever in their lives were found to exhibit an extremely severe type of anxiety compared to those who had normal to moderate cases. Results revealed that factors such as thoughts of suicide

in life in general ($p<0.001$) and over the past year particularly ($p<0.001$), attempting suicide in life in general ($p=0.008$) or over the past year particularly ($p=0.008$), were significant predictors of anxiety according to the general linear model at <0.05 level (Table 4).

The significant mental health factor which predicts the anxiety level among the students reported to be thinking about suicide, which was shown in a positive correlation ($B=0.643$, $SE=0.075$, 95% CI; lower=0.495, 95% CI; upper=0.791). This suggests that as the students tend to think about the idea of suicide, there is about a 0.643 factors or tendency that the students may express anxiety. The least significant predictor was found to be the suicide attempt, which was shown in a positive correlation ($B=0.256$, $SE=0.097$, 95% CI lower=0.066, 95% CI upper=0.445).

Furthermore, the association between depression level and suicide ideation consistent with the anxiety and stress assessment, A significantly higher proportion of those who have thought and attempted of committing suicide during the past year and ever in their lives were found to exhibit extremely severe types of depression in comparison to those who had normal to moderate cases (Table 5).

Table 1. Socio-demographic characteristics of the participants (N=3514).

Demographics		Count	%
Total		3514	100
Deployment Name	university students	3514	100
Gender	Male	1324	37.7
	Female	2190	62.3
Age	From 17 to 25 years old	3106	88.4
	More than 27 years old	408	11.6
Total household income	<10,000 SR	1279	36.4
	10,000-15,000 SR	980	27.9
	>15,000 SR	1255	35.7
Smoker	Yes	534	15.2
	No	2746	78.1
	Previously	234	6.7
Residence	On your own	119	3.4
	With the family	3296	93.8
	University/external housing	99	2.8
The rate of exercise during the week	Once a week	2394	68.1
	Two to three times a week	742	21.1
	Four times or more	378	10.8

Table 2. Mental health specialist diagnosis and thoughts of the studied population (N=3514).

Variables n=3514	Yes	No
	N(%)	N(%)
Suicidal thoughts		
Have you ever thought about suicide in your life?	1287(36.6)	2227(63.4)
Over the past year, have you ever thought about suicide?	822(23.4)	2692(76.6)
Have you ever attempted suicide in your life?	555(15.8)	2959(84.2)
Over the past year, have you ever attempted suicide?	296(8.4)	3218(91.6)

Table 3. Association between the stress level and suicidal ideation among the studied population (n=3514).

Variables n=3514	Stress					p-value
	Normal	Mild	Moderate	Sever	Extremely severe	
Have you ever thought about suicide in your life?	178(13.8%)	229(17.8%)	317(24.6%)	332(25.8%)	231(17.9%)	<0.001s
Over the past year, have you ever thought about suicide?	87(10.6%)	127(15.5%)	204(24.8%)	227(27.6%)	177(21.5%)	<0.001s
Have you ever attempted suicide in your life?	62(11.2%)	87(15.7%)	130(23.4%)	166(29.9%)	110(19.8%)	<0.001s
Over the past year, have you ever attempted suicide?	26(8.8%)	29(9.8%)	76(25.7%)	87(29.4%)	78(26.4%)	<0.001s

Note: s=stress.

Table 4. Association between the anxiety level and suicidal ideation among the studied population (N=3514).

Variables n=3514	Anxiety					p-value
	Normal	Mild	Moderate	Severe	Extremely severe	
Have you ever thought about suicide in your life?	298(23.2%)	79(6.1%)	276(21.4%)	152(11.8%)	482(37.5%)	<0.001a
Over the past year, have you ever thought about suicide?	150(18.2%)	45(5.5%)	179(21.8%)	101(12.3%)	347(42.2%)	<0.001a
Have you ever attempted suicide in your life?	104(18.7%)	26(4.7%)	105(18.9%)	69(12.4%)	251(45.2%)	<0.001a
Over the past year, have you ever attempted suicide?	37(12.5%)	10(3.4%)	46(15.5%)	44(14.9%)	159(53.7%)	<0.001a

Note: a=anxiety.

Table 5. Association between the depression level and suicidal ideation among the studied population (N=3514).

Variables n=3514 Suicidal thoughts	Depression					p-value
	Normal	Mild	Moderate	Severe	Extremely severe	
Have you ever thought about suicide in your life?	158(12.3%)	111(8.6%)	265(20.6%)	200(15.5%)	553(43.0%)	<0.001d
Over the past year, have you ever thought about suicide?	67(8.2%)	51(6.2%)	157(19.1%)	136(16.5%)	411(50.0%)	<0.001d
Have you ever attempted suicide in your life?	67(12.1%)	40(7.2%)	103(18.6%)	80(14.4%)	265(47.7%)	<0.001d
Over the past year, have you ever attempted suicide?	17(5.7%)	17(5.7%)	46(15.5%)	42(14.2%)	174(58.8%)	<0.001d

Note: d=depression.

Discussion

The aim of the study is to evaluate the percentage of suicide ideation and attempts among university students.

In our study, it was found that almost one-third of the participants were recognized by a mental health professional to have suicidal thoughts in similarity to 12-majority countries where the prevalence of participants who had thoughts about ending their lives was 22.%. In comparison to American colleges and universities, our study detected far more suicidal ideation victims whereas the prevalence among American students was only 6.3%.

We also found that severe type of stress is highly associated with suicidal ideation compared with normal to moderate type of stress. more specifically, we found that 27.6% of students who had severe stress thought about suicide over the past year, 29.9% of them have attempted suicide in their lives, and 29.4% have attempted suicide over the past year only.

There have been other studies done in Saudi Arabia demonstrating similar findings; for instance, a previous study conducted at Imam Abdulrahman Bin Faisal University to assess suicidal ideation among medical students in Saudi Arabia found that stressful academic environment is one of the 3 leading factors associated with suicidal ideation [12].

In a similar fashion, we found strong relationship between anxiety level and suicidal ideation, which corresponds to the result of previous researches done in Tehran university to demonstrate the

relationship between suicidal ideas, depression, anxiety, resiliency, daily stresses and mental health among Tehran university students, they found a strong and positive correlations between everyday stress, anxiety, and mental health and suicidal ideation [13].

Our study revealed that 43% people with extremely severe depressive symptoms thought of suicide in their life and 47.7% had attempt suicide. In comparison to a meta-analysis study was done between 1971 to 2014 among people with depression and the risk of suicide found that suicide attempt was the most common outcome (47.7%) followed by death (33.6%) and ideation (18.7%) [14]. We note that there is a similarity in suicide attempts rates in both studies, and the reason beyond it may lie in the ease of using self-injurious tools because of the sense of loss of passion and satisfaction after self-harm.

Conclusion

Academic challenges and a new environment for university students are associated with an increase in the prevalence of suicide attempts, the extent of ideation, especially among those diagnosed with anxiety or depression. Support from family and friends and follow-up with a psychiatrist are important steps to improve quality of life.

Suicide attempts are a deeply concerning and complex issue that demands our unwavering attention and collective efforts. This sobering phenomenon reflects the profound emotional pain and despair experienced by individuals who feel they have no other option. Addressing suicide attempts requires a multifaceted approach that encompasses mental health awareness,

accessible and affordable mental health care, and destigmatization of seeking help. Education and destigmatization efforts should extend to universities, workplaces, and communities to create an environment where individuals feel comfortable reaching out for support without fear of judgment.

Limitations

Despite the large population and the use of a validated questionnaire, the current study has many limitations. First, it was cross-sectional. A longitudinal study is required to determine whether the psychological impact of suicide ideation or a suicide attempt lasts for a longer time. Second, we collected the data entirely through an electronic questionnaire; hence, some of our findings might be biased due to self-reports by the respondents. Third, the study was limited to one university, which might not represent the general population of students in Jeddah, Saudi Arabia.

Recommendations

We found a high rate of suicide ideation among the participants. Based on our results, to improve mental health among university students, we recommend identifying students who are at high risk for suicide and assisting them. Access to mental health services on and off campus should be improved.

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Corresponding author: Sulhi Alfakeh, Department of Internal medicine, Unit of Psychiatry, King Abdulaziz University, Jeddah, Saudi Arabia

E mail: salfakeh@kau.edu.sa

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