The knowledge and awareness of suicide and attitudes towards its risks in university students of Asir region of Saudi Arabia

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Abstract

Background: Suicide is defined as the deliberate ending of one's own life or a deadly self-injurious act with evidence of the intention to die. Suicide among youths is a significant public mental health issue. Young individuals, particularly adolescents, are naturally susceptible to mental health problems. **Methods:** The present study has the cross-sectional study design based on simple random sampling technique. Initially, the questionnaire was self –administered to 4353 respondents. Questionnaire with incomplete responses was discarded, and finally, a sample of 4278 was used for the analysis. The study is based in the Kingdom of Saudi Arabia, and the data was collected between the months of January 2022 and April 2022. The survey instrument used in the present study comprised of two sections. **Results:** In our study, 79.5% of the respondents agreed to the statement "the ruling of suicide is the biggest factor to the low incidences of suicide in our community." Further, 66.6% of the respondents agreed that suicide is an idea or an act that a person can repel by religious practices such as prayer. **Conclusion:** A focus on suicidal behavior is a critical public health priority because although suicide is a prominent cause of mortality among teenagers; many more youths are at risk for suicide as a result of having suicidal ideation, creating suicide plans, and making an attempt. Trends in teenage suicide attempts increased overall and among numerous demographic categories.

Keywords: Awareness, behavior, knowledge, psychiatric, suicide

Introduction

Suicide is defined as the deliberate ending of one's own life or a deadly self-injurious act with evidence of the intention to die.[1] Suicide among youths is a significant public mental health issue. Young individuals, particularly adolescents, are naturally susceptible to mental health problems. As a result, suicide causes a significant number of premature losses as well as a great deal of immense suffering and societal damage. Every suicide is the product of a complex dynamic and interplay of numerous contributing risk factors.

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Therefore, one's individual efforts to predict and prevent one's own suicide are generally ineffective and most likely to fail. On the other hand, our knowledge of the leading risk factors is rapidly expanding. Psychiatric disorders or previous attempts at suicide, personality disorders, genes, and family history of mental disorders, in combination with the triggers of psychosocial stressors, and the availability of means to commit suicide, as well as exposure to inspiring models, are all significant risk factors for youth suicide.

Suicide is still a major cause of death among the world's youth,[2] while also the third leading cause of death among youths in the USA.

In Islamic countries, such as Saudi Arabia, the suicide average rate was 1.1 per 100,000 annually.[3] Although recent research shows that suicide attempts among Saudi Arabian youth are on the rise, there is no suicide risk assessment instrument that has been developed for the country's youth population till this day.[4]

The increasing rates of suicide during the youth years highlight the vital need for understanding the factors and causes associated with suicide and suicide attempts.[5,6] We recognized the importance of addressing youth health risks in order to prevent youth suicide attempts and improve health strategies for this group. A suicide attempt is a strong predictor for subsequent attempts among the youth population[7] and the lack of cross-sectional studies and data on knowledge and awareness of suicide risks and its incidents leave major questions regarding this topic in Asir region and as a matter of fact, in all regions of Saudi Arabia.

In international studies where meta-analysis was performed on 25 suicidal ideation SI risk factors and 4 suicide attempt SA risk factors among medical students, poor mental health outcomes, including depression, burnout, comorbid mental illness, and stress, presented the strongest risk for SI and SA among medical students. On the other hand, smoking, a family history of mental illness, and suicidal behavior were not significant risk factors for SI, whereas stress, female gender, and alcohol use were not significant risk factors for SA among medical students. Medical students face a variety of personal, environmental, and academic challenges that may place them at risk for SI and SA.[8-11]

These findings have significant ramifications since they show that there are multiple characteristics that are linked to having strong suicidal ideation. Overall, the study discovered that there may be more young people affected by the problem of youth suicide than previously believed. The study also claims that the difference in suicide rates between men and women is mostly brought on by the seriousness of attempted suicides.[12]

Methodology

The present study is based on the cross-sectional survey based on simple random sampling technique. Initially, the questionnaire was self-administered to 4353 respondents. Questionnaire with incomplete responses was discarded, and finally, a sample of 4278 was used for the analysis. The study is based in the Kingdom of Saudi Arabia, and the data was collected between the months of January 2022 and April 2022 The survey instrument used in the present study comprised of two sections. Section A comprised of the demographic details of the respondents, while the section B comprised of the questions related to behavioral aspects of the respondents. Section B comprised of a total of 21 questions based on nominal scale, multiple response, and Likert scale. IRB approval was obtained from King Khalid University, (ECM # 2021-5901).

Initially, the questionnaire was framed in English language and then translated into the Arabic language for better comprehension by the respondents as per the international guidelines, pre-pilot test was conducted to test the reliability of the questionnaire. Subsequently, the reliability of the survey instrument was assessed, with the help of Cronbach's alpha. The reliability of the scale was found to greater than the cut-off value of 0.7.

Results

Table 1 depicts the demographic attributes of the respondents. Age-wise, majority of the respondents belonged to age category of 21–23 years, which comprised a total of 42.8%. Marital status-wise, single category of respondent comprised of 82.2%. Gender-wise, female respondents comprised of 60.4%. Location-wise majority of the respondents belonged to Abha region which constituted 77.5%. Academic year-wise, majority of the respondents belonged to first year which comprised of 16.8%. Further, 20% of the respondent belonged to Faculty of Human Medicine.

Regarding respondent belief in general toward suicide, 79.5% of the respondents agreed to the statement "the ruling of suicide is the biggest factor to the low incidences of suicide in our community." Further, 66.6% of the respondents agreed that suicide is an idea or an act that a person can repel by religious practices such as prayer. 75.3% agreed that when a person with suicidal ideation informs their family member of their suicide attempts and ideation, they are advised to get closer to God and become more religious. Additionally, 68.7% agreed that wandering away from God, for example, atheism, is a cause of suicide [Table 2].

The measure to the religiosity scale was found to be highest for the moderate with 56.8% of the respondents. Likewise for the happiness scale, it was found to be highest for the moderate option with 44.9% of the respondents. For self-content and satisfaction, majority 36.9% of the respondents agreed to the moderate option.

Chi-square test of association is used to check association between two categorical variables measured on nominal scale. None of the demographic variables was found to have significant association as indicated by P value which was found to be greater than 0.5. However, there is significant association at 5% significance level between respondents' intention to physically

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Table 1: Demographic information of the participants

Demographic n=4278	Frequency	Percentage
Age		
18-20	1273	29.8
21-23	1829	42.8
24-26	753	17.6
27-29	193	4.5
30 years and above	230	5.4
Marital Status		
Single	3516	82.2
Married	512	12.0
Engaged	186	4.3
Divorced	54	1.3
Widow	10	0.2
Gender		
Female	2585	60.4
Male	1693	39.6
University Location		
Abha	3315	77.5
Khamis mushait	468	10.9
Ahad Rafidah	99	2.3
Al-majardah	23	0.5
Muhayil asser	165	3.9
Dharan al-janub	71	1.7
Rijal alma	25	0.6
Sarat abidah	79	1.8
Academic Year		
First Year	719	16.8
Second Year	581	13.6
Third Year	640	15.0
Fourth Year	695	16.2
Fifth Year	493	11.5
Sixth Year	398	9.3
Seventh Year	190	4.4
Eight Year	562	13.1
College Department		
Faculty of Sharia	231	5.4
Faculty of Community	160	3.7
Faculty of Human Medicine	855	20.0
Faculty of Education	202	4.7
Faculty of Home Economy	70	1.6
Faculty of Business	341	8.0
Faculty of Engineering	172	4.0
Faculty of Computer Science	368	8.6
Faculty of Sciences Mathematics, Biology, Chemistry, Physics	399	9.3
Faculty of Human Sciences History, Geography, Arabic Languages and Literature, Media and Communication	180	4.2
Faculty of Pharmacy	257	6.0
Faculty of Languages & Translations	257	6.0
Faculty of Applied Medical Sciences	416	9.7
Faculty of Dentistry	198	4.6
Faculty of Nursing	172	4.0

harm themselves and suicidal ideation. $\chi^2 = 1243.127$, df = 3, $P = 0.000$ as shown in Table 3.

Respondents viewed mental illness to be the most important reason for suicide attempts while drug use was the least cited reason for suicide attempts as depicted in Figure 1. The respondents were provided options for multiple selections.

Regarding the number of suicide attempts, majority of the respondents never attempted for suicide 4074, while 174 respondents made one suicidal attempt. Only eight respondents made three or more suicidal attempt as depicted in Figure 2.

As depicted in Figure 3, the most common method of suicide attempt was by causing self-harm by wounds 140 followed by

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use of medication over-dose 123. Self-electrocution was the least selected option. Respondents have the option of multiple selections.

Respondents were asked about the cases of suicide in their known ones. The maximum number of suicide was observed with college friends and acquaintances 41, while the least number of cases was observed with first degree relatives 13 [Figure 4].

As depicted in Figure 5, the majority of the respondents expressed that they would inform the parents and relative in case someone close to them is thinking about suicide.

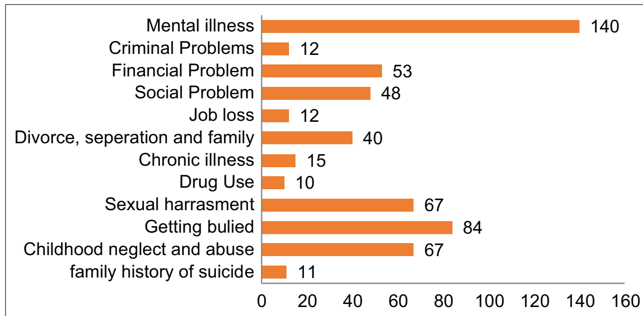

Figure 1: Reasons for thinking about suicide multiple options selected

Anxiety disorders was found to be the most common psychiatric disorder in the study population 180, followed by personality disorders 45. The least observed psychiatric disorder was neurodevelopment disorder like: autism spectrum disorders, learning disabilities, attention-deficit hyperactivity disorders 13.

In the present study, females were less inclined toward considering suicide thinking or planning without attempting OR: 0.950, 95% CL: 0.832-1.084. Further, the number of suicide

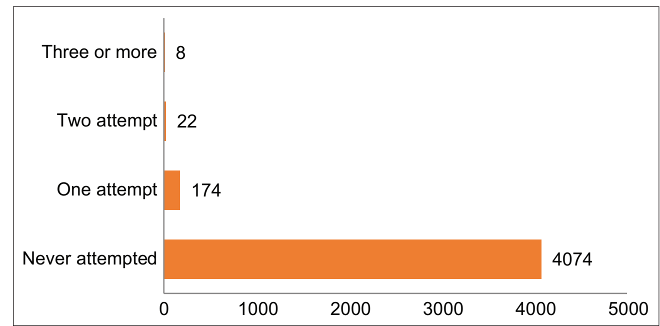

Figure 2: How many times have you attempted suicide? Multiple Options

Table 2: Respondents' belief toward suicide

Variables	*n*	%	Mean Score
The ruling of suicide is the biggest factor to the low incidences of suicide in our community			
I disagree	348	8.1	2.71
Neutral	531	12.4	
I agree	3399	79.5	
Suicide is an idea or an act that a person can repel by religious practices such as prayer, etc.			
I disagree	617	14.4	2.55
Neutral	811	19.0	
I agree	2850	66.6	
When a person tells their family of their suicide attempts and ideation, they're advises are often to get closer to God and perform more religious practices			
I disagree	416	9.7	2.52
Neutral	642	15.0	
I agree	3220	75.3	
Wandering away from God for example atheism is a cause of suicide			
I disagree	604	14.1	2.66
Neutral	734	17.2	
I agree	2940	68.7	
What is the measure of each of the following to a. religiosity scale			
Low	418	9.8	3.09
None	106	2.5	
Moderate	2431	56.8	
High	1323	30.9	
Happiness scale			
Low	790	18.5	2.88
None	260	6.1	
Moderate	1922	44.9	
High	1306	30.5	
Self-content and satisfaction			
Low	815	19.1	2.91
None	318	7.4	
Moderate	1578	36.9	
High	1567	36.6	

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Table 3: Cross-tabulation and Chi-square testing

Characters	Gender		χ^2	*P*
	Female	Male		
1. Have you ever considered suicide, thinking or planning without attempting? Q1			0.584	0.458
No	1767	1176		
Yes	818	517		
2. Have you ever tried to intentionally physically harm yourself with any device? Q4				
No, I've never have tried to harm myself	2071	1368	4.77	0.189
yes, I have tried to hurt myself for comfort	167	124		
yes, I have tried to hurt myself without the intention of ending my life	258	139		
yes, I have tried to hurt myself with the intention of ending my life	89	62		
3. Have you ever attempted suicide not suicidal ideation? Q6				
Yes	113	91	0.530	0.467
No	2472	1602		
Marital Status	**Have you ever considered suicide, thinking or planning without attempting? Q1**		χ^2	*P*
	No	**Yes**		
Single	2417	1099	4.71	0.312
Married	353	159		
Engaged	134	52		
Divorced	31	23		
Widow	8	2		
Marital Status	**Have you ever attempted suicide not suicidal ideation? Q6**		χ^2	*P*
	No	**Yes**		
Single	3343	172	6.857	0.144
Married	494	18		
Engaged	179	7		
Divorced	48	6		
Widow	9	1		

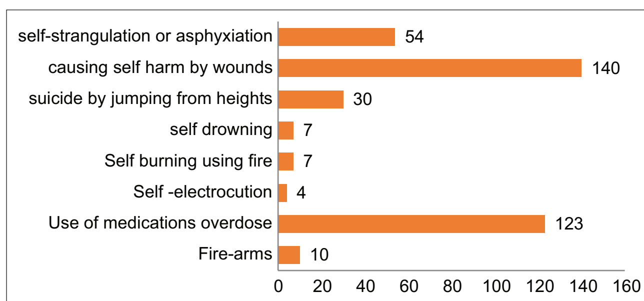

Figure 3: Methods of suicide attempt

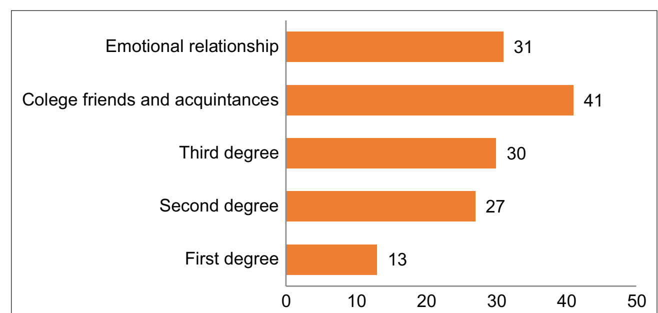

Figure 4: If a suicide has already occurred to a person close to you or to a person you know

attempt by female respondents was less as compared to their male counterparts OR: 0.933, 95% CL: 0.774-1.125.

Regarding the appointment with the psychiatry clinic, females have made less appointment compared to male OR: 0.916, 95% CL: 0.771-1.090 as illustrated in Table 4.

Discussion

A significant public health concern is that suicide claims 600 lives in Norway each year. It is a complicated phenomenon with numerous underlying factors, some of which may include the existence or lack of social bonds as well as the strength of such ties. It is helpful to have a better understanding of the traits that increase the risk of suicide in order to facilitate suicide prevention strategies.[13]

In our study, 66.0% of the respondents agreed that religion can be a barrier for the suicides attempts. The researchers also suggested that there is a complicated link between religion and the risk of suicide. Protection levels vary according on one's religious affiliation. A person's sense of community can be heightened by their religious connection, yet being a member of a minority religion can also make one feel alone.[14] A person's religious beliefs and practices are less likely to prevent suicide in nations or civilizations where there is hostility against religion, whether it be specific religions or religion in general. Suicide risk might increase

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if religion makes a person feel guilty, distanced from God, or abandoned by the religious community. According to several researches, having a religious affiliation can help prevent suicidal thoughts. That in a US sample of 200 depressive bipolar patients, people without a religious affiliation were more likely to attempt suicide total n = 51, 80.4% had a suicide attempt vs. total n = 641, 63.1% had a suicide attempt, bivariate P =0.023.[15] Additionally, bivariate P =0.034 analysis revealed that non-affiliated patients made on average 2.3 more suicide attempts than affiliated patients 1.6. However, after controlling for moral and religious objections to suicide, the connection between religious affiliation and suicide attempt was not statistically significant.[15,16]

In our study, we have observed significant d = gender regarding the suicides, as we know suicidal behavior is a serious issue for public health. Over 58,000 people die by suicide each year in Europe, making it the 13th biggest cause of death worldwide. According to statistics from the European Union, men die from suicide at a rate that is four to five times higher than that of women. The gender disparity is less obvious when it comes to suicide attempts, where the prevalence is 20 times higher than that of suicides. Females attempt suicide at a disproportionately higher rate than males. The ratio of male-to-female age-standardized suicide rates worldwide is the gender paradox of suicidal behavior which refers to the fact that while women try suicide much more often than men do, men commit suicide more frequently overall.[17]

Table 4: Odd ratio and 95% confidence interval of different variable

Variables	Gender		95% CL lower-upper
	Female	Male	
	Odds Ratio		
Q1. Have you ever considered suicide thinking or planning without attempting			
No	0.950		0.832-1.084
Yes			
Q6. Have you ever attempted suicide not suicidal ideation?			
No	0.933		0.774-1.125
Yes			
Q16. Have you ever had an appointment to a psychiatry clinic?			
No	0.916		0.771-1.090
Yes			

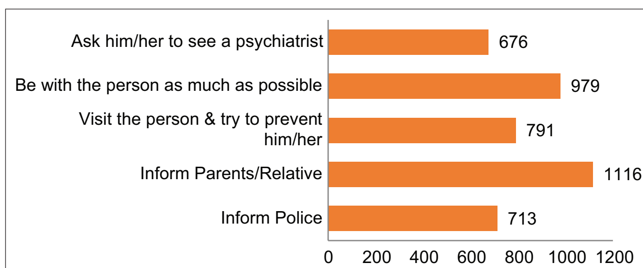

Figure 5: How would you act if you know that someone close to you is thinking about?

The findings of our study was in contrast with the American-based study. In our study, we discovered that is no gender difference regarding self-harm activities, but in other study, it was clear gender disparities in the prevalence of self-harm, with girls more likely than boys to engage in self-harm during younger ages and males more likely than girls to engage in it during older ages. However, the gender disparities tended to diminish across the entire age group. The prevalence of self-harm among boys and girls followed trends similar to those seen in a study of suicide among Americans aged 11–19.[3]

In our study, we have observed that marital status did not play a significant part with suicide and self harm attempts which is in contrast of other studies. Only among men does marital status, and particularly divorce, have a significant net impact on suicide mortality. The study demonstrated that stratifying samples according to important social or demographic traits will produce more accurate results in epidemiological studies on suicide. Studies examining the link between marital status and suicide have come to quite similar conclusions. Compared to widowhood, separation, divorce, and never being married, being married is associated with a decreased risk of mortality in general and a lower chance of suicide.[3,17,18]

In our study, the main reason for suicide attempt was the mental disorder, which was in line with other studies. The majority of studies concur that mental problems and suicide are closely related, and 90% of those who die by suicide had experienced at least one mental illness. Between 47 and 74% of the risk of suicide is shown to be contributed by mental illnesses. The disorder that occurs here the most frequently is affective disorder. In 50–65% of suicide cases, and more frequently in girls than in males, criteria for depression were discovered. Personality disorders including borderline or antisocial personality disorder were present in 30–40% of suicide victims.[14]

In Dammam, the prevalence of suicide attempts was 15%, while in our study, it was around 5% approximate, which is not match able, maybe due to regional divergences this difference was measured between two regions of the same county.[15]

Suicide mortality is influenced by the fatality of suicide techniques. Therefore, it is critical for suicide prevention that suicide methods be identified and predicted. The process and mechanism of selecting a suicide technique are intricate and multifaceted, impacted by a variety of elements including environment, culture, and personal traits.[14-17]

The majority of deaths 113 cases, 89.682% involved hanging as the means of death, and most of them 100 cases, 79.365% were in their third, fourth, or fifth decades. It was the method of choice in around 82.352% of the analyzed females and about 90.825% of the studied males 99 cases 14 cases, which is comparable with the findings of this study.[3]

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Conclusion

A focus on suicidal behavior is a critical public health priority because although suicide is a prominent cause of mortality among teenagers, many more youths are at risk for suicide as a result of having suicidal ideation, creating suicide plans, and making an attempt. Trends in teenage suicide attempts increased overall, and among numerous demographic categories, youths who identified as sexual minorities and youths who reported having had sexual interaction with either the same sex or both sexes had the greatest prevalence estimates of suicidal ideation, suicide plots, attempts, and attempts requiring medical attention.

Future study could go in many different areas. Existing research addresses related issues and employs related metrics, which may encourage future investigation. Studies could also look into if there are specific sub-populations that religion benefits more than others, and vice versa. Participants in qualitative research may be questioned about their religious practices, particularly during times when they are considering suicide.[18,19]

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Conflicts of interest

There are no conflicts of interest.

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