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Perception and experiences of suicide among university students in Egypt

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Abstract

Background The worldwide prevalence of suicide ideation, planning, attempt, and death is a major public health issue. The highest rates of suicide are seen in those aged 15 to 29, largely correlating to their time spent in higher education.

Objectives Identify the perception and experiences of medical students towards suicidal thoughts and attempts and explore some predictors.

Methods A cross-sectional study was conducted at Kafrelshiekh University in Egypt, included 554 university students using predesigned questionnaire that included sociodemographic characteristics, perception of students about suicide, and their experience with knowing a person who had suicide thoughts or attempts and if they themselves had suicidal thoughts or attempts.

Results Self-experience with suicidal thoughts was reported by 25.3% while 12.3% reported attempting suicide, and among those who attempted suicide the most frequent reason was feeling depressed (61.8) followed by educational pressures (54.4%) and feeling lonely (41.2%). Accepting the concept of suicide was the main predictor for having suicidal thoughts (OR = 7.784) followed by knowing a person who had suicidal attempt (OR = 2.234) or thoughts (OR = 4.609).

Conclusion Our results indicate the suicide ideation and behavior are prevalent among college undergraduates. Universities have the responsibility to educate students with effective life education as well as suicide prevention and intervention programs.

Keywords University students, Suicidal thoughts, Suicidal attempts, Suicidal behaviors

Introduction

Suicide is a growing public health concern globally [1], and suicidal behavior encompasses a range of outcomes, including suicidal ideation, impulses, plans, attempts, and completed suicide [2]. Recently, suicide has been among the top 5 mental health issues facing college undergraduates worldwide [3, 4]. It is most prominent factor of mortality among young adults [5], and the majority of suicides occur in low- and middle-income countries [6].

The prevalence estimates of suicidal behaviors among undergraduates are highly variable, and published estimates of lifetime suicidal ideation and attempts vary widely [7–10]. A meta-analysis revealed that lifetime prevalence of suicidal ideation and attempts was 22.3% and 3.2%, respectively, among college students [11].

In the Middle East Region, including Egypt, have witnessed an increase in suicide rates in recent years [12]. Suicide death rates in Egypt have risen dramatically

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reaching 3 per 100,000 people in 2019 [13], and 2584 suicides were officially reported in 2021 [14]. Moreover, the decision made by legislators in Egypt to establish legislation criminalizing suicide is deemed counterproductive, as it has the potential to discourage individuals from seeking immediate aid during critical situations and impede their access to essential mental health services [15, 16]. In 2019, Eskin et al. found that the prevalence of suicidal ideation and attempts among Egyptian university students was 17.5% and 7.1%, respectively [17].

Suicidal behavior is closely linked to mental health issues, including impulsivity, psychological discomfort, mood disorders, trauma exposure, and a history of mental illness in the family [18, 19]. Scholastic difficulties and social obligations of university life, along with a decline in parental support and supervision, are also identified as suicide triggers for undergraduates [20, 21].

The phenomenon of being exposed to suicide has been recognized as a risk factor and a predictor for subsequent suicidal thoughts and actions [22]. Compared to other populations, university students have a significantly increased risk of attempting and committing suicide [23].

Suicidal behavior among undergraduates not only affects the students and their families but also has a broader impact on society as a whole [24]. Thus, it is essential to identify the perception of medical students towards suicidal thoughts and attempts, explore their experiences, and identify predictors affecting suicidal thoughts and attempts among study participants.

Methods

We conducted this cross sectional study at Kafrelshiekh University located at the northern part of the Nile Delta and hosting nineteen faculties and three higher institutes. The sample size was estimated using Epi-Info software created by World Health Organization and Center for Disease Prevention and Control, Atlanta, GA, USA, version 2007. We assumed a prevalence of 10% of suicidal thoughts and a 3% margin of error at a confidence limit of 95% and a design effect of 1.5. The calculated sample size was found at $N=576$. We increased the sample size to 600 to compensate for missed data and incomplete questionnaires. We selected randomly one faculty to represent medical faculties (Medicine, Pharmacy, Dentistry, Nursing, and Physiotherapy) and one faculty representing non-medical faculties by simple random selection. Students' Affairs divided students in each faculty into groups for educational sessions. We considered these groups as clusters and chose randomly a number of clusters that include an average of 300 students in each selected faculty. The total number of completed questionnaires were 554 representing a response rate of 92.3%.

For data collection we used a predesigned questionnaire including sociodemographic characteristics, perception of students about suicide and their experience with knowing a person who had suicide thoughts or attempts and if they themselves ever had suicidal thoughts or attempts. Five expert professors, including 3 psychiatrists and 2 public health professors, reviewed the questionnaire for content and face validation. We conducted a pilot study including 35 students, not included in the present study, to test reliability of the questionnaire where Cronbach's alpha was 0.783.

We analyzed the collected data using SPSS software statistical package. We presented categories of each variable as number and percentages and tested differences observed by using chi-square test. We calculated the effect of each predictors on the occurrence of suicidal thoughts and attempts using odds ratio (OR) and 95% confidence interval (95% CI). The present study used $p<0.05$ as cut-off value for significance.

Results

The total number of filled questionnaire were 554 where 288 from faculty of medicine (52.0%) and 266 from Faculty of Commerce (48.0%). Students in the final academic year represented 44.4%. Male students totaled 261 representing 47.1%. Accepting suicide was low as represented by 9.4% only. Participants perceived suicide as a method of escape from reality (69.1%) or a mental trouble (31.4%). There are significant differences in relation to gender where more males reported escape from reality and more females reported mental disorder. The society had the responsibility to deal with the problem was reported by 58.5% that was significantly higher among males followed by being a self-problem as reported by 40.3% that was significantly higher among females. The most frequently reported reason was depression (68.8%) followed by absence of faith (58.8%) with attracting attention the least reported (13.5%) (Table 1).

Among participants, 35.7% and 51.1% reported knowing a person who committed or attempted suicide, respectively. Attitude toward the victim differed significantly between males and females. Participants who sympathized with the victim were 57.6% while 32.9% of participants did not care. The victim having suicidal thoughts or attempt was a friend was reported by 63.1%. The relationship with the victim differed significantly in relation to gender. More than one half (57.4%) reported knowing the intention of the victim and 78% tried to help. Self-experience with suicidal thoughts was reported by 25.3% while 12.3% reported attempting suicide. Among those who attempted suicide the most frequent reason was feeling depressed (61.8%) followed by educational pressures (54.4%) and feeling

Table 1 Distribution of participants by faculty, academic year, and their perception of suicide in relation to gender

Variables	Male ($n=261$)		Female ($n=293$)		Total ($n=554$)		$\chi 2$	p
	n	%	*N*	%	*n*	%		
Faculty:							47.18	0.001*
Medical	176	67.4	112	38.2	288	52.0		
Non-medical	85	32.6	181	61.8	266	48.0		
Academic grade:							0.000	1.000
First 3 years	145	55.6	163	55.6	308	55.6		
Final year(s)	116	44.4	130	44.4	246	44.4		
Accepting suicide	19	7.3	33	11.3	52	9.4	2.575	0.109
Opinion about suicide:								
Courageous act	10	3.8	12	4.1	22	4.0	0.025	0.874
Escape for reality	194	74.3	189	64.5	383	69.1	6.244	0.012*
Mental trouble	67	25.7	107	36.5	174	31.4	7.541	0.006*
Crime	49	18.8	52	17.7	101	18.2	0.098	0.755
Responsibility for suicide:								
Family	103	39.5	111	37.9	214	38.6	0.145	0.703
Society	166	63.6	158	53.9	324	58.5	5.323	0.021*
Country	81	31.0	109	37.2	190	34.3	2.330	0.127
Self	86	33.0	137	46.8	223	40.3	10.94	0.001*
Reasons for suicide:								
Depression	201	77.0	180	61.4	381	68.8	15.59	0.001*
Absence of faith	139	53.3	187	63.8	326	58.8	6.363	0.012*
Educational stresses	116	44.4	145	49.5	261	47.1	1.409	0.235
Feeling lonely	41	54.0	114	38.9	255	46.0	12.69	0.001*
Hard life	130	49.8	119	40.6	249	44.9	4.716	0.030*
Non supportive family	143	54.8	96	32.8	239	43.1	27.30	0.001*
Attract attention	36	13.8	39	13.3	75	13.5	0.027	0.868

* Significant

lonely (41.2%) with no significant differences in relation to gender. Among those who attempted or had suicidal thoughts, 63.2% reported that the reason for thinking of suicide is still existing and 45.6% of them still had suicidal thoughts (Table 2).

Accepting the concept of suicide was the main predictor for having suicidal thoughts (OR = 7.784) followed by knowing a person who had suicidal attempt (OR = 2.234) or thoughts (OR = 4.609) (Table 3). The present study reported same observation for predictors for suicidal attempts. The odds ratio for suicidal attempts among those who accepted the concept was 10.952. The odds ratio predicting suicidal attempt among those who knew a person attempting suicide was 3.673 and 3.933 for those who knew a person with suicidal thoughts, respectively (Table 4).

Multi variate analysis showed that accepting the concept of suicide is the most important independent predictor with adjusted odds ratio of 5.978 for suicidal thoughts and 8.638 for suicidal attempt (Table 5).

Discussion

This study highlights the prevalence of suicidal ideation and attempts among Egyptian university students, with 25.3% reporting suicidal thoughts and 12.3% reporting suicide attempts. These results are in line with a prior research conducted by Liu et al. (2019) among US college students, who reported that 24.3% of participants had suicide ideation and 9.3% had attempted suicide [25]. Similarly, a study by Eskin et al. (2019) among university participants from 12 Muslim countries reported a prevalence of suicidal thoughts of 22% and a prevalence of suicidal attempts of 8.6%, with Egyptian students reporting rates of 17.5% and 7.1% for suicidal thoughts and attempts, respectively [17]. Meanwhile, Owusu-Ansah et al. (2020) found lower prevalence rates of suicidal behaviors among undergraduates in Ghana, with rates of 15.2% for suicidal ideation, 6.3% for attempted suicide, and 6.8% for suicidal planning [26]. However, there are also studies that reported higher prevalence rates of suicidal behaviors, such as the study conducted

Table 2 Distribution of participants by their experiences with suicide

Variables	Male ($n=139$)		Female ($n=143$)		Total ($n=282$)		$\chi 2$	p
	n	%	*N*	%	*n*	%		
Knew someone attempting suicide	89	34.1	109	37.2	198	35.7	0.578	0.447
Knew someone having suicide thoughts	140	53.8	143	48.8	283	51.1	1.291	0.256
Attitude towards person attempting suicide:								
Sympathy	182	69.7	137	46.8	319	57.6	29.83	0.001*
Don't care	66	25.3	116	39.6	182	32.9	12.80	0.001*
Weak person	9	3.4	33	11.3	42	7.6	12.03	0.001*
Faithless	10	3.8	14	4.8	24	4.3	0.299	0.585
Contempt	3	1.1	10	3.4	13	2.3	3.086	0.079
Relationship:							18.31	0.003*
Family member	17	12.2	9	6.3	26	9.2		
Friend	79	56.8	99	69.2	178	63.1		
Neighbor	10	7.2	19	13.3	29	10.3		
Relative	21	15.1	7	4.9	28	9.9		
Someone known to me	6	4.3	1	0.7	7	2.5		
Not identified	6	4.3	8	5.6	14	5.0		
Know his/her intention to suicide	87	62.6	75	52.4	162	57.4	2.966	0.085
Try to offer help	114	82.0	106	74.1	220	78.0	2.557	0.110
Have suicidal thoughts	72	27.6	68	23.2	140	25.3	1.401	0.237
Attempted suicide	32	12.3	36	12.3	68	12.3	0.000	1.000
Reasons for attempt:	($n=32$)		($n=36$)		($n=68$)			
Depression	21	65.6	21	58.3	42	61.8	0.381	0.537
Education pressures	15	46.9	22	61.1	37	54.4	1.384	0.239
Loneliness	17	53.1	11	30.6	28	41.2	3.563	0.059
Absence of family support	10	31.3	12	33.3	22	32.4	0.034	0.855
Hard living conditions	4	12.5	9	25.0	13	19.1	1.712	0.191
Attract attention	1	3.1	2	5.6	3	4.4	0.237	0.626
Reasons are still present	19	59.4	24	66.7	43	63.2	0.387	0.534
Still think of suicide	11	34.4	20	55.6	31	45.6	3.064	0.080

* Significant

in Botswana included 122 psychology college students, where 47.5% reported suicidal ideation and 28.7% reported suicide attempts [27]. The findings emphasize the importance of understanding cultural and contextual factors in addressing mental health issues and promoting suicide prevention strategies.

Factors such as feeling depressed, educational pressures, and feeling lonely were found to be major contributors to suicidal behaviors. This is because undergraduates face huge challenges as the process of transitioning from high school to university, increasing burden, elevated levels of psychosocial stress and academic pressures, coupled with the challenges of adapting to a novel environment, are supplementary factors that can heighten the susceptibility to engaging in suicidal behaviors within this particular demographic [28]. Numerous studies have demonstrated that mental health disorders are a substantial risk factor for suicidal behaviors, and up to 90% of young adults who have tragically taken their own lives often exhibit a pre-existing background of mental illness [29–31]. Eisenberg et al. (2007) found that among undergraduates, suicide behavior was frequently associated with anxiety and depression [32]. This highlights the need for effective counselling and preventive services in universities.

Accepting the concept of suicide was the most important independent predictor for suicidal thoughts and attempts in our study. Among the participants, only 9.4% indicated that they accepted the concept of suicide. This is consistent with a study by Wu et al. (2021) among college students in Shanghai, China, where 14.7% of participants reported accepting the concept of suicide [33]. However, it is crucial to consider that attitudes towards suicide may differ across various cultures and countries. Eskin et al. (2016) conducted a study comparing attitudes towards suicide among university

Table 3 Factors affecting suicidal thoughts

Variables	Suicidal thought				*OR*	95% CI
	Present		Absent			
	n	%	*N*	%		
Faculty:					1.131	0.770–1.662
Medical	76	26.4	212	73.6		
Non-medical	64	24.1	202	75.9		
Gender:					1.261	0.859–1.850
Males	72	27.6	189	72.4		
Females	68	23.2	225	76.8		
Academic grade:					0.884	0.600–1.302
Final year(s)	59	24.0	187	76.0		
First 3 years	81	26.3	227	73.7		
Accepting concept of suicide:					7.784*	4.196–14.442
Yes	35	67.3	17	32.7		
No	105	20.9	397	79.1		
Knew a person attempting suicide					2.234*	1.511–3.305
Yes	70	35.4	128	64.6		
No	70	19.7	286	80.3		
Knew a person with suicidal thoughts:					4.609*	2.968–7.157
Yes	108	38.2	175	61.8		
No	32	11.8	239	88.2		

* Significant

Table 4 Factors affecting suicidal attempt

Variables	Suicidal attempt				OR	95% CI
	Present		Absent			
	n	%	*N*	%		
Faculty:					0.913	0.550–1.517
Medical	34	11.8	254	88.2		
Non-medical	34	12.8	232	87.2		
Gender:					0.998	0.600–1.659
Males	32	12.3	229	87.7		
Females	36	12.3	257	87.7		
Academic grade:					0.603	0.354–1.027
First 3 years	23	9.3	223	90.7		
Final year(s)	45	14.6	263	85.4		
Accepting concept of suicide:					10.952*	5.841–20.538
Yes	26	50.0	26	50.0		
No	42	8.4	450	91.6		
Knew a person attempting suicide					3.673*	2.165–6.231
Yes	43	21.7	155	78.3		
No	25	7.0	331	93.0		
Knew a person with suicidal thoughts:					3.933*	2.158–7.168
Yes	53	18.7	230	813		
No	15	5.5	256	486		

* Significant

Table 5 Logistic regression analysis for predictors of suicidal thoughts and attempts

Variables	Suicidal thought			Suicidal attempt		
	Wald	*P*	Ex.B	Wald	*p*	Ex.B
Accepting concept of suicide	29.29	0.001*	5.978	40.63	0.001*	8.638
Knew a person with suicidal thoughts:	28.14	0.001*	3.646	4.739	0.029*	2.108
Knew a person attempting suicide	1.41	0.235	1.310	9.324	0.002*	2.555

* Significant

students from 12 countries, finding that the Austrian, UK, Japanese, and Saudi Arabian samples had the highest suicidal acceptance scores, while the Tunisian, Turkish, Iranian, and Palestinian samples had the lowest [34]. These differences in attitudes towards suicide could be attributed to sociocultural factors including religious beliefs, culture, and traditions that might have a preventative effect on attitudes towards suicide. This highlights the importance of understanding cultural and contextual factors when addressing mental health issues and promoting suicide prevention strategies. Additionally, it indicates the need for educational plans to change students' attitudes towards suicide and teach them how to overcome obstacles without contemplating death.

Furthermore, knowing someone who had suicidal thoughts or attempts emerged as a significant risk factor for suicidal behaviors, emphasizing the importance of identifying and providing support to those affected. This can be explained by the fact that suicide is contagious; university students are primarily influenced by the suicide attempts and deaths of other students. A considerable number of students experience a profound loss of motivation and contemplate self-termination in response to a peer's suicide attempt or demise [35]. This explanation is in harmony with Santos et al. (2017), finding that the likelihood of young individuals was twice as high exhibit suicidal ideation if they knew someone who had attempted suicide as compared to individuals who did not [36]. Also, Borges et al. 2006 discussed that 24% of individuals who experienced thoughts of suicide were found to have a familial history of suicide attempts [37].

Ultimately, our study underscores the urgent need for comprehensive mental health support and tailored suicide prevention strategies within the university setting. By addressing the factors that contribute to suicidal behaviors and providing students with the tools and resources they need to cope with stress, universities possess the potential to assume a crucial role in the advancement of mental health and overall well-being among their student population.

Conclusion

Our results indicate the prevalence of suicidal thoughts and behaviors among college students. It is imperative for universities to offer comprehensive life education programs and implement suicide prevention and intervention initiatives, including the provision of gatekeeper skills training to instructors. Accepting the concept of suicide is the most important independent predictor with adjusted odds ratio of 5.978 for suicidal thoughts and 8.638 for suicidal attempt.

Recommendations

University authority should develop a comprehensive approach to suicide prevention that includes counseling services, follow-up care, awareness-building programs, and mental health screenings can help to address the alarming situation of suicidal thoughts and behaviors among university students. The prioritization of mental health and well-being, along with the provision of requisite resources and support systems, is of paramount importance for universities in mitigating the risk of suicide among their student population.

Limitations of the study

We applied the study in one university. Results cannot be generalized to other universities. Students self-reported suicidal thoughts and attempts may result in underestimation as some of students may refrain from reporting. However, the study give insight of the problem among university students to attract the attention to this important preventable life-threatening problem.

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Authors' contributions

Ibrahim Ali Kabbash was responsible for the concept of the paper, statistical analysis of data, and shared in writing and revision of the manuscript. Basem Salama participated in data collection, statistical analysis, and shared in writing and revision of the manuscript. Menatollah Ashraf Mohammad shared in data collection. Hagar Galal shared in data collection. Noorhan Yousef shared in

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Declarations

Ethics approval and consent to participate
Tanta University Faculty of Medicine Research Ethics Committee approved this study.
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Consent for publication
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Competing interests
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