- *Basic Research*

Quality of life as determinants of suicidal ideation among university students :A Cross-sectional Study

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Abstract

Suicidal ideation is a crucial component in a process called suicidal behavior. Quality of life is a multi-dimensional, dynamic concept that encompasses physical, emotional, and cognitive aspects. This study **aimed** to assess the impact of quality of life as a determinant of suicidal ideation among university students. **Design**: A Cross-Sectional Study. **Setting**: The research was carried out at MIT University, Egypt. **Subjects**: The stratified random sample technique was used to select the sample for the study, which consisted of one-quarter of all faculty of nursing students (300) at MIT University, male and female, free from psychiatric disorders. **Tools**: Three tools were used for data collection: 1) socio-demographic characteristics of students, 2) the Suicide Severity Rating Scale, and 3) the Kareem and Mans Quality of Life Scale. **Results**: The study revealed that there was a correlation analysis between suicidal ideation and QoL among adolescents on all items except the quality of education domain. **Conclusion**: Enhanced quality of life reduces suicidal thoughts in college students. **Recommendation**: focus intervention and treatment efforts on improving the quality of life of adolescents with emotional and peer problems.

Keywords: suicidal ideation , Universities Students, suicide quality of life.

Introduction:

Suicide, whether attempted or completed, is a serious issue that has an impact on young people and adolescents. According to WHO, suicide is the second-leading cause of mortality worldwide for people between the ages of 15 and 29; generally coinciding with the years spent attending university. The World Health Organization (WHO, 2019.) 1 stated in 2019 that more than 700 000 people worldwide commit suicide each year. Additionally, there are around 20 suicide attempts for every suicide. Suicidal ideation is a condition in which a person has suicidal thoughts. Suicidal thoughts fluctuate depending on the circumstance. A person gives suicide serious consideration and develops a well-thought-out suicide strategy. There are some of these few schemes that fail, however someone might succeed in some of them. Suicidal ideas, also known as suicidal thoughts, can range from a thorough plan to a passing notion and do not necessarily involve actually committing suicide, according to (Silverman MM, De Leo D,2016& Kennedy J, King L,2014).

The WHO GPW13, the Mental Health Action Plan, and the UN SDGs all include a suicide rate metric for each nation. Also, Egypt's vision for sustainable development 2030 was established, the first of which stipulated the improvement of the quality of life of the Egyptian citizen and the improvement of his standard of living. Families, friends, coworkers, communities, and entire cultures are impacted by suicide and suicide attempts. Suicides can be avoided. Suicide prevention efforts can be made at the individual, local, and governmental levels.(zz1-who, 2022)

Many people in Egypt who are considering suicide may be held back by their religion because both Islam and Christianity unequivocally forbid it (Baker, R. W. 2009). With fewer than five suicides per 100,000 inhabitants, Egypt was ranked among the nations with the lowest suicide rate by (World Health Organization in 2019).

However, because the behavior is commonly seen as sinful on a social and religious level, suicide cases in Egypt are frequently reported by the family of the deceased as accidental deaths. As a result, the actual number of cases is larger than what is reported. True suicide rates in Egypt are mainly unclear due to a lack of reliable data, but frequent media reports over the previous few months suggest they have significantly increased (Eskin, M., 2019). Egypt's culture has changed over the past 20 years, with Westernization introducing new concepts and helping to normalize previously unaccepted ones like suicide (Kral, M. J. 2019).

In Egypt, The most typical triggers of suicide include less religious behavior, increasing demands of daily life, and a lack of support (Kamel, M 2022). Also, suicidal conduct incorporates biological, genetic, psychological, social, and cultural elements.Research shows that mental health issues, substance misuse, sexual minority status, parental loss,

strife, and separation, academic stress, financial hardships, and a lack of social support are all risk factors for suicide conduct in young people (Eskin, M.,2019).

Suicide methods vary around the world depending on socio-cultural backgrounds and variations in national laws, which affect both the suicide rate and suicide methods [Vijayakumar, L. 2021]. Self-poisoning, firearms, and hanging are the most commonly used [Thumtecho, S.,2022]. While the United States views it as the most popular method of suicide attempt among minors, suicidal self-poisoning accounts for about 25% of all suicides in the United Kingdom [Kasemy, Z. A.2022]. The problem gets worse in the developing countries as self-poisoning suicide deaths keep rising [Albano, G. D. 2022]. There has been a large 38.4% rise in self-poisoning suicide attempts among young people in Egypt [Kasemy, Z. A.2022].

The term quality of life refers to the improvement in the level of material and social services provided to members of society, as well as individuals' awareness of the extent to which these services can meet their various needs (Haraldstad, K.,2019). The World Health Organisation defines quality of life (QoL) as a person's sense of their place in life in relation to their objectives, expectations, standards, and concerns for the culture and value system in which they live (Taboada, M.,2021).It is a broad concept that is influenced in a variety of ways by a person's physical health, psychological state, and level of education, social relationships , personal beliefs and their relationship to salient features of their environment (Sarkar R, Chugh S, Bansal S ,2020)

Significance of the study:

According to the World Health Organization (WHO), in 2022, 7881 people committed suicide in Egypt alone, which is a significant increase from the 3022 cases recorded in 2019. However, Egypt still has a relatively low suicide rate of less than 5.0 per 100,000 people, compared to the global average of 9.0 [World Life Expectancy Health profile Egypt, 2022].

This low suicide rate in Egypt could be attributed to either defects in surveillance or religious traditions that discourage reporting of such cases [Hilali S,2022]. The study on determining the impact of quality of life on suicidal ideation among university students is significant because it confirms the positive correlation between quality of life and suicidal ideation. This finding can help academicians, researchers, and psychologists to take better care of university students.

Aim of the study:

 The aim of the study is to study the impact of quality of life as a determinant of suicidal ideation among university students**.**

Research question:

What is the correlation analysis between suicidal ideation and QoL among university students?

Materials and Methods:

Research design: descriptive study

Setting: The study will be conducted at MIT University.

Subjects:

The stratified random sample technique will be used to select the sample for the study, which will consist of one-quarter of all Faculty of Nursing (300), MIT University students, and meeting the requirements listed below: 18 years of age or older. Devoid of any mental illnesses, capable of speaking clearly. With a 95% confidence level that the true value is within ±5% of the measured/surveyed value, and a population size of 1250 over six months, the sample size was estimated using the EPI info 7.0 programme. The sample size ranged from 295 at the minimum to 300.

Tools: Three tools were used to collect the necessary data for the study:

Tool I: Student socio-demographic characteristics. The researchers created it after reviewing the relevant literature to gather the necessary information. A semi-structured questionnaire was created to collect socio-demographic and clinical information. The following variables are included in this questionnaire: age, gender, marital status, education...

The questionnaire also includes questions about bereavement and suicide attempts.

Tool II: Suicidal Ideation Questionnaire - Suicidal Ideation Questionnaire (SIQ) (Reynolds, 1988; Ferreira & Castela, 1999, Portuguese version). The purpose of the SIQ (Ferreira & Castela, 1999) is to evaluate the severity of suicidal ideation and thoughts. Items ranging from mild to very serious cover the spectrum of suicidal thoughts. There are seven possible choices out of 30 items, arranged into the following categories: There are six possible responses to this question: never before(0), previously thought of but not in the last month(1), nearly once a month(2), a few times a month(3), roughly once a week(4), a few times a week (5), almost every day (6). Items are graded from 0 to 6, where a high score denotes a significant frequency of cognitions taking place quite frequently. The points on the SIQ scale range from 0 to 180. In addition to measuring suicidal ideation, the SIQ can be part of a battery used to assess psychopathological issues (Ferreira and Castela, 1999).

Tool III: Quality of Life (AQoI.) instrument 13, 14 This consists of 15 items that measure five dimensions of HRQoL: illness, independent living, social relationships, physical senses, and psychological well-being. Individual items can be summed to provide a score for each dimension as well as an overall score. In addition, an algorithm based on multi-attribute utility theory, using a multiplicative model, is available. This algorithm adds health state preference weights to the responses to provide a utility score for each dimension and an overall utility score. Each dimension is scaled from 0 (death) to I (full or normal health without handicap, impairment, or disability).

Method:

1. 1. The dean of the Faculty of Nursing at MIT University issued an official letter. The study's purpose and data collection schedule were then clarified.

2. 2. The researchers created tool I after conducting a thorough systematic review of relevant literature; tool II and tool III were then translated into Arabic. All of these tools' Arabic versions were tested for content validity by five (5) experts in the field. The necessary changes were made in response to the valuable comments of the experts.

3. Using Cornbrash's alpha test, thirty students underwent reliability testing for tools II and III to evaluate these instruments' internal consistency. R = 0.87 for tool III and 0.84 for tool II.

4. Thirty students participated in a pilot study that was conducted; they were not part of the study participants. It was carried out to evaluate the tools' suitability and clarity, check the questions' phrasing, and gauge how long the semi-structured interview would take. Moreover, to look for any barriers or issues that could crop up during data collection.

Ethical consideration:

In order to conduct this study, all participants were required to provide informed consent after being given a clear explanation of the study's goals. The confidentiality of the information collected was also maintained and participants were guaranteed the right to privacy, anonymity, and the ability to withdraw their participation at any moment.

Statistical analysis:

The Statistical Program for Social Sciences (SPSS, version 17.0) was utilized to conduct statistical analyses. Descriptive analyses were employed to characterize the sample, while correlation analysis was carried out to determine the association between suicidal ideation, quality of life, and additional elements such as sociodemographic characteristics, medical and psychological aspects, physical and global disabilities, etc. Additionally, the study of students' perceived quality of life, quality of life, and suicidal ideation was conducted using Spearman's rank correlation test (r_s). In the analysis, 95% and 99% significance levels were applied.

Results:

The study subjects included 300 students.
Table (1) shows that 47.0 % of the studied is aged from 20- years old. Also, 62.3% of the students were males compared to 38.0% were females. Regarding the class, more than one

half of the participants (55.3%) were two grad and 58.2% of them had enough income, excellent mark (54.3%), more than four fifth of them had not been suicidal Ideation (83.3%) and once time of suicide (35.3%).

Figure 1: Less than one-fifth of students attempted suicide, with 68.5% of attempts by males and 31.5% by females. However, 58.8% of suicide attempts were by females, which is 1.45 times more than males.

Figure 2 shows that the majority of students who do not have suicidal ideation have good sleep quality compared to their peers who have suicidal ideation (90% and 15%), respectively. And there is a significance relationship between them.

Figure 3 shows that the majority of students who do not have suicidal ideation high quality in all dimensions of life (health, public, family, emotions, educational, quality of time and management) compared to their peers who have suicidal ideation (89.9%, 80.2%, 32.1%, 61.5%, and 15%), respectively. And there is a significance relationship between them.

According to **Figure 4,** more than half of the students experience a high sense of vitality and activity, with no significant difference between genders

According to **Figure 5,** over two-fifths of students possess a sense of emotional balance, with a distribution according to gender.

The results displayed in **Table 2** depict a significant variation in terms of suicidal ideation scores, ranging from 0 to 51. The mean score was 31.96 (SD=26.38), indicating a wide variance in the final scores. According to the cut-off point of 31 which indicates potential suicide risk, it was found that 30% of the patients scored above this threshold.

Table 3: Table 3 presents the findings of the analysis conducted on different levels of suicidal ideation and quality of life among college students, stratified by gender. The analysis revealed that there were no significant differences in the levels of quality of life-based on the gender of the respondents (t = 0.98; p>0.05). However, the study found significant differences between genders based on suicidal ideation (t = 0.43; p<0.05). Furthermore, the correlation analysis indicated that there was a significant association between suicidal ideation and quality of life among adolescents for all the items, except quality of education.

Table 1: Socio-demographic Details of the Sample Under Study (n=300)

| Socio-Demographic Variables		Male (N=187)		Female (N=114)		Total N = 300 N (%)	X2 P-Value
		N	%	N	%		
Age	18-	64	34.2%	26	23.0%	90(30)	2.852 .091
	20-	82	43.9%	59	52.2%	114(47)	
	22-	41	21.9%	28	24.8%	69(23)	
	Mean ± SD	20.9 ± 1.4		20.8 ± 1.6		20.3 ±1.58	
Class	ONE	15	8.1	12	10.5	27(9)	.094 .759a
	TWO	101	45.1	199	40.6	167(55.3)	
	THREE	5	2.6	2	1.1	7(2.3)	
	FOUR	51	27.3	50	26.7	101(33.4)	
Father Education	Basic	25	13.3	55	4802		10.654 .005
	Secondary	38	20.3	11	9.6		
	Higher	57	30.5	48	42.1		
Income	ENOUGH	100		74		174(58.2)	.879 .644
	NO engh	69	36.9	56	49.1	125(41.8)	
Study Performance	A+	63	33.6	100	87.7	163 (54.3)	14.906 .001*
	A	29	15.5	24	21.1	53 (17.7)	
	c+	30	16.3	30	26.3	60 (20)	
	c	10	5.3	6	5.3	16 (5.3)	
	m	2	1,1	6	5.3	8 (2.6)	
Absenteeism (Day Per Week)	no	99	53	97	85..8	196 (65.3)	.137
	One /week	30	16.1	26	22.8	56 (18.6)	
	2/ week	33	6.9	5	4.4	38 (12.6)	
	More2/week	19		5	4.4	29 (9)	
Have You Been Suicidal Ideation	No	150	80.2	96	84.2	246 (82)	15.260 .000*
	Yes	37	19.8	17	15	54 (18)	
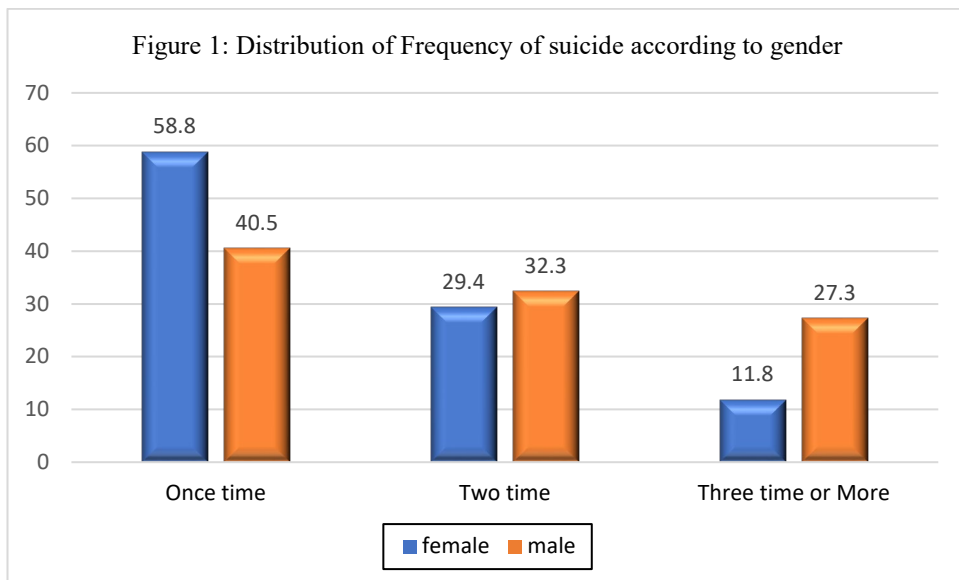
Figure 1: Distribution of frequency of suicide according to gender (n=54)
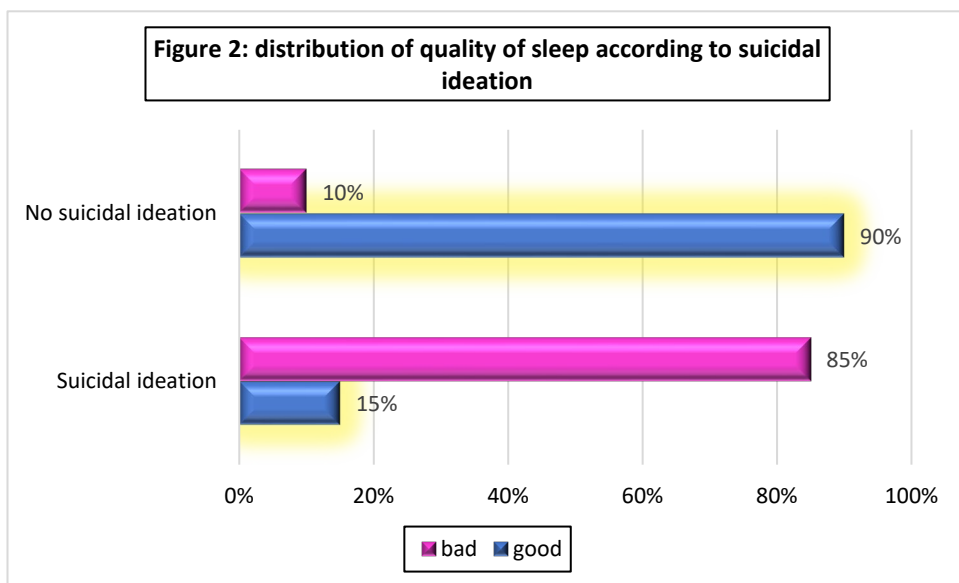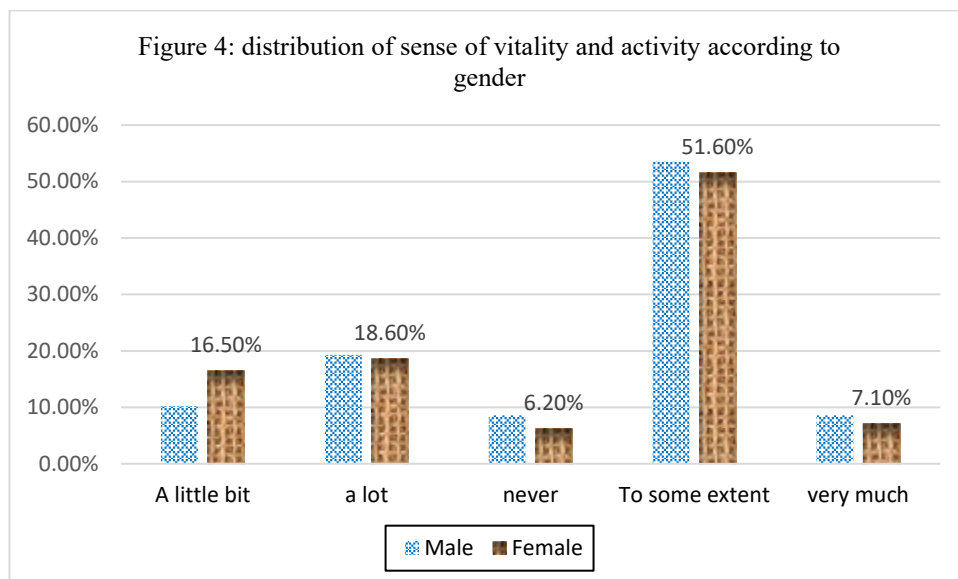

Figure 2: distribution of quality of sleep according to suicidal ideation (n=300)
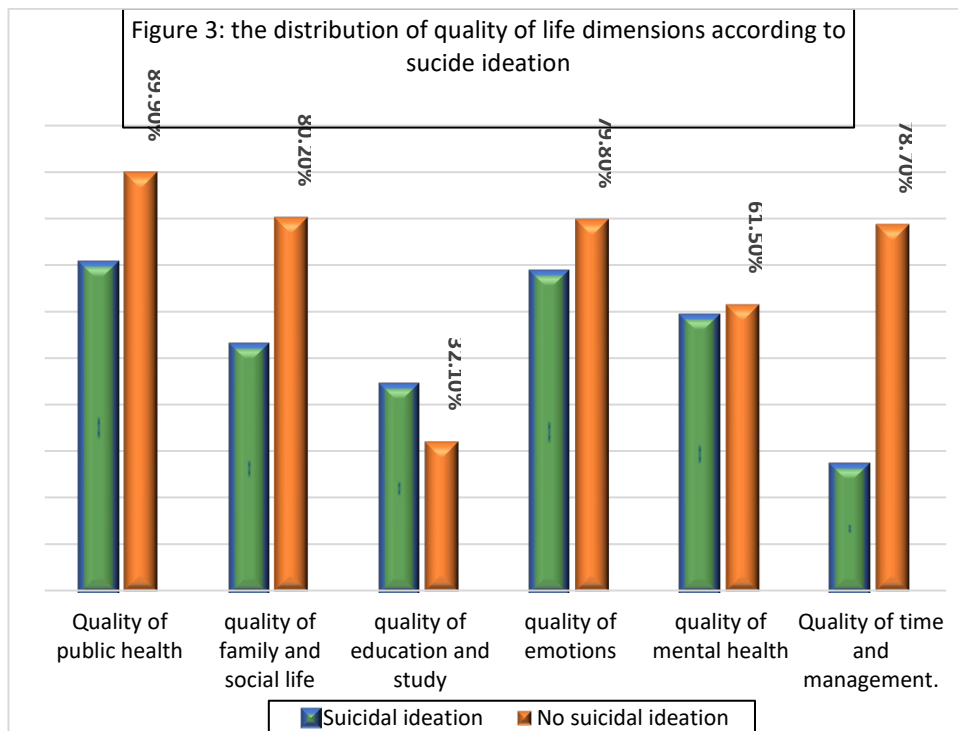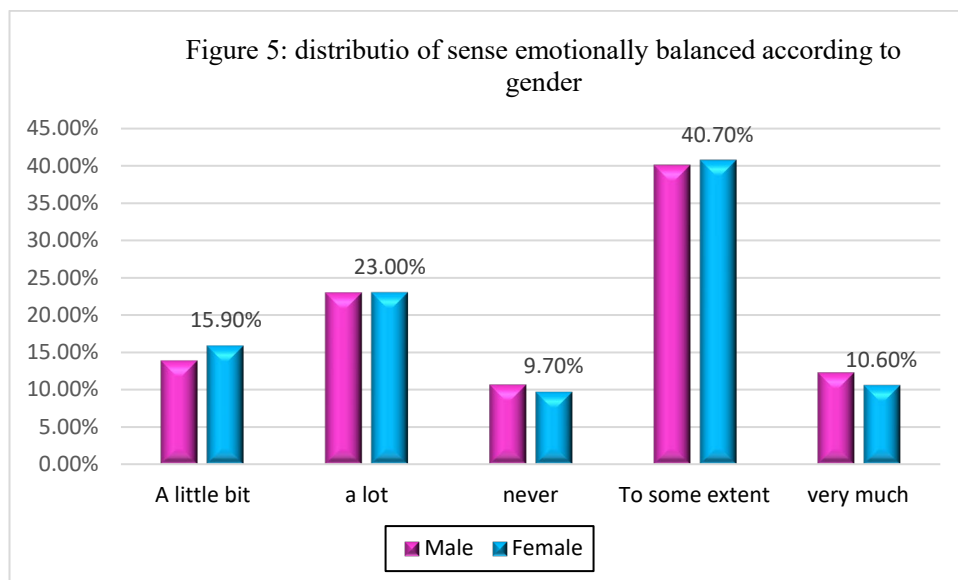
Figure 3: the distribution of quality of life dimensions according to suicide ideation

Figure 4: Distribution of sense of vitality and activity according to gender (n=300)

Figure 5: distributio of sense emotionally balanced according to gender

Figure 5: Distribution of sense of emotionally balanced according to gender (n=300)

Table 2: SIQ means concerning frequent thoughts

Questions	M (SD)
Suicidal Ideation	31.96 (26.38)
I thought about death.	2.75 (1.650
I thought of people dying.	2.75 (1.65)
I thought it would be better if I weren't alive.	2.41 (1.85)
I thought that my life was too miserable to go on.	2.39 (1.81)
I wished I had never been born.	2.35 (1.83)
I thought it wasn't worth it.	1.92 (1.81)
I wish I was dead.	1.81 (1.83)

Table 3: Pearson correlation between suicidal ideation and QOL among adolescents. N=300

Items	r / p
Gender / Quality of life	0.95
Gender / Suicidal Ideation	0.43**
Suicidal Ideation / Quality of public health	0.58
Suicidal Ideation /quality of family and social life	.40**
Suicidal Ideation/quality of education and study	ns
Suicidal Ideation/quality of emotions	.50**
Suicidal Ideation/Quality of time and management.	.23*
Suicidal Ideation/Quality of time and management.	0.01**
Suicidal Ideation / Quality of life	.62**

rs Spearman's correlation coefficient *p < .05; **p < .01.

Discussion:

The study found that 47.0% of the 300 participants were between 20 and years old. Compared to early adolescence, late adolescence, and early adulthood, the risk of suicide is relatively low during childhood and increases dramatically [Cha, C.B. et al. (2018) & Glenn CR, et al,(2020)]. Despite the high frequency and importance of suicide behavior among adolescents, "at-risk youths" are known for being poor help-seekers (Torok M, et al. 2019). For example, a recent study of adolescents aged 11 to 19 found that there was a one-year gap between the initial suicide attempts and seeking necessary medical attention from a professional (Lustig S., et al. 2021).

It was discovered that 62.3% of the students were male, compared to 38.0% who were female. Two studies found that higher rates of suicidality in males than in females were associated with greater suicidal behavior [(Akram B., et al. 2008)&(Amr M. et al., 201 3)].

The study suggested that since sleep offered a momentary reprieve from issues in waking life, about half of the students have good sleep; it might serve as a substitute for suicide. The researchers also stated that it may trigger suicidal thoughts as a means to escape. [(Williams J.M.G. 1997) &(Williams J.M.G, 2005)& (Johnson .J, et al. 2008)]

According to the results obtained, more than two-fifths of students have a sense of emotional balance. It is noteworthy that a high degree of emotion sensing is positively correlated with suicide behavior, whereas a high degree of emotion control of others correlates negatively with this construct, according to research by Ciarrochi et al. (2002) and other (later) investigations.

Regarding QOL, an individual's impression of QOL can be either positive or negative depending on the significance they assign to their life events. [(Tempski, P. *et al.* 2015),& (Muros, J. J., et al.2017), &Petrovič, F. & Murgaš, F 2021), &(Petrovič, F. et al. 2021)] In order to gain a deeper comprehension of these facets, the assessment of quality of life ought to take into account the correlation between positive and negative psychological characteristics as separate yet interconnected dimensions (Freire, T. & Ferreira, G. 2018). In this way, a positive learning environment may act as a "barrier" to students' negative psychological traits, including stress. When examining the psychological, physical, environmental, and social aspects of quality of life, variations based on gender and location are significant. [(Souza, I. M. D. M., et a. 2012),& (Angkurawaranon, C. et al., 2016)& Moutinho, I. L. D., et al. 2019] . In addition to having the most degraded physical domain of QOL [(Moutinho, I. L. D., et al. 2019), (Pagnin, D. & de Queiroz, V. 2015)& (Puthran, R., et al.2016)], female students tend to display worse QOL, a condition that may be linked to the result of the present study showed that the majority of the students having suicidal ideation as well as attempted suicide

The study reveals that the factors associated with suicidal thoughts in university students are also evident in the general population [4, &(Johnson .J, et al. 2008)]. Suicide can have adverse social, emotional, and economic repercussions on friends and family, especially in younger age groups where these effects may be more pronounced (Johnson .J, et al. 2008).

The data presented support the assumption that religious affiliation generally protects people from suicidal thoughts. This aligns with previous research showing a significant negative correlation between religiosity and suicidal ideation (Abdel-Khalek AM, et al. 2007). However, the stigma associated with suicide may be indirectly perpetuated by the fact that many religions, including Islam, forbid suicide. Suicide is stigmatized, and those who identify as more religious are more likely to view suicide as an unpardonable sin. Due to fear of being labeled and seen as sinful, people who are experiencing.

Research indicates that improving life quality may decrease suicidal thoughts in college students. Although the overall occurrence of suicidal thoughts is minimal, there exists a gender discrepancy, with males being more susceptible to such thoughts. According to Kposowa A.J. (2003), divorced men were over eight times more likely to commit suicide compared to divorced women (Kposowa A.J. 2003). Nevertheless, the study suggests that there is no gender-based gap in life quality, irrespective of the students' race.

Additionally, research indicates a connection between suicidal thoughts and quality of life. The moderate and positive relationship between these variables aligns with Alejandro's (2019) findings, which suggest that decreased sleep quality and quantity, as well as abnormal sleep patterns, significantly affect functioning (Alejandro's. 2019). Moreover, the Centers for Disease Control and Prevention and the National Center for Injury Prevention and Control (2022) have identified bullying, a family history of suicide, loss of relationships, high-conflict or violent relationships, and social isolation as the most significant factors in predicting suicidal behavior.

In summary, according to our results, QoL significantly mediates the relationships between quality of education and Suicidal Ideation. Our data indicate that male (82, 0) than female (51, 7)

Summary:

That study found that students with suicidal ideation have worse quality of life than those without it in all dimensions. Additionally, males with suicidal ideation scored lower than females on average. The correlation between suicidal ideation and QOL was strong overall except for the quality of education item. These findings provide new insights into the predictors of suicidal ideation among university students.

Limitation:

The generalizability of these findings is limited. For example, the study participants are students from one university, so the results may not apply to students from other Egyptian universities or from other countries. In the future, a multi-university trial with a larger sample size may be conducted. Additionally, the study relied on self-reported data from the students. Lastly, the age range was limited to under 21 years and did not include .individuals with psychiatric issues, which should be addressed in future research

Conclusion:

recommendation, and clinical implication ,

One of the more significant findings to emerge from this study is that Quality of life as determinants of suicidal ideation among university students. The findings reported here students with suicidal Ideation scored significantly worse than those with no suicidal Ideation in all . dimensions of functioning of the QoL

shed new light on the predictors of students with suicidal Ideation scored the mean more i males more than females and significantly less on all dimensions than those without suicidal Ideation.The findings of this study have several Correlation analyses between suicidal Ideation and QOL among adolescents at all items except on the quality of .education

Acknowledgments:

Declaration of interest:

The authors have no competing interests or relevant potential conflicts of interest to .disclose

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الملخص العربى

نوعية الحياة كمحددات للتفكير في الانتحار بين طلاب الجامعة: دراسة مقطعية

يعد التفكير في الانتحار عنصرًا حاسمًا في عملية تسمى السلوك الانتحاري. نوعية الحياة هي مفهوم ديناميكي متعدد الأبعاد يشمل الجوانب الجسدية والعاطفية والمعرفية. هدفت هذه الدراسة إلى تقييم أثر نوعية الحياة كمحدد للتفكير في الانتحار لدى طلاب الجامعة. التصميم: دراسة مقطعية. مكان الدراسة: تم إجراء البحث في جامعة MIT، مصر. عينة الدراسة: تم استخدام تقنية العينة العشوائية الطبقية والتي تكونت من ربع جميع طلاب كلية التمريض في جامعة MIT (300) ذكور وإناث، خاليين من الاضطرابات النفسية. الأدوات: تم استخدام ثلاث أدوات لجمع البيانات (1: الخصائص الاجتماعية والديموغرافية للطلاب، (2 مقياس تقييم خطورة الانتحار، و (3 مقياس جودة حياة كريم ومنس. النتائج: كشفت الدراسة عن وجود علاقة ارتباطية بين التفكير الانتحاري وجودة الحياة لدى المراهقين في جميع البنود باستثناء مجال جودة التعليم. الاستنتاج: تحسين نوعية الحياة يقلل من الأفكار الانتحارية لدى طلاب الجامعات. التوصية: تركيز جهود التدخل والعلاج على تحسين نوعية حياة المراهقين الذين يعانون من مشاكل عاطفية ومشاكل أقرانهم.