

Suicidal Ideation amongst Medical Students of Pakistan: A Cross-Sectional Study

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Received: 25 September 2020; **Accepted:** 01 October 2020; **Published:** 13 October 2020

Abstract

Introduction: Thinking, planning or even unsuccessful attempts of suicide come under the definition of suicidal ideation. The risk factor known to be the most important cause for suicidal thoughts is anxiety or feeling stressed, to which medical students are predisposed to due to a wide range of reasons from academics to personal pressures.

Objectives: To establish the risk factors and frequency of suicidal ideation amongst medical students.

Methodology: A cross-sectional study was done to ascertain the frequency of suicidal ideation and the risk factors causing it in medical students. A questionnaire was formulated and filled by the participants with a 100% response rate. Final data were analyzed with the help of SPSS version 17.0 and the descriptive statistics e.g. percentage and frequencies were calculated.

Results: Out of the 250 participants, 84% reported they have depression. 34% of the total students that participated claimed to have suicidal ideation in the previous year. 5.6% reported experiencing suicidal ideation once a week. 7.2% of participants reported that they might be capable of attempting suicide while 4.4% of participants reported that they are definitely capable of committing suicide. Of the total 2.4% reported having attempted suicide while 0.4% reported having attempted suicide more than once in their life.

Conclusion: The crux of this research was that the vulnerability of these medical students to feel depressed and experience suicidal ideation is high. The most significant contributor to this trend, as the research explores, is the stress level due to the academic burden that the medical students experience.

Keywords: Suicidal ideation; Depression; Stress; Suicide; Medical students

1. Introduction

Suicide is one of the many problems that our society faces and the actual attempt or suicide planning is preceded by suicidal ideation or suicidal thoughts. The most prevalent underlying mental health issue in the people who experience suicidal ideation is major depressive disorder, which also has shown higher numbers in medical students as compared to students of other fields leading them to experience suicidal ideation [1]. Moreover, academic stressors play a key role in provoking thoughts about self-killing [2, 3]. According to one study, medical students suffering from depression were approximately 28% out of which 5.8% experienced suicidal ideation [4].

Psychological condition is a very strong determinant of whether an individual will develop suicidal ideation or not. Prevalence of anxiety, depression, and psychological distress is higher in medical students which worsens with the beginning of medical school, and increments are observed with the progression of academic years [5]. Even though depression rates may be higher they are not enough to seek medical attention, according to the students in these studies. Students from around the world participated in these studies so the results could be generalized. A study conducted on Asian medical students identified significant proportion suffered from mental health issues and out of these students some experienced suicidal ideation; above 15% of the students showed a positive correlation between the two [6]. Another study on Chinese students showed that those with suicidal tendencies were less satisfied with their lives and had a higher degree of psychache than their colleagues [7].

35.6% of students reported considering suicide in the previous year while 4.8% reported also attempting it. These results are quite a step up when compared to findings reported from other western countries.. As found in one study, the major predictors of suicidal ideation in these students were burnout and poor mental health [8]. A study showed that more people thought of suicide than those who attempted it [9]. An array of risk factors are known to cause suicidal ideation for instance sexual abuse, financial instability, and broken families with an emphasis on the mother's parenting style [10, 6]. Furthermore, a family history of suicide may increase the risk of developing these thoughts [11]. In Vietnam, it was found that anxiety leading to suicide was more common among students with abusive families. Support from parents and teachers could be the solution [12].

Female students are more inclined towards these thoughts [13]. Stress resulting from factors like epidemiological, physiological, psychological, educational, and social factors contributes to suicidal ideation [4, 14]. And a positive correlation with the onset of medical studies suggests school experience as a causal factor as well [4]. However, as

observed in one study, many students did experience this suicidal ideation but they did not plan or attempt suicide due to religious reasons [15]. Medical students are less likely to receive care despite worsening mental health over the course of training due to stigma and fear of falling behind their counterparts, risking jeopardizing career as a responsible doctor [16]. Positive findings between depression and suicidal ideation increase short term risk of suicide and long term risk of episodes of depression and morbidity as reported by a study [4]. All these results suggest the importance of developing mental health support and treatment. Wellness programs have been proven beneficial for the maintenance of medical professionalism for these students [17].

In light of far-reaching effects of different contributors of suicidal ideation, this research was done to learn about its frequency in a public medical college in Lahore, Pakistan, along with identifying the factors that contributed towards these ideations.

2. Materials and Methods

The study to determine the frequency of suicidal thoughts amongst students studying medicine and to identify the factors that contributed towards these suicidal thoughts was a cross-sectional study. The study was conducted in 2020. It included 250 participants, 50 from each course year of the medical college. Students with odd roll numbers were picked at random from each course year to participate in the study. Research synopsis was approved by the Institutional Ethical Review Board. A questionnaire comprising of 15 questions was designed and filled by the participants after informed written consent.

Subjects were given background information about the purpose of the study and its methodology and were allowed to ask questions. Participants were guaranteed that their personal information will be kept confidential. The response rate by the participants was 100%. Data were analyzed by using SPSS (software package for statistical analysis) version 17.0 and descriptive statistics i.e frequency and percentages were obtained.

3. Results

This study was conducted to determine the prevalence of suicidal ideation amongst medical students of a public medical college. 250 students participated. 50 students from each course year respectively, 50% (125) were males and 50% were (125) females. The age of students ranged from 17 to 25, the mean age being 21. Out of the 250 students who filled the questionnaire, 210 students or 84% of individuals reported to be experiencing depression (Table 1).

Depression present	Frequency	Percentage %
Positive/Affirmative	210	84.0
Negative	40	16.0
Total	250	100.0

Table 1: Frequency of depression.

It was found that 48.8% of the students found medical studies/academics stressful, 28.8% found it difficult to cope with and only 19.2% were completely satisfied with the academics as relayed in (Figure 1).

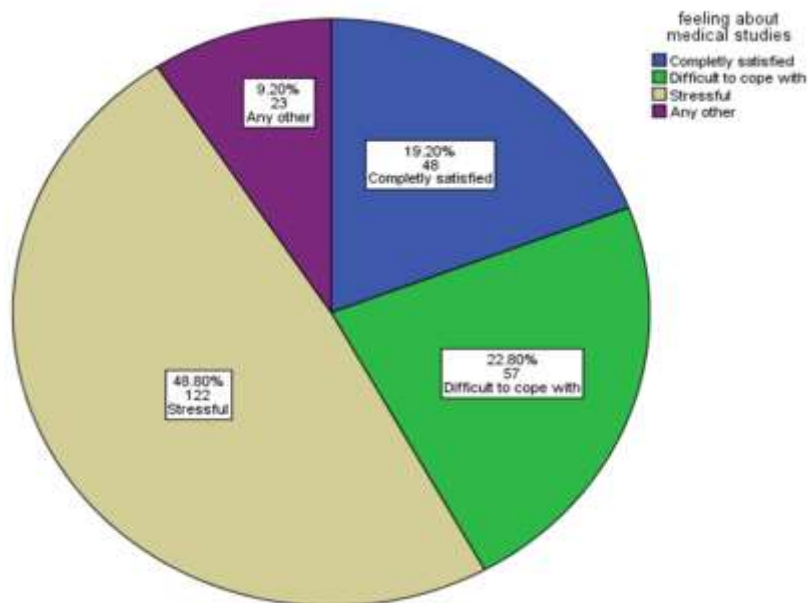


Figure 1: Feelings about medical studies.

The percentage of students who experienced suicidal thoughts was 34% with the remainder 66% not experiencing such thoughts (Table 2).

Suicidal thoughts present	Frequency	Percent %
Yes	54	21.6
Sometimes	31	12.4
No	165	66.0
Total	250	100.0

Table 2: Frequency of suicidal thoughts.

The most popular cause of these suicidal thoughts according to the survey was academic stress with 12.4% choosing this answer. Other causes included social isolation (10%), family issues (8.8%), sexual abuse (1.6%), bullying (0.8%), and financial instability (0.4%) as shown in (Figure 2).

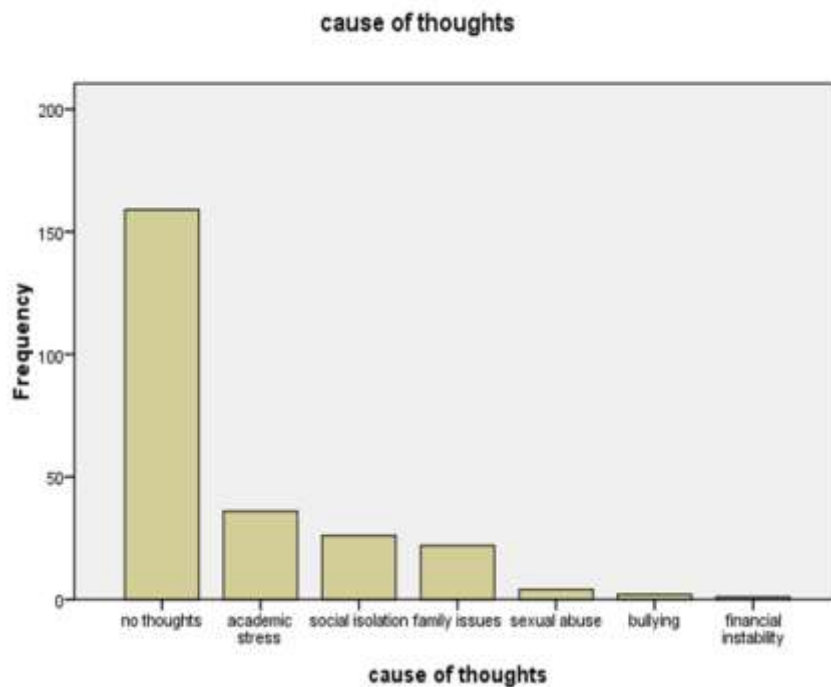


Figure 2: Causes of suicidal thoughts.

4.4% of the students reported of being capable of attempting suicide, 7.2% said they might be capable of attempting suicide, 12.4% of the students reported of having attempted self-harm while 11.6% reported that they had planned suicide at some point in their life as depicted in (Table 3).

Action	Capable to attempt		Ever tried to self-harm		Planned suicide	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Yes	11	4.4	31	12.4	29	11.6
No	221	88.4	219	87.6	221	88.4
Might be	18	7.2	0	0.0	0	0.0
Total	250	100.0	250	100.0	250	100.0

Table 3: Respondents capable to attempt suicide, try self-harm or plan suicide.

To cope with these suicidal thoughts 13.6% of the students said they seek refuge in faith and worship, 9.2% choosing to ignore them, 6.4% continued to dwell in them and 4.8% seek aid by sharing with friends.

When asked what method they used to overcome the depressive thoughts, the responses filled by the participants are reflected in (Figure 3).

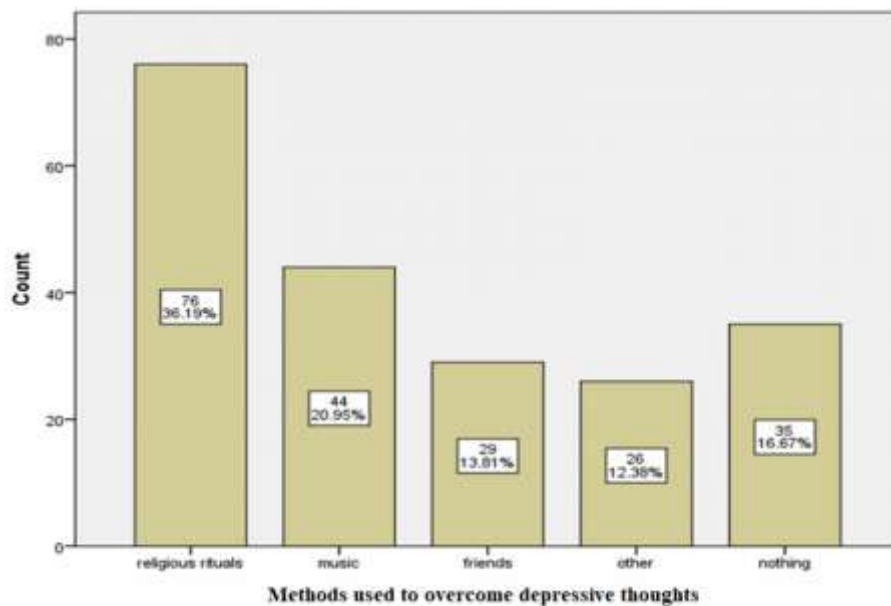


Figure 3: Methods used to overcome depressive thoughts.

From the 250 who filled the questionnaire about 2.4% had already tried to commit suicide once in their lifetime and 0.4% said to have attempted suicide more than once (Figure 4).

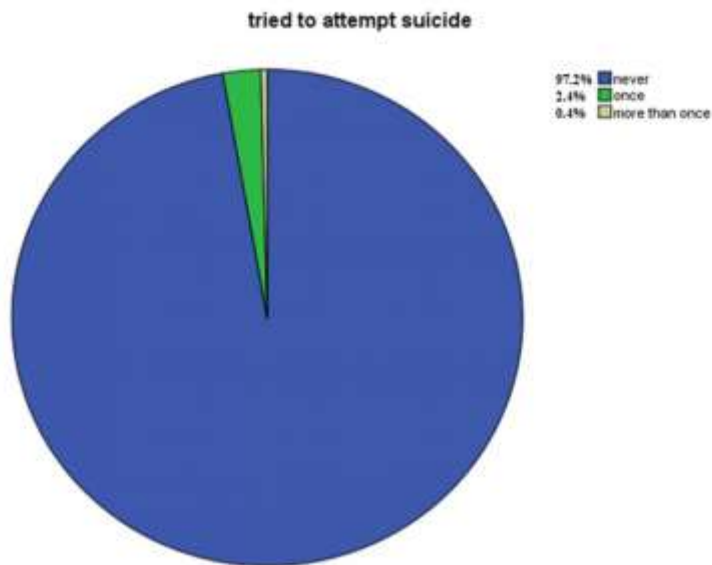


Figure 4: Frequency of students who tried to attempt suicide.

5. Discussion

Suicidal ideation is an alarming problem in our society as it increases the risk of suicidal attempts. Medical students are more prone to stress and depression due to overburdening academic responsibilities and various other factors hence they are more likely to experience suicidal thoughts. We conducted the study to check the trend of positive correlation between depression, stress, and suicidal ideation and find out the link between suicidal ideation, planning, and attempts.

Our study showed that 85 out of 250 students experience suicidal ideation and out of these 31 were male and 54 were females. In a survey conducted in 2007 on US medical students, 11.2% said that in the previous year they had had suicidal thoughts. [8]. A similar study in China showed the percentage to be 17.9% [6]. Another study conducted on medical students in Pakistan showed the percentage to be 35.6% [18]. The prevalence of suicidal ideation was 34% according to our study. The results from Pakistan are quite remarkable compared with those of China and the US showing that a larger fraction of Pakistani medical students suffered from these thoughts. All of these students who underwent these thoughts also experienced depressive symptoms. The percentage of students having depression was 44.4% in males and 66.6% in females in a study held in a medical college in Saudi Arabia [19]. The percentage of depression among the students surveyed in our study was found to be 84%. These results support the fact that the frequency is higher in students studying medicine in Pakistan compared to other countries.

Our study showed that there is a link between suicidal ideation and self-harm. The percentage of students attempting self-harm was found to be 12.4%. Another study conducted in a Chinese institute showed the prevalence of non-suicidal self-injury was 27.5% [20], which is double the amount in our study showing that suicidal ideation is higher but self-harm is lower in frequency in our medical college. The percentage of attempted suicide according to our study was 2.8% while that of a study in India was 0.39% [21].

Major factors responsible for suicidal ideation suggested in our study were academic stress, social isolation, family issues, sexual abuse, bullying, and financial instability. The most popular answer chosen by our participants was academic stress with a percentage of 12.4% of students choosing it. In a study held on medical students in western Nepal, the major factor associated with suicidal ideation was also dissatisfaction with academic performance. Other factors in this study were the history of drug abuse and feeling neglected by parents. Low academic performance, stress due to studies and abuse experienced at home, were considered the highest risk factors. Also high on the list were mental illnesses such as anxiety and depression. 48.8% of students in our study said that they found their medical studies to be stressful. 63.2% of students also said that their depression increased since they joined medical college. This shows that medical studies put students under a lot of pressure and stress, affecting them psychologically leading to suicidal thoughts.

When asked about how these students dealt with their depression, 38.19% said that they seek comfort in their religious practices. Upon inquiring about the opinion on suicide, a remarkable majority answered by saying that the only reason they did not think about or attempt suicide was because of religious reasons. A similar finding was observed in a study conducted in a mental institute in New York, where even though the individuals experienced suicidal thoughts they did not attempt it owing to religious reasons/affiliations [22]. It is thus relevant to know that Asian students' religion might preclude them from acting on any suicidal tendencies.

Early recognition of suicidal ideation and the major factors associated with its development in the medical students may prove beneficial in the prevention of suicide attempts and also aid in the development of strategies that can be used in the future for effective screening and interventions. A good initiative in that direction would be adopting academic practices that do not compromise the students' mental health as well as teaching stress-relieving techniques in especially conducted programs to ensure a healthy teaching and learning environment.

As various psychiatric researches conducted around the world explore psychological disorders to be closely linked with suicidal ideation, these could still be a major contributor in our participants. However, our research lacked the time and resources to establish the clinical diagnosis for psychiatric illnesses based on symptoms, in the participants and thence link suicidal ideation to their prevalence. This could be further improved by future researchers with a more detailed analysis in the questionnaire to assess for symptoms of major depressive disorder, GAD etc. The

purpose of the research however was to highlight and recognize the more practical stressors present for medical students that promote this ideation in them including subjective depression.

7. Conclusion

Suicide is a serious issue and an easily preventable cause of death. The recent high rising trend in the cases of suicide presses on the gravity of the situation. Pakistani medical students had a higher propensity to develop suicidal ideation that was more prevalent in this population than medical students in other countries in comparative analysis of different studies. Females students were more likely to experience these thoughts than male students. Timely intervention to recognize and deal with the factors that aggravate suicidal ideation in medical students can help prevent its dire consequences. A great step in that direction would be developing mental health support programs to promote the mental well-being of students in need. According to our study, there is an observed increase in depressive spells among medical students with the initiation of their medical studies. It is to be noted that the major contributor to the suicidal ideation is academic stress. Interestingly enough, the most prevalent method used by the affected population to resist suicidal ideation was finding comfort in their religious faith and practices. Therefore, developing awareness programs to help people identify aggravating factors in advance, learn techniques to deal with them, and providing proper mental health support facilities may help alleviate a vast number of issues including suicidal ideation among the students.

Funding Source

No external funding.

Author Contributions

Conceptualization: FLS, AI, NSS.

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Formal analysis: FLS, NSS, AI, HA.

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Project administration: FLS, MUR.

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Writing - original draft: FLS

Writing - review and editing: FLS, NSS, AI, HLS, ES, HA, BA, NA, MUR.

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Citation: Faria Latif Sami, Naveen Siddique Sheikh, Ali Ishtiaq, Hania Latif Sami, Emaan Salam, Hasban Ahmed, Bushra Arif1, Nasir Anis, Muhammad Usama Rafiq. Suicidal Ideation amongst Medical Students of Pakistan: A Cross-Sectional Study. Journal of Psychiatry and Psychiatric Disorders 4 (2020): 343-353.



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