

# Suicidal ideation in medical undergraduate students

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## Abstract

Suicide is emerging as a public health problem. Almost 800,000 people die because of suicide every year, which accounts for one person every 40 s. The suicidal ideation is increasing amongst the younger age group, particularly amongst students. However, not much is known about this problem amongst medical students in India. A study was conducted in Karwar Institute of Medical Sciences, after obtaining the permission from the Institutional Ethical Committee of the Karwar Institute of Medical Sciences, Karwar. It was a cross-sectional type of study assessing suicidal ideation in medical undergraduate students. A written consent was obtained from the students by the means of Informed Consent Form provided to them before the study. In our study, majority of the students (30%) were 21 years old. 45% of total students were male students and the rest female. Majority (84%) were Hindu and most of the students (90%) belonged to South India. 5% of students have family history of psychiatric/medical illness and 15% of total students have personal history of psychiatric/medical illness out of which anxiety (6%) was the most common illness. 15% of students reported a history of past attempts/ideation.

**Keywords:** Suicidal ideation, medical undergraduate, family history

## Introduction

Suicide is a term derived from two words Sui (to oneself) and Cide (killing of) and indicates self-planned and deliberate termination of one's life. An act of suicide is the result of a complex and an intricate interaction between one's mental conditions along with one's social, cultural, environmental and biological factors affecting an individual's life leading to suicidal impulse <sup>[1]</sup>.

After putting in a lot of efforts, many students clear the competitive exams and make it to medical colleges but often the burden and stress of their studies, adjusting in a new environment, fulfilling the expectations of their parents make the students feel uncomfortable and stressed.

With time, students get burnt out and are not able to cope up with the stressful environment, hence they develop suicidal ideations. Often these tendencies are triggered by various other factors which play the role of a catalyst in the development of these tendencies. The students choose a fatal end which can be prevented.

Suicide is emerging as a public health problem. Almost 800,000 people die because of suicide every year, which accounts for one person every 40s <sup>[2]</sup>. The suicidal ideation is increasing amongst the younger age group, particularly amongst students. However, not much is known

about this problem amongst medical students in India [3].

Suicidal behaviours being complex occurs as a result of various psychological, psychosocial, environmental and genetic risk factors. The college students are more exposed to academic and social pressure and hence, suicidal ideation (SI) among them may have a unique etiology [4].

Adolescents are more prone to suicide and since they are the asset of the nation, there is an urgent need to provide adequate counselling.

Few studies have been carried out in India to study suicidal ideation in medical students. Therefore, this study was designed to assess the prevalence of suicidal ideation among medical undergraduate students and the risk factors associated with it.

## Methodology

**Study place:** Karwar Institute of Medical Sciences, Karwar.

**Source:** Medical undergraduate students of all years. (1st, 2nd, 3rd and final years).

**Sample size:** 100 students (out of total 600 students) gave consent to participate in this study.

**Study design:** Cross-sectional study.

**Study tool:** The Suicide Behaviors Questionnaire- Revised' (SBQ-R) [7] is a self-reported questionnaire. SBQ-R consists of four items. Item 1 will tap into lifetime suicide ideation and/or any suicide attempt. Item 2 will assess the frequency of suicidal ideation over the past one year. Item 3 will help in assessing the threat of suicidal attempt. Item 4 will evaluate self-reported likelihood of suicidal behaviour in the future. The responses obtained can be used for identification of at-risk individuals and any specific risk behaviours.

**Study procedure:** A study was conducted in Karwar Institute of Medical Sciences, after obtaining the permission from the Institutional Ethical Committee of the Karwar Institute of Medical Sciences, Karwar. It was a cross-sectional type of study assessing suicidal ideation in medical undergraduate students. A written consent was obtained from the students by the means of Informed Consent Form provided to them before the study. After obtaining consent, each student was given 'The Suicide Behaviors Questionnaire-Revised' (SBQ-R) [7] self-reported questionnaire and the total scores were collected. Demographic and social profile details that include age, sex, religion, residence, family history, history of psychiatric/medical illness, history of past ideation/attempts, academic performance, family support and social support of the students were collected with the help of a questionnaire prepared locally which was later assessed. Statistical analysis was done using SPSS software and appropriate statistics were applied. Tables and graphs have been used for the presentation of the results obtained.

**Ethical issues:** This study was conducted only when Institutional Ethical Committee clearance was obtained. Confidentiality of the students and their results have been maintained. Students were required to give written consent before taking part in the study.

**Inclusion criteria:** Students who were willing to take part in the study and who have given consent were included.

**Exclusion criteria:** Students who were not willing to participate and have not given consent for the same.

## Observations and Results

**Table 1:** Gender and Suicidal ideation

	Number of students having suicidal ideation	Number of student not having suicidal ideation	p-value
Male	8	37	p=0.4742
Female	13	42	(not significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.4742$  (not significant at  $p < 0.05$ ) There is no significant association between gender and suicidal ideation in this study.

**Table 2:** Religion and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
Hindu	19	65	p=0.3624
Other religions	2	14	(not significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.3624$  (Not significant at  $p < 0.05$ ) There is no significant association between religion and suicidal ideation in this study.

**Table 3:** Family history and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
Positive family history	2	3	p=0.2845
Negative family history	19	76	(not significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.2845$  (Not significant at  $p < 0.05$ ). There is no significant association between family history and suicidal ideation in this study.

**Table 4:** Personal history and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
Positive personal history	7	8	p=0.008
Negative Personal history	14	71	(Significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.008$  (Significant at  $p < 0.05$ ). There is significant association between personal history of psychiatric illness and suicidal ideation in this study.

**Table 5:** Past attempts and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
History of Past Attempts/Ideation Present	9	6	p=0.00005
History of Past Attempts/Ideation Absent	12	73	(Significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.00005$  (Significant at  $p < 0.05$ ). There is significant association between history of past ideation/attempts and development of suicidal ideation in this study.

**Table 6:** Performance and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
Above average or average	18	73	$p=0.3409$
Below average	3	6	(not significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.3409$  (Not significant at  $p < 0.05$ ). There is no significant association between academic performance and suicidal ideation in this study.

**Table 7:** Family support and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
Adequate Family Support	19	75	$p=0.4442$
Inadequate Family Support	2	4	(not significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.4442$  (Not significant at  $p < 0.05$ ). There is no association between family support and suicidal ideation in this study.

**Table 8:** Social support and Suicidal ideation

	Number of students having suicidal ideation	Number of students not having suicidal ideation	p-value
Adequate social support	13	68	$p=0.01208$
Inadequate social support	8	11	(Significant at $p < 0.05$ )
Total	21	79	

**Inference:**  $p=0.01208$  (Significant at  $p < 0.05$ ). There is significant association between social support and suicidal ideation in this study.

## Discussion

Suicide has shown an increase in trend among the young generations especially students who undergo a lot of stress during their college years. MBBS is one such course during which students are under a lot of pressure with respect to their studies, classes, parental and social expectations.

Due to lack of awareness with regard to this topic, students often do not consider taking help and hence end up feeling hopeless. Various other sociodemographic factors also play a role in the development of suicidal ideation in students.

Hence, this study was carried out in our medical college for the first time to assess the prevalence of suicidal ideation in medical undergraduates and the various risk factors associated with it.

In our study, majority of the students (30%) were 21 years old. 45% of total students were male students and the rest female.

Majority (84%) were Hindu and most of the students (90%) belonged to South India.

5% of students have family history of psychiatric/medical illness and 15% of total students have personal history of psychiatric/medical illness out of which anxiety (6%) was the most

common illness.

15% of students reported a history of past attempts/ideation.

In a study by A Jain *et al.* conducted among medical students in Mangalore, out of 305 students, 61 (20%) reported suicidal ideation <sup>[5]</sup>.

In our study, on assessment of responses collected by the Suicide Behaviors Questionnaire-Revised (SBQ-R), 21% students had a cutoff score of more than 7 hence having suicidal ideation. The total scores range from 3-18. A cut-off score of more than 7 helps identify at risk individuals with 95% specificity and 93% sensitivity.

In the same study by A Jain *et al.*, 172 students (56.39%) were dissatisfied with their academic performance, 34 students (55.7%) had broken up with their close friends and 20 (6.56%) felt neglected by their families <sup>[5]</sup>.

In our study, 66% of students have an average academic performance. 6% of students have inadequate family support while 19% of students reported inadequate social support.

Similarly, in a cross-sectional study carried out by Abhinav Goyal *et al.* based in a medical college in Delhi, the prevalence of suicidal ideation amongst medical students was found to be 53.6% <sup>[3]</sup>.

In a study by Praveen Arun *et al.*, 425 medical students were assessed for suicidal risk using SBQ-R questionnaire. 126 students (29.6%) students were found to have suicidal ideation <sup>[6]</sup>.

On analysing the results of 21% (21) of total students reporting suicidal risk, it was found that 2 (0.09%) students out of 21 have history of psychiatric/medical illness in the family. 7 (0.33%) of them also report history of personal psychiatric/medical illness. 9 of those 21 (0.42%) have history of past ideation/attempts.

8 students (0.38%) of 21 have inadequate social support whereas 2 students (0.09%) have inadequate family support.

10 students of 21 (0.47%) have had a plan at least once to kill themselves but did not try to do it. 9 out of those 21 (0.42%) had sometimes (2 times) thought about killing themselves in the past year. 8 of those 21 students (0.38%) had never told anyone that they were going to commit suicide, or that they might do it. 5 students out of these 21 (0.23%) reported that they were likely to attempt suicide someday.

In our study, there was significant association found between personal history of psychiatric/medical illness, past history of ideation/attempts, social support and development of suicidal ideation in students.

There is scope for more research on this topic as suicide is evolving as a major problem worldwide especially among youngsters and there is an urgent need to provide help to those who feel neglected as it may in turn reduce the burden of such a problem in the society.

## Conclusion

1. The current study shows that medical undergraduates are under immense stress and hence show at-risk behavior which should be identified at the earliest so that adequate treatment and help can be provided by professionals.
2. Many students reported past history of suicidal ideation and inadequate family and social support which denotes how various sociodemographic factors also come into play in the development of suicidal ideation.
3. In this study, 21 students out of 100 (21%) have a cutoff score of more than 7 with reference to SBQ-R and hence have suicidal ideation.

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