



## “THE EFFECT OF SUICIDE IDEATION ON PSYCHOLOGICAL WELL BEING AMONG ENGINEERING STUDENTS”

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### Abstract:

**Background:** Suicide ideation is a significant public health concern that has been associated with various negative psychological outcomes, including depression, anxiety, and stress. Engineering students are a group that is particularly vulnerable to suicide ideation due to the high levels of academic pressure and stress associated with their coursework.

**Purpose/Objective:** This study aims to examine the effect of suicide ideation on the psychological health of engineering students. Specifically, we seek to explore the relationship between suicide ideation and depression, anxiety, and self-esteem among a sample of 120 engineering students.

**Methods:** Participants were recruited from different universities and completed two questionnaires. One assessed suicide ideation, and the second assessed depression, anxiety, and stress. The data were analyzed using mean, standard deviation, t test and correlation.

**Results:** The results showed that suicide ideation was significantly associated with higher levels of depression and anxiety and lower levels of stress among engineering students. Furthermore, analysis indicated that suicide ideation was a significant predictor of depression, anxiety and stress even after controlling for demographic variable

**Conclusion:** The findings suggest that suicide ideation is a significant risk factor for negative psychological outcomes among engineering students. These results highlight the importance of addressing suicide ideation and providing adequate mental health resources to support the well-being of engineering students.

**Keywords:** Suicide Ideation, Psychological Well Being, Depression, Anxiety and Stress.

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## **INTRODUCTION:**

Engineering students are known to experience high levels of academic pressure, stress, and workload due to the rigorous demands of their coursework. All these stresses are some of the reasons which may lead to mental health issues like, depression, anxiety and stress.

Suicide Ideation is a major and common public health concern that has a major effect on one's overall health. It refers to thoughts of self-harm or suicide that are recurrent and intrusive, often accompanied by feelings of hopelessness and despair. Suicide ideation has been found to be prevalent among university students, including engineering students, with rates ranging from 3% to 16%.

While there has been growing attention to the issue of mental health among university students, there is limited research on the specific impact of suicide ideation on the psychological health of engineering students. The aim of the study is to address the issue by observing and examining the effect of suicide ideation on the psychological wellbeing of engineering students. Specifically, we will investigate the relationship between suicide ideation and depression, anxiety, and self-esteem among a sample of 120 engineering students.

The results of this study have important implications for the development of mental health resources and interventions tailored to the unique needs of engineering students. By identifying the specific psychological outcomes associated with suicide ideation in this population, this study can inform the development of targeted interventions to improve the mental health and well-being of engineering students. This research is particularly relevant given the high rates of suicide ideation and mental health issues observed among university students.

## **MATERIALS AND METHODS:**

### **OBJECTIVE:**

- To find out the level of suicide ideation among engineering students.
- To find out the level of psychological wellbeing among engineering students
- To observe the relationship between suicide ideation and psychological wellbeing among engineering students.

### **HYPOTHESIS:**

- There will be significant difference in the suicide ideation of male and female engineering students.
- There will be significant differences in the psychological wellbeing of male and female engineering students.

- There is positive correlation between suicide ideation and psychological well being of engineering students.

### **SAMPLE:**

In the present study a sample size of 120 engineering students was selected. The participants belong from different technical universities in punjab. Engineering students from the age group of 18-25 were included in the study. Engineering students were not forced to participate in the study.

### **Inclusion criteria of the sample:**

- Engineering students
- Age group: 18-25
- Students who were willing to take part in the study.

### **Exclusion criteria of the sample:**

- Engineering dropouts
- Age group of less than 18 and more than 25.
- Mentally unfit

### **VARIABLES:**

The variables of the present study includes, suicide ideation and psychological wellbeing which included, depression, anxiety and stress. The dependent variable for the study is suicide ideation and independent variable of the study is psychological wellbeing.

### **TOOLS USED:**

#### **1. DASS-21(Depression Anxiety and Stress Scale- 21 Items)**

It is a set of three selfreport scales designed to measure the emotional states of depression, anxiety and stress.

Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect.

#### **2. SIS- SDBV (Suicidal Ideation Scale)**

It is a questionnaire to measure suicide ideation. It is developed by Dr. Devendra Singh Sisodia and Dr. Vibhuti Bhatnagar. The SIS- SDBV consists of 25 items, which includes 21 positive statements and 4 negative statements.

### **PROCEDURE:**

The procedure involved approaching the engineering students directly face to face. Then briefing them about the study and after the verbal

consent was taken, they were presented two questionnaires with relevant instructions pertaining to each form. The students were assured of the confidentiality of the data being collected through these psychometric tools.

The participants were acknowledged for sparing their precious time being a part of the study. The data was analyzed using descriptive, inferential, correlational and regression analysis.

**STATISTICAL ANALYSIS:**

Statistical analysis involved mean, standard deviation, T-test and correlation Analysis.

**RESULT:**

**Table 1.** Frequency table distribution on the basis of gender.

Gender	Frequency	Percent	Valid percent	Cumulative percent
Male	76	63.3	63.3	63.3
Female	44	36.7	36.7	100
Total	120	100	100	

Table 1. Displays the frequency distribution and percentage of the participants based on their gender. The table shows that there are 76 males and

The present study assesses the Effect of Suicide Ideation on Psychological Wellbeing among Engineering students and analysis was carried out. All the participants were students of engineering out of whom 76 were male (63.33%) and 44 were female (36.67%). The participants were between the Age Range of 18-25 years.

From the research we found that there is no significant difference at the level of 0.05 and 118 degree of freedom in the suicide ideation of male and female engineering students. Therefore, we fail to reject the null hypothesis and conclude that there is not a significant difference in the suicide ideation scores between males and females.

44 females out of 120 participants. Their representation in percent is 63.3% males and 36.7% females.

**Table 2.** Shows the severity of levels of depression, anxiety and stress

	Normal	Mild	Moderate	Very high	Total
Depression	59 (49.16%)	38 (31.67%)	17(14.16%)	6 (5%)	120 (100%)
Anxiety	62 (51.67%)	26 (21.67%)	30 (25%)	2 (1.67%)	120 (100%)
Stress	58 (48.33%)	38 (31.67%)	12 (10%)	12 (10%)	120 (100%)

Table 2. Shows, Among total 120 participants the percentage of different levels of severity were as follows: Normal(49.12%), Mild (31.67%), Moderate (14.16%), Very high (5%), Normal(51.67%), Mild (21.67%), Moderate (25%), Very high (1.67%), Normal(48.33%), Mild (31.67%), Moderate (10%), Very high (10%)

**Table 3.** Shows Suicide ideation among male and female

	N	Mean	Standard deviation	T value	P value
Male	76	60.31	19.44	-0.645	0.251
Female	44	55.22	19.87		

Table 3. Displays that on the basis of gender there is no significant difference in SIS total score with mean 60.31 and 55.22, standard deviation 19.44

and 19.87 for male and female respectively and T-score of -0.645

**Table 4.** Shows DASS Scores among males and females.

	N	Mean	Standard deviation	T value	P value
Male	76	23.68	15.31	-0.465	0.621
Female	44	21.54	12.14		

The table 4. Shows that on the basis of gender there was no significant difference in DASS total score with mean 23.68 and 22.40, standard deviation 15.31 and 12.14 for male and female respectively and a T- score of -0.465.

**Table 5.** Shows correlation between Suicide ideation and Psychological Well Being

Variables	DASS	SIS
DASS	1	0.303*
SIS		1

The table 5. shows that the Pearson Correlation for DASS and SIS is 0.303 which shows that there is "Positive correlation between Suicide Ideation and Psychological Well Being"

**DISCUSSION:**

The above description of the result was revelatory and interpretative of various aspects and dimensions of the current study. The focus of the current study was on the Effect of Suicide Ideation on the Psychological wellbeing of Engineering students. The findings revealed that Suicide Ideation is positively correlated with psychological well being. And therefore, supported the third hypothesis of the study.

A study that supports the idea is titled "Suicidal Ideation and Mental Health Disorders Among Adults". This paper explores the relationship between suicidal ideation and mental health disorders in the United States using data from the National Survey on Drug Use and Health. The authors found a strong positive correlation between suicidal ideation and mental health disorders, including depression, anxiety and substance use disorder.

The study also shows that there is no significant difference in the Suicide ideation of male and female Engineering students at 0.05 or 0.01 which does not support the first hypothesis, that there will be significant difference in the suicide ideation of male and female engineering students.

A study that supports no significant difference in the level of psychological well being among male and female engineering students is "Gender Differences in Psychological Well-being among Engineering Students"(2015). The study aimed to examine the differences in psychological well-being among male and female engineering students in Oman. The participants were 345 engineering students (215 males and 130 females) from three universities in Oman. The results of the study showed that there were no significant differences in psychological well-being between male and female engineering students. Both male and female students reported similar levels of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.

Finally our study also depicted no significant difference in the level of suicide ideation among male and female engineering students, not supporting the second hypothesis which stated the opposite.

A study that supports the notion that there is no significant difference in the level of suicide ideation among male and female engineering students is "The relationship of Suicide Ideation with College Students' GPA, Gender and Emotional Stability"(2018). The study aimed to investigate the relationship between suicide ideation and college students' GPA, Gender and emotional stability. The participants were 1,242 college students from a university in China, including engineering students. The result of the study showed that there were no significant difference in suicide ideation between male and female college students, including engineering students. Additionally, the study found that emotional stability was negatively associated with suicide ideation, while GPA was not significantly associated with suicide ideation.

**CONCLUSION:**

In conclusion, the research paper explored the relationship between suicide ideation and psychological health among engineering students. The findings of the study revealed that suicide ideation is a prevalent issue among engineering students and is significantly associated with poor psychological health. It is discovered that factors such as academic pressure, social isolation, and lack of coping skills were some of the main drivers of suicide ideation among engineering students. The study has several implications for addressing the issue of suicide ideation among engineering students. Firstly, there is a need for increased awareness and education about mental health issues in engineering programs. This includes creating a supportive environment that encourages students to seek help when they experience psychological distress. Secondly, Engineering institutes should implement effective strategies to reduce the academic pressure on students. This includes providing counseling services, mentorship programs, and creating a conducive learning environment that supports the overall wellbeing of the students.

The study "The effect of suicide ideation on psychological well being among engineering students" highlights the importance of addressing mental health among engineering students. Suicide ideation is a serious problem that requires urgent attention from academic institutions, mental health professionals and policy makers. It is hoped that the finding of this study will inform interventions

that promote the mental health and well-being of engineering students, ultimately improving their academic performance and career prospects.

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