



# Efficacy Of Counselling In Reducing Stress Among Engineering Students

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**Abstract** Engineering students in the present education system face high stress in adjusting themselves with their academic and family affairs, lack time management who in turn face negative circumstances in their professional courses and other aspects of their lives. Counseling helps one to understand oneself and its major objective is to help individuals become self-sufficient, self-dependent, self-directed and to adjust themselves efficiently to the demands of a better and meaningful life. **Objective:** This paper determines the effectiveness of counselling in managing stress among engineering students. **Design & Methodology:** In the Experimental design 'Before-and-after with control design', Stress Inventory (Hemalatha & Nandini Revised, 2005) was administered to 200 engineering students who were randomly selected from a private engineering college, comprising of 50 males and 50 females in each of the two groups, viz., the experimental group and the control group. **Statistical Analysis:** Means, standard deviations and One Way Analysis of Variance were used to analyze the data. **Results:** It was found that the students had reduced their stress level after counselling, male and female students in the experimental group showed decreased stress level after counselling whereas students in the control group continued to have almost the same stress levels since counselling was not provided to this group. **Conclusion:** Counselling is helpful in building confidence with good adjustment by reducing stress among engineering students.

**Index Terms:** stress, counselling, engineering students and adjustment

## I. INTRODUCTION

In this present education system, college students face wide experiences of their own personal and psychological problems that aggravate them to suffer from mental illness. Higher and Professional degrees produces high stress among these young adult students and they find it difficult to adjust with their academic and family affairs, fail to manage time properly who in turn face unsuccessful circumstances in their professional courses and other aspects of their lives. Generally, it is noted that adjustment issues persists due to

lack of efficiency in coping with the separation of family environment, fear of career development, stress management, basic study schedule, goal setting, forming relationship with other friends or faculty in the system, emotions and in developing their self esteem as a whole. This transition period is very sensitive in an individual's life span giving rise to the requirement of intervention methods that may prevent or reduce mental problems [1].

In this modern age, college students have more complex problems as compared to the traditional age and are more affected by severe issues like anxiety, depression, stress, drinking habits and thoughts of attempting suicide. Majority of the students feel stressed out, nervous or anxious before appearing exam or delivering a speech. Due to lack of confidence and communication, they struggle and fail to be successful resulting in depression and giving rise to feelings of sadness, fatigue, guilt and hopelessness. Pressures being borne by students at the college level are generating a wide range of academic, emotional and social problems that would require more support for them [2]. Students of Engineering Colleges are not exceptional from the problems faced by the students of other professional courses. It is observed that engineering students are overburdened with their workload and carry their frustrations, tensions, conflicts and anxieties to the class. They must be helped to understand and modify their emotions and attitudes that may have grown out of the home environment.

In this competitive society, college students find themselves in the midst of confusion and chaos leading them to difficulties and challenging circumstances and at times inability to respond positively to life's ever changing situations can reduce the overall well being and quality of one's life, resulting quite often in stress, anxiety, depression or complete immobilization. Counseling in the educational context comprises a very important and vital part of educational activities. It promotes emotional maturity, personality development, self-responsibility, creativity and ability to solve problems in students' level.

Stress is not necessarily something bad – it all depends on how one takes it. The stress of exhilarating, creative successful work is beneficial, while that of failure, humiliation or infection is



detrimental. He believed that the biochemical effects of stress would be experienced irrespective of whether the situation was positive or negative [3]. Stress is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize [4]. College students of both genders have different set of stressors that are common among all college students; those experiences associated with stress included a change in eating and sleeping habits, new responsibilities, heavy workloads and breaks [5]. Unique set of stressful experiences among ethnic minority, first generation college freshmen and more specifically, sources of stress included difficult financial challenges, domestic responsibilities, responsibilities related to holding a job while in school, and a heavy academic load. Also, the ethnic minority college freshmen experienced stressors such as conflicts in time management, pressure associated with their academic workload and problems within their family [6]. If coping skills are effective in decreasing stress and feelings of anxiety, students have a greater chance for academic success [7].

## II. OBJECTIVES

1. To analyze the levels of stress among engineering students.
2. To provide Counselling for engineering students (experimental group).

### Statistical analysis:

Statistical analysis was done with the help of Statistical Package for Social Sciences [SPSS]. The means, standard deviations and One-Way ANOVA were used to find if there were significant differences between the groups.

## IV. RESULTS AND DISCUSSION

**Table 1: Stress Level of the Engineering Students**

Stress	Before Counselling		After Counselling (for experimental group only)	
	Experimental group	Control group	Experimental group	Control group
Very High	36	34	12	32
High	40	46	28	44

3. To find out the gender differences in the levels of stress among engineering students before and after Counselling.

## III. METHODOLOGY

Stress Inventory [8] was used to assess the level of stress in engineering students who were selected randomly from an Engineering College. Stress Inventory consists of thirty items, under four parts namely Physiological, Emotional, Cognitive and Behavioural. There are two possible responses to each item namely 'Yes' or 'No'. The respondents were asked to tick (✓) any one, which applies to them most. There was no time limit. But they were asked to respond as quickly as possible. The validity of S.I. is 0.80 and the reliability of S.I. by test-retest method is 0.95

### Procedure

Stress Inventory was administered to 200 engineering students who were randomly selected from a private engineering college, comprising of 50 males and 50 females in each of the two groups, viz., the experimental group and the control group.

Stress Inventory was administered to the subjects ( $n= 200$ ) of experimental and control groups before and after counselling. To the experimental group, Counselling was given along with relaxation techniques and it was ensured that it was practiced. After one month, the questionnaire was once again administered to the respondents of both the groups of engineering students.

The mean scores and standard deviations with regard to stress was obtained for both the groups (experimental and control) of engineering students before and after counselling which was provided for the experimental group only. One-way analysis of variance (ANOVA) was used to test the significance of the difference between the mean scores obtained by students in the levels of stress. The following results were obtained from the present study.



<b>Moderate</b>	16	14	42	16
<b>Low</b>	8	6	18	8
<b>Total</b>	100	100	100	100

**Table 2: Stress among Engineering Students of Experimental and Control Groups before Counseling**

Stress	N	Mean	Standard Deviation	F
Experimental group	100	17.09	3.34	1.94 (NS)
Control group	100	17.69	2.71	

NS=Not Significant at .01 level

**Table 3: Stress among Engineering Students of Experimental and Control Groups after Counseling**

STRESS	N	Mean	Standard Deviation	F
Experimental group	100	12.44	2.36	55.19*
Control group	100	15.15	2.78	

\*=Significant at .01 level.

**Table 4: Stress among Boys in the Experimental and Control Groups before and after Counselling**

STRESS	N	Mean		Standard Deviation		F	
		Before	After	Before	After	Before	After
Experimental group	50	17.38	13.44	2.64	2.33	1.32 (NS)	32.56*
Control group	50	18.00	16.76	2.76	3.39		

NS=Not significant; \*=Significant at .01 level

**Table 5: Stress among Girls in the Experimental and Control Groups before and after Counselling**

STRESS	N	Mean		Standard Deviation		F	
		Before	After	Before	After	Before	After
Experimental group	50	17.42	13.08	3.28	1.39	0.98 (NS)	70.01*
Control group	50	16.76	15.68	3.39	1.69		

NS=Not significant; \*=Significant at .01 level



Table 1 shows the stress level of the Engineering Students. It has been found out that the stress level was high for both, the Experimental and Control group before Counselling. But, the stress level drastically reduced for the students in the Experimental group due to Counselling whereas the stress level for the Control group remained almost same since they were not given counselling and they were in the same circumstances and suffered from the same stress level. This suggests that Counselling has been very effective in managing the stress of the respondents.

Table 2 indicate the means, standard deviations and the F ratio in the two groups (experimental and control groups) before introducing counselling to the experimental group of engineering students. The Mean scores of 17.09 (experimental group) and 17.69 (control group) shows that the groups were homogeneous without much difference between them and 1.94 as F ratio which is not significant in nature. Thus, the result shows that there is no significant difference between the stress scores in between experimental and control groups.

Table 3 shows the F ratio of 55.19 with a good difference in the Mean scores of 12.44 in the experimental group after counselling as compared to 15.15 in the control group which has not received counselling as an intervention. Results show that there is a significant difference in the stress level after counselling between the experimental and control groups. Since the experimental group was given counselling, they were able to overcome the problems faced by them in their personal and academic grounds.

Table 4 shows the means, standard deviations and F values of both the groups experiencing levels of stress before and after counselling among boys. The Mean scores drastically reduced from 17.38 to 13.44 with a rapid development showing the decreased level of stress after the counselling session where as the difference of Mean Scores in terms of Control group do not show such difference in administering the questionnaire twice. The F value of 32.56 seems to be significant after the counselling session to the experimental group of engineering students. The boys were stressed out due to lack of proper communication in placement activities and counselling with proper relaxation techniques helped them to overcome their difficulties.

Table 5 shows the F value for the stress levels experienced by the girls before and after counselling in the experimental group, the girls

belonging to that group were very much relaxed and could overcome stress easily. The Mean scores reduced from 17.42 to 13.08 in the experimental group whereas it was 16.76 in the first session and 15.68 in the second session for control group which was almost similar since they were not given counselling. The results shows no significant difference in the stress levels among the girls in the experimental and control group before counselling but a drastic change took place after the counselling session. The girls were having lack of communication which was mostly because of the fear of comments and criticisms from the boys. But, the counselling session had helped them to build up their self confidence that they can do better in future.

## CONCLUSIONS

Engineering students are exposed to stress and are more affected by academic and placement activities. Lack of communication is one of the major stressor for the students and hence the need for specific measures like counselling should be adapted in educational institutions to decrease substantially the burden of stress and increase self confidence among the students. A student friendly environment should be developed along with proper counselling to the needy students identified by the faculty members to have a stress-free environment.

Stress among students of various professional colleges has its association with various academic, social and health-related factors [9]. Findings showed a statistically significant association between stress and the field of education. Stress was observed in 187 (27.7%) females and 112 (20.4%) males and the association with gender was statistically significant. By applying binary logistic regression, medical studies, health and lifestyle factors, and academic factors were the significant predictors for stress.

Counselling helped the college students to reduce the level of stress as a result of which those students who got the benefit of counselling during the intervention program were found to have lower levels of stress as compared to those students who did not receive the intervention of counselling. It also helped the students to increase the levels of self-confidence and the ability of adjustment and as such it is advisable to have a counselling program for all educational institutions in the society for the well being of the students.



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