

Comparative Study of Stress Between Engineering and Medical Students

¹*Sonam Patel, ²Dr. A.K. Agrawal

Abstract

An attempt has been made to study the comparison of stress between Engineering and Medical students of Bundelkhand area of Uttar Pradesh. For this purpose, 'Students' Stress Scale' by Dr. Tareh Bhatia & Arunima Pathak was administered on 200 Engineering and 200 Medical students of Bundelkhand region selected through stratified random sampling technique. The mean, standard deviation and critical ratio were calculated. The results showed that the Medical Students have significantly high stress than Engineering students at 0.01 level. The Medical Students have significantly high Academic, financial, vocational, Family, Emotional stress and social stress than Engineering students.

Introduction

Word 'stress' is very familiar to everyone and everyone is dealing with it at any point of time in their life. Stress among students is going to be increased day by day due to high family expectation, high competition, lack of family support and poor financial background of the family.

Professional students are widely affected with stress during their professional study course work. Many challenges come in professional student's way during their course duration. Stress has become part of students' academic life due to the various internal and external expectations placed upon their shoulders.

In the current competitive world Students faces more stress during their student life. It might be related to their studies, examination or career. Effect of stress on the students might be negative or positive. Sometimes due to stress some student breakdown and this causes negative impact on their physical and mental health. But some student comes out from the stress with the improved version of their character.

Professional (Engineering and Medical) students in Bundelkhand region generally comes from a middle-class background. Lack of infrastructure, lack of money, lack of local job opportunities, lack of social awareness etc are also create hinderance in the growth of students which leads to stress.

Behere, Yadav and Behere (2011) in their study found that stress as an entity is universally present in both streams irrespective of age, gender and other variable. Medical and Engineering students had stress level of such a degree that requires clinical attention. There is attitude among students of turning a blind eye toward existing stress which is a serious problem.

Gedam, Patond, Saklecha, Vaidya and Babar (2021) found that the overall prevalence's of stress, anxiety, and depression (mild to very severe) among the medical students were found to be 37.27%, 73.37%, and 60.94%, respectively, whereas that among the engineering students were found to be 29.3%, 78%, and 59.3%, respectively. There was significant difference between medical and engineering students, who fall under the category of stress on the basis of age, gender, religion, socioeconomic status, and satisfaction with the academic performance.

Kulkarni, Rohilla, Reddy and Behera (2020) examined there is a high prevalence was noticed in medical students as compared with Engineering students. Stress level was higher in first year and final year medical students.

Gupta, Singh & Kumar (2017) in a study find the relationship between emotional intelligence, perceived stress, and academic performance. It was found that perceived stress and emotional intelligence has no relationship with academic stress. However, perceived stress was significantly predicted by emotional intelligence. They concluded that medical students with higher emotional intelligence shows lower stress, while both have no significant academic performance relationship.

Vivek B. Waghachavare (2012) conduct a study of stress among professional college students from urban area in India. Students of medical, dental and engineering colleges of Maharashtra were examined. Out of 1200 sample of student's stress was observed 27.7% in female students and 20.4% male students. Academic factors were one of the most factors for stress.

Brennan, McGrady and Lynch (2010) present a paper on the first-year medical students to improve student's ability to deal with intense stress. Eight-session on stress management program was conducted with first-year medical students. Each session was interactive and focused on improving skills to manage stress. After completion of the all-sessions evaluation was done. Satisfaction with the program was 80% and 76% student recommend it to other students. Their findings show that it is both beneficial and feasible to offer a stress management intervention to first-year medical students.

¹*Research Scholar (Psychology), Bundelkhand University, Jhansi, Uttar Pradesh

²Head & Associate professor, Department of Psychology, Nehru College, Lalitpur, Uttar Pradesh

The Objective of the Study

To find out the stress between Engineering and Medical students of Bundelkhand region.

The Hypothesis of the Study

There will be no significant difference of stress between engineering and medical students in Bundelkhand region.

Research Methodology

Sample

In the present study, the sample was selected by stratified random sampling technique from Bundelkhand region of Uttar Pradesh which consists seven districts (Jalaun, Jhansi, Lalitpur, Mahoba, Hamirpur, Banda and Chitrakoot Dham). The researcher took sample as 200 Medical Field Students (100 male & 100 female) and 200 Engineering Field Students (100 male & 100 female).

Tools Used

In the present study, student stress scale used which was developed by Dr. Tareh Bhatia and Dr Arunima Pathak. The scale consists 6 sub-scales with 30 items. The sub-scales are academic stress, financial stress, vocational stress, family stress, social stress and emotional stress. The scale has significantly high reliability and validity.

Result and Discussion

An attempt has been made to study and compare the different areas of Stress between Engineering and Medical college students of Bundelkhand region. For this purpose, ‘Students Stress Scale’ by Dr. Tareh Bhatia & Arunima Pathak was administered on 200 Engineering students and 200 Medical students of Bundelkhand region. The table shows the Mean, Standard Deviation (S.D.) and Critical Ratio of stress between Engineering and Medical students.

The table 1 shows that the medical students have high stress (mean 94.86), while the engineering have relatively low stress (mean 81.34). The medical students have also high stress as academic (mean 15.47), financial (mean 15.25), vocational (mean 15.72), family (mean 16.03), social stress (mean 15.89) and emotional stress (mean 16.48) than boys engineering students. The engineering students have relatively low stress among different areas as academic (mean 13.20), financial (mean 13.41), vocational (mean 14.22), family stress (mean 13.01), social stress (mean 12.79) and emotional stress (mean 14.70) than medical students. Bar diagram-1 is also showing the above results.

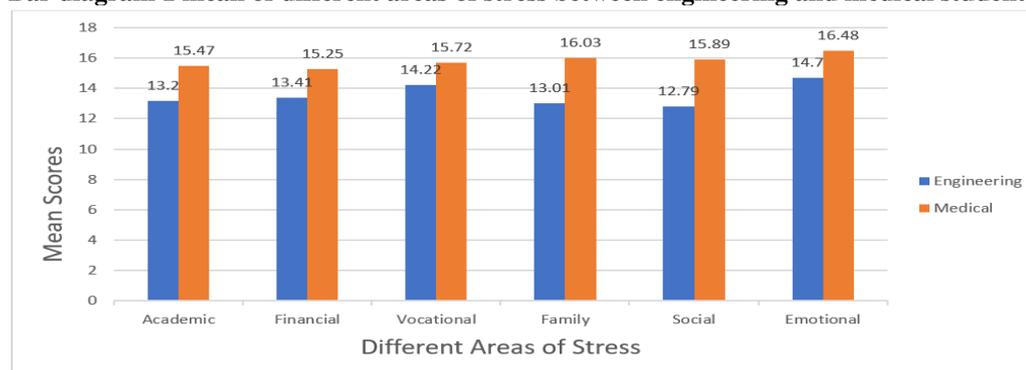
Table 01 comparison of different areas of stress between engineering and medical students

Different Areas of Stress	Types of Students				Critical ratio
	Engineering (N=200)		Medical (N=200)		
	Mean	SD	Mean	SD	
a. Academic Stress	13.2	3.38	15.47	2.98	7.09<0.01
b. Financial Stress	13.41	3.26	15.25	2.95	5.97<0.01
c. Vocational Stress	14.22	3.15	15.72	3.45	4.54<0.01
d. Family Stress	13.01	3.62	16.03	3.65	8.39<0.01
e. Social Stress	12.79	3.16	15.89	2.9	10.33<0.01
f. Emotional Stress	14.7	3.42	16.48	2.74	5.74<0.01
TOTAL	81.34	12.51	94.86	11.82	11.08<0.01

Significant level at 0.05 ->1.97

0.01->2.59

Bar diagram 1 mean of different areas of stress between engineering and medical students



To see the significant difference of stress between engineering and medical students. The Critical Ratio were calculated. The critical ratio value required to be significant at 0.01 level is 2.59 and at .05 level 1.97 with the degree of freedom 398. It may be revealed from table 4.02 that there is significant difference of stress engineering and medical students at 0.01 level. The obtained value of critical ratio found 11.08, which is significant at 0.01 level. The professional medical students have significantly high stress than engineering students at 0.01 level.

There are significant differences among different areas of stress between engineering and medical student as academic stress (Critical Ratio 7.09), financial stress (Critical Ratio 5.97), vocational stress (Critical Ratio 4.54), family stress (Critical Ratio 8.39), social stress (Critical Ratio 10.33) and emotional stress (critical ratio 5.74) at 0.01 level.

Thus, the null hypothesis stating that “There will be no significant difference of stress between engineering and medical students” is rejected. The medical students have significantly high stress as academic stress, financial stress, vocational stress, family stress, social stress and emotional stress than engineering students at 0.01 level. The engineering students have relatively low stress among different areas of stress.

It was supported by a study was conducted by Kulkarni, Rohilla, Reddy and Behera with title “A Comparative Study on Stress of Medical and Engineering Students by Using Kessler’s k-10 Questionnaire” According to the study, female students in both engineering and medical courses have a higher level of stress than male students.

CONCLUSION

The present study reveals that medical students have high stress in comparison to Engineering students. Medical students have high academic stress, financial stress, vocational stress, family stress, social stress and emotional stress than the Engineering students. As per the findings a proper academic structure should be there in the institute to help the students about their academic related problems. Government scholarship should be used to help the poor financial background students. Stress busting method also should be promoted. Role of family is very important to feel their children calm and stress free. Teacher should also act as student’s guardian so that student feel free to tell about their problems.

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