

Level of Stress, Stressors and Coping Strategies among Engineering College Students

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Abstract: College life is one of the most scintillating and memorable experience in an adolescent's life. They are exposed to a considerable amount of stress, which necessitates successful and constantly changing coping strategy. A descriptive study was conducted to assess the level of stress, stressors and the various coping strategies used by the students from selected Engineering Colleges of Vellore District. Total enumerative sampling technique was used and the data were collected from 151 students from engineering colleges situated in rural areas. The instruments used to collect data were demographic proforma, Perceived Stress Scale (PSS), Sources of Stress Questionnaire and Brief COPE scale. The findings revealed that majority of the students (66.2%) perceived moderate amount of stress, used various coping strategies like self-distraction and positive reframing to manage stress. The study also revealed that financial difficulties, worrying about the future and the study in general were their major sources of stress. The results of the study indicate the urgent need for the community health nurses and the management of the engineering colleges to take appropriate interventions to reduce the stress and thereby to improve the mental health of the students.

Keywords: college students, level of stress, stressors, coping

1. Introduction

Stress is increasingly becoming a part of our daily lives. Historically, the Latin word "stress" has been in common language since the seventeenth century and was used to address hardship, adversity, or affliction. However, stress is best described as a situation where environmental demands exceed the capacity for effective response by the individual and can potentially have physical and psychological consequences. Coping with stress, on the other hand is important for human survival and can be defined as the process of managing external or internal demands that are perceived as taxing on personal capacities and resources (Samira et al, 2015)

Engineering education in India rooted during the British era. The various branches in engineering courses provide wide opportunity for employment in public and private organizations. Hence, there is a growing number of engineering courses and colleges across the country. A large number of Indian engineers have made remarkable impact on the world internationally. To attain these positive outcomes the undergraduate engineering students have to face many problems and challenges during their course (Priyadharshini, Ramreke, Rubeena, & Ansari, 2016).

The engineering college students are exposed to a considerable amount of stress, which necessitates successful coping strategies. The stressors include internal and external pressures exerted by the environment to thrive and succeed, overcome economic hardship, worries about future and societal problems. Ineffective coping can lead to anxiety, depression, drinking problems and decline in academic accomplishments. It can affect both the physical and mental health of the students. Studies on coping with stress and identifying the stressors will have a significant impact in helping these students.

A study conducted by Samira et al (2015) among 400 medical students revealed that, over half of the students (53%) often felt stressed, yet 53.8% often felt confident as well and one third (32.1%) often felt that they could not cope with stress, 35.9% were unable to control, and 37.8% felt angered. The study also added that female students had more coping strategies as compared to male students.

Pariat, Rynjah, Joplin, and Kharjanain 2014 conducted a study on college students in Shillong city on academic stress and found that of all the academic stressors, family expectations (52.7%) and teacher expectations (32.4%) contributed the most towards the stress level of the participants.

The study conducted by Mathew (2017) among 100 college students of Bangalore city found that 4% of participants had mild level of stress, 82% had a moderate level of stress and 14% of participants had medium level of stress. The coping strategies in the study describe three domains i.e. Low, average and high. Majority of the participants (76%) use average coping mechanism. 8 % of participants use low and 16% of participants use high coping mechanisms.

All the above studies prove that students undergo stress during their college life, and they try out different coping strategies to cope with the stressors. Identifying the level of stress and teaching effective coping skills will help college students to deal with their stress. A cross sectional study was conducted by Ragesh, Sabitha, Anithakumari and Hamza in 2015 among 120 adolescent girls from rural areas of India. Findings showed lesser level of stress but the adolescents adopted maladaptive coping strategies like self-distraction, denial and self-blaming.

In the recent times, the perceived stress found among student community is found to be alarming and challenging. It leads to various mental health problems among college students. The investigator has come across many such incidents in the

rural community where she serves. Hence, this study was undertaken to identify the level of stress, stressors, and how students deal or cope with stress in engineering colleges situated in rural areas. The study findings will through light into planning appropriate stress management programmes in the Engineering colleges situated in rural areas.

2. Objectives

The objectives of the study were to:

- Assess the level of stress among Engineering College students
- Identify the common sources of stress among Engineering College students
- Identify the coping strategies used by the Engineering College students

3. Methods

A descriptive study design was used to conduct the study. A total of 151 students from two Engineering colleges situated in rural areas of Vellore District were included in the study by using total enumerative sampling technique. Students who did not give consent and were not present during the data collection time were excluded from the study.

The study was conducted after the approval and ethical clearance from the College of Nursing Research and Ethics Committee. Permission from the administration of the Engineering Colleges was obtained. The need and purpose of the study were explained to the college students, and after getting informed written consent from the students the questionnaire on stress, stressors and coping was administered.

Instruments

The data were collected using the following instruments:

- 1) **Socio-Demographic Proforma:** Age, gender, religion, type of family, locality, family income, year of study, parent's occupation, educational status, Place in the family
- 2) **The Perceived Stress Scale (PSS)** of ten items, measuring occurrence by "never", "almost never", "sometimes", "fairly often", and "very often" rated on a scale from 0 to 4 respectively. Higher score meaning, higher perceived stress by the student. Reliability Cronbach's alpha value is > 0.07.
- 3) **Sources of Stress Questionnaire** consists of 17 questions, with response choices of disagree and agree. The internal consistency of this questionnaire as indicated by the Cronbach's alpha value is 0.08.
- 4) **Brief COPE Scale** was used to measure the coping strategies used by the students. It consists of 28 items. It assesses how frequently each of the coping mechanisms were used by the students. Reliability of this instrument is 0.66 to 0.90

4. Results and Discussion

1) Demographic Profile

Majority (75.5%) of the students were males, and majority (84.8%) of them belonged to the Hindu religion. Regarding

the residence of the students, 53% reside in urban areas though the colleges are situated in rural areas. Most of them (58.3%) belonged to nuclear family and the family monthly income was between Rs.5000 to 10000 in 36.4% of students.

2) Level of Stress

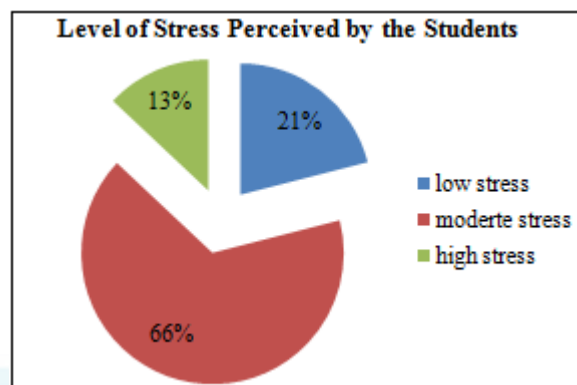


Figure 1: Distribution of Students according to their Perceived Level of Stress

Figure 1 shows that majority (66.2%) of the students perceived moderate level of stress, 20.5% perceived low level of stress and 13.2% perceived high level of stress.

A similar study was done by Pierceall and Keimin 2007, using the perceived stress scale on 212 students and the results showed that 75% were in a moderate stress category; 12% in a high stress category, and 13% in a low stress category and the findings are almost similar.

3) Sources of Stress

Table 1: Distribution of Students according to their Sources of Stress

No.	Stressors	Not agree		Agree	
		No	%	No	%
1	Study in general	66	43.7	85	56.3
2	Financial difficulties	63	41.7	88	58.3
3	Family problems	78	51.7	73	48.3
4	Sleeping disorders	104	68.9	47	31.1
5	Future worrying	41	27.2	110	72.8
6	Away from family	116	76.8	35	23.2
7	Trouble with parents	119	78.8	32	21.2
8	Trouble with teachers	94	62.3	57	37.7
9	Trouble with friends	128	84.8	23	16.2
10	Interpersonal conflict	99	65.6	52	34.4
11	No parental support	131	86.8	20	13.2
12	Hearing bad news	88	58.3	63	41.7
13	Appetite change	112	74.2	39	25.8
14	Low self-esteem	97	64.2	54	35.8
15	Roommate conflict	135	89.4	16	10.6
16	Transport trouble	94	62.3	57	37.7
17	Searching life partner	95	62.9	56	37.1

Table 1 shows that majority of the students (72.8%) were worried about their future, followed by financial difficulties (58.3%) and study in general (56.3%). A study done by Samira et al (2015) also states that worrying about the future and study in general were the major sources of stress for college students.

This study also shows that the students were in good terms with their friends (84.8%), and roommates (89.4%), and majority (86.8%) of them had good parental support. A study on adolescent perceptions of stress and future expectations by Preto (2017) revealed that adolescents with low stress were found to have good family relationship and well defined future expectations.

4) Coping Strategies

Table 2: Coping Strategies used by Students

S. no	Coping strategy	Never %	Sometimes %	Often %	Mostly %
1	Self-distraction	23.8	25.2	11.9	39.1
2	Active coping	18.5	26.5	23.2	31.8
3	Denial	35.8	24.5	19.2	20.5
4	Substance use	88.1	2	4	6
5	Use of emotional support	29.1	28.5	21.2	21.2
6	Use of instrumental support	36.4	26.5	13.2	23.8
7	Behavioral disengagement	44.4	27.8	12.6	15.2
8	Venting	42.4	27.2	9.3	21.2
9	Positive reframing	17.2	23.2	22.5	37.1
10	Planning	25.8	29.1	18.5	26.5
11	Humor	45	21.9	15.9	17.2
12	Acceptance	18.5	21.2	24.5	35.8
13	Religion	45.7	17.2	15.2	21.9
14	Self-blame	26.5	24.5	17.2	31.8

Table 2 shows that majority of the students use self-distraction (39.1%) as a method of coping with stress followed by positive reframing (37.1%) and acceptance (35.8%). Most of the students also use active coping (31.8%).

Puskar and Lamb, (1991) studied the life events, problems, stressors and coping methods of adolescents and found that the most common method of coping was self-distraction. Groer, Thomas and Shoffner in 1992 identified that high school students used active distraction techniques to cope with stress. The findings of the present study are in congruent with the findings of the study done by Radman, Ahmed, Al-naggar, Ahmed Al Shagga and Rampal in 2011 also found that the students used active coping, planning and acceptance to cope with stress.

Perceived stress and coping among rural adolescents in India by Ragesh, Sabitha, Anithakumari and Hamza (2015) also stated that adolescents used coping strategies like self-distraction, denial, positive reframing, blaming and acceptance.

5. Conclusion

A substantial number of engineering college students face moderate level of stress and some of them even perceive high level of stress. Future worries and about their study in general were their major sources of stress and they mainly used self-distraction and positive reframing to cope with stress. Understanding the causes of stress and the various strategies used by the students to deal with it will help the health personnel, college teachers, counseling centers, and university administrators to monitor and control the factors that cause undue stress to the students.

The current study also indicates the need for stress management programmes in all engineering colleges. Various approaches like identifying and eliminating or reducing, the most commonly identified sources of stress among students and conducting workshops on stress and coping can help the students. Availability of counsellors among faculty may help the students to overcome stressful situations. As health care personnel the Community Health Nurses who are in direct contact with these students in their community, play a major role in helping the students in reducing their stress, through stress management sessions and teaching relaxation techniques.

6. Conflicts of interest

The authors have declared no conflicts of interest.

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