Self reported stressors and use of coping strategies in undergraduate students of Latur

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Abstract
Background: Various stressors may affect students' psychological health and their academic performance. Coping strategies are specific efforts that individuals employ to manage stress. Objective of this study was to determine the most prevalent types of stressors among undergraduate (UG) college students of Latur, India as well as to identify the coping strategies they use to deal with stress. **Subjects and methods:** Cross sectional community based study with sample of 160 UG college students selected through purposive convenient sampling technique. There were 95 males and 65 females in the participants. The Student Life Stress Inventory (SLSI), a self-reported questionnaire was used to assess types of stressors and Brief COPE was used to assess coping strategies of students. The data obtained was analyzed statistically. **Results:** The top five stressors in the respondents were; Emotional stresses, Self-imposed stresses, Cognitive Appraisal, Pressures and Changes. The least common stressor reported by respondents was behavioral reactions to stressors. The top five coping mechanisms of our participants were: Religion, Active coping, Acceptance, Planning and Positive reframing. **Conclusion:** Emotional, Self-imposed, Cognitive appraisal, Pressures and Changes were dominant stressors. The most common coping behaviors present were using religion, active coping, acceptance of their stresses, planning and positive reframing. Female students were found to react emotionally more than male students.
Key Words: Stress, Stressor, Coping Strategy, Undergraduate, College Students.

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INTRODUCTION

Post-school undergraduate college life is an exciting time for its charms and challenges. In India, during this period expectations from family and teachers along with competition increase the stress levels in students. Every student strives hard to get ahead of everyone else and has to undergo so many college specific problems and difficulties. Challenges it poses for students may sometimes bring feelings of psychological distress. Academic, social and interpersonal stressors affect student life and might lead to unhealthy behaviors like smoking, substance use, depression, anxiety, suicidal tendencies, involvement in illegal activities, and issues of ethical dilemma.[1] Stressors that may broadly affect college life can be classified as academic, health related, interpersonal, self-imposed and financial stressors. When stress of any kind is perceived negatively or becomes excessive, students experience physical and psychological impairment and are vulnerable to develop depression and anxiety. Stress affects concentration span consequently leading to declining academic performance thereby further increasing stress, dissatisfaction, poor health, impairment in academic performance.[2] To quote an example of effect of stress on academics; study by *Nandi M. and others* in undergraduate medical students of medical college in Kolkata found more than 50% of the students reported being under stress in college more so in females than males. This stress showed definite relationship with mental well being and social contacts of students.[3] Coping behaviors are also important to be studied in relation to stress as use of productive coping styles and social support strongly affects the academic stress perceived. Some students may take to positive coping ways such as sports, exercise or creativity while others may fall prey to harmful behaviors like smoking,

drugs, alcohol abuse and other self damaging activities. In view of the evidence suggesting higher incidence of stress in college youth, we decided to find out most prevalent types of stressors in UG college youth of Latur and to also find out which major coping strategies are employed by these students to deal with it.

MATERIALS AND METODS

This cross sectional, analytical, community based study was carried out in different colleges in Latur, Maharashtra, India. The sample of the study consisted of 160 undergraduate college students selected from Medical College, College of Hotel Management, Technology and Engineering College and College of Commerce studies in Latur. The purposive convenient sampling technique was used to select the sample. Sample size calculations were made based on this formula; $n = Z^2 p (1-p)/e^2$ and minimum required sample size was 58. Data was collected using a close-ended structured self reported questionnaire Student Life Stress Inventory (SLSI). It is a self reported measure to assess levels of stress among college students. The Student Life Stress Inventory (SLSI) consists of 51 items having 9 sections indicating different type of stressors (frustrations, conflicts, pressure changes, and self imposed stressors) and reactions to the stressors (physiological, emotional, behavioral, and cognitive). The internal consistency coefficient of this scale was 0.83 indicating that the scale is reliable. The coping strategies were measured through Brief COPE Scale (Carver, 1997) comprising of 28 items categorized into 14 subscales. The response format of the items is a 4 point Likert scale (1= Never, 2= Very less, 3= Sometimes, 4= A lot). High score on each subscale shows more use of that particular coping strategy and vice-versa. Demographic information regarding background variables relevant to this study was collected using semi-structured proforma filled by interviewers. The proposal was approved by Ethics Review committee. The Potential institutions were identified and contacted. Written approval was taken from the concerned authorities. Data was collected after the the participants signed informed consent. The questionnaires were administered individually. For data analysis SPSS software version 21 was used. Then different variables were computed and descriptive statistics were applied.

RESULTS

Socio-demographic variables collected from participants are given in Table 1. Mean age of students participating in study was 20.17 ± (3.27); males and females constituted 59.37% and 40.62% of study population respectively. Courses participating students enrolled in included 42 (26.25 %) of MBBS, 56 (35.00 %) of BE (Bachelor of Engineering), 23 (14.37 %) of BHM ((Bachelor of Hotel Management) and 39 (24.37 %) of B.Com ((Bachelor of Commerce). The respondents hailed from different cities of Maharashtra. Occupationally, fathers of 45 (28.12 %) participants were skilled employees while 14 (8.75 %) were unskilled. 38 (23.75 %) had professional occupations while 27 (16.87 %) were retired and 36 (22.50 %) were involved in other miscellaneous occupations. Mothers' occupations include; most of them being homemakers 68 (42.50 %), skilled and unskilled workers formed 34 (21.25 %) and 14 (8.75 %) of the group respectively. 24 (15.00 %) mothers were engaged in professional work and 20 (12.5 %) were involved in other miscellaneous work. Regarding educational status of fathers of participant students; 12 (7.5 %) were uneducated, 25 (15.62 %) completed primary school, 68 (42.50 %) of them completed High-school/College while undergraduates and postgraduates included 24 (15.00 %) and 15 (9.37 %) respectively. Only 16 (10.00 %) had doctorates or PhD level qualifications. For mothers numbers were, 22 (13.75 %) were uneducated, 48 (30 %) had finished primary schooling, 42 (26.25 %) mothers had gone to high-school/college while 31 (19.37 %) were undergraduates and 13 (8.12 %) were postgraduates. Only 3 (1.87 %) had PhD or doctoral degrees. 63.12 % of the sample lived in a nuclear family system while the rest were living in joint family system. The details of socio-demographic data of participants are given in table 1.

The overall mean score of the inventory was 129.94 ± (28.20). The top five stressors in the respondents were; Emotional stresses, Self imposed stresses, Cognitive Appraisal, Pressure and Changes. The least common stressor reported by respondents was behavioral reactions to stressors. The mean score and percentages of score of the participants both males and females in each of the nine categories of the 'Students-Life Stress Inventory' (SLSI) are given in the Table 2. Women scored more in the emotional stress category than men. (Table 2)

Table 3 depicts the mean scores of the participants according to their gender and courses they are studying in. Mean score of SLSI for female was slightly higher than the male. The mean score and percentages of scores of participants according to the discipline of the study are 134.08 ± 23.52 for MBBS; 131.60 ± 26.84 for BE (Bachelor of Engineering), 127.86 ± 32.74 for BHM (Bachelor of Hotel Management) and 123.33 ± 4.72 for B.Com ((Bachelor of Commerce). Students of B.Com reportedly scored higher in the emotional reactions of stresses than students of other courses. Mean score of other courses were slightly more than MBBS and BHM in the behavioural reaction to stressors.

Table 1: Socio-demographic variables of study population

Sr. No	Variable		Frequency, Percentage, Mean ±(SD)
1	Age ± (SD)		20.17 ± (3.27)
2	Gender	Male	95 (59.37%)
		Female	65 (40.62%)
3	Number of siblings		2.51 ± (1.45)
4	Courses students are enrolled in	MBBS	42 (26.25 %)
		BE (Bachelor of Engineering)	56 (35.00 %)
		BHM ((Bachelor of Hotel Management)	23 (14.37 %)
		B.Com ((Bachelor of Commerce)	39 (24.37 %)
7	Father's Occupation	Unskilled	14 (8.75 %)
		Skilled	45 (28.12 %)
		Professional	38 (23.75 %)
		Retired	27 (16.87 %)
		Others	36 (22.50 %)
8	Mother's Occupation	Homemaker	68 (42.50 %)
		Skilled	34 (21.25 %)
		Unskilled	14 (8.75 %)
		Professional	24 (15.00 %)
		Others	20 (12.5 %)
9	Father's Education	Uneducated	12 (7.5 %)
		Primary	25 (15.62 %)
		High-school/College	68 (42.50 %)
		Undergraduate	24 (15.00 %)
		Postgraduate	15 (9.37 %)
		PhD/Doctorate	16 (10.00 %)
10	Mother's Education	Uneducated	22 (13.75 %)
		Primary	48 (30 %)
		High-school/College	42 (26.25 %)
		Undergraduate	31 (19.37 %)
		Postgraduate	13 (8.12 %)
		PhD/Doctorate	3 (1.87 %)
11	Family structure	Nuclear	101 (63.12 %)
		Joint	59 (36.87 %)

Table 2: Mean percentage scores of participants on Students-Life Stress Inventory (SLSI) scale

Sr. No.	Types of stressors	Mean percentage score
1	Frustrations	43.21
2	Conflicts	45.39
3	Pressures	58.70
4	Changes	55.61
5	Self imposed	68.75
6	Physiological	42.85
7	Emotional	76.47
8	Behavioral	32.52
9	Cognitive appraisal	66.83

Table 3: Mean Students-Life Stress Inventory (SLSI) scores of the participants

Sr. No	Characteristics		Mean scores of complete Student-Life stress inventory
1	Gender	Male	127.86 ± 27.75
		Female	133.26 ± 28.90
2	Courses students are enrolled in	MBBS	134.08 ± 23.52
		BE (Bachelor of Engineering)	131.60 ± 26.84
		BHM ((Bachelor of Hotel Management)	127.86 ± 32.74
		B.Com ((Bachelor of Commerce)	123.33 ± 4.72

The coping strategies employed by students to deal with stress were also explored using Brief COPE scale and their mean scores are mentioned in Table 4. Religion and active coping strategies were most commonly employed by students to cope with stress while denial and substance were least used strategies. Students from MBBS used active coping and self distraction as most common coping strategies. BE and BHM students used acceptance and self distraction commonly as coping strategies to manage their stress. B.Com students used religion and use of instrument support as most common coping strategies.

Table 4: Mean scores of coping strategies employed by students

Coping Strategies	Mean Score ± SD
Self distraction	5.46 ± 1.71
Active coping	6.19 ± 1.55
Denial	3.93 ± 1.79
Substance abuse	2.46 ± 1.20
Use of emotional support	4.99 ± 1.81
Use of instrument support	5.47 ± 1.76
Behavioral dis-engagement	4 ± 1.58
Venting	4.38 ± 1.71
Positive reframing	5.66 ± 1.68
Planning	5.80 ± 1.61
Humor	3.99 ± 1.92
Acceptance	5.92 ± 1.83
Religion	6.32 ± 1.68
Self Blame	4.58 ± 1.78

DISCUSSION

College Students are subjected to different kinds of stressors during under-graduation such as the pressure of academics, competition, an uncertain future and difficulties of adjusting with changes in surrounding. The students usually face social, emotional, physical, interpersonal and family problems which may affect their academic performance. In today's competitive world too much stress can cause physical and mental health problems, reduce students' self-esteem and may affect students academic achievement and personal life. This study is an attempt to explore the experience of stress and coping strategies to deal with stress in life of undergraduate college students in Latur. Our study reveals most common stressors present were emotional stressors, self-imposed stressors, cognitive appraisal, pressure and changes. Female students showed more emotional reactions in comparison to male students suggesting stress affects both genders differently. Study done in urban professional students in India reported stress was present in 25% of students with almost 1/3rd of them having mild to moderate levels of stress. Females were found to have significantly more stress than males.[5] Other studies conducted in past have reported approximately 2/3rd of college students were moderately stressed and about 10-12% are severely stressed. It has been assumed that emerging adult-hood, a transitional phase from adolescence into adulthood, augmented the college students' vulnerability to stress.[6] Several other studies conducted in undergraduate medical students and other fields have reported different rates of psychological morbidity among medical students using GHQ.[7] A study from Agha Khan University, Pakistan has reported that more than 90% of students felt stressed at one time or the other during their course[8] The most frequently occurring sources of stress were, 'quality of hostel amenities like food in mess and cleanaliness', 'dissatisfaction with the class lectures', vastness of academic curriculum/syllabus', worrying about the future', 'lack of entertainment in the institution', "frequency of examinations', 'expectations on all fronts', and 'lack of leisure time'.[4] In our study most common sources of stressors were found to be emotional stressors, self-imposed stressors, cognitive appraisal, pressure and changes. The most frequent coping strategies used by college students were religious coping, active coping, acceptance, planning and positive reframing. The significant gender difference was also observed regarding coping strategies to deal with the stressors. Our study reveals students frequently adopted active coping strategies (religion, positive reframing, planning, acceptance, and active coping) rather than avoidant strategies (denial, alcohol/drug use and behavioral disengagement). Other Studies from the United Kingdom have reported, use of alcohol, tobacco and drugs as common coping strategies adopted by the medical students.[9] Students from all fields of education are exposed to stress it seems that specific fields like medical students are more prone to the development of stress compared to others.

IMPLICATIONS

This study finds evidence regarding various stressors affecting the performance of students during their college life. A large proportion of students might face psychological problems in future. The stressors experienced by the students were mainly related to academics and psychosocial concerns. These stressors need to be analyzed further in detail. This research highlights the need to incorporate stress management education in the curriculum, as well as to develop mechanisms for decreasing stress among students in colleges like academic counselors, involvement of parents and teachers. Creating positive (Spiritual) environments at colleges and hostels, providing good food and recreational activities help to decrease stress among students. Healthy coping strategies could then be encouraged and a system put into place to support the students to adopt useful coping strategies.

LIMITATIONS

There are some limitations to this study. This study was based on results from a self-administered questionnaire, hence reporting bias cannot be totally eliminated. There was limited geographical coverage and limited group of participants. Cross-sectional design did not allow us to study the cause-and-effect relationship of psychological stressors and coping strategies.

FUTURE DIRECTIONS

Further studies should be conducted with larger student population considering curriculum, facilities, patterns of examinations, background in order to get a clearer picture of the problem.

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