

## JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH

**How to cite this article:**

SHAH C , R S TRIVEDI, DIWAN J , DIXIT R , ANAND A K.COMMON STRESSORS AND COPING OF STRESS BY MEDICAL STUDENTS.Journal of Clinical and Diagnostic Research [serial online] 2009 August [cited: 2009 August 7]; 3:1621-1626. Available from [http://www.jcdr.net/back\\_issues.asp?issn=0973-709x&year=2009&month= August &volume=3&issue=4&page=1621-1626 &id=401](http://www.jcdr.net/back_issues.asp?issn=0973-709x&year=2009&month= August &volume=3&issue=4&page=1621-1626 &id=401)

## ORIGINAL ARTICLE

**Common Stressors And Coping Of Stress By Medical Students**

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**ABSTRACT**

Everyone experiences stress. It is a natural reaction that everyone experiences at one time or the other. It is a part of human nature. Stress is the body's response to danger or perceived threat. Many things in life can bring us stress. Adrenalin is released through our body, causing our body pressure to rise and the outward muscles to tighten. Elevated levels of stress can put a toll on our system but we can develop ways to cope with stress or to make attempts in our lives to avoid it. The participants in this study were 126 undergraduate medical students of Shree M P Shah Medical College, Jamnagar. Systemic random sampling was used for the selection of the participants.

A majority of the 1<sup>st</sup> year medical students at Shri M.P Shah Medical College perceived stress. The stress profiles were as follows. 18-25% stressors were environmental. 21-40% stressors were due to office relationships. 18-25% stressors were due to social factors. 35-70% stressors were due to academic factors.

As stress has a detrimental effect both on health as well as academic performance, the college administration should incorporate stress management plans as a co-curricular activity. The stressors at the campus should be identified, discussed with, and proper coping assistance should be provided to individual students. As stress in our colleges cannot be eliminated, we can and should do a better job and provide life satisfaction to our students.

**Key Words:** Medical Student, stressor, coping mechanism, 't' test

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**Introduction**

Everyone experiences stress. It is a natural reaction that everyone experiences at one time or the other. It is a part of human nature. Stress is the body's response to danger or perceived threat. Many things in

life can bring us stress. Adrenalin is released through our body, causing our blood pressure to rise and our muscles to tighten. Elevated levels of stress can put a toll on our system but we can develop ways to cope with stress or make attempts in our lives to avoid it.

College students, especially freshers, are a group particularly prone to stress[1] due to the transitional nature of college life[2]. They must adjust to being away from home for the first time, maintain a high level of academic environment and adjust to a new social environment.

The stressors don't cause anxiety or tension by themselves. Instead, stress results from the interaction between stressors and the individual's perception and reaction to those stressors<sup>3</sup>. The amount of stress experienced may be influenced by the individual's ability to effectively cope with stressful events and situations[1]. If stress is not dealt with effectively, feelings of loneliness and nervousness, as well as sleeplessness and excessive worrying may result[4].

The 'lack of fit' between a student's expectation, hopes and fears on the one hand and the pressures and stress of his/her college environment on the other, is often revealed in the potential dropout's complaints, that the college is "not what I expected" [5]. It is important that stress intervention programs may be designed to address an effective intervention and the stressors specific to college students must be determined [4].

The dynamic relationship between the person and environment in stress perception and reaction is especially magnified in college students. The problems and situations encountered by college students may differ from those faced by their non-student peers[6]. The environment in which medical students live is quite different with respect to the sources of stress, such as the evaluation by superiors and striving for goals, the continuous evaluation that college students are subjected to such as weekly tests and papers, which is not often seen by non medical students[7].

The pressure to earn good marks (grades) and to earn a degree is very high[6]. Earning high grades is not the only source of stress for college students. Other potential sources of stress include excessive homework, uncleared assignments and uncomfortable classrooms[8]. In addition to academic requirements, relationships with faculty members and time pressure may also be sources of stress[9]. Relationships with family and friends, eating and sleeping

habits and loneliness may affect some students on an average[4].

Coping is defined as the person's constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources[10]. Research shows that students with an active coping style (those who can tackle problems in a positive and straight forward manner) have lower levels of psychological distress[11]. In view of the potential long term benefits of managing stress in a more effective way, it may be important for students to develop such skills early in their medical career.

The objective of this study was to determine what the most prevalent sources of stressors among our students are, and to evaluate the coping mechanisms adopted by them. Medical colleges may consider incorporating training in coping skills into the medical curriculum to reach it to the students who need it the most.

Brown[12] suggested that certain types of students would perform optimally in certain kinds of college environments and other writers[13],[14] have emphasized the importance of the compatibility determining the operating efficiency of both the students and the college.

## **Material And Methods**

### **Participants**

The participants were 126 undergraduate medical students of Shree M P Shah Medical College, Jamnagar. Systemic random sampling was used for the selection of the participants.

### **Procedures**

In the present study, the following information was collected from the participants:

1. Personal data: it included general information regarding the stay in a hostel, the medium of study in

- schooling, mother tongue, socio economic status, residential area etc.
2. Stress inducing factors: they were divided into four categories of potential sources of stress.
    - a. Academic: academic achievements, examinations and course material, competition among students.
    - b. Physical factors: hostel facilities, environmental factors.
    - c. Office relationships: to get certificates, scholarships etc. from the office.
    - d. Social factors: social aspects in college, relationships in classrooms, parental influences, socioeconomic supports etc.

Each item was scaled (Likert's scale) (15) as:

- 0: no stress,
- 1: mild stress (sometimes stressful),
- 2: moderate stress (often stressful),
- 3: considerable stress (always stressful),
- 4: extreme stress.

A total score was obtained from summing up the score of each subgroup. Average subgroups of individuals were compared for further analysis.

Ragging is routinely considered as one of the stress factors but it is not so in our college, as an anti-ragging committee set up in our college since three years focuses particularly on various hostels of our institute, which is often considered the hub of ragging activities. They also look into the detailed aspects of ragging like why it happens and during what time of the day.

3. Stress reducing factors or ways of coping: To determine the stress coping methods, various factors perceived as stress relievers which includes gymkhana activity, personal hobbies, planning of studies, physical exercise and other co-curricular activities and social supports, were evaluated. Social supports involve a kind of relationship transaction between individuals. It provided "coping assistance" to an individual. It is

also a positive factor that aids in the maintenance of health as well as in disease recovery. It assessed perception from their specific source: family, friends and significant ly others (special persons). The statistical test used was the Student's 't' test.

## Results

- A majority of the 1<sup>st</sup> year medical students in Shri M.P Shah Medical College perceived stress.
- The stress profiles were as follows:
  - 18-25% stressors were environmental.
  - 21-40% stressors were due to office relationships
  - 18-25% stressors were due to social factors
  - 35-70% stressors were due to academic factors
- In detail, stress responds to individuals stressors are shown in [Table/Fig 1].

(Table/Fig 1) Stress responds to individuals stressors

Sr.	Stressors	N
1.	Residing away from home	21
2.	Change in the medium of education	49
3.	Hostel environment	
	Food	12
	Friends	7
	Seniors	23
4	Office relations	
	To get certificates	32
	To get scholarship	58
5.	Teaching and learning	
	Course materials	
	Length of course	102
	Understanding the course	62
	Reading textbooks	46
	Overloading of work	96
	Classroom relationship	
	Teachers	14
	With same students	2
	With opposite sex students	26
	Competition	
	In exams	84
	During learning	58
	Pressure From parents/friends	22

Overall difference in the perception of stress among different categories was demonstrated in [Table/Fig 2].

(Table/Fig 2) Overall difference in the perception of stress among different categories

I. Gender wise difference	
	Stress (score $\geq 2$ )
Male (N=100)	16.80%
Female (n=26)	16.38%
II. Medium of education in schooling	
Gujarati (n=86)	18.78 %
English (n = 30)	8.33 %
Hindi (n = 10)	12.20 %
III. Staying pattern	
In hostel (n=93)	18.99%
At home (n=33)	9.24%
IV. Social economic status	
Lower (n=1)	1
Middle (n=67)	19.89
Upper middle(n=52)	11.53
Higher (n=6)	22.22

Perception of stress for individual subgroups of stressors. On the basis of gender, medium of education, staying pattern, socio economic status is given [Table/Fig 3].

(Table Fig 3) Perception of stress for individual subgroups of stressors. On the basis of gender, medium of education, staying pattern, socio economic status

Subgroup	Staying away from home	Hostel environment	Office relationship	Course material	Classroom relationship	Competitive environment
TOTAL	23(18.25%)	3(2.3%)	27(21.11%)	45(35.7%)	3(2.3%)	23(18.25%)
SEX						
Male (100)	16(16%)	2(2%)	23(23%)	38(38%)	2(2%)	20(20%)
Female (26)	7(26.9%)	1(3.8%)	4(15.38%)	7(26.1%)	1(3.8%)	3(11.5%)
Medium						
English(30)	1(3.33%)	0	4(13.3%)	8(26.6%)	0	9(30%)
Hindi(10)	1(10%)	0	0	3(30)	1(10%)	0
Gujarati (86)	21(24.4%)	3(3.48%)	23(26.74%)	34(39.5%)	2(2.32%)	14(16.27%)
Socioeconomic						
Low(1)	0	0	0	0	0	0
Middle(67)	16(33.88%)	2(2.98%)	17(25.37%)	29(43.28%)	1(1.49%)	18(22.38%)
U. middle(52)	7(13.46)	1(1.92)	7(13.46)	12(23.07)	2(3.84)	7(13.46)
Higher(6)	0	0	3(50)	4(66.66)	0	1(16.66)
Stay						
Hostel(93)	23(24.73)	3(3.22)	19(20.43)	38(40.86)	3(3.22)	20(21.52)
Home(33)	0	0	8(24.24)	7(21.21)	0	3(10)

[Table/Fig 4] reveals the personal stress management plan employed by students.

(Table Fig 4) reveals the personal stress management plan employed by students

NO	Way of coping	Response percentage(n)
1	Talking with friends	28.57 (36)
2	Go to sleep	25.39(32)
3	Playing and watching sports	19.04(24)
4	Go to home	19.04(24)
5	Calling parents with phone	15.87(20)
6	Planning of study searching for good materials	34.92(44)
7	To do movies/ internet/videogames/cultural activities/hobbies	15.87(20)
8	Seek help from seniors	15.87(20)
9	Seek help from teachers	15.87(20)
10	Go to yoga	12.69(16)
11	Smoking/tobacco chewing / physical exercise	6.34(8)

A majority of students preferred to cope with stressful conditions by talking to their friends (28.57%), which was followed by another way of coping like going to sleep (25.39%) or playing or watching sports (19.04%). The least preferred ways indicated by the students were either physical exercise or chewing or smoking tobacco (6.34%).

Even though 34.92% students felt the importance of planning and procuring study and related materials, it was ranked at the 6<sup>th</sup> position among their preferences (6 out of 11)

### Discussion

This study confirmed the general impression that there is a considerable amount of stress among medical students at Shri M.P Shah Medical College, Jamnagar. This is similar to other studies elsewhere, which have reported such findings (10, 16). The five most frequent stressors in order are, the length of course material (n102), overloading of work (n=96), competition in exams (n=84), understanding information (n=62) and competition during the learning process (n=58). This shows that academic factors were greater perceived causes of stress among medical students at Shri M.P Shah Medical College. This was similar to the finding reported by others. Examination and overloading of work are also reported by others [10], [17], [18],[19].

Overall, there was no gender wise difference in the perceived stress among students which are in conformity with those reported by others (10, 20). Stress was found to be more in the students from Gujarati medium schools than in the students from English and Hindi medium schools ( $p < 0.05$ ). This is in contradiction with the findings of Supe AN who did not find differences in the perceived stress on the basis of the mediums of study in school education. [10]. The school level medium of instruction also plays a role in the perception of stress. The ‘‘Hindi’’ board and ‘‘English’’ board students were able to adjust to the social–academic environment more easily than the ‘Gujarati’ board students. However, the ‘Gujarati’ board students were able to establish good classroom relationships and compete confidently with others in studies.

There were differences in the perceived stress among the students residing in the hostel. Stress was found to be double in

hostel students in comparison to that in the students of the local area (day scholars) ( $p < 0.05$ ). This is in contradiction with the findings of Supe AN who did not find differences in stress levels in the students residing in hostels and in those residing in the local area (home). Difference in stress levels in both genders was evident in our study, which clearly indicated that females perceive that the change in medium, residing away from home and the hostel environment are stressful.

Depending on the socioeconomical status, higher levels of stress was found among students coming from the higher socioeconomical group than that in students coming from lower socioeconomical groups. Another interesting fact which was observed in the study was that the students of higher socioeconomical groups were stressed with course material and class room relationships, either with teachers or with fellow students. As compared to students residing in hostels, local students found office relationships like getting certificates and scholarships, more difficult and stressful.

Many recommendations have been made and implemented to counter the stress of medical students ever since they spoke about it. But medical colleges should consider integrating the medical curriculum to make sure that help reaches those most in need. Among the coping styles, the selective coping style as achieved by planning and proper study programmes in a positive and straight forward manner brings good levels of life satisfaction. However, in the present study, 34.92% of students have preferred these styles but they have ranked it lower in their choice of coping style. "Defensive or avoidance" coping style in the form of going to sleep or divert activities need attention by teachers/wardens. In the present study, avoidance behaviour ranked 2<sup>nd</sup> in their preference.

Talking to friends was the most common stress relieving factor in students. Friends as the most perceived social support for

students. This might be because students spend more time in medical colleges than at home. This is a good sign in this competitive field where they have to compete with one another in examination. Going to play sports (or exercise) was ranked third among the coping methods and it is one of the effective methods, as exercise increases the overall health and the sense of well-being, 'which puts more pep in one's steps every day'. But exercise also has some direct stress-busting benefits. It pumps up the endorphins. Physical activity helps to bump up the production of the brain's feel-good neurotransmitters called endorphins. Although this function is often referred to as a runner's high, a rousing game of tennis or a nature hike also can contribute to this same feeling. It is 'meditation in movement'.

After a fast-paced game of racquetball or several laps in the pool, one often finds that he/she has forgotten the day's dilemmas and irritations and could concentrate only on the body's movements. By regularly shedding daily tensions through movement and physical activity, one may find that this helps to focus on a single task, and the resulting energy and optimism can help him/her remain calm and clear in everything that he/she does. It improves the mood. Regular exercise can increase self-confidence and lower the symptoms associated with mild depression and anxiety. This can ease stress levels and give one a sense of command over one's body and your life.

Even though a modest amount of stress/stressors are documented to motivate and increase the performance more, the stressors which affect younger students should be explored. The institute should be able to provide adequate counseling regarding personal stress management plans to the groups of students getting admitted, as well as to those who employ avoidance/defensive behaviour so as to enhance their intellectual properties. The initial stress, its source and severity, a detailed history and coping style should be

investigated for future research using more diverse samples.

### Conclusion

In the present study, an attempt has been made to identify the stress profile of medical students, the student community which is more stressed than others. As stress has detrimental effects both on the health as well as the academic performance of the students, the college administration should incorporate stress management plans as a co-curricular activity. The stressors at the campus should be identified, discussed with, and proper coping assistance should be provided to individual students. As stress in our colleges cannot be eliminated, we can and should do a better job and provide life satisfaction to our students.

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