

## Stress management strategies among medical students

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### Abstract

**Introduction:** Stress doesn't only exist among professionals but also among medical students who undergo high ranked stress due to study burden. Although some degree of stress is assumed as a normal part of medical training and can serve as motivating factor but not all students find the stress manageable. Stress may give rise to feelings of fear, incompetence, hopelessness, anger, and guilt and has been associated with both psychological and physical / physiological disorders. We need to explore most effective and healthy coping strategies for the medical students.

**Objective:** The purpose of this study was to identify key stressors by assessing the aptitude for language (English), stress, anxiety level among medical students and to explore the most effective stress management strategies.

**Materials and Methods:** 185 medical students i.e., 91 MBBS and 94 BDS students. For above purpose measures used were Differential Aptitude Test (DAT) for language (English), Cohen's Perceived Stress Scale (PSS), Sinha's Anxiety Scale (SAS) and Stress Coping Checklist (SCC).

**Result and Discussions:** Students were found to be moderately stressed and anxious but found to have adequate English aptitude, grammatical part was found to be questionable. Stress coping level was adequate being in 1<sup>ST</sup> year and most useful stress coping strategies were listed.

**Conclusion:** Stress is really exerting element for all of us but the students who are involved in higher studies specifically medical entrants are needed to be identified, guided and supported with immediate effects.

**Keywords:** Stress, Stress coping, Medical students.

### Introduction

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.<sup>1</sup>

Medical education has always been perceived as highly stressful by students. But stress among medical students is less explored in comparison to the students of other professional courses. Only a few studies have assessed the perceptions of stress and coping strategies among medical students.<sup>2</sup> When attempts were made in this area it was found that stressors affecting medical students' overall wellbeing were related to their training especially academic matters.<sup>3</sup> Also, the most common stressors were tests and examinations, time pressure, too much content to be studied, getting behind in work, conflicting demands, not getting work done within time planned and heavy workload, all are contributing stress among students. For our zealous and young budding doctors, college should emphasize on learning and growth, not illness. When compared with students of other fields, stress levels of medical students were found to be significantly high,<sup>4,5</sup> along with high level of anxiety and depression.<sup>6</sup>

Current study focuses on evaluating and handling stress of the students from the very beginning of the medical academic journey. The sudden transition from sheltered school environment to professional training without much of mental preparedness makes first year students experience highest degree of pressure due to

studies,<sup>7</sup> and as the course proceeds the academic pressures increases and brings additional hardship of rotatory internship and frequent examinations.<sup>8</sup>

If stress is left unmanaged it can lead to serious problems. Exposure to chronic stress can contribute to both physical illnesses, such as heart disease, unmanageable anxiety. Thus, focus on student's needs and problems can prevent the harmful effects of stress on health and academic performance. Current study is an attempt to draw attention to deal with psychological health of medical students i.e., our future doctors who will be responsible for lives of others.

Every individual perceives the events and circumstances differently and hence some are comparatively well adjusted and less affected than others. One need to have a suitable stress management mechanism which keep the system intact. Stress management strategies are the specific efforts, both behavioural and psychological that individual employ to master, tolerate, reduce or minimise stress. It plays a central role in adaptation to a stressful life events. It's a stabilizing factor that assist an individual in psychosocial adaption during a stressful period. And we need to identify the most effective ways that medical students use and also to develop a system where medical student can work with their teachers, parents and peer to deal effectively with the academic and personal life stress.

The practice of modern medicine requires excellent stress management/coping skills from its practitioners, which is the focuses of the current study. The aim of the

study is to study stress level among medical students and find out the most effective stress coping strategies.

### Materials and Methods

Research design is cross sectional and sample size is 185 medical science students (MBBS & BDS) of 1<sup>st</sup> year at Santosh University, U.P. Department of Clinical Psychology in collaboration with Department of Paediatrics conducted this study. Students were assessed on English aptitude, anxiety, stress and stress coping. The nature of the questionnaires was based on self-administration. English was assessed in order to identify if students are facing trouble with regard to understand their lecture or course content which is in English. English language aptitude was assessed by Differential Aptitude Test.<sup>9</sup> It assessed knowledge of English grammar and vocabulary. Anxiety level was assessed using Sinha's Anxiety scale,<sup>10</sup> stress level was assessed using Cohen's Perceived stress scale<sup>11</sup> and coping ability was assessed by Stress Coping Checklist.<sup>12</sup> All included students were required to fill the consent form. Statistical mean, standard deviation, correlation by Carl Pearson method and students t-test were calculated for the analysis.

### Results and Discussions

Table 1, reflects that overall students scored 94.18 ( $\pm 15.14$ ) on English aptitude, which is above average and almost 81% students scored above average. And no significant difference of English scores was observed across both the gender. But when we compared scores of spellings and grammar, we found that serious problem with grammatical part is present among majority of the students. The results show that lack of English language is also one of the stressors because students had limited exposure of English and the sudden transition into less spoken language has increased their difficulty.

Mean scores on anxiety level for overall student is found to be 31.98 ( $\pm 11.08$ ) which falls in normal category. Thus, contrary to previously done studies which suggest high anxiety level among medical students we did not find the same. But findings revealed that female students were comparatively more anxious than male students. Similar findings were reported by previous studies where females reported higher score as compared to their male counterparts on stress and anxiety.<sup>13,14</sup>

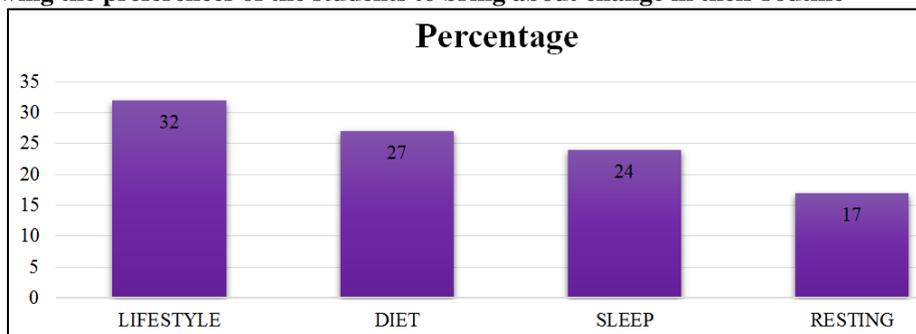
**Table 1: Showing mean of male and female students and value of t-test**

S. No.	Tests	Male	Female	Total	t – Test
1	English Aptitude	92.25	95.53	94.18	0.1
2	Anxiety	31.40	32.17	31.98	0.63
3	Stress	16.93	16.99	12.37	0.93
4	Stress Coping	12.04	12.37	12.18	0.31

Stress was evaluated on Cohen's perceived stress scale, mean score was 12.37 ( $\pm 3.98$ ) which indicates moderate stress level among the students but female were significantly more stressed than male students. It's an important issue for medical educators to know the prevalence and cause of student's distress which not only affects their health but also their academic achievement at different point of their study.<sup>15</sup> (Table 1)

Mean scores on stress coping checklist was found to be 12.18 ( $\pm 2.17$ ) which indicate adequate stress coping level among medical students. On comparing scores across both the gender it was found that male students have better stress coping level than female students but the value of student t test i.e., 0.31 indicates that the difference is non-significant. (Table 1)

**Graph 1: Showing the preferences of the students to bring about change in their routine**



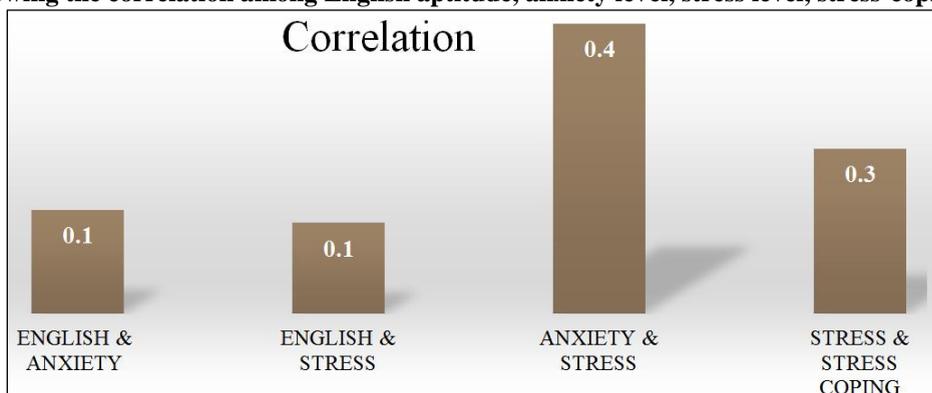
Graph 1 shows percentage of students who wish to bring about changes in life style, their diet, sleeping pattern and resting time. Change in life style is chosen

by almost 32% students, change in diet 27% students, change in sleep pattern 24% student, change in resting time 17% of students. It is suggested that if we modify

the routine and make some space to keep up good routine for sound health it will create a balance between

the demand and the potential one carries to deal with stress and anxiety.

**Graph 2: Showing the correlation among English aptitude, anxiety level, stress level, stress-coping**



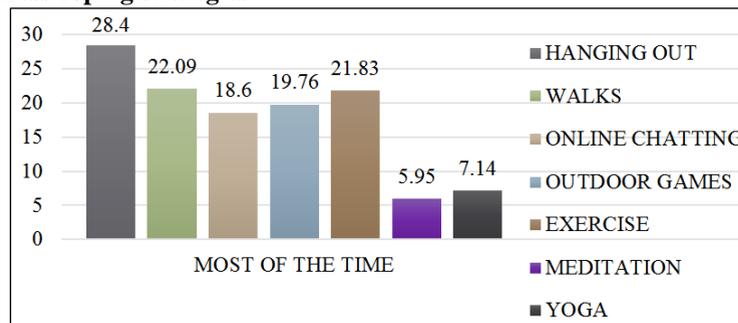
In current study, we found a positive correlation between stress and anxiety. Stress and anxiety go hand in hand. Stress is a response to a threat in situation whereas anxiety is a reaction to stress. Hence it can be implied that increased stress is making students more anxious. (Graph 2)

There is positive but insignificant correlation of English aptitude with stress and anxiety. The reason could be that during the beginning of the course, the content of the syllabus appears to be easier than it is going to be in years ahead. But since we assessed aptitude of English we found that majority of the

student carries serious problem with regard to grammatical part which will definitely be problematic in preceding years with all the advancement in their course. (Graph 2)

The positive correlation among stress and stress coping shows that as stress increases the intensity of applying stress coping strategies also increases but the value of correlation is non-significant. It could be possible that the strategies that are employed by the students are providing them little support but not making them learn and grow stress free. (Graph 2)

**Graph 3: Shows the stress coping strategies**



When stress coping strategies were explored, out of 185 students, most preferred coping strategy was spending time with friends (28.4%), second most preferred was going for morning and evening walks (22.09 %), then exercise 21.83%, outdoor games (19.76%), online chatting 18.6%, yoga 7.16% and meditation 5.95%. It is evident that these young students relieve their stress mainly by spending time with their friends. It is congruent with the finding obtained in a similar study in King Saud University, where spending time with friends and family was mostly used coping strategy among 1<sup>st</sup> year medical students.<sup>16</sup> (Graph 3)

## Conclusion

Medical health professional faces many challenges throughout his life, his experiences and many aspects of his profession are drenching at physical and psychological level. There is no denial about the presence of mental health issues among medical community.<sup>17</sup> But right training and support at the very beginning of their academic career would empower them to deal efficiently with challenging situation. Thus current study drew attention to the less explored area i.e., Mental health of medical students.

Whilst identifying the stressors among 1<sup>st</sup> year medical students, we found that some of the students had lack of average English aptitude and it is also one

of the reason for creating stress and anxiety among them besides academics. Education and language are well connected and inseparable component of each other. The medium of instruction makes the learning pattern simple or complex.<sup>18</sup> In a country like India where the diversity is huge, students come from different states and they are more comfortable with their regional language than in English.

It was found that students are bearing moderate levels of stress which is in sync with the previous findings where higher level of stress was prevalent among medicine and dentistry students.<sup>19</sup>

Although stress cannot be predicted all the time but having good stress coping strategies is definitely an asset. However we also understand that each individual has varying degrees of stress coping skills, so it is important to explore the source of stress/difficulty and provide them with a resource to be successful.<sup>20</sup> Coping is crucial to physical and psychological health, specifically because stress has been associated with a range of psychological & health outcomes.<sup>21</sup>

The present study has established that 1<sup>st</sup> year medical student carries sufficient abilities to manage the stress and the most preferred coping strategy is hanging out with friends which indicates the importance of psycho-social support in the form of our family & friends.

Although most of the students were found to cope well with the stress but a sub group with no effective strategies besides severe stress levels is also there who needs attention. Mary E Rogers correctly pointed that one of the reason for dropping out of medicine is medical educational training system.<sup>22</sup>

It is considerable matter that students are taking initiatives to manage stress on their own but seeing the future scenario of medical science it is going to be more distressing and competitive due to EXIT examination. Thus we recommend that medical educators must bring in a psycho social support for each and every medical college for wellness, counselling, preventive health services, stress management program on regular basis. And strategies can be more effective if they can be included as a apart of co-curricular activity. It will turn these students into well capable and strong minded professionals which will also prevent them from professional burnout syndrome.

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