

## Stressors in health professional students

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### Abstract

Stress is increasingly seen to invade every segment of the society today. Increasing stress levels are pushing many people into depression as is evidenced by the increased number of suicides in younger population. Health Professional courses are difficult to gain entry into. They are lengthy, hectic and stressful to continue.

To determine stress levels, most common and least common stressors, and any gender differences in stress levels among first year health professional students.

A study was done in an institution in south India. Ethical clearance was obtained from the institution research council and informed consent obtained from all the students involved in the study. First year medical and dental students were included and the study protocol was explained to them first. A previously tested instrument, the Medical Student Stress Questionnaire (MSSQ) was administered to them.

On an average first year health professionals are moderately stressed when analyzed according to MSSQ. Stress levels are high in dental students than in medical students. Girls are more stressed than boys. Dental girls are moderately to highly stressed. Dental boys are mildly stressed. The most common stressor is Inter and intra personal related stress; second most common is Group activity related stress. The least common stressors are drive, desire related stress and social activity related stress.

Almost all the health professional students are stressed moderately. Inter and intra personal related stressors seem to be the greatest cause of stress in them.

**Keywords:** Stress, Students, Stressors, Medical, Dental

### Introduction

Stress is increasingly seen to invade every segment of society today. Though digital technology is becoming more and more common in different spheres of life mental stress is also increasing in individuals. This is because of intense competition and a desire on part of people to excel in everything. Teenagers and young people are becoming billionaires early in life. Increasing stress levels are pushing many people into depression as is evidenced by the increased levels of suicides in younger population. In India, every 90 minutes a teenager is attempting suicide and every 6 hours a teenager is successful in committing teenager as per a news magazine.<sup>(1)</sup>

Depression as well as stress is becoming more and more common in students because of unhealthy competition in academics, all over the world.<sup>(2,3,4,5)</sup> This competition is seen in primary and secondary as well as in pre university courses. Competitive examinations are determining the entry into professional graduate courses especially in India. Specialized coaching centers are increasingly available which drill students through long term, short term, intensive and crash coaching programs. In these courses students are made to sit and study from 6am to 10:00pm in some instances. They do not have break for weekends and are made to study day after day for months together. At the end of this rigorous exercise some of the students succeed and enter the portals of professional institutions with relief. But what happens to them there?

They are subjected to further more stress because of the following:

1. Challenge of new learning environment. The paradigm of learning is shifted from teacher-centric to student-centric.
2. Change of classmates and hostel mates with many compromises and adjustments they are forced to make.
3. In certain cases there is a challenge of change of medium of instruction from regional languages to English.
4. Increased levels of parental expectations on academic achievements of students in professional courses.
5. In some institutions there are issues of ragging by the senior students.

Distress and depression have been known to plague medical students in different regions of the world.<sup>(2,3,4,5)</sup> In this context we studied the stress levels of health professional students during their first year at college. This is a cross sectional study wherein a previously tested and pre validated instrument, the Medical Student Stress Questionnaire (MSSQ) was administered to all entry level students in medical and dental undergraduate courses of institution based in a town of a southern state of India. Though such studies were done in other places and countries they were not reported so far in this area so the need for such study exists.<sup>(6,7,8)</sup>

The MSSQ results was analyzed at depth in relation to the following six types of stressors.

1. Academic Related Stressors. (ARS)
2. Intra-personal and interpersonal Related Stressors. (IRS)
3. Teaching and Learning Related Stressors. (TLRS)
4. Social Related Stressors. (SRS)
5. Drive and desire Related Stressors. (DRS)
6. Group Activity Related Stressors. (GARS)

### Materials and Method

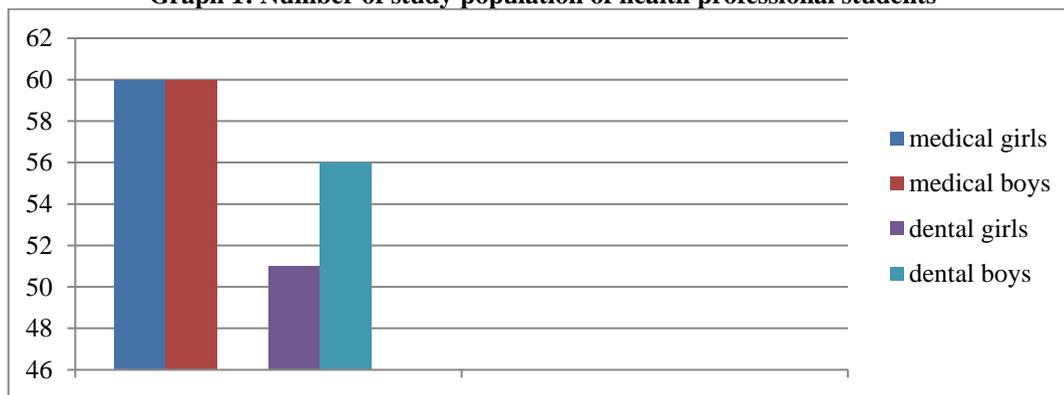
The study was done in an institution in south India which has medical and dental courses. The institutional and ethical clearance was obtained from the relevant institutional research and ethics committee after submitting the necessary documents. Informed consent was obtained from all the students who are involved in the study. All the first year medical and dental students were taken into confidence and the study protocol was explained to them. They were informed that all the details will be kept confidential by the investigators. A pre validated test instrument The Medical Student Stress Questionnaire was administered to all entry level students of health professional courses. This was done

separately for each stream of study in a quiet environment after explaining the procedure in detail to them. Each student was supplied a copy of the questionnaire and clear instructions were given as to complete them. Terms not clear to them were explained to them in detail.

### Results

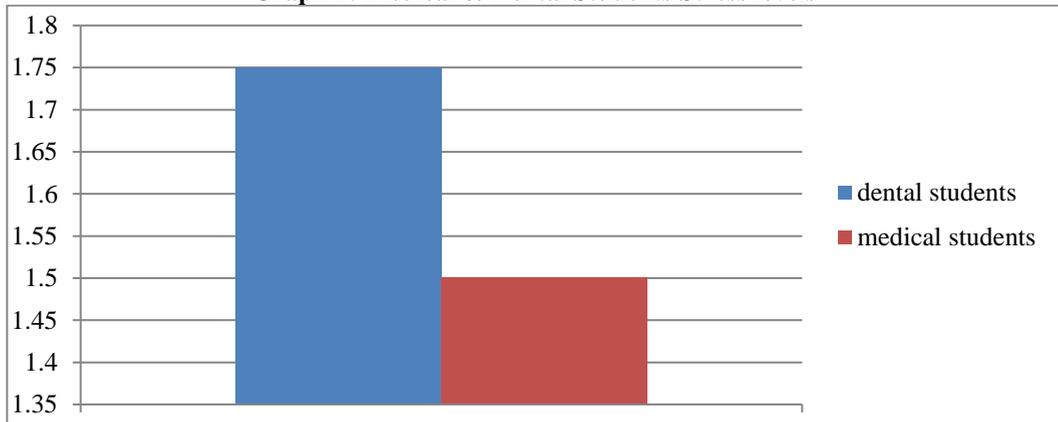
A total of about 120 medical and 115 dental students responded to the MSSQ. (Graph 1) The Mean age of respondents was 21 years (21 -25 years). On an average the first year health professional students were found to be moderately stressed ( $p=0.0005$ ) when analyzed according to MSSQ. Specifically the stress levels are higher in dental students than in Medical students. Medical girls and boys have moderate stress predominantly (60%). Dental girls are moderately (51%) and highly stressed (49%). Dental boys are mildly stressed (56%) with a few (7%) who are severely stressed. Graph 2 shows the number of students under moderate stress in both medical and dental professional courses. The values of stress are averages for all medical and dental students separately.

**Graph 1: Number of study population of health professional students**



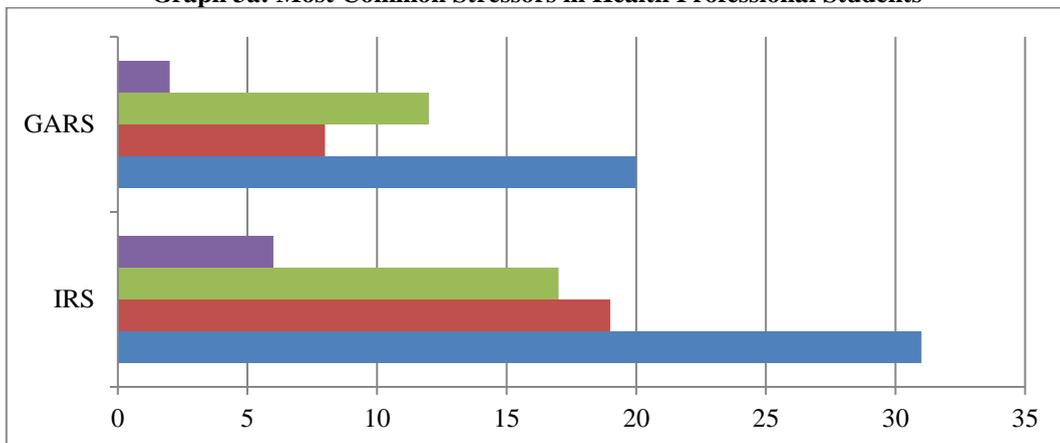
The most common stressor among all the groups is IRS (inter and intra-personal related Stressor) more predominant in Medical boys (49%). The second most common stressor is GRS (group activity related stress), which is more predominant in both dental and medical girls (28%).

**Graph 2: Medical & Dental Students Stress levels**

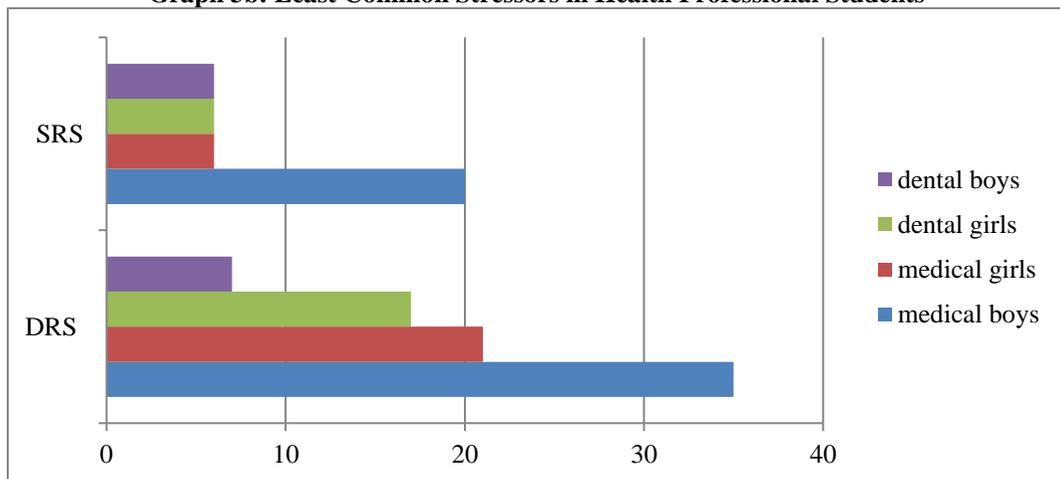


The least common stressor is DRS (drive and desire related stressor) especially in medical boys. Second least common stressor is SRS (social related stress) seen in both boys and girls pursuing medicine. ARS (academic related stressor) was least common in Dental girls and boys.<sup>(9)</sup> The Graph 3 gives us the spread of the most common and least common stressors in the four sub populations studied.

**Graph 3a: Most Common Stressors in Health Professional Students**



**Graph 3b: Least Common Stressors in Health Professional Students**



**Graph 3a & 3b: Stressors in health professional students: shows the most common and the least common stressor among all the students**

## Discussion

Our study confirmed that a considerable amount of stress is present in the health professional students during their first year, which is similar to other studies.<sup>(10)</sup>

However the incidence was high when compared to other studies (75%) Stress was found to be more in dental students rather than medical students.<sup>(11)</sup> This increased stress in dental students may be due to

- a highly demanding and stressful learning environment,
- the fact that the dental curriculum has a higher number of subjects/disciplines
- exposure to more exams frequently

Stress is significant in medical students also due to various reasons (ARS, IRS, SRS, GARS, DRS, etc.). Students seem to be more concerned about getting better marks than their competitors irrespective of the individual performance which probably led to predominance of stress due to Inter and Intra-personal Related Stressor.

Interestingly, in our study there were no significant gender differences in the levels of stress. Inter and Intra personal related factors were greater perceived causes of stress in the health professional students in our study, which is different from other studies where academic factors contributed most in producing stress. Emotional factors were found to be more important in first year health professionals, which led to IRS as the dominant stressor. The least common stressor is Drive related stress in all the categories of students we studied.

## Conclusions

Almost all the health professional students are stressed at least moderately or mildly. Inter and intra-personal causes are the greater perceived cause of stress in health professionals in their first year. Emotional factors are found to be important among them. Social and psychological support in the form of counseling services to be made available, stress management, change in teaching and evaluating methods, specific stress busting extracurricular programs, mentoring programs are needed to reduce stress. These may be initiated in all health professional institutions in order to lower stress levels and enable the students to cope with their stresses adequately.

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## Conflict of Interest

There is no conflict of interest.

## Limitations

The number of health professional students taken up is small for the study. Willing volunteers who would cooperate were taken and so this limitation.

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