



Evaluation of Stress and its Associated Stressors Among Undergraduate Dental Students: A Questionnaire-based Study

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Abstract

Aim: To evaluate the stress and its associated stressors or stress factors among dental undergraduate students.

Background: Stress is a subjective feeling that acts as a barrier to preventing his/her goal. Stress occurs in everyone's life in every aspect of life due to enormous reasons, and so dental students are cited for facing various amounts of stress throughout their academics due to several reasons.

Materials And Methods: This cross-sectional study was conducted among undergraduate students (including interns) in a self-financing dental college in Tiruvallur, India. A google survey was conducted to collect data regarding academic sessions, environmental issues, and profiles of socio-demographics.

Results: Out of 500 dental undergraduates participating in the study, nearly 332(66%) students are stressed. Nearly two third of students have reported being stressed is a large number. The study has also found that students from the internship are under more stress while studying in college, possibly due to work pressure or fears of their future after graduation.

Conclusion: Sociodemographic profile, academic matters (performance of the study, curriculum, and frequency of tests), stress predictors, and physical stressors such as physical problems, high expectations of parents, and family issues are revealed as reasons in this dental curriculum. Management programs in dental colleges should be developed to improve students' psychological support and promote better psychological health and coping.

INTRODUCTION

Any eliciting biological response of intrinsic or extrinsic stimulation is known as stress. Stress may threaten and negatively impact an individual's physical and mental health. Stress can cause multiple steps on the human, extending options for balance to the effect of threats and even death based on the severity of applying stimulus and timing.¹ One of the most stressful professions and experiences is considered dentistry at the time of starting their dental studies. Studies all over reported stated that the stress due to dental education is comparatively higher than in other professional studies or medical studies.^{2,3}

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It is considered that dental study is stressful, and it is intensified at the time by moving students through the years gradually. During dental studies, the students go through immense stress for multiple reasons, including courses meeting, high expectations, the anxiety of handling patients' demands of the curriculum, and clinical requirements.⁴⁻⁶ "Dental education is seen as a complicated, demanding, and often stressful pedagogical exposure," according to research by the "Global congress" on dental studies (2008). It involves acquiring required academic, clinical, and interpersonal skills during learning." Patients' treatment and conducting skills are needed in practicing dentistry, and even characteristics that are also needed cause stress for dental students.⁷

Perceived stresses have also been related to present mental pain⁸, the fourth upcoming health issue.⁹ Their ability to learn and perform in studies is affected by their emotional, physical, family, and social problems.^{10,11} Hence, the study was carried out with the following objectives: (a) to determine the actual number of dental students who are under-

graduate and stressed from the total count, (b) to identify the causes of stress, and (c) to determine which year of student are at the higher rate of stress.

MATERIALS AND METHODS

One divisional context was managed in the participants who are undergraduates in a self-financing college of dental education, Tiruvallur, India. A total of 500 students are asked to join in the study. The dental students who are undergraduates from 1st year to Interns were invited to participate in the dental courses. The motive of the context was described to the students. The participants who joined the courses were added, and the students were told to finish a management test given through a google survey form created online. The questionnaire includes the following sections a) sociodemographic details, b) academic sources, c) psychosocial sources d) environmental sources.

Inclusion Criteria

The students who are willing to participate in the courses were observed in the additional criteria.

Table 1: Questions regarding stress and its associated factors

S. no	Questions
1.	Do you think the vastness of the academic curriculum makes you feel stressed?
2.	Does the presence of quota's make you feel stressed?
3.	Does submitting your quota work at a stipulated time make you feel stressed?
4.	Does the performance of the examination make you feel stressed?
5.	Does competition with peers make you feel stressed?
6.	Does the lack of any recreational activity make you feel stressed?
7.	Does the lack of hand skills required for dentistry make you feel stressed?
8.	Does fear of a particular staff in a department make you feel stressed?
9.	Does the valuation of education make you feel stressed?
10.	Does worrying about the future of becoming a doctor makes you feel stressed?
11.	Do family problems make you feel stressed?
12.	Does a financial problem in your family make you feel stressed?
13.	Do loneliness, depression, and burnout among friends make you feel stressed?
14.	Does feeling with the opposite sex makes you feel stressed?
15.	Does your health issue of not performing well in academics make you feel stressed?
16.	Doesn't meet your parent's expectation makes you feel stressed?
17.	Does traveling from college to home and vice versa makes you feel stressed?
18.	Does homesickness make you feel stressed?

Students from 1st year, 2nd year, 3rd year, 4th year, and CRI were included in the study.

Exclusion Criteria

The exclusion criteria added the dental students who were not present during the preceding times (till one month) of the studies and the dental students who were not concerned about joining the study.

Ethical Approval

The Institutional Review Board approved the study protocol.

DATA COLLECTION AND ANALYSIS

The test was provided for undergraduates through a google survey form. It was told to the dental students to approach the investigators quickly based on doubt regarding any query in the test survey. The test was divided into three parts which included the following:

- Part 1: Details of sociodemographic
- Part 2: Questions related to stress and its triggering factors
- Part 3: Questions in the section about stressor/ stress factors, including academic/psychosocial/ environmental stressors.

The information was gathered, processed, organized in a logical order, and examined in terms of frequency (yes/no).

Statistical Analysis

ANOVA was used to compare the difference between the three groups. The statistical importance was calculated at a *p-value* set at about 0.05.

RESULT

Essential characteristics such as age, gender, and years were compared. Males constituted 39.2%, and Females constituted 60.8%. 1st year participants were 20.2%, 2nd year participants were 20.6%, 3rd year participants were 19%, 4th year participants were 20.6%, and Interns were 19.6%. Questions were compared and aggregated at the academic year level, and the analysis was performed; questions were asked concerning stress and its associated factors. Questions were (i) a total number of

Table 2: Number of students who are stressed

Stressed (yes >=3)	Count of stressed (yes>=3)
No	168
Yes	332

Table 3: Sources of stress

Source of stress	Yes	No
Academic	307	193
Psychosocial	351	149
Environmental	308	194

Table 4: Comparison of students in academic year wise who are stressed

Year of study	Total no. of students	Percentage of students who are stressed (%)
1 st year	101	46.5
2 nd year	103	40.8
3 rd year	95	54.7
4 th year	103	53.4
Intern	98	56.1

graduates who are stressed. The result is that 332 (66%) students were stressed during undergraduate education. (ii) Is there any difference between the three groups of the section, which are stressed due to academics, stress due to psychosocial, and stress due to environmental conditions? One-way ANOVA was performed to compare 3 groups. The results came to be not statistically significant as the *p-value* was 0.764. (iii) Which year was highly affected due to stress? We could see interns were highly stressed compared to the other year’s students. This could be due to high work pressure or the management between studies and work simultaneously, or it may be due to fear of their future career.

DISCUSSION

The study looked at dentistry students’ perceptions of stress, possible academic, psychological, and environmental stressors, and the relationship between viewed stress and stress factors of sociodemographics and pains (Table 1). Various personal and institutional factors can affect dental students’ mental deterioration. According to a recent study, schools of medical studies can create an unsafe mental environment in which the pressure

of studies, working load, economic challenges, and lack of sleep are all stresses.¹²

According to Halboub *et al.*, reducing and relieving pressure among the students studying dental courses will improve determination and achievement of studies, resulting in better patient management and care.¹³

The study conducted have shown that in a total of 500 undergraduate students, about 332(66.4%) students are stressed (Table 2), which shows that a larger population are stressed and shows various stressors or stress factor are the given reasons for the stress that affects the performance in their academics and also affects the physical and mental health of the students.

The study also showed that about 328(65.6%) students are stressed due to the vastness of the academic curriculum. The study participants that participated stated that nearly 312(62.4%) are stressed due to the presence of quota, and it was also stated that about 317(63.4%) are highly stressed due to the completion of their quota at a given amount of time (Table 3).

In the psychosocial section, study participants stated that nearly 323(64.6%) are stressed due to loneliness, depression, and burn out in their under-graduation. Also, this study recorded that about 319(63.8%) are stressed due to financial problems in their family. The high parental expectation is one of the critical stress factors where about 313(62.6%) (Table 3).

In the environmental section, the study has shown that nearly 281(56.2%) are stressed due to homesickness. In comparison, about 285(57%) of the undergraduates are stressed due to traveling long distances from college and vice versa (Table 3).

Brahmbhatt *et al.*, in their study, showed that more expectations of parents and isolation were the leading causes of mental pressure.¹⁴ In the current study, high expectations of parents and family issues were important for assessing mental pressure.

The study also revealed that from comparing all the academic years of dental undergraduate students, interns were highly stressed compared to all other years of dental students (Table 4).

Travel, peer adjustment, and living conditions had a minimal amount on stress level; however, fear of individual staff in a department and worrying about the future have a significant amount of stress. The

high acceptance of pressure among dental students is a concern since this can affect dental students' conduct, studying, and taking care of patients.

Undergraduate dentistry students may be harmed by a high prevalence of stress, which can lead to poor academic performance, dropout, drug addiction, and suicide. Because of the significant influence of stress on undergraduate dentistry students, stress management programs in dental school are required.

CONCLUSION

This study found psychosocial factors to be a significant source of stress among dental students. Nevertheless, the academic source was also a significant predictor of stress.

Interventions must be devised to target specific stressors to alleviate the strain on pupils. Students should be taught various stress management approaches to strengthen their ability to cope with the demanding professional course. Various activities should be done from the first year onwards to lessen the stress burden. Teaching dental students stress management and self-care skills is becoming increasingly important. Students' stress levels can be reduced by encouraging them to participate in extracurricular activities, conducting community camps, and student welfare programs to improve their mental health, which would be a stress buster. Organize workshops on skill development, time management, and career guidance.

Limitations

The research sample was restricted to a single dental institution; hence, generalization should be made with prudence. Research should also focus on involving students from other dental institutions. Since the information was obtained from a self-administered questionnaire, information bias cannot be ruled out.

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Nil.

CONFLICT OF INTEREST

This study has no conflicts of interest.

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