

Perceived Sources of Stress Among Final Year Dental Undergraduate Students of Multan Medical and Dental College

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ABSTRACT

Introduction: Stress affects everyone at some point in their lives, but dental students are particularly vulnerable as dental education is highly demanding and stressful. Stress is defined as a state of mental or emotional strain or tension resulting from difficult or demanding circumstances. Stress impairs work effectiveness and results in low performance. So, it's vital to identify the sources so that we can reduce the stressors and improve students' performance.

Objective: The objective of this study is to identify the perceived sources of stress for final-year dental students of Multan Medical and Dental College.

Methods: It was a cross-sectional study. We used a validated Modified Dental Environmental Stress (DES) questionnaire to identify the perceived sources of stress among final-year dental undergraduate students. A 4-point Likert scale was used ranging from '1 not stressful', '2 slightly stressful', '3 Moderately stressful' and '4 Extremely stressful'. The questionnaire has 34 items, under five different categories (Personal factors, Educational environment, Academic course, Clinical factors and Patient management).

Results: Out of 45 final-year students, 36 participated in this study. According to the results, final-year students found many factors to be stressful but the lack of time for relaxation, toxic friendships, fear of failing a subject, and the amount and difficulty of the syllabus were the most stressful factors identified.

Conclusion: The Dental education is demanding, hence dental students need stress management training. In order to increase student performance and well-being, institutes should provide stress awareness, student counseling mentor-mentee and stress management programs.

Keywords: Stress, Final-year, Dental undergraduates, DES questionnaire

Doi: <https://doi.org/10.53708/hpej.v6iSpecialIss.1782>

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INTRODUCTION

Among Stress is the body's reaction to difficult or demanding situations, whether actual or perceived. Stress is a natural part of everyday life but while some levels of stress can be beneficial, chronic stress can lead to significant disorders such as anxiety, depression, and even burnout and has an adverse effect on students' well-being and performance (Myrvold.,2017). According to Saleem et al dental students experience more stress than the general population, stress has multiple causes at different stages of dental education. They can have both psychological and physical effects (Saleem et al., 2021). Individual beliefs, values, and cultural backgrounds all influence stressors. Medical students come from a variety of backgrounds, with varying traditions, financial levels, educational environments, and customs. So because the medical field differs from their previous academic backgrounds, not all students are able to manage their stress levels (Tariq et al., 2020).

Humphris et al., (2002) concluded that the level of emotional fatigue was higher in dental undergraduates when compared to medical undergraduates. In a study it is concluded that dental undergraduates experience more emotional exhaustion than their medical counterparts in a survey on psychological stress in dental undergraduate (Humphris et al., 2002). Dental students must simultaneously acquire academic knowledge and clinical skill, including patient care and interpersonal skill, as part of

the dentistry program which contributes to the stress perceived by the students. Existing literature suggest that psychological deterioration and emotional strain are associated with high levels of perceived stress, this may put dental students at risk of professional burnout and lower productivity (Alhajj et al., 2018). Students in their clinical year of study are especially vulnerable to stress so, they must have the ability to manage stress (Pau and Croucher., 2003). Thus it is critical to identify potential sources of stress at the dental school and make institutional changes to improve students' stress and coping skills. So, this research focuses on identifying the perceived sources of stress among final-year dental undergraduate students of Multan Medical and Dental College.

METHODS

Ethical approval (ref no. Public 1/02/22) was taken from ethical committee of Multan Medical and Dental College. This cross-sectional descriptive study was conducted from March to April 2022 at Multan Medical and Dental College on final-year Bachelor of Dental Surgery (BDS) students (n = 45) using the Modified Dental Environmental Stress (Modified DES) Questionnaire. Out of 45 students, 36 responded in which 13 were male and 23 were female. The questionnaire was shared online via WhatsApp using google forms. The Modified DES Questionnaire is a closed-ended pre-validated questionnaire consisting of 39 questions addressing five domains (Personal factors, Educational environment, Academic course, Clinical factors and Patient management) and has been used extensively in literature to identify sources of stress (Harikiran et al., 2012). The reliability of the scale, A Cronbach's alpha value of 0.925 is noted for the scale which was excellent. The questionnaire was reviewed and edited for local cultural validity by the authors and a group of 10 dental educators. Five of the 39 questions were

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Received: November 15, 2022 **Revised:** January 11, 2023

Accepted: February 18, 2022 **Available online:** March 15, 2023

dropped due to cultural irrelevance. These included questions on intimate relations, necessity to postpone marriage and children, dependencies and fear of going out due to crime. The students rated the items on a 4-point Likert scale as “Not Stressful, Slightly Stressful, Moderately Stressful, Extremely Stressful.” Data was analyzed using SPSS for descriptive statistics and frequencies.

RESULTS

Out of the 45 total students in the class, 36 final-year students responded. The response rate was 80 %. Off total, 36 % (13 students) were Male and 63 % (23 students) were Female. The living accommodation of students staying at home (22 students) 61 % and hostels (12 students) 33 %. Hostelites experienced more stress because of lack of home atmosphere in living quarters. Table 1 below shows list of 34 questions from Modified Dental Environmental Stress Questionnaire. The questions are divided into different categories. Questions falling in the Academic courses category yields the highest scores.

Table 1. Dental environmental stress scores

Stress Items	Not Stressful	Slightly Stressful	Moderately Stressful	Extremely Stressful
Personal Factors				
Lack of time for relaxation	11.1	13.9	22.2	52.8
Stressed out by financial responsibilities	25.0	25.0	22.2	27.8
Personal physical health	22.2	25.0	27.8	25.0
Toxic friendships	11.1	11.1	25.0	52.8
Home atmosphere in living quarters	22.2	44.4	16.7	16.7
Multiple role i.e spouse, parent, dental student	25.0	25.0	22.2	27.8
Educational Environment				
Dental school in reality vs. expectations	2.8	25.0	30.6	44.4
Dental school's rules and regulations	13.9	16.7	38.9	30.6
Atmosphere created by clinical faculty	11.1	33.3	27.8	27.8
Staff's approachability	27.8	33.3	19.4	19.4
Receiving criticism	2.8	27.8	27.8	41.7
Inconsistency of feedback	16.7	36.1	27.8	19.4
Discrimination due to race, social class	38.9	13.9	22.2	25.0
Gender discrimination	36.1	25.0	22.2	16.7
Academic Courses				
Fear of failing a subject	2.8	19.4	25.0	52.8
Unable to catch-up	8.3	36.1	22.2	33.3

Amount/load of syllabus	8.3	13.9	19.4	58.3
Difficulty of the syllabus	8.3	8.3	33.3	50.0
Competition for grades	16.7	36.1	13.9	33.3
Examinations and Grades	2.8	22.2	30.6	44.4
Insecurity of dental career	11.1	19.4	27.8	41.7
Insecurity lack of employment	8.3	16.7	33.3	41.7

Clinical Factors

Manual dexterity	16.7	38.9	16.7	27.8
learning precise clinical skills	19.4	30.6	25.0	25.0
Transition from pre-clinical to clinical	27.8	25.0	25.0	22.2
Clinical requirements	13.9	30.6	22.2	33.3
Allocated clinical time	16.7	25.0	33.3	25.0
Understanding clinical procedures	19.4	30.6	27.8	22.2
lack of confidence to be a successful dentist	19.4	30.6	22.2	27.8

Patient Management

Patient being late	19.4	47.2	19.4	13.9
Patients with dirty mouths	13.9	27.8	27.8	30.6
Responsible to find suitable patients	16.7	33.3	33.3	16.7
Patient co-operation	13.8	36.1	36.1	27.8
Patients not give proper history	5.6	19.4	41.7	33.3

Table 2 below gives the overview of top stress factors. The items, i.e. questions, with the highest score were collected from Table 1 and arranged in rows

Table 2. Top stress causing items

Stress Items	Category	Extremely Stressful (%)
Amount/load of syllabus	Academic Courses	58.3
lack of time for relaxation	Personal Factors	52.8
Toxic Friendships	Personal Factors	52.8
Fear of failing a subject	Academic Courses	52.8
Difficulty of the syllabus	Academic Courses	50
Dental school in reality vs. expectations	Educational Environment	44.4
Examinations and Grades	Academic Courses	44.4
Receiving criticism	Educational Environment	41.7
Insecurity of dental career	Academic Courses	41.7
Insecurity lack of employment	Academic Courses	41.7
Patients not giving proper history	Patient management	33.3

DISCUSSION

This study was conducted at a dental teaching institute in Multan, to identify the various sources of stress perceived by dental students. One's personal system of beliefs and attitudes frequently influences one's perception of stress. These self-cognitions form a barrier between the perceived stressor and the resulting student behavior (Latti., 2020). Stressors begin right at the start of students' dental education and are observed to dramatically increase among undergraduate students as they progress through consecutive years of study (Khanagar et al., 2021).

Undergraduate final-year dental students face increasing stress because along with academic syllabus they have to master clinical skills and complete quotas (Rabbani et al., 2020). The most stressful factor for final year students was the amount/load of syllabus in academic domain followed by fear of failure in challenging courses, they may feel that their entire career is at risk if they don't perform well, difficulty keeping up with the dense syllabus, pressure of exams and grades, and insecurity about their future career prospects, as dental profession is quite competitive. To manage stress, they can develop good study habits, seek support, and prioritize their physical and mental health. It's also important for students to remember that setbacks and challenges are normal and asking for help is okay (Cheema et al., 2022).

Students with inadequate coping mechanisms were incapable of dealing with dental educational stress. Dental educators should provide regular and detailed feedback to struggling students, as well as collaborate with them to develop clear strategies and methods for improving, empathize with their students, and make them feel respected. Topics such as coping with stress, time management, and choosing realistic goals should be addressed (Dahan et al., 2010).

A study conducted in India also showed that majority of students felt stressed about academic performance, clinical and career related stress. Exam and grade stress were the top stressors in academic performance-related stress, followed by fear of failure, a lack of time to relax, and workplace criticism (Sekhon et al., 2015). A study conducted on Greek dental students showed that final-year graduating students were significantly more insecure about their professional future (Polychronopoulou and Divaris., 2005).

No matter how severe, students' perceptions of stress contribute to overall stress, which in turn has an impact on their performance and general wellbeing. High levels of stress have been associated with depression, whereas low and moderate levels of stress have been associated with anxiety (Basudan et al., 2017). Alzahem et al. (2014) identified because of the significant influence of stress on dental students, stress management programs in dentistry education are required. Dental curricula could incorporate such programs (Alzahem et al., 2014). Lack of time for relaxation is also a major stress causing factor. Students need time to relax, and identifying stressors will aid in developing ways to reduce stress overload and its detrimental effects. Formal student support systems, such as counselling cells and mentorship programs, can help to create an environment that decreases

stress and enhances student well-being. The study's limitations, included the inclusion of only one dental college and the failure to investigate stress factors in first, second and third year. Further studies need to be conducted on stress prevention and management

CONCLUSION

Stressors like less time for relaxation, toxic friendships, amount/load of syllabus, fear of failing a subject were the main stressors for undergraduate dental students in Multan Medical and Dental college. According to this study, dentistry is demanding, hence dental students need stress management training. In order to increase student performance and well-being, institutes should provide stress awareness, student counselling, mentor-mentee and stress management programs. Self-care is also critical for dental students in order to cope with the constant barrage of stress experienced.

DECLARATION OF INTEREST

The author declare no conflict of interest.

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AUTHOR'S CONTRIBUTION

1.H.T: Created concept and design of the research, prepared initial draft, collected data, interpreted the results and generated discussion and conclusion.

2.F.A: Critical review and addition of important content.