

## Original Research Article

# A cross-sectional survey of perceived sources of stress in dental students from Punjab

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	International Archives of Integrated Medicine, Vol. 2, Issue 11, November, 2015. Copy right © 2015, IAIM, All Rights Reserved. Available online at <a href="http://iaimjournal.com/">http://iaimjournal.com/</a> ISSN: 2394-0026 (P)                      ISSN: 2394-0034 (O)
	Received on: 22-10-2015                      Accepted on: 29-10-2015 Source of support: Nil                      Conflict of interest: None declared.
<b>How to cite this article:</b> Mengi A, Bharathi M, Vakil N, Divya DC, Goel S, Jindal R, Venkatesan M. A cross-sectional survey of perceived sources of stress in dental students from Punjab. IAIM, 2015; 2(11): 20-25.	

## Abstract

**Background:** World Health Organization (WHO) estimates that stress-related disorders will be one of the leading causes of disability by the Year 2020. Dental education has been asserted as one of the most challenging, demanding, and stressful fields of study.

**Aim:** The present study was therefore planned to analyse and ascertain the sources of stress and their severity among undergraduate dental students studying in a dental college across the entire curriculum (first to final year) in Punjab.

**Material and methods:** The current study was carried out at Adesh Institute of Dental Sciences, Bathinda from August-December 2014 using a self-administered questionnaire. The severity of each stressor was rated using a Likert scale (1-10) ranging from not severe to very severe.

**Results:** Out of a total 400 students, 267 returned completely filled questionnaires. Males (61.04%) outnumbered female students (38.96%). The mean age of study subjects was 21.24 years. Performance in examinations (42.7%) and frequency of examination (42.3%) were most commonly cited sources of academic stress. Becoming a doctor and competition with peers were rated as most severe stressor. Quality of food in the mess (51.3%), lack of entertainment (40.1%) and living conditions in the hostel (34.9%) were three most commonly cited psychosocial stressors. Quality of food in mess (45.8%) was the most commonly reported health related stressor.

**Conclusion:** The findings of this study can be utilized in strategic planning to ensure wellbeing of the future dental doctors. Targeted efforts are needed to tackle stress and improve dental students' physical and psychological well-being.

### Key words

Stressors, Dental, Students, Well being.

### Introduction

Stress is a part and parcel of human lifestyle. It can serve as a driving force in terms of obtaining results, but on the other hand, non-stop stress can act as a killer in terms of performance [1]. The World Health Organization (WHO) estimates that stress-related disorders will be one of the leading causes of disability by the Year 2020. A United Nations Report labelled stress "The 20th Century Disease." A few years later the WHO called it a "World Wide Epidemic [2]."

Dental council of India is committed to shape the dental students into the best dental doctors of the world. Hence during the training dental students are subjected to different kinds of stressors, such as the pressure of academics with an obligation to succeed, an uncertain future and difficulties of integrating into the system [3]. Dental education has been asserted as one of the most challenging, demanding, and stressful fields of study, as dental students are expected to acquire diverse competencies such as academic and clinical competencies and interpersonal skills [4, 5]. Highly competitive environment of dental schools often exerts a negative effect on the academic performance, physical health, and mental well-being of the students which results in psychological morbidity and other unintentional negative consequences later on [6].

It is important for dental educators to know the level of psychological distress and psychological well-being among dental students. As psychological disorders are projected to be among the top four leading causes of disability in the future, research on its effects and association among those who are expected to be future professional mental and health providers would be useful. The present study was therefore planned to analyse and ascertain the sources of stress and their severity among undergraduate dental students studying in a dental college across the entire curriculum (first to final year) in Punjab.

### Materials and methods

The current study was carried out at Adesh Institute of Dental Sciences, Bathinda (Punjab) in from August-December 2014 using self-administered questionnaire. The study population consisted of the students currently studying in Adesh Institute of Dental Sciences. At the time of study there were 4 batches of dental students each with 100 students. All these students formed the study population. Those students who could not be contacted after three attempts were excluded from the study. Students were explained about the nature and purpose of study and requested to fill the questionnaires which were distributed by authors in the classrooms just

after the completion of classes. The time allocated for the completion of the questionnaire was 30 minutes.

A meticulous questionnaire was mounted to capture socio-demographic information of the study participants, the potential stressors experienced by the students and other relevant data. There were a total of 33 stressors which were grouped into academic, psychosocial and health related stressors. Academic stressors included stressors such as academic curriculum, performance in examinations etc. Psychosocial stressors in the study included high parental expectations etc. Sleeping difficulties and exercise were some of the stressors in the health related stressors segment of the questionnaire. For each potential stressor the frequency of occurrence was classified as never, rarely, sometimes, often and always and scored as 1, 2, 3, 4, 5 respectively. The severity of each stressor was rated using a Likert scale (1-10) ranging from not severe to very severe.

Permission of Institutional ethics committee (IEC) was sought before the commencement of the study. Informed consent was obtained from

the study participants. Out of a total 400 students, 267 returned completely filled questionnaires. All the questionnaires were manually checked and edited for completeness and consistency and were then coded for computer entry. After compilation of collected data, analysis was done using Statistical Package for Social Sciences (SPSS), version 20 (IBM, Chicago, USA). The results were expressed using appropriate statistical methods.

## Results

Out of a total 400 students, 267 returned the questionnaires giving an overall response rate of 66.75%. 163 (61.04%) of the respondents were male while 104 (38.96%) were female. The mean age of study subjects was 21.24 years with a standard deviation of 1.88.

On analysis of academic stressors and their severity, performance in examinations (42.7%) and frequency of examination (42.3%) were most commonly cited sources of stress. Becoming a doctor and competition with peers were rated as most severe stressor. (**Table - 1**)

**Table - 1:** Perceived various academic sources of stress and their severity.

Academic Stressors	Never	Sometimes	Very often	Median	IQR
Academic Curriculum	72 (26.9)	91 (34.1)	104 (38.9)	4	2-6
Frequency of Examinations	64 (23.9)	90 (33.7)	113 (42.3)	5	2-7
Performance in Examinations	56 (20.9)	97 (36.3)	114 (42.7)	4	2-6
Dissatisfaction with Class Lectures	101 (36.8)	63 (23.5)	103 (38.6)	3	2-5
Non-Availability of Adequate learning material	134 (50.2)	79 (29.6)	54 (20.2)	4	1-4
Becoming a Doctor	115 (43.1)	75 (28.1)	77 (28.8)	7	3-8
Lack of time for recreation	94 (35.2)	106 (39.7)	67 (25.1)	5	2-6
Competition with Peers	137 (51.3)	90 (33.7)	40 (15.0)	6	3-7
Performance in practicals	82 (30.7)	105 (39.3)	80 (30.0)	5	2-7
Lack of special guidance from faculty	88 (32.9)	114 (42.7)	65 (24.4)	5	1-7

On analysis of psychosocial stressors and their severity, quality of food in the mess (51.3%), lack of entertainment (40.1%) and living conditions in the hostel (34.9%) were three most

commonly cited psychosocial stressors. Lack of personal interest and accommodation away from home were the least common stressors reported by the students. Quality of food in mess was

rated as most severe psychosocial stressor. (Table - 2) was the most commonly reported health related stressor. Class attendance and quality of food in mess were rated as most severe. (Table - 3)

On analysis of health related stressors and their severity, again quality of food in mess (45.8%)

**Table - 2:** Perceived various psychosocial sources of stress and their severity.

Psychosocial Stressors	Never	Sometimes	Very often	Median	IQR
High Parental Expectations	114 (42.7)	93 (34.8)	60 (22.5)	4	1-7
Loneliness	123 (46.1)	75 (28.1)	69 (25.8)	5	2-6
Family Problems	178 (66.7)	62 (23.2)	27 (10.1)	3	1-5
Accommodation away from home	185 (69.3)	77 (28.8)	5 (1.9)	4	1-6
Political situation in the country	184 (68.9)	68 (25.5)	15 (5.6)	5	1-6
Relations with the Opposite Sex	151 (56.5)	57 (21.3)	59 (22.2)	6	2-7
Difficulty reading text books	167 (62.5)	54 (20.2)	46 (17.3)	4	1-6
Lack of entertainment in the institution	86 (32.2)	74 (27.2)	107 (40.1)	4	2-6
Difficulty in the journey back home	127 (47.6)	66 (24.7)	74 (27.7)	5	2-7
Quality of food in mess	52 (19.5)	78 (29.2)	137 (51.3)	7	3-9
Financial strain	126 (47.2)	65 (24.3)	76 (28.5)	6	1-8
Inability to socialize with peers	155 (58.0)	69 (25.8)	46 (16.2)	3	2-6
Living conditions in the hostel	101 (37.8)	73 (27.3)	93 (34.9)	6	3-8
Member of fraternity	136 (50.9)	54 (20.2)	77 (28.9)	2	1-4
Lack of personal interest in medicine	222 (83.1)	22 (8.2)	23 (8.7)	3	1-5
Adjustment with roommates	175 (65.5)	63 (23.6)	29 (10.9)	4	1-6

**Table - 3:** Perceived various health related sources of stress and their severity.

Health related stressors	Never	Sometimes	Very often	Median	IQR
Sleeping difficulties	179 (67.0)	63 (23.6)	25 (9.4)	5	1-6
Class attendance	130 (48.7)	77 (28.8)	60 (22.5)	7	3-8
Nutrition	138 (51.7)	72 (26.9)	57 (21.3)	3	2-5
Exercise	145 (54.3)	53 (19.8)	69 (25.9)	3	1-5
Quality of food in mess	80 (29.9)	65 (24.3)	122 (45.8)	6	3-7
Physical disability	243 (91.0)	15 (5.6)	9 (3.4)	1	1-3
Alcohol/Drug abuse/smoking	226 (84.6)	27 (10.1)	14 (5.3)	1	1-2

## Discussion

The current study assessed to evaluate the sources of stress and their severity among undergraduate dental students studying in a dental college of Punjab region. Valid conclusions were drawn on the basis of data collected by scrutinizing 267 proformas filled by them.

The current study confirmed the assumption that there is a considerable amount of stress among dental students at Adesh Institute of Dental Sciences, Bathinda. Stress has been described as a double-edged sword that can either stimulate and motivate the students to peak performance or reduce the students to ineffectiveness [7, 8]. Previous studies have reported that dental education induces considerable stress on students

[9-12]. Our findings were in conformity with some of the studies conducted across the globe.

It was observed in this study that majority of the students had experienced either academic and/or psychosocial stressors. It was observed that among academic stressors, "Becoming a Doctor" was the most severely reported stress. Every student entering into dental school is a bright student. He or she competes with thousands of students and get selected for dental profession. After entering the dental school the situation changes. Here everyone is a bright student. Now he or she has to become champion of champions. Now they have to sacrifice everything to achieve the goal and probably this puts them under a lot of stress.

We observed that academic curriculum and performance in examinations were among most common source of stress. Shaikh, et al. [13] from Pakistan has reported similar results. Authors have also reported that academics/exams are common sources of stress among students [14, 15]. Exams are important in the dental training as a standard for evaluation/assessment. Also examinations encourage student's learning and also provide feedback to the teachers. There may be a need to revisit the evaluation/examination system to make it less stressful to the students. Arrangements can be made so that the students who perceive tests/exams as a burden may experience stressful situations while for others, who consider exams useful, they may assist in their learning.

This study has several strengths. We have analysed the sources of stress and their severity among undergraduate dental students studying in a dental college across the entire curriculum (first to final year) in Punjab. In-depth analysis of this aspect has not been closely investigated by many experts in the field. This study becomes very important as long lasting impact can be achieved if rectifications of deficiencies are identified well in time and corrected at the earliest. All the investigations were conducted by authors of the study only, which creates a sense of uniformity.

The study has some limitations as well. Some may argue that the results obtained may not be applicable to all the dental colleges. I agree because these findings are based on a single centre study. Results may vary with different geographical terrain. More multicentric studies need to be carried out. Improvement after rectifications of deficiencies identified should have been measured.

## **Conclusion**

The findings of this study can be utilized in strategic planning to ensure wellbeing of the future dental doctors. Targeted efforts are needed to tackle stress and improve dental students' physical and psychological well-being. Multicentre studies are warranted to identify the associated morbidity, causes and consequences of stress among dental students.

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