

# Stress, Anger and Coping among Dental Students

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## Abstract

**Background** : Medical course and dentistry have always been considered to be stressful to the students because of its depth, diversity and competitiveness. These are very extensive course spread 4 to 5 years in India. Stress sometimes can lead to anger, which cause even more stress. Prolonged stress and anger can take a toll on the students, both physically and emotionally. It is important to eliminate them by attempting control management and implication of positive coping strategies

**Aim** : This study aims to investigate level and source of stress, anger, anxiety, depression and associated coping mechanisms among dental students

**Material and method** : A link to an online questionnaires conducted through SurveyMonkey was distributed among all third-year, fourth-year and final-year students.

**Result** : The first major stressor for the dental students was clinical requirements (61.3%) followed by patient's behavior, peer pressure/competitiveness, education program and language barrier. Taking some time off to rest (20.3%), talking to a friend (23.9%) and listening to music (19%) were the most commonly reported coping mechanisms (Table 3).

**Conclusion** : The primary sources of stress as perceived by the dental students were peer pressure/competitiveness, patient's behavior and clinical requirements. In the present study, female dental students reported higher stress levels and a wider range of coping than male students, hence a stress management program should be implemented that focusing towards dental students. The preventive and intervention must be sought and directed as this need early in the student years.

**Keywords** : Anger, dentistry, depression, pressure and stress

## Introduction

Stress has a vast meaning which depending on different people under different situations. Claude Bernard first scientifically explained stress, about how cells and tissues respond to stress. They are surrounded

by buffer system, ion concentration, gaseous exchange and other biochemical modalities in order to coordinate physiological process and establish homeostasis. Other Ancients such as Aristotle and Hippocrates were aware of the stress and its adverse effect but the most generic definition of stress was given by Hans Selye. Selye was the 'father of stress' and he defined stress as "a non-specific response of the body to any demand"<sup>1</sup>.

Dental course undoubtedly is stressful, extensive and exhaustive. Students commonly encounter numerous of stressor in the beginning of dental school life. The stress can be multifactorial, which is arising from academic and socio-cultural environment and social support issues<sup>2</sup>. In addition, students in the health care field are

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more vulnerable to stress due to the high demand of their education, demanding workload and intense theoretical education. Also, they are facing additional challenges such as providing care and treatment for patients, which can cause harm if performed inappropriately<sup>3-5</sup>. As a result, dental students are repeatedly going through pressure and stress and put them under risk for depression, burnout and anxiety problems.

Many studies have been conducted to investigate level and causes of stress and findings have shown high stress levels among dentists and physicians. Two similar studies reported 38% of dentists and 44% of doctors having high stress<sup>6,7</sup>. Significantly, the putative causes of stress for these two professions are to be differing. Dentists' most common stressors are associated with difficulty to interact with patients, practice management pressure and ability to maintain high level of focus during procedure; doctors are constantly stressed with job and patient demands, constant interruptions and work conflict interfere with family life<sup>7,8</sup>. As for students of dentistry and medicine, studies have shown that most these students are engaging in destructive coping mechanisms<sup>9</sup>. Murphy et al also stated that dental students surprisingly perceive higher level of stress than medical students<sup>10</sup>.

### Anger And Depression In Dentistry

Anger is generally believed as a maladaptive attempt or effort to overcome a stressful condition, which causing inner conflict and personal discomfort physically and emotionally<sup>11</sup>. On the other hand, anger is also said as an adaptive venture to achieve obstructed goals and perceived threats. An unhealthy anger happens when it is suppressed and collectively resulting to anxiety and depression<sup>12</sup>. In addition, prolonged anger and temper can cause damage to relationships, lead to irrational thinking among the society followed by unpleasant consequences. Most studies have found that students under anger management training exhibit great self-control along with reduced aggressive behavior and attitude in classes and at home<sup>13</sup>.

Depression is an illness that can occur at the average of mid-20s, which often related with anxiety

disorders. A major depression generally involves the body, mood and thoughts. The first approach of managing depression can be done with a consultation and physical examination with physicians. The choice of treatment depends on the solid cause of depression after evaluations. Psychological counseling, antidepressant medication, stress management and self-help are some of the necessary components in overcoming depression. Self-help or self-guided improvement is the best help, which people have to exert a strong willing to manage the illness<sup>14</sup>. This study was carried out to investigate level and source of stress, anger, and anxiety and to see associated coping mechanisms among dental students.

### Material and Method

This study was conducted among all third-year, fourth-year and final-year students of Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences. Total participants of forty-four male and seventy female were involved and all the responses of the questionnaires were kept anonymous. Age ranged from 21 to 24 years.

A link to an online questionnaires conducted through SurveyMonkey was distributed. The questionnaire contained 19 questions about level of stress, anxiety, anger, depression and coping mechanisms. Participation was voluntary and no concession was offered. Verbal informed consent was obtained before participation in the study.

The data was collected and analyzed using the descriptive statistics and comparisons made using the Chi-square test and level of significance was set at  $P < 0.05$ .

#### Questionnaire design

The questionnaire was based on the dental environment stress and was modified accordingly to suit the curriculum and grading system of Saveetha Dental College. The questionnaire was sectioned into demographic details, course-associated stress,

enjoyment, feelings of stress, anxiety, anger and related behaviour and coping mechanisms.

## Questionnaire Analysis and Interpretation

Table 1 : Year and gender of the study population

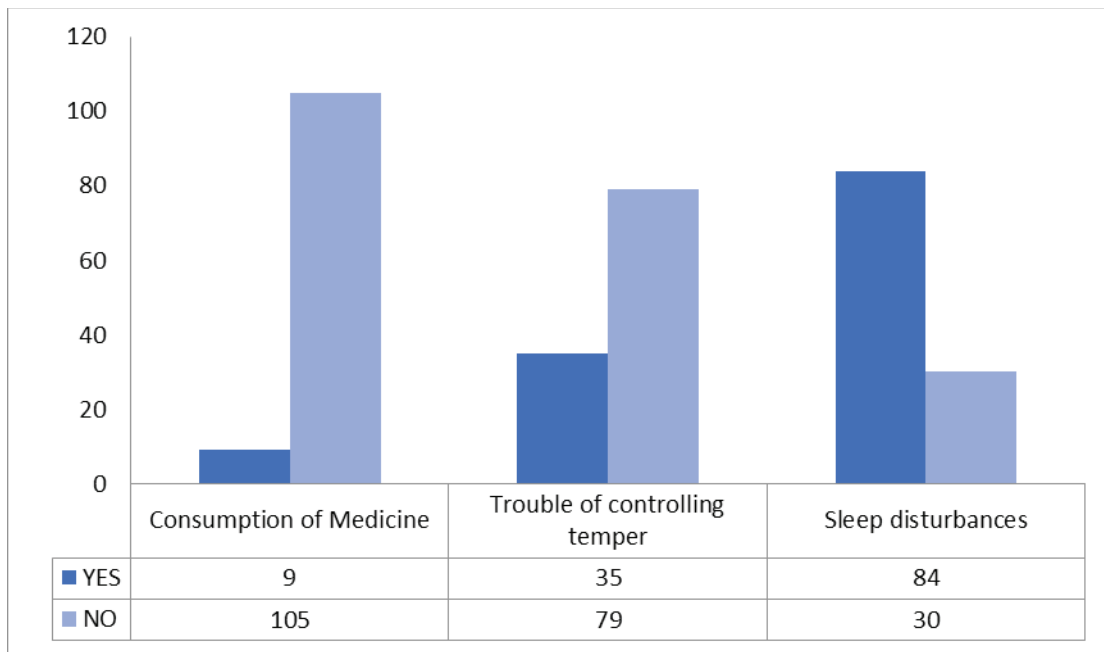
Sample description by year of study and gender			
Year of study	n	Gender	
		Male	Female
Third years	40	15	25
Final year	40	20	20
Intern	34	13	21
Total	114	48	66

Table 2 : Stressors among respondents

	No stress				Moderate stress				High stress			
	Male		Female		Male		Female		Male		Female	
	n	%	n	%	n	%	n	%	n	%	n	%
Education program	6	5.2	10	8.8	33	28.9	33	28.9	16	14.1	16	14.1
Language barrier	21	23.4	26	17.8	12	12.3	25	20.1	13	11.4	17	15
Patient's behavior	2	1.8	2	1.8	24	21	34	29.8	13	11.4	39	34.2
Clinical requirements	1	0.9	3	2.7	12	10.5	28	24.6	32	19.3	48	42
Peer pressure/ Competitiveness	4	3.5	5	4.4	19	9.4	48	41.9	21	19	17	14.6

Table 3 : Management of stress/depression/anger/related behavior

	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Indulge in hobbies	21	6.8	14	5
Take some time off	36	11.8	26	7.9
Practice mindfulness	20	6.5	20	6.6
Listen to music	32	10.5	26	8.5
Exercise regularly	19	6.2	4	1.3
Manage time properly	6	1.9	8	2.6
Talk to a friend	24	7.9	49	16



**Figure 1 : Data collection of the respondents based on their consumption of medicine, trouble of controlling temper and sleep disturbances**

### Results and Discussion

This study investigated, compared reported stress levels and related behavior with the associated coping managements in three batches of dental students in Saveetha Dental College. Out of the 114 participants, 80 (70.2 %) were equally third and final year dental students and 34 (29.8 %) were the interns. Age range of the dental students was between 21 years and 24 years, and the mean age for all three years was 23.3 years.

Stress scores for each parameter per gender were summarized in Table 2. A definite relationship between gender and perceived sources of stress was observed; majority of female students were reported higher levels of stress than male students in any conditions. In the present study reported that students were most stressed about the patient’s behavior (45.6%) and clinical requirements (61.3%). A significantly greater proportion of (48 female) dental students reported feeling stressed on completing clinical requirements while 32 male students were highly stressful on the same. Language barrier was quoted as the least stressor among the students that 41.2 % of the dental students were not in pressure due to communication with patients. Only 37 (32.4%) of the students were moderately stress and 30 (26.4%) of them were highly stress on language barrier. 48 female students and 19 male students were moderately stressful while 17 female students and 21

male students were highly stress about the peer pressure or competitiveness with their batchmates. Same result was reported in the previous studies that students tended to have more stressed and pressured on items related to academic performance such as competition with peers and examinations and grades<sup>15-18</sup>. This is also consistent with other studies, which showed that most of dental students had feeling pressure to compete with other students, which two-thirds of those reported associated with anger, anxiety and sadness. Also, one-fifth of the students lied about their grades to peers and parents<sup>9</sup>.

Most respondents reported moderately stressful on the education program (28.9% equally on both gender). Only fewer students reported having more stressed on the education program (28.2%).

Taking some time off to rest (20.3%), talking to a friend (%23.9) and listening to music (19%) were the most commonly reported coping mechanisms (Table 3). There were closely followed by hobbies (11.5%) and practice mindfulness (19%). Strikingly, more than half of female students tended to talk about their stress and problems with the peers or friends. Resting and listening to music were highly reported in male students compared to female students. There was a statistically significant difference between genders, that 19 male students and only 4 female students were reported managing stress with exercising. Fewer dental students

(4.5%) reported being able to manage time properly as a means of coping. Previous studies reported majority of dental students preferred to rest, talk to people who care and indulge in hobbies. A minor population chose to spend their money, eating and consume medication as an alternative therapies. 15.3% of dental students and 19.5% of medical students were reported having some form of counseling or prescribed psychotropic medication during their studies<sup>9</sup>. Prinz et al describes most students often manage their stress, anxiety, anger and depression by 'active-functional coping', which have been described as resting, talking to someone and social interactions<sup>19</sup>. The students' coping mechanisms were very similar to the findings of Ayers et al<sup>7</sup>.

In the present study, just under one-third (35 students) were having trouble to control their anger and may have bad temper on occasional basis. On the other hand, two-thirds of the students often have trouble to sleep. Prabhu et al reported in his study that 70% of students had inclination of bad temper, with 3% of students said that they would 'never' suppress their anger and 62% of the students on the other hand chose to 'occasional' when it comes to tolerate their emotions<sup>20</sup>. Potegal et al has pointed that anger episodes vary in duration and is confined to some factors such as its intensity, continued presence/absent of the offending person/object and mind of the person<sup>21</sup>.

Overall, female dental students reported higher stress levels and a wider range of coping than male students, which are the strong cause for concern. Soh reported same finding that female students expressed a higher level of stress in dental training<sup>22</sup>. Although that dentistry is a stressful profession, the findings are alarming. Detrimental emotions and adverse mental states among the students may lead to more serious problems as they progress into work force in future. It is very important to maintain stable mental health and well being, not only for their own good, but for the best interests of patients as well. This significantly emphasizes the needs of help in these areas and importance of self-care.

### Conclusion

The primary sources of stress as perceived by the dental students were peer pressure/competitiveness, patient's behavior and clinical requirements. In the present study, female dental students reported higher stress levels and a wider range of coping than male

students, hence a stress management program should be implemented that focusing towards dental students. The preventive and intervention must be sought and directed as this need early in the student years. Also, future research is recommended to achieve a greater understanding of stress through dental education program.

**Ethical Clearance** – All datas were taken from students of Saveetha Dental College

**Source of Funding** – Saveetha Dental College

**Conflict of Interest** - Nil

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