

PERCEIVED CAUSES OF STRESS AMONG DENTAL UNDERGRADUATES AT ARMY MEDICAL COLLEGE, RAWALPINDI

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ABSTRACT

The aim of this study was to evaluate the perceived causes of stress among dental undergraduates studying at Army Medical College, Rawalpindi. Evaluation of student's perception will be helpful in taking measures to improve the academic performance and psycho-social well-being.

Modified Dental Environment Stress (DES) questionnaire was distributed among the dental undergraduates during the middle of academic year 2013-2014. The students were included in the study on voluntary basis, 195 questionnaires were distributed and 164 were returned (84% response rate). The questionnaire was analyzed using SPSS-15. The Mann-Whitney test and Kruskal-Wallis test were applied. The level of significance was set at $p < 0.05$.

The most common stressor among the 1st, 3rd and final year students was the fear of failing the professional exams (mean and SD were 2.82 / 1.18, 2.63 / 1.00, 2.95 / 0.96 respectively) where as the overloaded feeling due to huge syllabus was the highest stressor among the 2nd year students (mean and SD were 3.02 / 0.96).

Comparing the gender with the stress perception revealed that the 3 most bigger stressor among the female undergraduate students were fear of failing the course, overloaded feeling due to huge syllabus and the fear of dealing with patients who do not disclose contagious disease, where as the male undergraduate students found the overloaded feeling due to huge syllabus as the biggest stressor followed by fear of failing the course and lack of time to do the assigned task. The findings of this study suggest that academic and clinical workloads are the primary sources of stress among the Dental undergraduates at Army Medical College. Dental educators can encourage students to be realistic.

Key Words: Stress, Psychological undergraduates.

INTRODUCTION

Stress is a response or a process by which an individual interpret and react to environmental challenges and tasks.^{1,2} Personal set of beliefs and attitudes are responsible for perception of stress. Stress is also described as environmental demands on the psychological well-being of an individual.³ Wide range of strong external stimuli result in a psychological response known as General Adaptation Syndrome and when the demands surpass individuals personal and social resources then response is shifted from Eustress (curative stress or positive form of stress) to Distress.⁴ Individual set of thoughts and beliefs constitute the perception of stress.³ Fatigue, tension, sleepiness, irritability, gastrointestinal symptoms and anxiety are the manifestations of stress.⁵

It is recognized that dentistry is associated with stressful environment.^{6,7} The major stress provoking factors in dentistry include the time management pressures, uncooperative patient, commercial issues and technical methodology of work.^{8,9,10} Psychological and physical distress are sequel of stress, which affect the academic and clinical capability of individual.^{11,12} Depression, anxiety, substance misuse, absenteeism; decreased work efficiency, and exhaustion are the sequel of stress.³

MATERIAL AND METHODS

A cross sectional questionnaire based anonymous study was conducted during the middle of academic year 2013-2014, at the Army Medical College, Rawalpindi. The students of undergraduate dental program of all four years of education were included in the study. Dental under graduate program comprises of four years, first year students learn basic sciences, second year students perform preclinical work while the third and the fourth year students go to various clinical department. Ethical approval was obtained from Ethical committee of Army Medical College, Rawalpindi.

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This study was conducted on basis of Dental Environment Stress (DES) Questionnaire, concerning the undergraduate students.⁴ The questionnaire was modified according to the population of the Army Medical College, Rawalpindi. A 27-item questionnaire was used. It was printed in English language and the students were involved in the study on voluntary

TABLE # 1: DEMOGRAPHIC PROFILE OF STUDENTS

Variables	N (%)
Total participants (195)	164(84.10%)
Gender	
Male(25)	19(76%)
Female(170)	145(85.29%)
Study year	
First year (50)	38(76%)
Second year(51)	44(86.27%)
Third year(46)	40(86.95%)
Fourth year(48)	42(87.50%)
Age	
Mean	21
Median	21.5
Range	18-24

TABLE 2: THREE BIGGEST STRESSORS FOR FEMALES

No.	Stressor	Mean(SD)
1.	Fear of failing	2.76
2.	Overloaded feeling due to huge syllabus	2.51
3.	Fear of dealing with patients having contagious disease	2.51

TABLE # 3 THREE BIGGEST STRESSORS FOR MALES

No.	Stressor	Mean(SD)
1.	Fear of failing	2.76
2.	Overloaded feeling due to huge syllabus	2.89
3.	Fear of dealing with patients having contagious disease	2.63

TABLE 4: YEARLY COMPARISON OF THE HIGHLY PREVALENT STRESSORS

No.	Stressor	Mean SD			
		1st year	2nd year	3rd year	4th year
1.	Fear of failing	2.82	2.82	2.63	2.95
2.	Overloaded feeling due to huge syllabus	2.23	2.11	2.42	1.73
3.	Lack of time to do assigned task	2.60	2.40	2.30	2.21
4.	Fear of dealing with patients having contagious disease	2.34	2.72	2.45	2.47
5.	Working on patients with dirty mouths	2.07	2.59	2.55	2.33
6.	Clinical requirements	1.02	2.20	2.60	3.20

basis. The questionnaire comprised of 6 categories self efficacy beliefs (1-9), workload (10-13), patient treatment (14-17), clinical training (18-21), performance pressure (22-24), social stressor (25-27). Students answered all the questions on four point scale measuring the severity of stress. It included 'Not Stressful at all', 'Somewhat stressful', 'Quite stressful', 'Very stressful'.

The data were entered and analyzed using Statistical Package for Social Sciences (SPSS-Version 15). Descriptive statistics (proportion, mean, standard deviation). The comparison of stress levels among the two gender was analyzed using Mann-Whitney test where as comparison of stress between the academic years was done using Kruskal-Wallis test.

RESULTS

The demographic profile (Table 1) represented 164 students out of 195 returned questionnaires (response rate 84.10%). The response rate of female students (85.29%) was more than the male students (76%). The final year students (87.50%) took more interest in participating in the study, where as first year students (76%) were least interested.

The stress levels were compared between the two genders (Table 2 and 3). The analysis represented that the most common stressor for male and female students was the 'fear of failing the course' (mean 3.16 and 2.76 respectively). The second and third most stressful condition for male students was 'overloaded feeling due to huge syllabus' (mean 2.89) and 'lack of time to do assigned work' (mean 2.63). Where as for female students the 'overloaded feeling due to huge syllabus' (2.73) and 'fear of dealing with patients who do not disclose contagious disease' (mean 2.51) were the three most stressful conditions. Comparison of stress levels among the professional years is shown in (Table 4.)

DISCUSSION

The knowledge of perceived causes of stress among dental undergraduates will be helpful in eliminating

the factors leading to stress. The study has shown that the most common stressor for both the genders is 'Fear of failing the professional exams' followed by 'overloaded feeling due to huge syllabus.' This result is similar to the study conducted among Saudi dental undergraduate.⁴

Comparison among the professional years has shown that fear of failing a professional exam is highest among final year students whereas 2nd year students have the highest stress level of overloaded feeling due to huge syllabus. Stress related to time management has decreased subsequently in the undergraduate program which signifies that student learned to manage time and work load. Fears of dealing with patients who have contagious disease and dirty mouth is highest among 2nd year students whereas clinical requirements appear to be the most prevalent stressor among final year students.

With the advancing year dental undergraduates have to work didactically incorporating lab work and patient care in addition to studies. It has been concluded in a study that dental students experience more stress than medical students due to the technical excellence required in dentistry.¹³

The overall mean stress score among all years has shown that the stress related to academic workload has gradually decreased whereas the stress of optimum clinical performance has subsequently increased. This suggests that students have learned to manage the academic work load with advancing year but the clinical technicalities and excellence require greater attention by the administration to reduce the associated stress.

However stress is also linked with the personalities of the dental students.¹⁴ Among the Australian Dental students the perception of stress was due to inner tendency and expectations of higher professional excellence.¹⁵ In this study males have shown to experience more stress than females and it is in agreement to similar study conducted in India.¹⁶

Since current study has cross-sectional design-investigating at one point time, it has certain limitations. This design did not investigate the fluctuations of stress over time (longitudinal fluctuations). Additionally information bias could not be ruled out since self-administered questionnaires were used.

CONCLUSION

It is concluded that, stress is the combination of psychological, physiological and behavioral reactions that people have in response to events that threaten or challenge them. Stress can be good or bad. Sometimes stress can be helpful, providing people with the extra energy or alertness they need. This good kind of stress is called Eustress. Unfortunately stress is often not helpful and can even be harmful when not managed effectively. Moreover stress can increase the risk of developing health problems such as cardiovascular

diseases and anxiety disorders. This bad kind of stress is called as distress, the kind of stress that people usually are referring to when they use the word stress.

This study was conducted to investigate the background of stress, identify the factors associated with stress, the effects of stress and to recommend suitable and appropriate actions that can be taken to overcome this problem. The findings of the present study suggest that academic and clinical workloads are the primary sources of stress among the dental undergraduates at Army Medical College. Dental educators can help students by encouraging them to be realistic in their expectation.

REFERENCES

- 1 Yusoff MS, Abdul Rahim AF, Yaacob MJ. Prevalence and sources of stress among university students Malaysia medical students. *Malays J Med Sci.* 2010 Jan-Mar; 17(1): 30-37.
- 2 Med Sci 2010; 17:30-7. Myers DG. Stress and health. In: *Exploring Psychology*. 6th ed. New York: Worth Publishers; 2005. p. 402.
- 3 Pradeep S, Tangade, Anmol Mathur. Assessment of Stress Level among Dental School Students: An Indian Outlook. *Dent Res J* 2011; 8(2): 95-101.
- 4 Zeyad H. Al-Sowaygh, Abdulmohsen A. Alfadley, Mohammed I. Al-Saif, Saleh H. Al-Wadei. Perceived causes of stress among Saudi dental students. *King Saud University Journal of Dental Sciences* 2013; 4, 7-15.
- 5 Shashidhar Acharya, Factors Affecting Stress among Indian Dental students. *Journal of Dental Education* 11/2003; 67(10):1140-8. PubMed.
- 6 Atkinson TM, Millar K, Kay EJ, Blinkhorn AS. Stress in dental practice. *Dent Update* 1991; 18: 60-64.
- 7 Gorter RC, Albrecht G, Hoogstraten J, Eijkman MAJ. Professional burnout among Dutch dentists. *Community Dent Oral Epidemiol* 1999; 27: 109-16.
- 8 Westerman GH, Grandy TG, Ocanto RA, Eriksine CG. Perceived sources of stress in the dental school environment. *J Dent Educ* 1993; 57: 225-31.
- 9 Heath JR, MacFarlane TV, Umar MS. Perceived sources of stress in dental students. *Dent Update* 1999; 26: 94-100.
- 10 Lamis DR. Perceived sources of stress among dental students at the University of Jordan. *J Dent Educ* 2001; 65: 232-41.
- 11 Cecchini JJ, Friedman N. First-year dental students: relationship between stress and performance. *Int J Psychosom* 1987; 34: 17-19.
- 12 Westerman GH, Grandy TG, Lupo JV, Mitchell RE. Relationship of stress and performance among first-year dental students. *J Dent Educ* 1986; 50(5): 264-67.
- 13 Murphy RJ, Gray SA, Sterling G, Reeves D, Du J. A comparative study of professional student stress. *J Dent Educ* 2009; 73: 328-37.
- 14 George JM, Whitworthl DE, Sturdevant JR, Lundeen TF. Correlates of dental student stress. *J Dent Educ* 1987; 51(8): 481-85.
- 15 Sanders AE, Lushington K. Sources of stress for Australian dental students. *J Dent Educ* 1999; 63: 688-97.
- 16 Kumar S, Dagli RJ, Mathur AJain M, Prabu D, Kulkarni S. Perceived Sources of stress among Indian dental students. *Eur J Dent Educ* 2009; 13: 39-45.