



Alarming aspect of dentistry

Sukhpal Kaur*, Riponjot SinghSandeep Kaur*****

- Reader, Dept. of Orthodontics and Dentofacial Orthopaedics, Desh Bhagat Dental College and Hospital, Muktsar, Punjab, 152026.
- Dental hygiene student, Georgian College of Applied Arts and Technology, Barrie, Canada.
- Consultant dentist (BDS), Cosmetic dental clinic, Barnala. 148101.

Corresponding Author: Sukhpal kaur,

Reader, Dept. of Orthodontics and Dentofacial Orthopaedics, Desh Bhagat Dental College and Hospital,
Muktsar, Punjab, 152026.

E-mail: docs284@gmail.com

Abstract

Stress is a response to pressure or threat. Under stress one may feel tense, nervous or on edge. It also creates physical response as it triggers secretion of a hormone called adrenaline that temporarily affects the nervous system. The students of professional courses are more prone to stress because of various stress factors. In this article we will discuss about stressors and management of stress among dental students.

Keywords: Stress, physical response, nervous system.

Introduction

In today's life, stress does not spare anyone. Stress is defined as the pattern of specific and nonspecific responses an organism makes to stimulus events that disturb its equilibrium and exceed its ability to cope. ¹Stress can be physical, emotional or psychological. The ability to cope with stress is variable among individuals. There are some factors which influence the response to stress such as how a person see the situation, general physical health, genes and past experiences. Overeating, smoking, drinking and not exercising resulting from stress, can also worsen the negative effects of stress. Stress has both physiological and psychological external

stimuli which can cause physiological reaction referred as general adaptation syndrome, it was first described by Hans Selye in 1936. The transition from Eustress that is positive form of stress to distress that is negative implications of stress take place when demands exceed the personal and social resources of individual.²

The process, how the body reacts to stress, called as allostasis. The best known response to acute stress is fight or flight reaction. The body produces several stress hormones in response to stress and these hormones intensify concentration, ability to react and strength. Heart rate and blood

pressure also increase and immune system and memory become sharper. Chronic stress creates problem, as body is constantly producing higher levels of hormones due to repeated stress and does not have time to recover. These raised blood level of hormones can cause serious health problems such as digestive system problems, obesity, weakening of immune system, anxiety, depression, loss of sleep, lack of interest in physical activity, increase in blood pressure, heart rate, blood fats, blood sugar level, memory and decision making skills are also affected.³

Stress in dentistry

Prevalence of stress in dental students is 100%.⁴ Dentistry becomes stressful for dental students as it is expected from students to achieve a wide range of knowledge and skills for their success in studies and future career.⁵ Stress causes both physical and psychological distress which can affect the well being and performance of dental students.^{6,7} Stress is simply a strain that accompanies a demand perceived to either positive or negative and depending on consideration, either adaptive or debilitating. Anxiety is debilitating reaction to stress and it is the measure of stress that has been used to evaluate the academic performance of dental students. Perception of stress is influenced by person's beliefs and attitude. Therefore individual's understanding mediates the response to stressors resulting in either positive or negative consequences.^{8,9,10}

Consequences of stress in dental students

Most of studies reported that stress has detrimental effect on academic performance of students^{6,11,12,13}. But few studies did not support this fact.^{14,15} Students under chronic stress have psychological problems such as mood changes, frustration, decreased concentration, high levels of burnout.¹⁶⁻²⁰ Other health problems created by stress are fatigue, sleeplessness, tension, dizziness, tachycardia, irritability, anxiety and gastrointestinal disturbances.^{6,21,22} Behavior changes such as smoking and substance abuse, also observed in relation to stress. Gordon and Rayner found that among students examination

stress and relaxation are the reasons behind their smoking.²³ In Dutch students reasons for substance abuse were relaxation and relief of tension.²⁴ Another manifestation reported in relation to stress is social isolation from family and friends.¹²

Factors causing stress:

Studies reported that etiology of stress is multifactorial. The major stressors causing stress in dental students are academics, examination, fear of failing, clinical training, financial resources, fear of facing parents after failure and fear of unemployment.²⁵⁻²⁷

Clinical training issues impose stress in dental students. There are many issues such as requirement of certain quota of cases to be completed, absence of early clinical exposure and getting an ideal clinical case for exam. Although it is institute's responsibility to provide patients but there is shortage of particular cases like ideal class II cavities, therefore sometimes students have to go out for finding these cases. It can be highly stressful for students especially during exams, which themselves are a major stress factor. Working on patients with unhygienic mouth may be stressful for third year students because they just start working on patients in that year. Stress due to communication problem with patients in their local language is higher in third year students.²⁸

Dental education requires lots of study, therefore students feel overloaded by academic demands. Exams, grades and fear of failing, all these are stressors for dental students. Academic stress is high in first year, decreased in second year and then again high in third and fourth years. This may be due to sudden change of subjects and start of clinical work in third and fourth year.²³ It was reported that lack of time for relaxation is major stress factor for third year students. This may be due to difficulty in maintaining balance between academic work, clinical activities and social life.¹² The transition from preclinical second year to clinical third year was found more stressful because of change in learning environment, teaching style and expectations from students.²⁶

Some studies found that faculty behavior also causes stress among students. Teachers frequently criticized students for clinics and academic work. It becomes more stressful when students are criticized in front of their patients. Therefore clinical years are more stressful than non clinical years.²⁸⁻³⁰ But according to Westerman et al non clinical years were more stressful.³¹ Stressors found by Heath et al include information input overload, fear of not completing the quantity and variety of work, insufficient and criticizing feedback regarding performance.³²

A study conducted on Egyptian dental students concluded that insecurity related to future professional career also a stress factor for third and fourth year dental students.²⁷ Another study in India also reported stress among students regarding future, fear of unemployment, pursuing post graduation, clinic set up and to be a successful dentist.^{33,34}

It was observed that most of students in dental colleges are depressed because they could not get admission in MBBS college.³⁵ It was reported that a student whose first choice was medicine show higher stress than students whose first choice was dentistry. Another study concluded that students who join dental course due to parental pressure, show higher stress due to behavior of staff, academic workload, fear of unemployment and have lack of confidence.²⁸

The students staying in hostel experienced more stress than day scholars due to lack of homely facilities. Living away from parents was found more stressful and it may be due to difficulties with adaptation to new environment alone and being self-dependent.³⁶

Stress related to financial resources and parental expectations also observed in many studies. It was explained that cost of dental education is very high and some parents finance their children through bank loans, these things become stressor for students.^{33,37}

Stress management

Tisdelle et al found deficient stress management research and programs available for dental students.³⁸ Literature is available on stress management but its specific application to dental students has not been explored so much. Various types of stress management programs for dental students have been reported, differing in their duration, content and effect. Program can be either single or multiple sessions and involve relaxation techniques or information about stress. It was observed that these programs either reduce number of stressors or increase stress tolerating skills. The main focus of these programs is stress prevention through awareness lectures. Suggested stress management programs by different studies include: improvement of inter-professional relationship skills, yoga, Synchro-Energizer and Progressive Muscle Relaxation technique, combination of awareness and stress reducing exercise in multiple sessions, deep breathing and training workshops that incorporate aspects of solving academic problems. These were recommended as these are easy to implement, liked by students and can achieve high outcomes with least time consumption and effort.^{37,39-41} Alzahem et al introduced a new program named Dental Education Stress Management program (DESM program) to reduce stress among dental students. This program was based on psychoeducation principle and it included three 90-minute sessions. This program taught the students how to deal with their stress symptoms and reduce stress level. This program in their study showed positive results but it need more elaborate research.⁴²

Acharya recommended delightful environment to be created by faculty to reduce stress related to faculty behaviour. This can be possible by interaction of staff with trained educational psychologists who can train faculty in advanced educational techniques to increase student performance and decrease stress of students. This study also recommends parent counseling and make them aware about the ill effects of pressuring their children to join a course in which they have no interest. This can be done by

organizing workshops involving parents and teachers and career fairs for parent counseling.²⁸

Grewal et al found more stress in hostellers, therefore they suggest some alterations to be done in hostel environment so that students feel like home. The quality of food and living facilities in hostels should be improved.

Conclusion

Stress is an inevitable part of life, but one can improve the way of responding to stress and can try to avoid or alter the circumstances that trigger negative stress. Stress is very much common in dental students. As stress is affecting adversely all aspects of student's life such as psychological, physical and social. Therefore, there is need for more research to find out stress management programs that are easy to implement, effective and comfortable for students.

Financial Support and Sponsorship: Nil

Conflicts of Interests: There are no conflicts of interests

References

1. American Psychological Association. Glossary of Psychological Terms. Washington,DC:APA;2011.Availablefrom: <http://www.apa.org/research/action/glossary.aspx> [Last cited on Oct 2014].
2. Selye H. The stress of life. McGraw-Hill:New York;1956.
3. McEwen B. Stress and your health. J Clin Endocrinol Metab 2006;91(2):E2.
4. Ahmad MS, Md Yusoff MM, Abdul Razak I. Stress and its relief among undergraduate dental students in Malaysia. Southeast Asian J Trop Med Public Health. 2012;42(4):996-1004.
5. Polychronopoulou A, Divaris K. Dental students perceived source of stress: a multi-country study. J Dent Educ. 2009;73:631-9.

6. Cecchini JJ, Friedman N. First year dental students: a relationship between stress and performance. Int J Psychosom 1987;34:17-9.
7. Westerman GH, Grandy TG, Lupo JV, Mitchell RE. Relationship of stress and performance among first year dental students. J Dent Educ 1986;50(5):264-7.
8. Sanders AE, Lushington K. Effect of perceived stress on student performance in dental school. J Dent Educ 2002;66(1):75-81.
9. Kumar S, Dagli RJ, Mathur A, Jain M, Prabu D, Kulkarni S. Percieved sources of stress amongst Indian dental students. Eur J Dent Educ 2009;13:39-45.
10. Rajab LD. Percieved sources of stress of stress among dental students at the University of Jordan. J Dent Educ 2001;65(3):232-41.
11. Silverstein ST, Kritz- Silverstein D. A longitudinal study of stress in first year dental students. J Dent Educ .2010;74(8):836-48.
12. Dahan H, Bedos C. A typology of dental students according to their experience of stress: a quantitative study. J Dent Educ 2010;74(2):95-103.
13. MacInnis WA, Murphy HJ, Pentz DG. Identifying dental student dissatisfiers using a Delphi technique. J Dent Educ 1987;51(9):539-42.
14. Sanders AE, Lushington K. Effect of perceived stress on student performance in dental school. J Dent Educ 2002;66(1):75-81.
15. Tervit SL. An examination of perfectionism, stress and self-esteem as predictors of clinical performance for dental students. Diss Abstracts Int Sect B Sci Engineering 2002;62(8-B):3817.
16. Gorter R, Freeman R, Hammen S et al. Psychological stress and health in undergraduate dental students: fifth-year outcomes compared with first year baseline results from five European dental schools. Eur J Dent Educ 2008;12(2):61-8.

17. Humphris G, Blinkhorn A, Freeman R et al. Psychological stress in undergraduate dental students: baseline results from seven European dental schools. *Eur J Dent Educ* 2002;6(1):22-9.
18. Pohlman K, Jonas I, Ruf S, Harzer W. Stress, burnout and health in the clinical period of dental education. *Eur J Dent Educ* 2005;9(2):78-84.
19. Badran DH, Ali Ali MH, Duaibis RB, Amin WM. Burnout among clinical dental students at Jordanian universities. *East Mediterr Health J* 2010;16(4):434-7.
20. Freeman R, Lindner RL, Rooney J, Narendran S. Dental students in Northern Ireland in 1992 and 1995: changing trends in psychological stress. *Stress Med* 2000;16(4):233-8.
21. Martinez NP. Assessment of negative effects in dental students. *J Dent Educ* 1977;41:31-6.
22. Tedesco LA. A psychological perspective on dental education experience and student performance. *J Dent Educ* 1986;50:601-5.
23. Gordon NA, Rayner CA. Smoking practices of dental and oral health students at the university of the Western Cape. *SADJ* 2010;65(7):304-8.
24. Plasschaert AJ, Hoogstraten J, Van Emmerik BJ et al Substance use among Dutch dental students. *Community Dent Oral Epidemiol* 2001;29(1):48-54.
25. Kumar S, Dagli RJ, Mathur A, Jain M, Prabu D, Kulkarni S. Perceived sources of stress amongst Indian dental students. *Eur J Dent Educ* 2009;13:39-45.
26. Morse Z, Dravo U. Stress levels of dental students at the Fiji school of medicine. *Eur J Dent Educ* 2007;11:99-103.
27. Polychronopoulou A, Divaris K. A longitudinal study of Greek dental student's perceived sources of stress. *J Dent Educ* 2010;74:524-30.
28. Acharya S. Factors affecting stress among Indian dental students. *J Dent Educ* 2003; 67(10):1140-48.
29. Lamis DR. Perceived sources of stress among dental students at the university of Jordan. *J Dent Educ* 2001;65:232-41.
30. Sanders AE, Lushington K. Sources of stress for Australian dental students. *J Dent Educ* 1999;63:688-99.
31. Westerman GH, Grandy TG, Ocanto RA, Eriksine CG. Perceived sources of stress in dental school environment. *J Dent Educ* 1993;57:225-31.
32. Heath JR, Macfarlane TV, Umar MS. Perceived sources of stress in dental students. *Dent Update* 1999;26(3):94-100.
33. Sekhon TS, Grewal S, Gambhir RS, Sharma S. Perceived sources of stress among dental college students: An Indian perspective. *Eu J Gen Dent* 2015;4(3):121-6.
34. Tangade PS, Mathur A, Gupta R, Chaudhary S. Assessment of stress level among dental school students: An Indian outlook. *Dent Res J(Isfahan)* 2011;8:95-101.
35. Sunder R, Neelima P. Prevalence of anxiety among newly admitted dental students: A cross sectional study. *Indian Journal of Basic and Applied Medical Research* 2016;5(2):98-102.
36. Sedky NA. Perceived sources of stress among junior and mid senior Egyptian dental students. *Int J Health Sci(Qassim)* 2012;6:141-57.
37. Musser LA, Lloyd C. The relationship of marital status and living arrangement to stress among dental students. *J Dent Educ* 1985;49:573-8.
38. Tisdelle DA, Hansen DJ, St Lawrence JS, Brown JC. Stress management training for dental students. *J Dent Educ* 1984;48(4):196-202.
39. Alzahem AM, Van der Molen HT, Alaujan AH, De Boer BJ. Stress management in dental students: a systematic review. *Advances in Medical Education and Practice* 2014;5:167-176.
40. Howard CE, Graham LE 2nd, Wycoff SJ. A comparison of methods for reducing stress among dental students. *J Dent Educ* 1986;50(9):542-44.
41. Piazza- Waggoner CA, Cohen LL, Kohli K, Taylor BK. Stress management for dental students performing their first pediatric restorative procedure. *J Dent Educ* 2003;67(5):542-48.

42. Alzahem AM, Van der Molen HT, De Boer BJ. Effectiveness of a dental students stress management program. Health Professions Education 2015;1(1):34-42.

Access this Article in Online	
	Website: www.ijcrims.com
	Subject: Dental Sciences
Quick Response Code	

[How to cite this article:](#)

Sukhpal Kaur, Riponjot Singh, Sandeep Kaur. (2017). Alarming aspect of dentistry. Int. J. Curr. Res. Med. Sci. 3(8): 39-44.

DOI: <http://dx.doi.org/10.22192/ijcrms.2017.03.08.007>