

Stress Management in Orthodontics -A Review

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Abstract

There is a lot of study on the unpleasant elements of the dentistry profession. Research has investigated work-related strain among dental professionals, particularly orthodontists, and the findings indicate that multiple variables might contribute to stress. This article focuses on examining the factors that contribute to occupational stress among orthodontists working in various locations and assessing how these factors relate to both individual and occupational traits.

Keywords- dentistry, individual, occupational, orthodontists, profession

INTRODUCTION

Stress results from a person's inability to appropriately meet bodily, sentimental, or psychological requirements. It has been found that around 84% of medical professionals are in stress due to their work environment.¹ In 1930, Hans Selye has introduced the modern concept of stress. All that is uncomfortable, toxic, or unduly challenging has been defined as stress. The study of those factors that either have negative impacts or provide a threat of harmful effects is known as occupational stress. Studies on the demanding elements of dental professional have been conducted and are still being conducted. There have been reports of high levels of work stress in orthodontics and its repercussions. These include coronary artery disease, hypertension and suicide.² It is really thinkable that dental occupational stress could lead to such potentially deleterious effects among practitioners.

Studies in Canada

A study was done on "Occupational Stress Among Canadian Orthodontists" in 2003. Based on high severity and frequency of occurrence the time management and cooperation of the patient are considered to be the most concerning stressors in orthodontics. The stressors in orthodontic practice and in general dentistry are more or less similar, but some stressors are particular to the orthodontic profession. A model of overall job happiness, age, weekly hours worked, annual days of continuing education, part-time academic status, and participation in coping with stress are all included in multiple regression analysis. 35.9% of the difference in reported workplace pressure can be attributed to it.²

Another study was done on the relationship between occupational stress and job satisfaction among orthodontists in Canada in 2004. With the increase in financial stressors, income satisfaction decreases. There has been found a strong correlation between time-related stressors and professional and personal time. As time-related stressors increase, satisfaction with professional time and the amount of personal time decrease. Satisfaction with staff, professional time and practice management decreases with the increase in staff-related stressors. Satisfaction with

professional time and practice management was strongly and significantly related to all categories of occupational stress. Orthodontists who wish to decrease occupational stress should improve their time management to decrease the many occupational stressors. Occupational stress affects all aspects of job satisfaction in orthodontics, whether it is satisfaction with personal time, practice management, or respect as a member of the profession. All categories of occupational stress affect overall job satisfaction in orthodontics; the strongest effects are from stressors related to work, income, and patients.³

Occupational stress among orthodontists in Saudi Arabia

In terms of academic training and practicing guideline, dentistry has historically been considered the most grueling medical specialty. Currently, dentists are facing physical and mental health challenges which are constantly increasing. Dental specialties have the clinical environment which is more prone to occupational stress. Occupational stress in the orthodontics branch is associated with job satisfaction and final treatment results. If reasons of occupational stresses is captured earlier, it will help in preventing orthodontic working burnouts. In Saudi Arabia, orthodontic branch requires more extensive training for 8–10 years. During practice, orthodontists work with patients with aesthetic demands having serious emotional stress. Occupational stress is decided by the individual and environmental factors, so the treatment protocols are influenced by the sociocultural aspect of the local population. So the orthodontist has the responsibility of not only satisfying the esthetic demands but also comprehensive care to get the desired result. Stress level is further increased by the treatment of teenage adults, rescheduling of failed appointments and longer appointments for follow-up. Occupational stress among orthodontists can be considerably reduced by patient education, teaching them oral hygiene maintenance and telling them to follow all instructions given by their orthodontist.¹

The comparison of job stress among dental professionals of Tabriz university, Iran

Their research revealed that dental professionals in various specialties had differing levels of stress. The area of dentistry that experienced the most stress was orthodontics, paediatric dentistry, oral medicine, endodontics, oral and maxillofacial surgery. Orthodontics professionals was having the highest job stress. They are subjected to psychological factors such as stress, emotional exhaustion, tension, sadness, and anxiety, high stress due to long working hours. As compared to male dentists, female dentists have higher amount of stress. High stress in professionals should be managed. It may be done by arranging workshops or educational programs involving steps of stress management. It is mandatory to improve the living standards of dentists by the health care system.⁴

Orthodontic postgraduate's students in India- evaluation of psychological stress

Psychological stress is seen with many professions of dental specialty. It is common among under graduation (BDS) students, which further increases among post-graduation (MDS) students. (Table 1)

Chacko et al in 2017, did a study. The result expressed that most of the postgraduate students were extremely stressed. Females were more stressed than males. Except for homesickness, the difference of stress between the male and female was statistically non-significant. Orthodontics is the oldest branch among dental specialties, and is one of the most complex branches of dentistry; thus, more stress can be anticipated in this department during post-graduation. For both male and female students, stress of academic activities such as seminars, Journal Club (JC), and stress to complete treatment of the patient for presentation in university examination was the most perceived stress source among the curricular and clinical factors, respectively. In relation to personal factors, males were more stressed because of uncertainty in employment and females were maximally stressed due to financial limitations. The top three sources of stress under curricular factors are related to the time management. When time management is not done properly, it will lead to increase in work load due to piling and ultimately leading to stress. For clinical category, in orthodontics, a longer time period is required to finish a particular case with fixed mechanotherapy. If patients are not started early or are not followed up properly, the stress is generated to present a finished case in the examination.

An educational institution has a fundamental duty of providing an optimal learning environment for students. In this regard, the initial essential step is the identification and understanding of the factors responsible for stress. Music, meditation, and taking a break topped the list among the stress busters. High-stress levels in the PG curriculum are there and to relieve the stress, the students should take action towards stress busters so they can work efficiently during their course and institutions should organize extracurricular activities in the college to break the monotony of PG curriculum.⁵

Sources of stress for orthodontic practitioners

Burn-out is a distinct psychological construct. It is different from stress as it causes constant pressure on the individual. These pressures are of an emotional nature and dentists have to constantly take care of every demand of every patient. Thus, burn-out is strongly associated with the emotional effects of providing face-to-face patient services. Prolonged experience of burn-out may lead to depression, and early recognition of the symptoms is important. The dentists are more prone to burn-out due to the nature of their work. Symptoms include: Low energy, helplessness, lowered motivation towards work, negative attitude towards self, work and others, lack of control. Burn-out is caused by lack of participation in decision making, inaccurate perceptions of job uncontrollability, lack of social support from supervisors, and role ambiguity. Humphries (1998) has suggested several ways for prevention of burn-out. These include problem recognition and understanding, taking regular breaks from work. Distraction of the burn-out dentist from patient contact can be done with teaching and research. There is a need to change the attitudes of management and they have to understand the factors responsible for the burn-out in staff so that it is prevented and timely steps can be taken. Dentists of all grades and specialties are highly susceptible to burn-out and stress. It is further increased by higher patient expectations and higher targets of dental care. Those in practice can prevent burn-out in themselves and their staff with care, recognition, and planning. Sue Kaney et al in 1999 told some ways to alleviate work pressure.⁶ (Table 2)

Evaluation of stress among orthodontists in Morocco

In this study which was done in 2011, it was found that most stress was from pressure from patients and parents to remove the appliance before the treatment is completed. Thus, it is stressful to meet the unrealistic expectations of patients. This is associated with the specialty of orthodontics in addition to the general dental practice. The most stress to orthodontic practice is factors related to the patient and those related to time. According to the regression model, with the increase in duration of exercise, stress decreases. Clinical competence and the proper management of orthodontic practice are the factors for reducing stress in orthodontic practice.⁷

Orthodontists in the United Kingdom- work life balance

In this study, done in 2016 in UK, four factors were considered related to work-life balance in orthodontics: work factors, life factors, perceptions and suggestions to manage work-life balance in the orthodontic profession. Most of them have career satisfaction and are able to maintain a good work-life balance. Stress related factors include the lack of flexibility in the work environment, extra work at short notice, the ability to work part-time and reviewing patient expectations.⁸

Professional burnout in orthodontists

This study done in India in 2016, it was emphasized that stress and burnout are more common in dental profession compared to medical profession. Moderate to high amount of Job-related stress was found in about 80 percent respondents, some signs of professional burnout were seen in 40 percent respondent. This is the situation to be taken care at the earlier stage to protect orthodontic community. More attention has to be paid on the healthy lifestyle and preventive measures to reduce stress. It will be more beneficial if academic curriculum incorporates strategies to deal with stress for optimum performance in the field.⁹

Orthodontists work-related cardiovascular stress

This study was done in Italy in 2016. This is the first study done in the group of Orthodontists to document cardiovascular stress during the working day. The cardiovascular system of orthodontists is affected by the routine practice during the working day. The two most important factors to be considered in this reference are psychological pressure from parents and lack of cooperation from patient side. These have a negative effect on their health including circulatory system. Orthodontists must be aware that their cardiovascular system is affected by the patient anxiety and parental pressure and appropriate measures to be taken to cope up with it.¹⁰

CONCLUSION

Occupational stress and the potential stressor among orthodontists is to be identified, as it is very essential. The intended therapy outcomes can be achieved while relieving anxiety among orthodontists through time management and effective patient literacy. To cope up the stress, the mechanism should be incorporated to identify the underlying causes of these stressors. Some of the effective mechanisms include proper scheduling of the procedures, properly timed intervals, and increasing the stamina and level of the physical level of fitness orthodontists. In addition to this, having an attitude of positive thinking, motivated working attitude, healthy and balanced food, and enough sleep according to body requirements can help to cope up toward the existent occupational stresses in orthodontists.¹

REFERENCES

1. Alqahtani ND, Aljajji S, Alshalan N, Aljabaa A, Aldosari M, Albarakati S. Occupational Stress among Orthodontists in Saudi Arabia. *J IntSocPrev Community Dent.* 2020 May 18;10(3):350-358. doi: 10.4103/jispcd.JISPCD_376_19. PMID: 32802783; PMCID: PMC7402246.
2. Roth SF, Heo G, Varnhagen C, Glover KE, Major PW. Occupational stress among Canadian orthodontists. *Angle Orthod.* 2003 Feb;73(1):43-50. doi: 10.1043/0003-3219(2003)073<0043:OSACO>2.0.CO;2. PMID: 12607854.
3. Roth SF, Heo G, Varnhagen C, Major PW. The relationship between occupational stress and job satisfaction in orthodontics. *Am J OrthodDentofacialOrthop.* 2004 Jul;126(1):106-9. doi: 10.1016/j.ajodo.2004.02.002. PMID: 15224066.
4. Dehnad SV, Ghavimi MA, Ghoreishizadeh A, Falsefi A, Negahdari R, Babalou AR. The Comparison of Job Stress among Dental professionals of Dentistry Faculty Members of Tabriz University. *Asian Journal of Pharmaceutical Research and Health Care.* 2016;8(S1):7-11.
5. Chacko A, Tikku T, Srivastava K. Evaluation of psychological stress in orthodontic PG students in India. *Int J OrthodRehabil* 2017;8:19-25.
6. Kaney S. Sources of stress for orthodontic practitioners. *Br J Orthod.* 1999 Mar;26(1):75-6. doi: 10.1093/ortho/26.1.75. PMID: 10333894.
7. Ousehal L, Lazrak L, Hassani K. Evaluation of stress among 100 Moroccan orthodontists. *Open Journal of Stomatology* 2011;1(1):1-6
8. Bateman LE, Collins JM, Cunningham SJ. A qualitative study of work-life balance amongst specialist orthodontists in the United Kingdom. *J Orthod.* 2016;43(4):288-299. doi: 10.1080/14653125.2016.1229846. Epub 2016 Oct 4. PMID: 27700908.
9. Bedre VV, Chachada A, Atulkar M. Professional Burnout in Orthodontists- An Online Survey Report. *Int J Oral Health Med Res* 2016;3(1):36-37.
10. Vasconi L, Veronesi M, Lombardo L, Borghi C, Siciliani G. Work-related cardiovascular stress in orthodontists: A pilot project. *Journal of the World Federation of Orthodontists* 2016;5(4):135-139.

“Table 1. Ranking Order of perceived sources of stress in participants of study.⁵”

STRESSORS	MALE	FEMALE
CurricularFactors	<ul style="list-style-type: none"> ➤ Stressofacademicactivitieslikeseminar,Journal Clubs ➤ Too muchworkload ➤ Stress tomeet deadlineforThesis andLDsubmission 	<ul style="list-style-type: none"> ➤ Stress of academic activities seminar etc ➤ Too much workload ➤ Stress to meet deadline for Thesis and LD submission

Clinical Factors	<ul style="list-style-type: none"> ➤ Need to complete treatment of the patient for presentation in university exam ➤ Lack of adequate Material and equipments ➤ Lack of adequate patients 	<ul style="list-style-type: none"> ➤ Need to complete treatment of the patient for presentation in university exam ➤ Lack of adequate Material and equipments ➤ Lack of adequate patients
Personalfactors	<ul style="list-style-type: none"> ➤ Uncertainty in employment ➤ Lack of time for relaxation and neglect of personal life ➤ Financial limitation 	<ul style="list-style-type: none"> ➤ Uncertainty in employment ➤ Lack of time for relaxation and neglect of personal life ➤ Financial limitation

“Table 2. Behavioral, cognitive, and physical ways to alleviate work pressures.⁶”

BEHAVIOURAL	COGNITIVE	PHYSICAL
<ul style="list-style-type: none"> ➤ Anticipate problem ➤ Exercise control ➤ Problem solving behaviour ➤ Time management skills ➤ Communication skills ➤ Social and interpersonal skills ➤ Practice management skill 	<ul style="list-style-type: none"> ➤ Reassess attitudes and ideas ➤ Examine expectations ➤ Don't catastrophize ➤ Clear appraisal priorities 	<ul style="list-style-type: none"> ➤ Relaxation ➤ Balanced diet ➤ Working habits (e.g. Proper posture, stretching exercises, yoga etc.)