

IMPACT OF CLINICAL WORKLOAD ON THE LIFESTYLE OF DENTAL PROFESSIONALS IN KARACHI

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ABSTRACT

The impact of clinical workload on the lifestyle of the dentists (including social, personal and overall mental and physical) was the core area of interest of this research. The objective of this online questionnaire based study was to determine the effect of clinical workload on the lifestyle of post graduate residents, dental faculty and general dentists in Karachi, Pakistan using Copenhagen Burnout Inventory. A cross-sectional study design and convenience sampling technique was used. A total of 124 dentists including faculty members, postgraduate residents and general practitioners working in clinics and hospital based setups of Karachi were included in the study. Data obtained from the questionnaires was analyzed by using SPSS ver.23. Most of the participants were in the practice between 5 to 10 years and worked for around 5-6 hours daily, treating 5 or more patients. The prevalence of burnout was found to be 71.9% amongst the postgraduate residents whereas faculty and GP showed a frequency of 58.8% and 48.5%, respectively. Burnout was found to have strong association with 5-10 years of practice among dental faculty ($p = 0.002$), whereas, general practitioners faced maximum burnout due to increased working hours ($p = 0.038$) and post graduate residents ($p = 0.029$) and general dentists ($p = 0.004$) felt stressed out after treating more than 5 patients per day. It was concluded in the present study that a high occurrence of burnout was found in the dentists of Karachi.

Key Words: Burnout, Dental Surgeons, Copenhagen Burnout Inventory, stress, Life style

This article may be cited as: Anwar S, Khan JA, Hassan A, Ali B. Impact of Clinical Workload on The Lifestyle of Dental Professionals in Karachi. Pak Oral Dent J 2019; 39(3):285-88.

INTRODUCTION

The term “burnout” is broadly described as a state of chronic stress or syndrome leading to physical and emotional exhaustion and lack of accomplishment.¹ Globally conducted studies report burnout to be either psychological or physiological. Among physiological factors, neck and shoulder disorders are included. Various studies have concluded that these physical exertions may interfere with daily activities of every profession. A study conducted in 1999 on Dutch Dentists estimated that nearly half of dentists retired prematurely,

either partially or completely due to poor health and work-related illness.² Similarly, psychological factors also impact burnout. Burnout and emotional exhaustion leads to depression.³ Similarly, emotional exhaustion impair an individual’s inability to accept and manage changes in emotional scenario.

In order to study burnout, two scales have been reported in literature; Maslach burnout inventory and Copenhagen Burnout Inventory. In 1981 Maslach and Jackson designed, Maslach Burnout Inventory (MBI) scale. However, the MBI scale can only be used on human services sector. MBI Scale is an old scale on which almost 90% of burnout empirical studies have been done.⁴

Copenhagen Burnout Inventory (CBI) scale is used as valid and reliable measurement instrument to conduct studies on professional burnout. It is a unique tool for the measurement of psychometric properties. In comparison to MBI, CBI can be used in a more practical and industrial level layout. The CBI measures burnout in terms of three factors, namely personal, work-related and client-related burnout. A questionnaire based study assess the level of physical and psychological fatigue experienced by individuals with respect to personal

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Received for Publication: June 15, 2019
First Revision: Aug 1, 2019
Second Revision: Aug 8, 2019
Approved: Aug 9, 2019

and work-related burnout. Using CBI; measurement scales – the studies have also been able to take into consideration the ‘personal’ burn-out impact and separate it from ‘work-related’ burnout and has also been able to show how to minimize the burnout affects for the employees who are suffering from stress.⁵

Burnout among dentists have been reported in literature. One study from Israel reported dentist assistant relationship as a strong predictor of burn-out.⁶ A study from UK reported that general dental practitioners were most affected group of dentists from burnout.⁷ Other reports have focused on specific reasons of burnout and concluded that dentists due to long working hours and uncomfortable postures makes their neck muscles flexed and shoulders tensed leading to various pathological effects.⁸⁻¹¹ Other issues are less family time, poor leisurely life, lack of physical exercise due to timings and exhaustion from long working time throughout the day.¹²

On literature search, three studies on burnout were found locally. These studies have largely focused on burnout among undergraduate students.¹³⁻¹⁵ It was therefore, the objective of this research was to study burnout and investigate the effect of clinical workload on the lifestyle of post graduate residents, dental faculty and general dentists in Karachi, Pakistan using Copenhagen Burnout Inventory.

METHODOLOGY

A retrospective cross sectional study was conducted among dental practitioners of Karachi from September 2018 to March 2019. A total of 330 PMDC certified dentists were invited to participate in the online survey. Total, 124 responses were returned and used for present study. The study participants were classified into faculty members of teaching hospitals, post graduate students and dentists working in private and hospital based setups.

A questionnaire was made with demographic details and other work related characteristics like years of working experience, working hours, number of treated patients per day, time interval between patients and level of exhaustion.

The Copenhagen Burnout Inventory (CBI) scale was used to measure the level of burn out in the professional individuals.⁵ It is a 19-item validated and standardized questionnaire which measures burnout scores in 3 categories: personal burnout, work related burnout and patient related burnout. Each of 19 items have a Likert type response, i.e. from 1 to 5 with 1 representing lack of burnout and 5 suggesting strong presence of burnout. In this way a score ranging from 19 to 95 may be scored for an individual, 19 representing lack of burnout and 95 representing highest burnout. A cutoff

of 50 was used from a previous publication.¹⁶ Therefore, a score less than 50 represented lack of burnout while 50 and above represented its presence.

STATISTICAL ANALYSIS

A SPSS Windows version 23 was used for data entry and analysis. Mean and standard deviations was calculated for age, whereas for categorical variables like gender, professional status, number of years into practice etc, frequency and percentage were calculated. Chi square test was applied to find an association between burnout and work characteristics of the respondents. A p- value of ≤ 0.05 was considered as statistically significant.

RESULTS

Basic characteristics of present study population are presented in table 1. The prevalence of burnout was found to be 62% (Table 2). All three sections of CBI i.e. personal, work related and patient related burnout were found to have significant association with occurrence of burnout (Table 2). Table 3 describes the association of burnout with study variables. Dental professionals who were in the practice for 5-10 years experienced more burnout than other groups (Table 3) and they felt more exhausted after treating 3-4 patients (p=0.000).

DISCUSSION

TABLE 1: DEMOGRAPHICS OF RESPONDENTS

Study groups	n	Male	Female	Mean Age (years)
Faculty	34	9	25	32.5 ± 6.7
GP	33	16	17	33.6 ± 8.9
PG	57	21	36	28.4 ± 2.4
Total	124	46	78	

TABLE 2: OVERALL BURNOUT SCORE AND MEAN SCORES OF INDIVIDUAL SECTIONS

Burnout	n	%
Yes	77	62.1
No	47	37.9
	Mean	SD
Burnout	53.66	14.371
Personal Burn-out	17.87*	4.8
Work Related Burnout	19.9*	4.88
Patient Related Burnout	15.9*	5.66

*p=0.000

TABLE 3: ASSOCIATION OF BURNOUT WITH STUDY VARIABLES

Burnout	yes	no	Total (%)	P value
Gender				
male	29	17	46(37)	
female	48	30	78(63)	0.511
Professional Status				
Faculty	20	14	34(27.4)	
GP	16	17	33(26.6)	
PG	41	16	57(46)	0.078
Number of Years into Practice				
>10	6	18	24(19.4)	
5-10	53	15	68(54.8)	
<5	18	14	32(25.8)	0.000*
Working Hours in a Day				
>7	33	26	59(47.6)	
5-6	38	12	50(40.3)	
3-4	4	7	11(8.9)	
1-2	2	2	4(3.2)	0.038*
Number of Patients Treated per Day				
>5	20	8	28(22.6)	
5	39	27	66(53.4)	
4	11	9	20(16.1)	
3	7	3	10(8.1)	0.576
Feeling Exhausted after how many Patients				
>5	38	40	78	
4	14	6	20	
3	22	1	23	
2	3	0	3	0.000*

* is significant

The results of present study suggest that majority (n=77, 62%) of dental surgeons are affected by burnout. Most (n=68) of the participants were into practice between 5 to 10 years and worked for (n=59) 5 – 6 hours daily, treating 5 or more patients. All three section of CBI i.e. personal, work related and patient related burnout were found to have significant association with occurrence of burnout.

Burnout seems to be a global phenomenon among dental professionals. A survey from Britain reported 87% burnout prevalence in general practitioners.^{17,18} Similarly, present study found a range of 45 – 75 % of burnout among all professional categories which is similar to the other surveys reported in literature.¹⁸ The possible reason for the high level of burnout in Britain

and Islamabad dentists could be due to a difference in the scale used to measure burnout. Another reason may be the fear of litigation among the UK dentists. Another study from UK reported findings similar to present study.¹⁶

The local data also seems to agree with the international trend of high level of burnout among dentists. Azad Ali et al reported a total burnout of 80 % among dentists of Rawalpindi and Islamabad which depicts a moderate to high stress level.¹⁹ Another study from Khyber Pakhtunkhwa found 52% of dental professionals suffering from some sort of psychological episode.²⁰ These results are within the range of findings in the present study.

This study found an increasing occurrence of burnout among the professionals who had 5-10 years of practice experience. However, the burnout prevalence decreased for practitioners with more than 10 years of experience. It is possible that with experience, the practitioner learns to cope with work stress and hence experiences less burnout. A systematic review also found strong association between young age among dentists and burnout.²¹

Maximum scores of burnout were found in the work related burnout category of CBI. This particular category enquires about the number of working hours, number of patients treated per day and feeling of exhaustion after treating a certain number of patients. A study from Germany reported an increased risk of burnout while treating anxious and demanding patients.²² Although the methodology used in present study differ from that used in German study and comparisons drawn can be misleading, it nonetheless point towards a significant problem. Dentistry is not just about clinical skills and the science behind it, it also involves interacting with a live patient. Patient related factors, for instance the personality type of the patient can often make a simple procedure look difficult for the treating Dentist. Unfortunately, psychology is not taught to the under-graduates. It is therefore recommended to add this important subject in the undergraduate curriculum.

This study found post-graduate trainees who were also working in private practices to be the most affected group (n=41, 71.9%). A study from India also reported similar results.²³ The possible reasons for this occurrence could be due to double exposure to challenging clinical situations, in the first half of the day in teaching hospitals and in second half of the day at private practices. Although, the faculty of dental institutes is also exposed to this double exposure, post-graduate trainees may find it hard to cope with stress due to less experience.

LIMITATION & RECOMMENDATION

The limitation of this study was small sample size and lack of enough representation from each district of Karachi. A cluster sampling method is suggested for future work. It is recommended that subject of psychology should be included in the curriculum of undergraduate dentistry so that future dentists could be trained to cope with professional stress in a better way.

CONCLUSION

A high occurrence of burnout was found in the dental practitioners of Karachi. Post-graduate trainees were most effected.

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CONTRIBUTIONS BY AUTHORS

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| 1. Dr. Samra Anwar: | Conceived research topic, Data collection, literature search, questionnaire designing, pre testing of questionnaire. |
| 2. Dr. Javeria Ali Khan | Conceived research topic, designed result tables, critically analyzed the manuscript, questionnaire designing, pre testing of questionnaire. |
| 3. Dr. Arshad Hassan | Manuscript writing, statistical analysis, approved final manuscript, questionnaire designing, conceived research topic. |
| 4. Dr. Batool Ali | Designed result tables, critically analyzed the manuscript, questionnaire designing, pre testing of questionnaire, conceived research topic. |