



Research Article



Prevalence Occupational Hazards among Dentists of Uttarakhand: A Descriptive Study

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ABSTRACT

Dentists are known to have occupational health issues, including dental threats of a physical, environmental, chemical and psychosocial type. The poor medical outcomes with occupational health issues include musculoskeletal disorders (MSDs), eye injuries, vibration neuropathy and neurological problems. Problems such as contact dermatitis, hearing loss and irritation from dental products were also observed. Dental workers in the dental school and functional sector have a number of challenges including a range of occupational health threats as well as hazards such as the reactions of infectious diseases, pollution and vibration, as well as allergies to dental products. This study was conducted to assess occupational hazards among the dental surgeons of Uttarakhand. Among the study group of 80 dentists, 54 were males and 26 were females. Descriptive cross-sectional survey was conducted using a self-administrated questionnaire. The study reveals that mean percentage scores were found maximum in the area of 'psychological hazards (90 %), followed by 72.70 per cent in the area of ergonomic hazard, 45.93 per cent in accidental hazard and only 1.67 per cent in the area of 'physical hazard'. The chances of occupational hazards are more common in dentists. Almost all the private dental practitioners were suffering from the occupational hazards. Back problems were common. Regular training and workshops can help lower such problems.

Keywords: Dentists, Occupational hazards, Occupational health, WMSD, Prevalence, psychological hazards.

INTRODUCTION

Unexpected situations in our lives causing worsening of our health status usually represent our first confrontation with our own health-related weakness and mortality. Almost all professions have their more or less pronounced health-related hazards. Occupational diseases are diseases or health disorders that are caused by the work or working conditions. There are also work-related diseases which usually have multifactorial origin. In this case, working conditions can be one more or less dominant factors contributing to the appearance and development of the health disorder (Vodanovic, 2015). Occupational hazard can be defined as a risk to a person usually arising out of employment in sense of the nature or working conditions of a particular job (Fasunloro and Owotade 2004; Chopra and Pandey 2007). Occupational hazards cause the appearance of various diseases and disorders, more or less specific to the profession, which can significantly develop and intensify with years (Louie, 2005). Occupational hazards can also be significantly influenced by age, gender, work station design and geographical factors (Arheim and Ingafou, 2015). Dental profession is recognized as a challenging profession regarding numerous occupational health hazards (Szymanska, 1999 and Ayatollahi et al 2012). Occupational diseases are not only physical,

psychological and social disease, but also have economic and security impacts when they reach a level of severity that directly affects working capacity, leading to absences and early retirement (Rambabu and Suneetha 2014). Although education and discussion about occupational and work-related diseases is of highest importance for their prevention, information regarding occupational and work-related diseases, occupational health hazards and their prevention among the dental professionals is usually insufficient. The aim of this paper is to provide a brief overview and prevalence of occupational health hazards in contemporary dentistry.

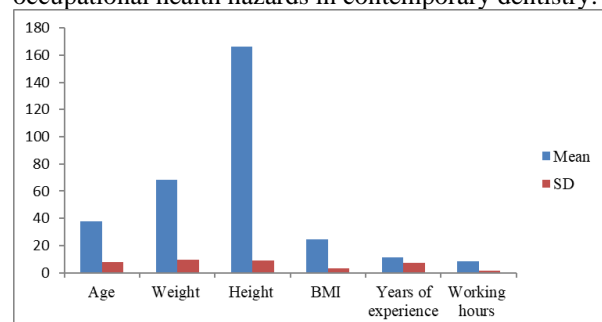


Figure 1. Demographic Statistics

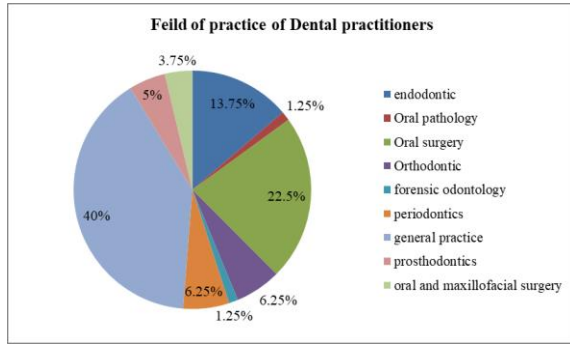


Figure 2. Field of practice of dental practitioners

Table 1. Area wise mean percentage score of occupational hazards

Occupational hazard risk factor	Maximum possible score	Mean score	Obtained total score	Mean percentage score
Biological hazards	3	1.01	81	33.75
Chemical hazards	6	1.81	145	30.20
Physical hazards	3	0.05	4	1.67
Accidental hazards	4	1.83	147	45.93
Ergonomic hazard	6	4.36	349	72.70
Psychological hazards	5	4.5	360	90

MATERIALS AND METHODS

The current study was carried out in Uttarakhand state with a sample size of 80 dental practitioners. The samples were selected with the help of snow ball sampling technique. Occupational injuries and health hazards questionnaire were prepared to collect data over a wide range of hazards namely, biological hazards, chemical hazards, physical hazards, ergonomics hazards, psychological hazards and accidental hazards which were faced by dental practitioners during their work and their frequency of occurrence.

RESULTS AND DISCUSSION

Area wise mean percentage score of the occupational hazards were depicted in table 1, and it was revealed that psychological hazards had the maximum score of 90 percent, followed by ergonomical hazard (72.70 %). It can be depicted from the graph (figure 3) that regarding psychological hazards, a large share of dental practitioners (71.25 %) had not reported any incidence of stress due to absence of respect from peers and other doctors followed by abuse from patients (70 %). Further 48.75 percent of dental practitioners sometimes faced stress due to work schedule and financial issues. Similarly, 22.5 percent of dental practitioners often faced stress due to uncooperative patients; lastly 20 percent always reported stress due to absence of respect from peers and other doctors. Similar findings were also reported by Kay and Lowe, 2008 who reported that the most common factors contributing to stress at work were

patient demands (75 %), practice management/staff issues (56 %), fear of complaints/litigation (54 %) and non-clinical paperwork (54 %). in the study conducted by AlSadhan and Darwish 2016 which revealed that Dealing with uncooperative or anxious patients was reported to be the highest worry encountered by the dentists participating (75.4%) followed by worries of causing pain (73.5%), then running behind schedule (71.1%). This agrees with Moore and Brodsgaard (2001) who found that running behind schedule and causing pain were sources of stress in the dental profession (Korunka et al, 2010). With regards to anxious patients, dentists need to spend more time with them and they might ask for changing the treatment plan or refuse to pay their bills which put dentists under more stress. Ayers et al (2008) also reported that time pressure was a main source of stress among dental professionals (Wilson et al,1998).

Table 2. Correlation of psychological hazards and ergonomic hazard

Variables	Psychological hazard		Ergonomic hazards	
	r values	p values	r values	p values
Age	0.29	0.008**	0.23	0.03*
Height	-	-	0.52	0.0000006**
Weight	-	-	0.48	0.0000004**
Years of experience	0.94	0.0000**	0.36	0.0007**
Work days	0.10	0.36	0.10	0.36
Working hours	0.02	0.80	0.08	0.45
Patient number	0.10	0.27	0.25	0.02*
Number of staff	0.13	0.21	0.05	0.60

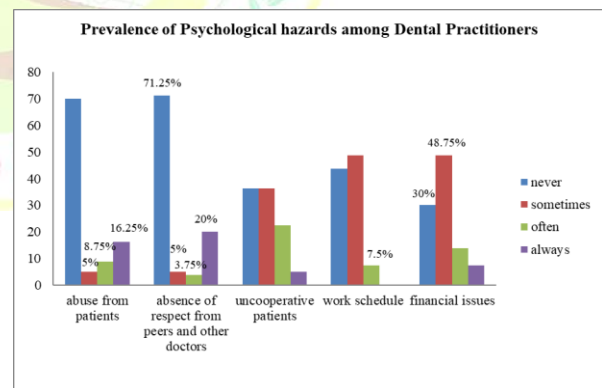


Figure 3. Distribution of respondents as per the incidence of psychological hazards

CONCLUSION

Being under stress was the second prevalent psychosocial hazard of the dental profession. The most prominent related factors were found to be; dealing with uncooperative or anxious patients, worrying of causing pain to patients, running behind schedule, enduring heavy work load, maintaining a high quality of work and meeting society’s expectations of the prestigious profession.

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