# OCCUPATIONAL HEALTH ISSUES AMONG DENTISTS IN KARACHI

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## Abstract:

**Introduction:** To study the occupationally related complications among dentist in Karachi. Regarding collective occupational health problems and the safety measure they commonly take during their practice. So the current study was to manuscript and assess dentist health illness and point out disorders.

**Methodology:** A questionnaire survey was conducted on a sample of 220 dentists , amongst the dentists working in a private & public dental clinic in Karachi. The dentists were requested to fill questionnaire and return , which was designed to evaluate dentist and to rule out the existing complaints about their health. The questionnaire was designed few open as well as some structured questions. A statistical analysis was assumed by means of MS Office, Excel and SPSS version 16.0 software package, with figures evaluated using descriptive and analytical methods.

**Result:** The feedback proportion of the dentists was 81.8%. The most common difficult experienced was musculoskeletal pain (65.8%) mainly in the neck, lower back, another issue was allergic dermatitis of the hands (8.7%) , though almost all of the defendant dentists wore gloves 100% and face masks 96.8% during the work.

**Conclusion:** The prevalence of hand skin problem and musculoskeletal problems are high and influence mostly on dentists 'daily lives. (There seems to be a large claim for continuing education in occupational health and safety. More stress on this matter awareness concerning the importance of work-related risk factors.

## Introduction:

As per definition of World Health Organization, health is a state of physical, mental, and social well-being. Occupational hazards can be describe as a person rare ascending out of an occupation risk.[13] It can also refer to a work ,material or substance, process or situation affects or it self origins accidents or disease. at work place [4].The common collaboration of a dentist is susceptible by single work setting and by a personal characteristic. There is growing rate that different occupied conditions of a dentist affect their health. Dentistry is known to be a very challenging profession. Dental work in Karachi is more focused because many dentists are working in more than one foundation and for more than six hours per day. This numerous workload gives to full stress and decreases the overall performance and the significance of the life of the precious individuals. [6,14] Dentists also require mental vigilance, complete conclusion, good statement, and administrative skills. Although dentistry has seen significant technical advancements in recent years, but professional strength difficulties remain. [5] Failure to adapt to or contend with the working environment can predispose to illness or injury [1].Although dentistry has seen a more advance now a days, but these occupational health hazards still remain [8].. Approximately 81% of American dentists suffer from neck, shoulder and lower back pain [16].Common possibility which contribute to the growth of health disorders can be categorized as those connected to personal background variables (e.g. Anthropometric characteristics, age, hereditary factors) and those associated to work (e.g. Repetitive motion, static posture, force, akward position, vibration, temperature, biological factors, chemically irritating, or toxic factors, radiation) Dentist has occupation-related health problems, mainly comprising neck and low back pain, allergies to latex, and injury from needles and sharp instruments. [1].Risk of low back pain increases with a greater physical workload. health care workers are at risk of becoming informed to latex. Dentists may be at risk of occupational diseases such as systemic infection (e.g. HIV, hepatitis B or C and tuberculosis), allergies. (including dermatitis and respiratory disorders), toxicity, hearing loss, musculoskeletal disorders (particularly of the neck, back and shoulders), injuries (e.g. percutaneous or ocular) and emotional problems [8,9]. Dentists use high-energy equipment, such as drills and scalars, in the presence of bodily fluids such as blood and saliva, and dental plaque. This combination has been shown to form aerosols of oral micro-organisms, and blood. Concerning inhibition, the global literature emphases strictly on control of infections and suitable controlling of potentially infected materials, due to the high profile of dentistry regarding infection transmission. Barrier values such as gloves, masks, protective eye wear, high power pressure, and good ventilation reduce aerosols and vapor hazards. [7] Educational level and nonstop working were important hazard for shoulder pain. Living alone was important for neck and shoulder pain. Increased age was connected to all objection's chronicity. Female gender was considerably linked to chronic back and

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shoulder pain. Co morbidities were more among those with higher physical load, lower job control, and working long hours.[3]

## Material and Methods:

The study intricate a postal opinion poll assessment of dentists working in various private and public dental institutions. The questionnaire was considered in order to estimate the general physical and mental health of a dentist along with their current complaint. The questionnaire was planned few open as well as some organized questions. 220 dentists (194 males – 88.2% and 26 females – 11.8%) in completing the questionnaire focused on occupational health issues. The questionnaire include demographic questions regarding gender, age, work duration and attained knowledge, and also concern with the working conditions (working posture, work with or without an assistant) and the organization of the dentist's work (number of breaks and their purpose). The study group presented many specializations in different field of dentistry. 40% of respondents were general practitioners of dentistry (without any specialization), while only 22.27% of dentists specialized in: operative dentistry 10.91%, prosthetic dentistry 6.36%, maxillofacial surgery1. 82%, pediatric dentistry 1.82%, Periodontology 0.91%, and orthodontics 0.45%.The questionnaire was developed following a literature review. (Pls explain) Questionnaire based survey was conducted on a sample of 220 dentists amongst the dentists working in private public dental clinic of Karachi. The dentists were asked to complete the questionnaire and return. The questionnaire Include demographic questions regarding gender, age, work duration and acquired specialization and also concern with the work conditions (working posture, work with or without an assistant) and the organization of dentist's work (number of breaks and their purpose. A statistical analysis was undertaken using MS Office Excel and SPSS version 16 software package, with data analyzed using descriptive and analytical methods. Associations between categorical variables were tested for statistical significance using the chi-square test, with the alpha level set at 0.05. Means were compared using the independent samples t-test.

## Result:

Almost one-third (32%) of defendants were female and 68% were male. Results show that as many as 33% of the dentists worked without any break,36.4% had one break, and only 8% had a short rest break after every patient. Additionally, 10% of the surveyed dentist exercise regularly to reduce MSDs. (MUSCULOSKELETAL DISORDERS)

However, it was found that statistically significantly more females experienced pain in their fingers while significantly more males felt pain in the lower back. It was found that over 92% of the surveyed dentists experienced pain and disability of the musculoskeletal system, especially in the neck. Over 29% of the dentists experienced discomfort in their hands and finger.

**Fig 1: Status of Dentist's Working Position of Musculoskeletal Disorders (N=220)**

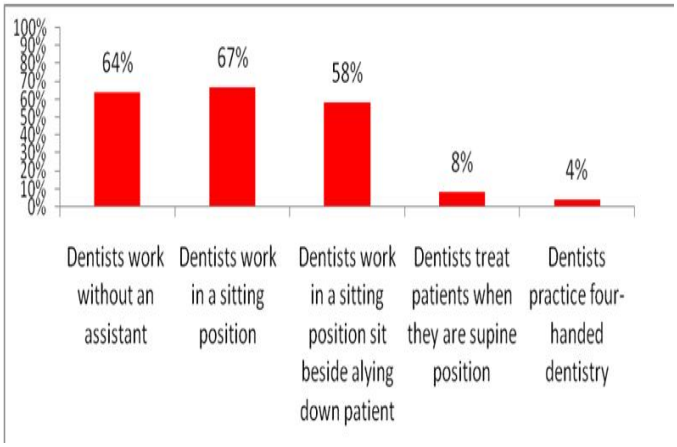



**Fig 2: Relationship of rest break and hip pain of a dentist**

| | | Dentists Felt Hip Pain | | |
|---|---|---|---|---|
| | | Once in a week | Twice in a week | After every patient week |
| Dentist's working practice | Without any rest break | | | 33% |
| | With one rest break | | 36% | |
| | With short rest break after every patient | 8% | | |

**Fig 3: Relationship between Dentist's Exercise and MDS Reduction**

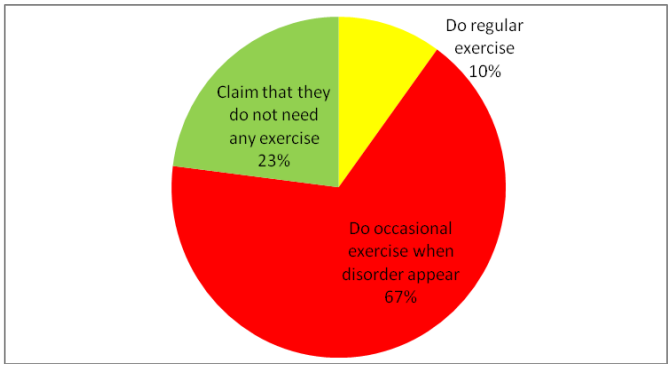
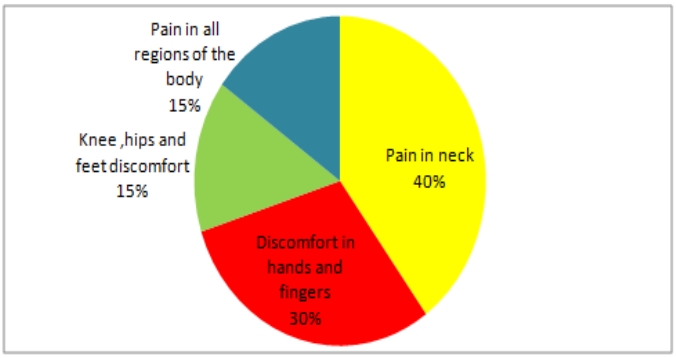


Fig4: Dentists who suffered from musculoskeletal disorders (MSDs)




## Discussion:

The results of this study indicate that the dentists showed unsuitable practices and lack of basic knowledge of biotechnology.

There was no correlation found between MSDs and work. Only the increase of pain in knee and feet due to work in standing position. Therefore, the present study did not allow for finding direct relationships between the cause) and the effects. Irrespective of the above, poor ergonomic work habits such as prolonged pressured work position with e.g. neck or Spine flexion, may involve a risk factor [5].A researcher concluded that the work posture of dentists plays an important role as a risk for the development of work-associated disorders. In many studies very high frequency of MSDs found in the dentist [10,11]. As it is commonly known, that with discomfort posture for a long time can result in muscular weakness and pain. In a study Researcher[6] stated that due to rise in the number of reported MSDs cases, special attention was given in this field. Duration of years in practicing is also one of the important factors in developing MSDs, both age groups, young and old have been found same in some studies [2]. In our study it is found that pain in the hip, feet, shoulders and elbows is after 20 years of practice. A high frequency of MSDs among dentists was confirmed in numerous subsequent studies [10, 17, 16]. It is concluded that, uncontrolled ergonomics in the work environment of the dentists can lead MSDs, and its frequency is very high. The MSDs depends upon the duration of the work done by the dentist. In order to overcome this problem, continuing education about the limitation of overwork, undue stress on the body and work-related risk factors should be given. Literature has shown that predisposing factors for MSD are multifactorial and may be attributed to posture, repetitious movements, physical loads, psychological stress, and other ergonomic factors [9, 10, 11].General practitioners tend to be predisposed to neck and low back, MSD due to their prolonged static postures (PSP) and fewer repetitive motions while working.

## Recommendations:

Dentist continue to follow strict infection control guideline for glove tears and show there skin cut are covered by water proof dressings.

The use of personal protective measures are highly recommended prior to any dental procedure in order to avoid HBV and HIV risk. Dental staff should take steps during the exposure from radiation by standing behind protective barrier ,use of radiation monitoring badge's and regular equipment checks. Priority to use new filling material in order to reduce the chances of mercury contamination. In order to avoid eye injury during procedures eye protection glasses are highly recommended during dental procedures.

Maintain a neutral, balanced position–position of an appendage when it is neither moved away from nor directed toward the body's midline; it also should not be laterally turned or twisted Brief but frequent rest pauses can minimize fatigue and enhance productivity Use non-latex gloves for activities not likely to involve contact with infectious materials.

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