

PREVALENCE OF MUSCULOSKELETAL DISORDERS AMONG DENTISTS

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ABSTRACT:

BACKGROUND: Work related musculoskeletal disorders are described as an inflammatory and degenerative disease and disorders that results in pain and functional impairment. Wrist and hands, low back, shoulder joint, knee joint and cervical areas are most commonly affected areas among Dentists now. **OBJECTIVE:** To find out the prevalence of musculoskeletal disorders among Dentists. It is a prime important to have the awareness of work setting in order to understand the prevalence and causes for musculoskeletal disorders among Dentists. **METHODOLOGY:** Study design was non experimental design, study type was observational type, sampling method was

Convenient sampling sample size was 60 subjects, study setting was on SRM Dental Collage and Hospital SRM UNIVERSITY Kattankulathur. inclusion criteria was dental students and dentists, Age 25 – 40 years working experience of one year and above, both males and females, exclusion criteria was those with hereditary, deformities due to previous trauma, history of recent fracture and surgery, systemic diseases like Diabetes mellitus. Working Dentist were approached, the procedure were explained and informed consent were taken to participate in the study. Participants for the study should be working Dentists and internship students. Applying inclusion and exclusion criteria, 60 Dentists were selected and questionnaire were given

to them . A format of STANDARD NORDIC MUSCULO SKELETAL DISCOMFORT QUESTIONNAIRE, a simple questionnaire were given. The scores obtained with the help of the questionnaire helps to find areas and prevalence of work related musculoskeletal disorders among Dentists. **RESULT:** Neck, Shoulder and Lower back are the most common sites of musculoskeletal disorders among Dentists. **CONCLUSION:** Here by concluded that neck, shoulder and lower back are the most common sites of musculoskeletal disorders among Dentists. **Keywords:** Standard Nordic Musculoskeletal discomfort questionnaire, Dentists, neck shoulder, wrist lowerback.

INTRODUCTION: Work related musculoskeletal disorders are a diverse group of disorders with regard to pathophysiology. According to World Health Organization (WHO), the burden of musculoskeletal disorders can be assessed in terms of problems associated with them, that is the

pain and impaired functioning (disability) related to the musculoskeletal system. Severe cases of musculoskeletal disorders results in frequent absences from work and finally to early retirement. In the world of increasing Dental problems, Dentists are exposed to more number of patients. Simultaneously they are also exposed to increased workloads which in turn increased the prevalence of a wide variety of musculoskeletal disorders among them. Hayes et al., (2009) reviewed the prevalence of musculoskeletal disorders among Dentists. It is as high as, neck 19–85 per cent and 64–93 per cent with back more severe are hand and wrist contributing the highest which is 60–69.5 per cent. The major risk factors associated with musculoskeletal disorders in Dentists are repeated unidirectional twisting of trunk (repetitive movements), working in static postures for prolonged period (prolonged static postures), awkward work postures, less flexibility and less core strength (muscle imbalances).

AIM:

To find out the prevalence of work related musculoskeletal disorders among Dentists.

NEED FOR THE STUDY:

It is a prime important to have the awareness of work setting in order to understand the prevalence and causes for musculoskeletal disorders among Dentists. The objective of this study is to determine the prevalence, identify the risk factors and coping strategies for work related musculoskeletal disorders among Dentist.

METHODOLOGY:

This Study design was non experimental design, study type was observational type, sampling method was Convenient sampling sample size was 60 subjects, study setting was SRM Dental Collage and Hospital SRM UNIVERSITY Kattankulathur. Participants for the study should be working Dentists and internship students. Subjects aged 25 to 40, Both men and women with working

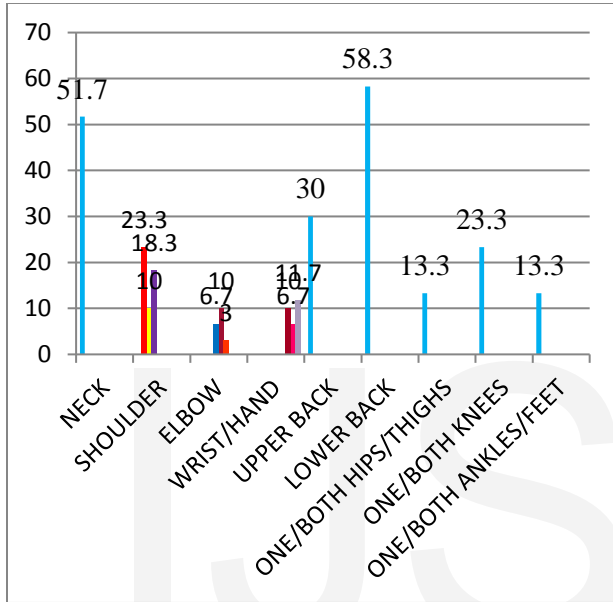
experience of one year and above were included in the study and exclusion criteria was those with hereditary, deformities due to previous trauma, history of recent fracture and surgery in neck, patients with hereditary disorders and systemic diseases like Diabetes mellitus. Working dentist were approached, the procedure were explained and informed consent were taken to participate in the study.

PROCEDURE:

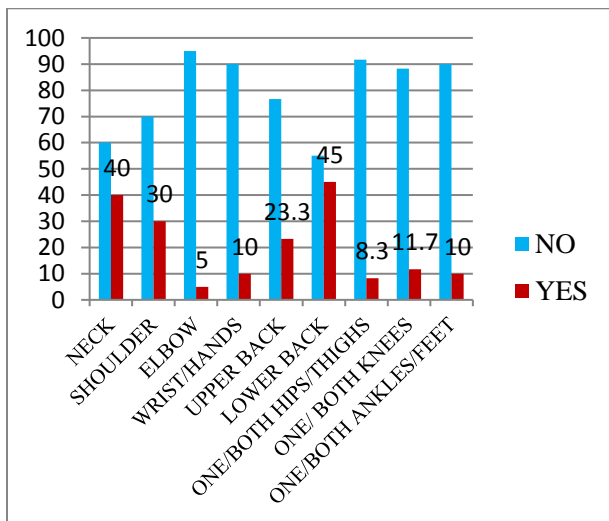
Working Dentists were approached, the procedure were explained and consent were taken to participate in the study. Applying inclusion and exclusion criteria, 60 Dentists were selected and A format of NORDIC MUSCULOSKELETAL DISCOMFORT QUESTIONNAIRE were given. The scores obtained with the help of the questionnaire helps to find areas and prevalence of work related musculoskeletal disorders among Dentists.

RESULTS:

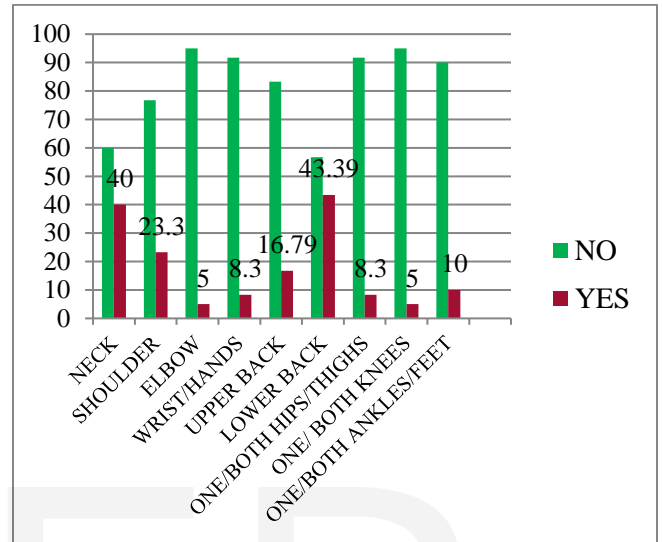
This graph shows that lower back and neck regions were affected more in Dentists at percentage of 58.3%.and 51.7%.



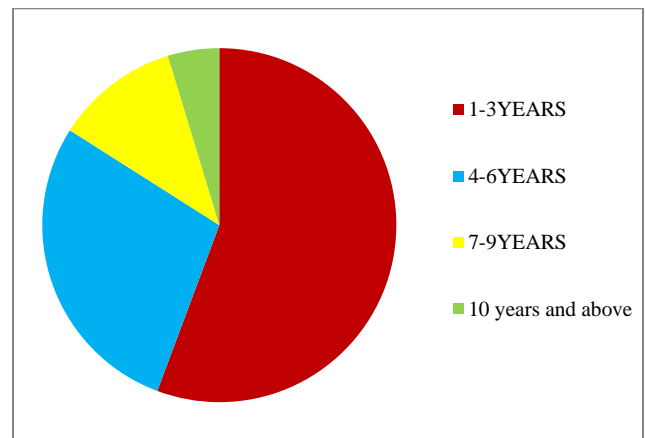
graph showing pain due to musculoskeletal disorders in the past 12 months



graph showing pain due to musculoskeletal disorders in the past 7 days.



Graph showing prevalence of musculoskeletal disorders with years of experience



Followed by neck, back region was affected i.e. upper back was affected at 30%.

The prevalence of knee was next to back region at percentage of 23.3%. The prevalence of shoulders were next to knees, at 18.3% and in side wise right side shoulder was affected more than left side (right side - 23.3%, left side -7.8% and both shoulders - 18.3%). Then the prevalence of hips/thighs and ankles/feet were in same percentage of 13.3%, Prevalence of wrist/hand region was 11.7%. And elbows were 3%.Side wise prevalence of wrist , elbow region were shown in table.

DISCUSSION:

In the present study the commonly affected areas were low back (58.3%), neck (51.7%) and upper back (30%). IN 2010 T. Morse and H. Bruneau says Musculoskeletal disorders affects the physical, psychological, and social aspects of practitioners. IN 2010 Solidaki et al says severe form of musculoskeletal disorders involving more than three anatomical areas was seen in 25% of the practitioners.IN 2004 T. M. Newell and S.

Kumar ,Literature has shown that predisposing factors for musculoskeletal disorders are multifactorial and may be attributed to posture, repetitious movements, physical loads, psychological stress, and other ergonomic factors.IN 2009 M. J. Hayes, D. R. Smith, and D. Cockrell, says This has been attributed to prolonged static postures, repetitive movements, use of force and vibrations, which are considered to be risk factors for musculoskeletal disorders . IN 2006 P. A. Leggat and D. R. Smith, Other studies have shown that dentists have predominantly low back pain because of the repeated forward positioning of head and bending of low back during clinical procedures. IN 1991 T. U. Lehto and H.Y. Helenius says that there is high prevalence of musculoskeletal disorders among Dentists.IN 2003 B. Valachi and K. Valachi says General practitioners tend to be predisposed to neck and low back musculoskeletal disorders due to their static postures and fewer repetitive

motions while working. Dentists are predisposed to pain or injury in different regions of the body depending on the type of work and the position adopted. Dentists are shown to be predisposed to neck, shoulder, and wrist pain largely due to the static postures combined with forceful, repetitive movements adopted while performing procedures. This in turn impacts on their productivity and ultimately reducing the quality of life of the practitioners. In accordance with their experience those who are with 1-3 years of experience are found to be more affected with musculoskeletal problems than with greater experienced Dentists. This can be explained by faulty posture they adopt while practising and initial work may lead them to take more time and hold the equipments with added unwanted pressures that may be learnt effectively with experience.

CONCLUSION:

To conclude, a high prevalence of Musculoskeletal disorders exists among the Dental practitioners which affects the daily practice of more than one third of them. These results indicate that most of the practitioners adopt positions which frequently result in pain on the neck and low back regions, so these regions are most commonly affected and dentists new to the profession are at more risk to musculoskeletal problems than the experienced Dentists. Thus care should be taken and all the Dentists should be made aware of these problems and they should be advised to take necessary steps to prevent these injuries for better serving society. Further studies are needed to identify the specific risk factors for musculoskeletal disorders, so as to introduce effective remedial measures. Recommendations were Influence of work settings changes over work related musculoskeletal disorders can be done. Risk factors among dentists can be evaluated.

Effects of Preventive measures can be analysed. Region wise intervention with exercise protocol can be analysed.

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Conflict of interest: No conflict of interest was declared.

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