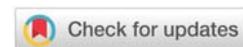


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Research Article

Prevalence of low back pain among the Dentists of Karachi, Pakistan

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Abstract

Objective: To assess the Prevalence of Low Back Pain among the Dentists of Karachi, Pakistan

Methodology: A cross sectional survey was conducted in many different hospitals of Karachi, Pakistan from October to December 2015. A self-constructed questionnaire which includes the demographic Characteristics and other questions were duration of work per day, work experience of a participants, onset of pain, aggravating factors. Among the 68 dentists SPSS version 17 was used to analyze the data.

Results: The majority (n=38, 55.8%) of the participants belongs to age group of 36 to 45 years, (n=36, 52.9%) were female and (n=25, 36.7%) were specialized in the dental surgery. Moreover in the prevalence the (n=65, 96 %) of the participants reported they are suffering from lower back pain. After checking the working status of respondents we found that (n= 34, 52.3%) were working more than 8 hours in a day, while (n=29, 44.6%) of responded that they had work experience between 5 to 10 years. In the onset of pain (n=23, 35.3%) reported that they usually start feeling pain within 1 to 2 hours of working especially when they use to bend their lower back.

Conclusion: This Study finalized that there is 96% prevalence of lower back pain among the dentists working in Karachi Pakistan.

Introduction

Globally Low Back Pain (LBP) is the most general complaint especially in Dentists. Almost every dentist experiences the LBP in their life and they are prone to have low back pain due to their activity in sustained sitting posture, whereas, the LBP decreases their work performance as well. The low back pain can be localized or radiating, in advance cases it affects the lower limb weakness which can lead to an abnormal gait [1,2]. The prevalence of LBP is 44.9% globally, whereas in Pakistan it's reported that 56% of dentist suffer from LBP. The Risk factors for Low back pain could be non-modifiable and modifiable [3,4]. The modifiable risk factors occupation-related such as, poor posture, activity in sustain postures and

lifting of heavy loads Whereas the non-modifiable factors are age, past history of Low back pain, the changeable factors include an inactive lifestyle, obesity, and smoking [5,6]. The LBP is managed by the different methods depending upon the norms and culture of that area but the common methods which are being used are the pharmacological management along with the support of physical therapy management. In pharmacological management the Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) are widely used whereas in the physical therapy the Transcutaneous Electrical Nerve Stimulation (TENS), Inferential therapy, Ultrasound (US) spinal manipulation, McKenzie exercises, exercises for spinal flexibility, thermotherapy(cold/hot packs).acupuncture, massage therapy, acupressure are used to treat the different painful conditions which causes the LBP [7,8].

Material and methods

Study design, settings and duration

A cross sectional descriptive study was conducted from October to December 2015, and data was collected from different dental OPDs of Karachi, dental OPDs of the following institutes: Jinnah Postgraduate Medical Centre (JPMC), Civil Hospital Karachi, Dr Ishrat Ul Bad Khan Institute of Oral Health Sciences, Dow dental OPD DMC & Ojha campus Karachi, Pakistan.

Sampling

Convenient Non-Probability Sampling Technique among the 68 selected participants were used. Participants with both genders (male & female), having the age between 25- to 45 years and willing to participate were included in the study. While, participant above the age of 45 years, pregnant females, participant having any systematic disease, having history of trauma and not willing to sign informed consent were excluded.

Data collection tool

A self-constructed proforma was used to collect the data, which include the demographic Characteristics (age, gender and their field of specialization). While the other questions were duration of work per day, work experience of a participant, onset of pain, aggravating factors of pain.

Data collection procedure

The participants were asked to fill the questionnaire on the spot, only the minor help was given upon the request of participants in order to understand the questionnaire.

Data analysis procedure

Descriptive statistics; categorical variables were measured as frequency and percentage. The Data was analyzed by using Statistical Package for Social Sciences (SPSS) version 17.

Ethical concern

As the Ethical approval was taken from the Review Committee of Institute of Physical Medicine & Rehabilitation, Dow University of health sciences and for data collection prior permission was taken from the respective head of the departments. Informed consent was taken from the participants prior to the data collection that their participation is voluntary, information of their responses will be kept confidential and they can leave the study anytime they want.

Results

Table 1 displays demographic characteristics of participants which shows that Majority (n=38, 55.8%) of the participants belongs to age group of 36 to 45 years and (n=36, 52.9%) were females. In the domain of the Speciality majority (n=25, 36.7%) were practicing in the department of dental surgery.

Figure 1 displays the prevalence of lower back pain which shows that (n=65, 95.5%) of the respondents reported that they are suffering from lower back pain.

Table 2 shows working status of participants which shows that Majority (n=34, 52.3%) of the participants were working more than 8 hours in a day, whereas the (n=29, 44.6%) had work experience of 5 to 10 years.

Table 3 shows status of pain of participants which shows that Majority (n=23, 35.3%) of the participants were experiencing a pain after the 3 to 5 hours of working, however in (n=29, 44.6%) respondents pain was aggravating when they were bending their lower back.

Table 1: Demographic Characteristics.

Demographics	Frequency (n=68)	Percentage %= 100.0
Age		
25-35 years	30	44.1
36 to 45 years	38	55.8
Gender		
Male	32	47
Female	36	52.9
Speciality		
Restoration	21	30.0
Endodontics	10	14.7
Orthodontics	12	17.6
Surgery	25	36.7

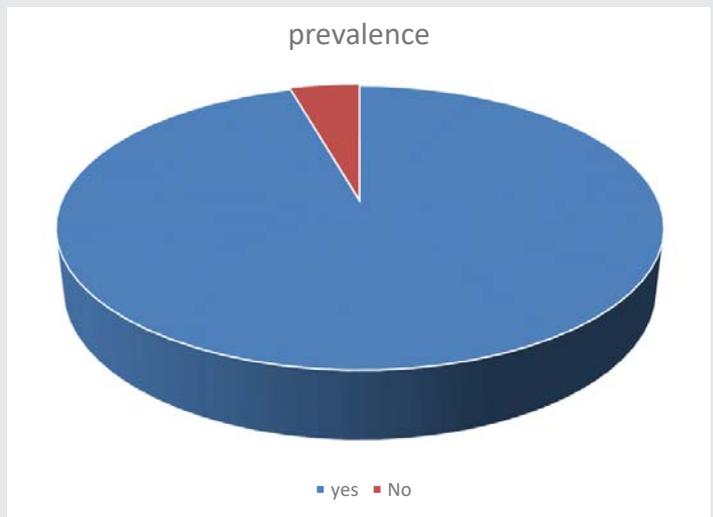


Figure 1: Prevalence of Lower Back Pain.

Table 2: Working Status of Participants.

Characteristics	FREQUENCY (n=65)	PERCENTAGE %= 100.0
Duration of work		
01 to 5 hours per day	11	16.9
5 to 8 hours per day	20	30.7
More than 8 hour per day	34	52.3
Work experience		
01 to 5 years	10	15.3
5 to 10 years	29	44.6
More than 10 years	26	40.0

**Table 3:** Status of Pain.

Characteristics	FREQUENCY (n=65)	PERCENTAGE % = 100.0
Onset of Pain		
Immediately	09	13.8
After 1 to 2 hours of working	20	30.7
After 3 to 5 hours of working	21	32.3
More than 5 hours of working	15	23.0
Aggravating factors of pa in		
Sitting	16	24.6
Standing	23	35.3
Bending Forward	26	40

Discussion

The current study disclosed that there is 96% of prevalence among the dentists who are working in Karachi, Pakistan. Globally there were many studies conducted and some of them are in line with the current study that are conducted by Leggat PA et al in Queensland Australia and concluded that the dentists who are working in different hospital are more prone to suffer from lower back pain due to their posture adaptation. When the dentists were applying different procedure on patients they don't take care of their own posture and due to continuous non maintenance of the posture slowly they start developing the lower back pain [9,10]. Similar studies were conducted by Ilyas M et al in 2012 in Indonesia and Pargali et al in 2010 in Iran, concluded that there is only 9.3% prevalence of lower back pain among the working dentists of Indonesia where as in Iran its higher and found around 55%. The main cause of the lower back pain among the dentists is their abnormal posture, prolong sitting, prolong standing and these all positions are maintained by the dentists for prolong time without any break. Among all, the dentist who were working in the surgical department were found more prone to the lower back pain which can be due to the prolong standing. The dentists who work in surgical department the used to do the extraction which requires the prolong standing [6,11]. The factors which aggravates the pain in the dentists of Pakistan is improper bending of lower back which is usually performed by the dentists at their working places [12,13]. Globally it was observed that the dentist's starts felling pain when they work more than 5 hour per day continuously but in Pakistan we found that the dentists start feeling lower back pain after the working of 1 to 2 hours which shows the poor health of the lower back among dentists [14,15].

Conclusion

The study concluded that the Dentist who were working in different hospitals of Karachi Pakistan were 96% prone to develop the lower back pain, however the onset of pain and the aggravating factors among all were different and were mainly dependent of the duration of work performed by them on daily basis.

Limitations

As this study was conducted in the hospitals of Karachi which cannot show the full aspect of pain among the dentist.

Author contributions

All authors contributed equally.

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