

Prevalence of Work-Related Musculoskeletal Disorder among Dental Personnel in Perak

Authors : Nursyafiq Ali Shibramulisi, Nor Farah Fauzi, Nur Azniza Zawin Anuar, Nurul Atikah Azmi, Janice Hew Pei Fang

Abstract : Background: Work related musculoskeletal disorders (WRMD) among dental personnel have been underestimated and under-reported worldwide and specifically in Malaysia. The problem will arise and progress slowly over time, as it results from accumulated injury throughout the period of work. Several risk factors, such as repetitive movement, static posture, vibration, and adapting poor working postures, have been identified to be contributing to WRMSD in dental practices. Dental personnel is at higher risk of getting this problem as it is their working nature and core business. This would cause pain and dysfunction syndrome among them and result in absence from work and substandard services to their patients. Methodology: A cross-sectional study involving 19 government dental clinics in Perak was done over the period of 3 months. Those who met the criteria were selected to participate in this study. Malay version of the Self-Reported Nordic Musculoskeletal Discomfort Form was used to identify the prevalence of WRMSD, while the intensity of pain in the respective regions was evaluated using a 10-point scale according to 'Pain as The 5th Vital Sign' by MOH Malaysia and later on were analyzed using SPSS version 25. Descriptive statistics, including mean and SD and median and IQR, were used for numerical data. Categorical data were described by percentage. Pearson's Chi-Square Test and Spearman's Correlation were used to find the association between the prevalence of WRMSD and other socio-demographic data. Results: 159 dentists, 73 dental therapists, 26 dental lab technicians, 81 dental surgery assistants, and 23 dental attendants participated in this study. The mean age for the participants was 34.9 ± 7.4 and their mean years of service was 9.97 ± 7.5 . Most of them were female (78.5%), Malay (71.3%), married (69.6%) and right-handed (90.1%). The highest prevalence of WRMSD was neck (58.0%), followed by shoulder (48.1%), upper back (42.0%), lower back (40.6%), hand/wrist (31.5%), feet (21.3%), knee (12.2%), thigh 7.7%) and lastly elbow (6.9%). Most of those who reported having neck pain scaled their pain experiences at 2 out of 10 (19.5%), while for those who suffered upper back discomfort, most of them scaled their pain experience at 6 out of 10 (17.8%). It was found that there was a significant relationship between age and pain at neck ($p=0.007$), elbow ($p=0.027$), lower back ($p=0.032$), thigh ($p=0.039$), knee ($p=0.001$) and feet ($p=0.000$) regions. Job position also had been found to be having a significant relationship with pain experienced at the lower back ($p=0.018$), thigh ($p=0.011$), knee, and feet ($p=0.000$). Conclusion: The prevalence of WRMSD among dental personnel in Perak was found to be high. Age and job position were found to be having a significant relationship with pain experienced in several regions. Intervention programs should be planned and conducted to prevent and reduce the occurrence of WRMSD, as all harmful or unergonomic practices should be avoided at all costs.

Keywords : WRMSD, ergonomic, dentistry, dental

Conference Title : ICOSHW 2022 : International Conference on Occupational Safety and Health at Work

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : December 09-10, 2022