

Assessment of Biomechanics Disorders in Iranian Dentists

Safoura Ghodsi¹, Javad Vatani^{2*}

¹Assistant professor, dental research center, dentistry research institute and Department of prosthodontics, school of

dentistry, Tehran University of Medical Sciences, Tehran, Iran,

²Assistant Professor, Department of occupational health, Guilan Road Trauma Research Center, School of public health, Guilan University of Medical Sciences, Rasht, Iran.

ABSTRACT

The major work-related disorders in workplaces are biomechanics disorders, which are the main reasons for workers' disability. This study was performed to evaluate the prevalence of contributing factors to biomechanics pain in dentistry. A descriptive analytical study was conducted on 200 dentists in Tehran, Iran. Nordic standard questionnaire was used to collect data about biomechanics disorders via interview; Postural evaluation was performed by direct observation during work; photos were taken; videos were recorded; and REBA (Rapid Entire Body Assessment) was used for data collection. Ethics statement: the study was authorized to use human subjects by the university human research ethics committee (Irct ID: IRCT2014051117649N1). The prevalence (95% confidence interval (CI)) of neck, shoulder, elbow, wrist, low back, and knee pains in the study sample were 22.0% (28.39 – 16.46), 25.5% (19.61 – 32.13), 8.5 (5.02 -13.26), 18.5 (13.37 – 24.59), 32.16 (25.72 – 38.60), and 32.5 (26.06 – 39.46), respectively. Based on multiple logistic regression results, the relationship between occurrence of biomechanics disorders in different parts of body and ergonomic factors such as working hours, height, work precedent, and demographic factors such as age, sex, marital status, and education was significant (P value≤0.05). Postural evaluation during work using REBA, indicated high risk of biomechanics disorders for the dentists. Most of the determinants of biomechanics pain including being forced to work, job dissatisfaction, and body posture during work can be controlled. Therefore, the managers and decision makers' attention in improving the quality of working conditions is important along with specific occupational health education.

Key Words: Biomechanics pain, Nordic Questioner, Ergonomic, REBA Method.

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