Abstract

Evaluation of ergonomic factors affecting skeletal and muscular disorders among dental students in ardabil

Introduction: Ergonomics is very important in dental clinical practice. Due to the fact that dentists are placed in different positions during work as needed and also the high precision they need during work, these dentists are at risk of suffering from musculoskeletal disorders related to work. This study was conducted with the aim of evaluating ergonomic factors affecting skeletal and muscular disorders among dental students in Ardabil.

Materials and methods: In this descriptive and analytical study, 105 dental students in Ardabil were randomly examined in two groups: 7th and 8th semester students without clinical practice and 11th and 12th semester students with clinical practice. To evaluate musculoskeletal disorders, Nordic standard questionnaire and rapid whole body instrument (REBA) were used. After collecting the data, they were analyzed using chi-square, Mann–Whitney U and Kruskal-Wallis tests. All analyzes were performed using SPSS version 25 software. A significance level of less than 0.05 was considered.

Results: The risk of musculoskeletal disorders in all students was in acute condition in 30.5% of cases, with the highest amount of pain, discomfort, burning or numbness and reduced work activity in the specified areas in the last 7 days and 12 months, respectively, related to the lower back. (7 days 45.7% and 12 months 15.2%) and neck (7 days 38.1% and 12 months 12.4%). Skeletal and muscular disorders (pain, discomfort, burning or numbness) of students were affected by the semester, age, gender, marital status, work activity of the student and the amount of sports activity; Also, factors such as female gender, older age, and playing sports had a significant effect on the REBA score of dental students, and there was a significant difference in reducing work activity, leaving the workplace, not doing any activity based on gender, work activity and its amount ($P<0.05$).

Conclusion: The findings of this study showed that skeletal-muscular disorders in Ardabil dental students have a moderate prevalence, which was influenced by gender, age and sports activity.

Keywords: Ergonomic Factors, Ergonomics, Work-related Muscle Disorders.