عنوان مقاله:

Ergonomic Analysis of the Neck Posture in Computer Users and Identifying the Related Risk Factors

محل انتشار:

نویسندگان:

Hamidreza Heidari - *Assistant Professor, Research Center for Environmental Pollutants, Qom University of Medical Sciences, Qom, Iran*

Shahram Arsang - *Assistant Professor, Department of Epidemiology and Statistics, Faculty of Health, Qom University of Medical Sciences, Qom, Iran*

Maryam Mahmoodi - *Researcher and Occupational Health Specialist, Student Research Committee, Faculty of Health, Qom University of Medical Sciences, Qom, Iran*

Fatemeh Ramezani - *Researcher and Occupational Health Specialist, Student Research Committee, Faculty of Health, Qom University of Medical Sciences, Qom, Iran*

خلاصه مقاله:

Background:Neck disorder is a common complaint in computer users which affects the task performance and fatigue. Several studies confirmed the relation between neck discomfort and working with a computer. But focusing on the root risk factors inducing neck discomfort can be applied for taking preventive measures and improving workstation design. So, the main purpose of this study was the neck posture analysis in computer users and identifying the related risk factors. Methods:This descriptive-analytical study was performed in 2018 on 169 administrative staff in one of the governmental hospitals in Qom. A researcher-made questionnaire was used to investigate neck discomfort and related risk factors. To determine the angle of the neck, photographic analysis method was used. Finally, SPSS software version 22 and appropriate statistical tests including the logistic regression model, two independent t-test, and chi-square test in contingency tables were used to determine the relationship between individual parameters and workstation with neck angles and neck pain. Results:The results showed that two factors of the height (p= 0.023) and the gender (p= 0.012) had a direct statistically significant association with neck disorder statistically. In addition, the anthropometric dimensions, monitor height from desk level was positively correlated with neck discomfort but sitting elbow to eye height was negatively correlated with neck discomfort (p<0.05). Odds Ratio analysis showed that moderate and severe monitor angle compared to neutral posture (monitor angle less than 10 °) can increase neck discomfort as 1.925 and 3.137, respectively. Conclusion: Generally, it can be concluded that workstation design can affect taking a posture in computer users. So, establishing correct workstation criteria such as eye height, monitor height from desk level and sitting elbow to eye height dimensions are very important. However, determination of the proportion of each parameter effect is strongly recommended for other investigations. This can develop preventive measures for reducing neck awkward postures.

کلمات کلیدی:

Neck, Posture, Disorder, Workstation, Design, گردن, پوسچر, اختلال, ایستگاه کار, طراحی