

Effectiveness of ergonomics training in decreasing the risk of musculoskeletal disorders based on rapid upper limb assessment among computer operators

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Abstract

Introduction: Musculoskeletal disorders are one of the leading problems among computer users. They have attracted increasing attention over years and different solutions have been proposed for their resolution. This study evaluated the effects of ergonomic training on reducing the risk of musculoskeletal disorders in computer users.

Materials and Methods: This study was conducted among the office workers of a university. A total of 110 computer operators were randomly selected and allocated to intervention and control groups. The intervention group was trained about the ergonomic principles of working with computers. Nordic Musculoskeletal Questionnaire (NMQ) was used to investigate the prevalence of musculoskeletal disorders. Moreover, rapid upper limb assessment (RULA) was applied to determine the risk of musculoskeletal disorders before and six months after training. Data was analyzed using independent and paired t-test.

Results: The highest frequency of musculoskeletal disorders was seen in the back (55.4%) and neck (54.5%). In addition, risk assessment before the intervention suggested 31% of the participants to be high-risk. After the training program, significantly lower risk was detected in the intervention group. No such a significant difference was present in the control group.

Conclusion: The results of this study showed that corrective actions can reduce the risk of work-related musculoskeletal disorders (WMSDs). They can thus be implemented to enhance the effectiveness of ergonomic measures.

Key words: Ergonomic, Computer operators, Training intervention, Musculoskeletal disorders

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