

Ergonomic Analysis for Musculoskeletal Disorder Prevention of workers in Operation Prepare Room

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Abstract

The surgery-room is one of the key medical care locations in hospitals and tools and material have prepared in the operation prepare room. The people of surgery team are medical doctors, nurses and assistants. Nurses, the majority of the team, have complained musculoskeletal disorder (MSD) problems. These problems originate from multiple factors. In this study, ergonomic analysis has been used to evaluate risk factors of musculoskeletal disorder. The objective is to estimate the risks of nurses and to redesign the tool carriage in surgery rooms. The subjects are the nurses at surgery rooms in a university hospital. The ergonomics analysis of nurse work was processed in the hospital. Not only professional observation has been done, but also camcorder and camera recorded key activities. The results of ergonomic job analysis and questionnaire show that muscle disorders are very common symptoms of low back; the results of checklist shows that the nurses and assistant people are under high musculoskeletal disorder or injury risk. The new carriage is suggested to reduce the problems of surgery tool lifting and moving. The layout of surgery rooms and preparation room should be redesigned to increase productivity and reduce lifting and moving activities. To provide standing-chairs and to train nurses with valid postures are recommended to decrease nurses' musculoskeletal disorders.

Keywords

Ergonomics, nursing, operation room, musculoskeletal disorder