

ABSTRACT

Keywords: *ergonomics, musculoskeletal disorders, physical activity, posture, work*

Background: The prevalence of musculoskeletal disorders (MSDs) is increasing worldwide, with a significant impact on the workforce. The design of workstations and the organization of work are crucial factors in preventing these disorders.

Objective: This study aims to evaluate the impact of workstation design and work organization on the prevalence of MSDs in a manufacturing environment.

Methods: A cross-sectional study was conducted in a manufacturing plant. Data were collected through questionnaires, direct observations, and video analysis of work tasks. The prevalence of MSDs was compared between different workstation designs and work organization conditions.



Results: The study found a significant association between workstation design and the prevalence of MSDs. Workers using adjustable workstations and those with optimized work organization showed a lower prevalence of MSDs compared to those using non-adjustable workstations and those with suboptimal work organization.

Introduction: Musculoskeletal disorders (MSDs) are a leading cause of disability and lost productivity in the workplace. The design of workstations and the organization of work are crucial factors in preventing these disorders.

Workstation Design: The design of workstations can significantly impact the prevalence of MSDs. Adjustable workstations allow workers to customize their work environment to their individual needs, reducing the risk of MSDs.



Work Organization: The organization of work, including the duration and frequency of work tasks, can also impact the prevalence of MSDs. Optimizing work organization can reduce the risk of MSDs by minimizing physical strain.

