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Effectiveness of an Ergonomics Programme in the Reduction of Musculoskeletal Disorders at the Workplace

Patrick Ker

Singapore General Hospital, Singapore, Singapore

Introduction

Musculoskeletal disorders (MSD) are the most common self-reported, work-related injuries and high incidence rates have been reported for workers in a wide range of industries and occupations. The most common areas of pain reported were neck, shoulder and low back. Ergonomics programmes are often implemented to reduce the incidence of work related musculoskeletal disorders.

Objectives

The aim of this study is to determine the effectiveness of an ergonomics programme led by an occupational therapist in reducing the prevalence of pain from MSD in a manufacturing company.

Methods

A Nordic Questionnaire was administered to workers from a unit in a company manufacturing medical devices through the occupational health and safety personnel. The survey was administered before and 6 months after the implementation of an ergonomics programme. The programme included an evaluation of the work area, task analysis to identify risk factors, implementation of changes to work environment to reduce risks and a 1-hour training session for the workers. The pre and post survey data were analysed using descriptive statistics.

Results

35 completed questionnaires were returned for analysis for pre-programme implementation and 21 questionnaires were received post-programme implementation. Both surveys showed that the most common body parts with pain were neck, shoulder and low back. After the implementation of the ergonomics programme, there were reduction in the prevalence of pain reported for neck (12%), shoulders (18%) and back (18%). From the Chi-Square Test, the improvement reported for the neck was not statistically significant ($p=0.1025$). The improvement reported for the shoulders and back were statistically significant at $p=0.0001$ and $p=0.0014$ respectively.

Conclusion

The results showed that the application of an ergonomics programme at the workplace was useful in the management of MSD, particularly for the shoulders and back. However, more studies should be conducted to confirm the findings with a bigger sample size.

Contribution to the practice/evidence base of occupational therapy

Occupational therapists can play an important role in the area of occupational health through the application of ergonomics. This fits well with the practice of occupational therapy which also emphasizes the interaction between the person and the work environment.