

Prevalence and factors associated with work-related musculoskeletal discomfort among carpenters in Moratuwa Divisional Secretariat, Sri Lanka

M. A. M. Amhar, K. R. M. Chandrathilaka

Department of Allied Health Sciences, Faculty of Medicine, University of Colombo, Sri Lanka

Musculoskeletal (MSK) discomfort is a common occupational health problem among carpenters. The current study aimed to determine the prevalence and associated factors of musculoskeletal discomfort among carpenters in selected Grama Niladhari divisions in Moratuwa Divisional Secretariat, Sri Lanka. This descriptive cross-sectional study was conducted among 155 carpenters recruited using a two-stage random sampling method from the Moratuwa Divisional Secretariat. Individuals with at least 1 year of experience as a carpenter were included. Interviewer-administered questionnaires were used to collect data. The Nordic Musculoskeletal Questionnaire was used to assess MSK discomfort, and pain intensity was evaluated by the Numerical Pain Rating Scale. The study used Karasek's Job Demand-Control-Support (JDCS) model to assess psychosocial exposures. Descriptive statistics and the chi-square test were used to analyze data. The response rate was 91.6% (n=142). The prevalence of MSK discomfort in one or more body regions was 92.3% (n=131) during the past 12 months and 78.9% (n=112) during the past 7-day period. Shoulder pain was the most prevalent region of MSK discomfort in the last 12 months (65.4%), followed by lower back pain (62.0%). During the last 7-day period, the lower back region was the most prevalent. Age (p=0.001), educational level (p=0.003), psychosocial demand (p=0.001), level of fatigue after work (p=0.001), and working posture (p=0.001) were significantly associated with MSK discomfort in at least one body region during the last 12 months. Region-wise analysis revealed significant associations (p<0.05) between MSK discomforts and age, BMI, education level, working posture, regular exercise, service period, fatigue level, and smoking habits. MSK discomfort among carpenters is high. Shoulder, lower back, knee and elbow are more prone to developing MSK discomforts from carpentry. Findings of the study highlight that carpenters' work postures need to be investigated, and that ergonomic and occupational health measures are needed to improve working conditions and reduce future musculoskeletal discomfort.

Keywords: *Work-related musculoskeletal discomfort, Occupational health, Ergonomics*