

Landscaping work: work-related musculoskeletal problems and ergonomic risk factors

ABSTRACT

Background: Work-related musculoskeletal disorders (WRMSDs) are considered one of the foremost reasons of disability globally with significant economic impact due to loss of productivity. Landscaping work is considered a high-risk industry in the service sector. Landscape workers are susceptible to WRMSDs as they are exposed to high physical demands at work, and exert significant physical effort to complete daily repetitive tasks during long working hours. The aim of this study was to determine the prevalence of WRMSDs and to identify the ergonomic risk factors among landscape workers in a university setting. Methods: This was a cross-sectional study conducted among landscape workers at a public university in Kota Kinabalu, Sabah. Interviews were conducted due to low literacy of the participants, using structured questionnaires which consist of personal characteristics, work descriptions, ergonomic risk factors, as well as self-reported WRMSD symptoms using the NORDIC questionnaire. Ergonomic risk assessment (ERA) using rapid entire body assessment (REBA) was then conducted. Results: Fifty-five of 60 landscape workers agreed to participate (92% response rate). The overall prevalence of WRMSDs among landscape workers was 85.5%. The highest prevalence involving the shoulder (65.5%), followed by neck (23.6%), wrist/hand (23.6%), and lower back (20.0%) regions based on their self-reported WRMSD symptoms over the past 12 months. Awkward posture was the risk factor identified through ergonomic risk assessment (ERA) conducted by ERA trained personnel. None of the working postures during assessment was noted to be appropriate. Although no significant difference was associated with self-reported WRMSDs, majority of the landscape workers (71%) were classified as medium ergonomic risk group using REBA, with the remaining 29% considered to be high ergonomic risk group. Conclusion: Improvement in awareness campaigns, modification of working tools, and enhanced administrative approaches are among the control and prevention measures recommended to delay or prevent the occurrence of WRMSDs.