

Prevalence of musculoskeletal symptoms and its associated risk factors among bus drivers in a university in Malaysia

ABSTRACT

Introduction: Musculoskeletal disorder is a significant public health problem because of high numbers of cases reported especially in the working population. **Objective:** The aim of this study was to determine the prevalence of musculoskeletal symptoms and its associated risk factors among university bus drivers. **Materials and Methods:** A cross sectional study was done on bus drivers in a public university. A modified, validated Standardized Nordic Questionnaire was used to obtain information about socio demography, health status, job characteristics, perceived ergonomics risk factors and musculoskeletal symptoms among 47 bus drivers. Height and weight were measured and BMI was calculated. A calibrated Human Vibration Meter was used to measure whole body vibration (WBV) exposure while postural analysis was used to evaluate awkward working posture. **Results:** The prevalence of musculoskeletal symptoms (MSS) among university bus drivers was 97.9%. Majority (78.7%) of the respondents experienced musculoskeletal symptoms involving lower back. Other common sites were knee (63.8%), leg (59.6%) and neck (53.2%). The level of whole body vibration (WBV) magnitude did not exceed exposure action value (EAV) of European Directive (0.27 m/s²). There was significant association between duration of working hours per day ($\chi^2 = 14.9, p=0.001$), static posture ($\chi^2 = 22.9, p<0.001$) and awkward posture ($\chi^2 = 14.9, p=0.036$), with MSS. **Conclusion:** Prevalence of musculoskeletal symptoms among university bus drivers was high, especially involving the lower back. Work related exposures were the significant associated factors of musculoskeletal symptoms among university bus drivers. Preventive measures such as periodical training and improvement of work factors and working condition should be implemented to reduce the prevalence of MSS among university bus drivers.

Keyword: Musculoskeletal symptoms; Bus drivers; Risk factors