

## **Lower back pain and its association with whole-body vibration and manual materials handling among commercial drivers in Sabah**

### **ABSTRACT**

A cross-sectional study was undertaken to determine the prevalence of lower back pain (LBP) and its association with whole-body vibration (WBV) and manual materials handling (MMH). We studied 110 commercial vehicle drivers using a self-administered questionnaire and the VI-400Pro human vibration monitor. Prevalence of LBP was 66.4%. The percentage of drivers who had frequent manual handling of heavy loads was 45.5% and those who handled heavy loads in awkward postures accounted for 86.4%. Daily vibration  $A(8)$  averaged on the  $z$  axis was 0.25 (0.06)  $\text{m}\cdot\text{s}^{-2}$  and at vector sum was 0.29 (0.07)  $\text{m}\cdot\text{s}^{-2}$ . Daily vibration exposures on the  $z$  axis, frequent manual handling of heavy loads and awkward posture during MMH were significantly associated with LBP. Drivers who are exposed to WBV and frequently handle heavy loads manually and with awkward postures probably have more LBP than drivers who are exposed to only one of these risk factors.