

The association between hand arm vibration syndrome and vibrotactile perception threshold among shipyard workers

ABSTRACT

A cross sectional study was done among 47 hand-held vibrating tools workers with the objective of obtaining the current prevalence of hand-arm vibration syndrome (HAVS) and the association with vibrotactile perception threshold (VPT) and sensory threshold in a tropical environment. Questionnaire was administered in determining reported related symptoms of HAVS, Pallesthesiometer (EMSON-MAT, Poland) was used in obtaining the sensory threshold of index and little finger. Measurement was done at 31.5 Hz and 125 Hz. Results indicate 49% of the shipyard workers were manifesting HAVS symptoms. Most were exposed to the equally high intensity level of HAVS due to continuous use of vibrating hand-held tools. The VPT values were significantly higher for both fingers and both frequencies compared to the normal healthy population. No significant association was found between the reported HAVS and the level of VPT and (Monofilament) among the workers. As a conclusion, the prevalence of HAVS was high but lower compared to those working in an extreme cold environment. In addition, a higher mean of VPT value and Sensory threshold was observed compared to the normal healthy population.

Keyword: Hand-arm vibration syndrome; Monofilament; Shipyard; Tropical environment; VPT