

## Abstracts

**Methods** Parkinsonism was assessed by a movement disorders specialist, using the Unified Parkinson Disease (PD) Rating Scale motor score (UPDRS3). The 39-item PD Questionnaire (PDQ-39) was used to assess participants' Parkinson disease-specific quality of life. PD symptoms were self-reported, using a standard screening questionnaire. The grooved peg board timed test was used to measure fine motor speed and visuo-motor coordination. We used locally weighted scatterplot smoothing (LOWESS) to graphically evaluate the associations of UPDRS3 score with age, grooved peg board times for both dominant and non-dominant hands, PDQ-39 score, and PD symptom questionnaire score. We also used LOWESS to evaluate the relationship between PDQ-39 score and symptom questionnaire score. We assessed correlations using Spearman coefficients.

**Results** The LOWESS plots and Spearman coefficients indicated positive associations ( $p < 0.001$ ), suggesting that individuals with higher UPDRS3 scores were older ( $\rho = 0.24$ ), took longer to complete the grooved pegboard test (dominant  $\rho = 0.31$ , non-dominant  $\rho = 0.28$ ), had higher PDQ-39 scores ( $\rho = 0.28$ ), and had more PD symptoms ( $\rho = 0.35$ ). Furthermore, PDQ-39 score was highly correlated ( $\rho = 0.70$ ) with screening questionnaire score.

**Discussion** The strong correlations between parkinsonism and the administered tests showed that the tests used in this study are robust for identifying individuals with neurological health effects, are useful in large scale epidemiological studies, and may augment data obtained from a clinical specialist's examination.

## Unemployment and Job Insecurity

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# THE ASSOCIATION BETWEEN NOISE PERCEPTIONS WITH HEARING LOSS OCCURRENCE ON CARPENTERS OF INFORMAL SECTOR IN DUREN SAWIT DISTRICT, EAST JAKARTA

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**Background** Industry's noise has long been an issue that cannot be resolved properly so it can be a serious threat to the workers's hearing function. In Indonesia, the incidence of noise-induced hearing loss is estimated between 20%–30% of the total working population in the formal sector who are productive, while the incidence of hearing loss due to noise in the informal sector is not yet known.

**Objective** This study aims to determine the relation of noise and other risk factors for hearing loss on carpenters of informal sector in Duren Sawit district, East Jakarta in 2013.

**Method** This study was an observational analytic with a cross sectional method. This research was carried out on 71 wood-workers in Duren Sawit districts, East Jakarta. Data were obtained from observations, additional physical examination, and an interview based on a questionnaire that has been made. Analysed using univariate and bivariate analysis.

**Results** A total of 51 workers (71.8%) had subjective hearing loss. All workers have the perception that their workplace is quite noisy. In bivariate analysis, the use of Hearing Protection Devices has a significant effect on the occurrence of hearing loss, with a value of  $p = 0.032$ ,  $OR = 8.824$ .

**Conclusion** Noise has a considerable impact on the occurrence of hearing loss. In addition, workers who did not use Hearing Protection Devices have 8 times greater risk for hearing loss compared with workers who use Hearing Protection Devices.

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# EXPOSURE TO HAND-ARM VIBRATION AND RISK FACTORS FOR HAVS AMONGST OIL WORKERS IN THE UAE

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**Introduction** There is a shortage of information on hand arm vibration syndrome (HAVS) data among exposed workers in developing countries, in particular hot regions. The oil industry in United Arab Emirates (UAE) is expanding and vibrating tools are used regularly in this industry. Data on the degree of exposure to hand arm vibration and associated symptoms among exposed workers in UAE are scarce.

**Methods** All workers ( $n = 115$ ) exposed to hand-arm vibration in the company were included. Personal vibration levels were measured for vibration tools used for different job titles. Personal A (8) daily exposure values were calculated for all by combining typical daily exposure duration with measured tool vibration levels. A questionnaire was administered to all workers.

**Results** 5 participants were excluded due to Diabetes. Participants were divided in three exposure categories using the A (8) values. The prevalence of HAVS among the 110 participants was 13.6% (vibration white finger 0.9%, neurosensory symptoms 3.6%, and 9.1% musculoskeletal symptoms). Cases of HAVS increased significantly with age, increasing exposure categories and total years vibration exposure. Multiple logistic regression analysis delineated that the only statistical significant predictor of HAVS was the current A (8) exposure level. Participants in highest exposure category were at a risk of HAVS 37 times greater than those in the lowest exposure category. (CI: 5–270.6).

**Conclusion** This is the first study of occupational exposure to vibration and risk factors for HAVS amongst oil workers in UAE. The study shows that the sensorineural and musculoskeletal components are more common than the vascular in warm area. Also HAVS symptoms were found to increase with increasing current A (8) exposure levels. It is essential that follow-up studies be carried out among larger numbers of hand-arm vibration exposed workers and appropriate health surveillance program developed to identify early sensorineural and musculoskeletal symptoms.

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# VIBRATION EMISSION INFORMATION FOR USERS OF HAND-TOOLS IN THE EU AND NORTH AMERICA – AN INTERNATIONAL COMPARISON

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**Introduction** The European Union (EU) Machinery Directive mandates that manufacturers inform the EU user of hand-held tools about the vibration values emitting acceleration exceeding  $2.5 \text{ m/s}^2$ .<sup>(1)</sup> Emission assessment and declaration guidelines exist (ISO 20643 and EN 60745).<sup>(2)</sup> The goal of this study was to review and compare published manufacturer information for users