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 visuomotor 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 UPDRS scores were older (ρ=0.24), took longer to complete the grooved pegboard test (dominant ρ=0.31, non-dominant ρ=0.28), had higher PDQ-39 scores (ρ=0.28), and had more PD symptoms (ρ=0.35). Furthermore, PDQ-39 score was highly correlated (ρ=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

1084 THE ASSOCIATION BETWEEN NOISE PERCEPTIONS WITH HEARING LOSS OCCURRENCE ON CARPENTERS OF INFORMAL SECTOR IN DUREN SAWIT DISTRICT, EAST JAKARTA

SA Pitut*, Abdul Baktiansyah. The Faculty of Medicine and Health University of Muhammadiyah Jakarta

Background Industry’s noise has long been an issue that cannot be resolved properly so it can be a serious threat to the workers’ 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 woodworkers 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.
HAND-ARM VIBRATION AND THE RISK OF NEUROLOGICAL DISEASES – A SYSTEMATIC REVIEW AND META-ANALYSIS

Tohr Nilsson*, Jens Wahltström, Lage Burström. Occupational and Environmental Medicine, Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden

10.1136/oemed-2018-ICOHabstracts.1454

Introduction The current risk prediction modelling (ISO-5349) for ‘Raynaud’s phenomenon’ is based on a few studies published 70 to 40 years ago. There are no corresponding risk prediction models for neurosensory injury or carpal tunnel syndrome, nor any systematic reviews comprising a statistical synthesis (meta-analysis) of the evidence.

Methods This systematic review covers the scientific literature up to January 2016. The databases used for the literature search were PubMed and Science Direct. We found a total of 4335 abstracts, which were read and whose validity was assessed according to pre-established criteria. 294 articles were examined in their entirety to determine whether each article met the inclusion criteria. The possible risk of bias was assessed for each article. 52 articles finally met the pre-established criteria for inclusion in the systematic review. For the outcome neurosensory injury, 33 articles were included and for Carpal tunnel syndrome 7.

Result The results show that workers who are exposed to HAV have an increased risk of neurological diseases compared to non-vibration exposed groups. The crude estimate of the risk increase is approximately 4-5 fold. The estimated effect size (odds ratio) of neurosensory injury is 7.4, when including only the studies judged to have a low risk of bias and the equivalent of carpal tunnel syndrome is 2.9.

Discussion At equal exposures, neurosensory injury occurs with a 3-time factor shorter latency than Raynaud’s phenomenon. Which is why preventive measures should address this vibration health hazard with greater attention.

REFERENCE