

Noise Induced Hearing Loss and Non-Auditory (Stress and Hypertension) Effects on Automotive Plant Workers Exposed to Noise

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Abstract

A cross-sectional study of noise-induced hearing loss (NIHL), stress and hypertension due to noise exposure was carried out among automotive plant workers in Pahang. Area noise monitoring was conducted to determine the high risk area exposed to noise. Personal noise monitoring, blood pressure measurement and observation of stress symptoms were conducted among the exposed and unexposed workers. Questionnaire on demographic information including personal lifestyles and medical history were also obtained. Meanwhile the secondary data on individual audiometric assessment was also obtained from the industry. The area noise monitoring of this automotive plant ranged from a 61.3 dB (A) to 90.8 dB (A). This study revealed that there was a significant correlation between noise level and increase of blood pressure ($p < 0.001$) as well as noise stress level ($p < 0.001$). Nonetheless, there was no significant correlation between noise exposure and NIHL. However, there were symptoms and complaints on ringing in the ear and sudden hearing loss were present. It was also noted a significant increase of stress level and both systolic and diastolic blood pressure due to noise exposure over accumulated time. Other factors influencing changes in auditory as well as non-auditory effects include age, working experiences and personal noise level.