World Academy of Science, Engineering and Technology
International Journal of Bioengineering and Life Sciences
Vol:13, No:06, 2019

Auditory Effects among 18-45 Years Old Workers of a Textile Plant in Seeduwa, Sri Lanka

Authors : P. G. S. Madushani, L. D. Illeperuma

Abstract : Abstract Noise is one of the most common physical hazards in industrial settings. The prevalence of Noise Induced Hearing Loss (NIHL) is on the rise with increasedduration of exposure and the increase in the severity of hearing loss. The purpose of the study was to determine auditory effects among textile workers and to establish associations between the degree of hearing loss and exposure duration, degree of hearing loss and noise level and the proportion of hearing related complaints. A cross sectional descriptive study using purposive sampling was carried out. An interviewer administered questionnaire and Distortion Product Oto Acoustic Emission (DPOAE) hearing screening on 127 (72 female and 55 male) textile workers of the selected textile plant in Seeduwa, Sri Lanka was done (Age: M= 31.16, SD=7.75). Noise measurements were done in six sections of the factory and average noise levels were obtained. Diagnostic hearing evaluations were done for 60 (57.75%) subjects, referred from the DPOAE hearing screening test. The degree of hearing loss and the exposure duration had a significant association in the high frequency region of 4 kHz to 8 kHz ($p < 0.05$). Noise levels fluctuated between 90.3±0.8 dBA and 50.6. ±0.52 dBA. 30.83% of workers reported having NIHL. Most of the workers (33.9%) complained difficulty in conversing in noisy backgrounds. Other complaints as tinnitus, dizziness, ear fullness and headache were reported in less than 30%. workers who were exposed to noise for more than 15 years were affected with NIHL in the high frequency region. Administrative controls and engineering controls need to be implemented to manage hazardous noise levels in industrial settings. Hearing Conservation Programs should be initiated and implemented for textile workers.

Keywords : textile industry, NIHL, degree of hearing loss, noise levels, auditory effects
Conference Title : ICAHA 2019 : International Conference on Audiology and Hearing Aids
Conference Location : London, United Kingdom
Conference Dates : June 27-28, 2019

Open Science Index, Bioengineering and Life Sciences Vol:13, No:06, 2019 publications.waset.org/abstracts/107824.pdf