

The Use of Hearing Protection Devices and Hearing Loss in Steel Industry Workers in Samut Prakan Province, Thailand

Authors : Petcharat Kerdonfag, Surasak Taneepanichskul, Winai Wadwongtham

Abstract : Background: Although there have not been effective treatments for Noise Induced Hearing Loss (NIHL), it can be definitely preventable with promoting the use of Hearing Protection devices (HPDs) among workers who have been exposed to excessive noise for a long period. Objectives: The objectives of this study were to explore the use of HPDs among steel industrial workers in the high noise level zone in Samut Prakan province, Thailand and to examine the relationships of the HPDs use and hearing loss. Materials and Methods: In this cross-sectional study, eligible ninety-three participants were recruited in the designated zone of higher noise (> 85dBA) of two factories, using simple random sampling. The use of HPDs was gathered by the self-record form, examined and confirmed by the researcher team. Hearing loss was assessed by the audiometric screening at the regional Samut Prakan hospital. If an average threshold level exceeds 25 dBA at high frequency (4 and 6 Hz) in each ear, participants would be lost of hearing. Data were collected from October to December, 2016. All participants were examined by the same examiners for the validity. An Audiometric testing was performed with the participants who have been exposed to high noise levels at least 14 hours from workplace. Results: Sixty participants (64.5%) had secondary level of education. The average mean score of percent time of using HPDs was 60.5% (SD = 25.34). Sixty-seven participants (72.0%) had abnormal hearing which they have still needed to increase lower percent time of using HPDs (Mean = 37.01, SD = 23.81) than those having normal hearing (Mean = 45.77, SD = 28.44). However, there was no difference in the mean average of percent time of using HPDs between these two groups. Conclusion: The findings of this study have confirmed that the steel industrial workers still need to be motivated to use HPDs regularly. Future research should pay more attentions for creating a meaningful innovation to steel industrial workers.

Keywords : hearing protection devices, noise induced hearing loss, audiometric testing, steel industry

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