

Hearing status among 20-45-year-old bus drivers and conductors of the Kadawatha bus station, Sri Lanka.

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Abstract:

Bus drivers and conductors are a group working in noisy environments having a risk of developing occupational hearing loss. The hearing status of 86 bus drivers and conductors was evaluated comprehensively via diagnostic testing. Age and duration of work were the main factors contributing to their reduced hearing levels. Bilateral high frequency hearing loss was commonly seen in this population.

Background:

Noise is a significant occupational health hazard in the transportation industry (Duarte et al. 2014). Bus drivers and bus conductors are a group affected by occupational hearing loss due to traffic noise, difficulty in sound protection methods, poor maintenance of vehicles and roads (Guardiano et al., 2012). It is important to evaluate the hearing status of Sri Lankan bus drivers and bus conductors comprehensively for the establishment and enforcement of proper regulations in the transportation sector to ensure health and safety of this population.

Method:

This descriptive cross sectional study recruited 86 bus drivers and bus conductors between 20 and 45 years from the Kadawatha bus station by purposive sampling. Data were collected from May to October 2015 through an interviewer-administered questionnaire, otoscopic examination, Distortion Product Otoacoustic Emission (DPOAE) hearing screening and diagnostic evaluation which included several hearing tests such as pure tone audiometry, speech audiometry, tympanometry, reflexometry and diagnostic Distortion Product otoacoustic emission (DPOAE) test. Data were analyzed by descriptive and inferential statistics using SPSS version 22.

Results:

79.1% failed the hearing screening test; 89.8% of bus drivers and 64.9 % of bus conductors. Probable factors/causes for failing the hearing screening test were, being a bus driver, age above 40 years, having a working experience as a bus driver or a bus conductor for more than 10 years and having a habit of listening to loud music. All tested by the diagnostic hearing evaluation had some form of hearing loss; 32.3% had NIHL. Age above 40 years, working experience of more than 10 years, daily travelling hours greater than 5, playing a sound system in the bus, having a habit of alcohol consumption and a history of noisy occupation and they could be associated factors for hearing loss.

Conclusion:

Tinnitus, ear fullness, headache and difficulty in hearing in noisy setting are the common complaints reported by this group. Bus drivers were the most affected group. Bilateral high frequency hearing loss was common. Age and working experience were the main factors contributing to reduced levels of hearing in this population.

Recommendations:

A pre-employment hearing evaluation and periodic follow up tests are recommended. Further in-depth studies can be conducted to measure noise levels of the bus drivers' working environment such as inside buses, place of control and other parking places. Further studies can also be conducted to identify other causative factors for hearing loss such as whole body vibration and Carbon Monoxide exposure. It is also important to conduct education programs in order to raise awareness among bus drivers, bus conductors and their authorities on the risk of developing hearing loss and its potential implications.

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