The prevalence of noise induced hearing loss among miners in a gold mining company in Tanzania

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ABSTRACT

Background: Noise induced hearing loss is an occupational illness that causes significant disability. Tanzania has a young mining history with several operating open pit and underground mines. No prevalence studies have been conducted among Tanzania mine workers to provide an impetus for the development of comprehensive hearing protection programmes.

Objectives: The main objective of this study was to determine the prevalence of noise induced hearing loss among miners in a major gold mining company operating in Tanzania. The study also aimed to identify other associated risk factors such as age, sex, duration of exposure, type of mining and ear infection.

Methods: Selected with a simple randomised sampling technique, a cross-sectional study was conducted using two hundred and forty six audiograms from open pit and underground mines. The audiograms were analysed using the HSE categorisation method for noise induced hearing loss.

Results: A noise induced hearing loss prevalence of 46.8% was found. This was made up of 12.2% poor hearing and 34.6% mild hearing impairment. The proportion of noise induced hearing loss increased with total years of exposure to noise. There was a higher proportion (71.5%) of those affected amongst underground miners in comparison to open pit miners (28.5%). These findings were statistically significant. There were a higher proportion of miners with noise induced hearing loss (60.5%) among the youngest age group 20 to 29. This finding was not statistically significant.

Conclusion: A structured method of managing sickness absence, including personnel and management training and the institution of a trigger system could help manage the number of days off as a result of long term illness and facilitate an earlier return to work for employees.

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