

UNIVERSITI TEKNOLOGI MARA



PREVALENCE AND ASSOCIATED FACTORS OF
HEARING IMPAIRMENT AMONG WORKERS IN PAPER
MILL

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Declaration by Student

Project entitled Prevalence and Associated Factors of Hearing Impairment Among Workers in Paper Mill is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr. Mohd Izwan bin Masngut as Project Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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Abstract

PREVALENCE AND ASSOCIATED FACTORS OF HEARING IMPAIRMENT AMONG WORKERS IN PAPER MILL INDUSTRY

Siti Fatimah binti Mohamed

Introduction: Noise induced hearing impairment occurs predominantly at higher frequencies, with largest effect at 4000 Hz. Hearing impairment can be caused by many factors such as age, gender, working duration and practice of hearing protective devices. A cross sectional study was carried out among paper mill industry workers in Temerloh, Pahang. The objective of this study is to determine association of age, employment years and usage of hearing protective devices with hearing impairment among workers at paper mill industry.

Methodology: Seventy two workers (n=72) were involved in this study which had been chosen from the data on audiometric test by company consultant after considered inclusive and exclusive criteria. Thirty six workers in production area as exposed group and thirty six workers in management area as unexposed group. Workplace noise level was measured using ANSI S1.4 Type 2 sound level meter. Personal monitoring dosimeter was used in five workers in production area as the representative of the work section. The audiometric test data were analyzed statistically using SPSS ver. 18.0. Test means of variable is used and Pearson correlation test was performed to determine the relationship between variables.

Result: The noise level in the study area exceed 90 dB (A) of Permissible Exposure Level. This study shows there is a significant difference between the hearing level among exposed and unexposed group with $p < 0.05$ at 4000 Hz level which indicate hearing loss due to high frequency. Based on audiometric data there is 18 respondents with hearing impairment. There is significant association between age, usage of hearing protective devices and hearing impairment with $p < 0.05$, but there is no significant association between employment year and hearing impairment.

Conclusion: There was a significant association between age and the usage of hearing protective device and the occurrence of hearing impairment in paper mill industry.

Keyword: Noise, hearing impairment, permissible exposure level, audiometric