

UNIVERSITI TEKNOLOGI MARA

**NOISE EXPOSURE AMONG WORKERS AT
PRINTING FACTORY**

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**Thesis submitted in fulfillment of the requirements for the degree of
Bachelor in Environmental Health and Safety (Hons.)**

Faculty of Health Sciences

MAY 2010

This Final Year Project entitled a study of Noise Exposure among Workers at Printing Factory was prepared by Rohaida Md Wazir had been submitted to the Faculty of Health Sciences in fulfillment of the requirement for the Bachelor in Environmental Health and Safety (Hons).

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ACKNOWLEDGEMENT

First of all, a huge gratitude to Allah The Almighty for granting me and friends to finish our final year research project. Thank you to my beloved parents and siblings for their supports and never-ending loves and courage to keeps me going. A handful thanks to Head of Department, PM Rodziah Binti Ismail, my very committed and helpful Research Supervisor, Mdm Nadiatul Syima Mohd Shahid and not forgetting my Co-supervisor Mr K Subramaniam and Prof Dr Abdul Rahim Md Noor that always support and hand a guide during my research project as well as my other beloved lecturers whose always willingly provides the guidance throughout my learning process.

I also would like to thanks to Mr Thiagu, Mr Mohd Azwat and Mr Mohd Syafie for helping me in this study and never forget to Mr Hisyamuddin Hj Md Jahi and Mr Ahmad Reza for giving me an opportunity to do this study at the factory. Last but never the least, thanks to all my dearest course mates, for always help, support and share the happiness and sorrows, and generously offer me such a comfort of being around them after all these years. And also to those respondents who has been so kindly cooperative in conducting this research, your willingness to help will always be cherished and appreciated.

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ABSTRACT

NOISE EXPOSURE AMONG WORKERS IN PRINTING FACTORY

Rohaida Md Wazir

Introduction: A comparative cross sectional study of noise exposure and hearing loss was conducted among workers in printing factory at Shah Alam, Selangor. Thirty workers that exposed to noise produced by the machine with 30 workers that do not exposed to noise were selected as respondents in this study. **Objective:** The aim of this study is to identify the noise exposure level among workers at printing factory and hearing loss. **Methodology:** A comparative cross sectional study was carried out in order to determine the noise exposure level among exposed and unexposed group. Sound level meter model DAWE were used to measure the noise level at the printing company while dosimeter model Quest Edge 4 were used to measured personal noise exposure. Audiometric test using audiometer booth model Garson Stadler was done to measure the impact on hearing. The questionnaires were distributed in order to gather data of the respondents participate and also the symptoms of hearing loss. **Result:** Noise level at the printing factory was above 80 dB(A). The highest noise produce was 89.7 dB(A). For total sound pressure level, the highest noise produce was 93.3 dB(A). For noise exposure level, exposed group has high noise exposure level with mean (82.31 dB(A) \pm 3.21) compare to unexpose group (32.62 dB(A) \pm 4.97). This study shows there is a significant different between both group ($p=0.01$, 95% CI = 47.54 - 51.86). There are also has a significant different between the hearing level among exposed and unexposed group with $p<0.01$. The study also show there is a significant association between noise exposure and hearing loss ($p=0.004$). Twenty two of exposed workers suffer hearing loss. For symptom of hearing loss, difficult to hear conversation and speaking loud show a significant association with hearing loss ($p=0.028$). **Conclusion:** The study shows that there is a significant association between noise exposure and hearing loss. Workers will suffer noise induced hearing loss if control measures do not get serious attention. Hierarchy of control needed to follow when managing the risk. The authorities, need to revise noise regulation at national level to be more effective so that it become more effective by reducing the action level to 80 dB(A) and Permissible Exposure Limit (PEL) to 85 dB(A).

Keywords: *Noise exposure, hearing loss, printing workers*