

UNIVERSITI TEKNOLOGI MARA

**THE ASSOCIATION OF OCCUPATIONAL NOISE
EXPOSURE AND THE SYMPTOMS OF
HEARING LOSS AMONG CONSTRUCTION
WORKERS IN UiTM PUNCAK ALAM**

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**Project Paper Submitted In Partial Fulfillment Of The
Requirements For The Degree Of
Bachelor In Environmental Health And Safety (Hons.)**


Faculty Of Health Sciences

JULY 2014

Declaration by Student

Project entitled "The Association Of Occupational Noise Exposure and The Symptoms of Hearing Loss Among Construction Workers in UiTM Puncak Alam" is a presentation of my original research work. Wherever contributions of others are involved, every efforts 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 Assoc. Prof. Rodziah Binti Ismail as Project Supervisor and Mr. Muhammad Afiq Bin Zaki as Co-Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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860117-01-5207

Date : 11 JULY 2014

ACKNOWLEDGEMENT

First and foremost, I offer my sincerest gratitude to Allah S.W.T. for His blessing giving me strength and without Him this thesis would not have been completed. There are a number of people without whom this project might not have been written, and to whom I am greatly indebted.

I would like to acknowledge my supervisor, Assoc. Prof. Rodziah Binti Ismail for his valuable guidance, comments and worth support from him throughout this project. Unforgettable, thank you to my Co-supervisor, Mr. Muhammad Afiq Bin Zaki, as well as other lecturers who are always supports and hand a guide during my research project. I also thank the Department of Environmental Health laboratory staff, especially Puan Maziah Binti Mahad, Mr. Erdzuham Bin Abd Rashid and Mr. Syamsul Amri Bin Deraman for their assistance and guidance during this study had been conducted.

I also dedicate this work to my family members, especially my beloved parents, Mohd Zahari Bin Yusoff and Endon Binti Abdullah who has been a source of encouragement and inspiration to me throughout my life. You have actively supported me in my determination to find and realise my potential, and to make this contribution to our nation. Special thanks also go to my siblings for their lifelong support and encouraging me to pursue this degree. Without their support, i would not success as today. I love you all.

Next, i would like to thank Johawaki Sdn Bhd management team for giving me cooperation and permission to conduct this study. Thank you for my field supervisor, Mr. Ahmad Zhafrie Bin Md Junus (Safety and Health Officer, JKKP IS 127/438/2/6961) for giving me opportunity to conduct this study and also respondents who have been so cooperative during this study conducted. Your willingness to help will always be cherished and appreciated.

Finally, thanks to my entire dearest course mates, for always supporting help, support and share the happiness and sorrows throughout my studies in this campus.

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Abstract

The Association Of Occupational Noise Exposure and The Symptoms of Hearing Loss Among Construction Workers in UiTM Puncak Alam

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Introduction: A study was conducted on the association of occupational noise exposure and the symptoms of hearing loss among construction workers in UiTM Puncak Alam, Selangor. The workers were selected from Machine Operators (n=29), In-Building Workers (n=17), and Outside Building workers (n=14). These workers were exposed to noise produced by the machines and construction activities.

Methodology: A comparative cross sectional study was carried out where 60 questionnaires had been distributed among the Machine Operators (n=29), In-Building Workers (n=17) and Outside Building Workers (n=14) in the construction site. Sound Level Meter and Noise Dosimeter were used to measure the area noise level and personal noise exposure level respectively.

Result: Noise level at the construction site was below 85 dB(A). This study showed there were no significant difference ($p > 0.05$) on noise exposure level between Site A, B, C and D. The noise exposure level among the workers showed there were a significant difference ($p < 0.05$) of noise exposure level between the combinations of "Machine Operators and In-Building workers" and "Machine Operators and Outside Building Workers". The association of symptoms of hearing loss between groups of Machine Operators, In-Building and Outside Building was analyzed by using Pearson chi-square test. There were no significance differences between three groups of workers experiencing Difficulty In Understanding Words since the p value was more than 0.05 ($p > 0.05$), meanwhile there is significant difference between three groups of workers experiencing Turn Up Volume and Talking Loudly since the p values was less than 0.05 ($p < 0.001$).

Conclusion: Noise exposure level among workers in Site A, B, C and D were found to be insignificant. Nevertheless, the different prolonged exposure to noise may possibly lead to symptoms of hearing loss. It was found that there were significant difference on noise exposure levels between the combination of "Machine Operator and In-Building workers" and "Machine Operators and Outside Building workers" ($p < 0.05$). In minimizing the noise exposure to the workers, hierarchy of control need to be taken into consideration by the management.

Keywords : Noise Exposure, hearing loss, construction site.