

UNIVERSITI TEKNOLOGI MARA

**NOISE EXPOSURE AND NOISE INDUCED HEARING
LOSS AMONG WORKERS AT WOOD
MANUFACTURING INDUSTRIES IN SHAH ALAM,
SELANGOR**

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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

JUNE 2013

Declaration by Student

Project entitled "Noise Exposure and noise induced hearing loss among workers at wood manufacturing industries in Shah Alam, Selangor" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due to 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 and Mr. Haji Hashim bin Ahmad as Co-supervisor. It is submitted to the Faculty of Health Sciences as a partial fulfillment in the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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2009417266

810114-14-5270

Date: 2/8/2013

ACKNOWLEDGEMENT

In the name of Allah. The Most Gracious and The Most Merciful.

Alhamdulillah, all praise to Allah the supreme lord of the universe. Peace and blessing to Prophet Muhammad saw, all the prophets, their families and all the Muslims.

First and foremost, I would like to thank God for endowing me with health, patience, and knowledge to complete this thesis project. Acknowledgement is due to UITM for the support given to this thesis through its excellent academic base and facilities and for granting me the opportunity to pursue my degree studies.

Secondly, I would like to express my deepest appreciation to all those who have provided me with the possibility to complete this project. My sincere appreciation goes to my supervisor, Mr Mohd Izwan bin Masngut, for his inspiration, encouragement, valuable time and guidance. His careful reading and constructive comments have helped me shape the thesis into its final form. Thereafter, I would like to thank my co-supervisor, Mr. Haji Hashim bin Ahmad for his valuable advice and cooperation.

Furthermore, I am also highly indebted to the laboratory assistant, Madam Maziah Mahad for giving me the permission to use the required equipment and necessary materials and also for their substantial assistance in the experimental work.

I also wish to thank my friends and colleagues who have given their support and help. Finally, I would like to express my greatest gratitude to my family for their emotional and moral support throughout my academic career and for their love, patience and prayers.

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Abstract

A Study of Noise Exposure and noise induced hearing loss among workers at wood manufacturing industries in Shah Alam, Selangor

Rohaizat Bt Mohd Noordin

Noise is unwanted sound and when people are exposed to the higher levels of noise it can damage the ear. Exposure to high levels of noise that exceed safe levels can lead to noise induced hearing loss which is a major hazard in many workplace and in society. The National Institute of Occupational Safety and Health estimates that more than 30 million worker (almost 1 in 10) are exposed to unsafe noise levels on the jobs. Wood manufacturing industries workers work in an environment which exposed to machineries noise makes the issue of damaging ears and hearing loss. A cross sectional study has been carried out to determine the relationship between noise exposure and hearing loss among 38 exposed workers (n=38). Respondent were selected based on their work process (stratified random sampling). Noise measurement has been done using the sound level meter at four (4) points at every factory involved (10). Noise dosimeter were used to measure personal exposure (TWA for 8 hours) and for this purpose 38 workers being selected (n=38). A structured questionnaire also being distributed to 38 workers that workers to identify the health effects (n=38). Audiometric test have been done to the 38 workers with supervision by OSH Doctor. Result shown there is no significant difference between right ear (p=0.122) and left ear (p=0.317) in noise exposure levels among exposed workers [85 dB to \geq 90 dB (A)]. Hearing loss symptoms shown significant difference for buzzing in the ear (p=0.000), difficulty to hear in noisy environment (p=0.000), raising the voice to communicate (p=0.000) and raising the radio volume after work (p=0.000). Audiometric testing results had shown that the group developing NIHL with 63.2%. Study also found there is no significant association between noise exposure level and noise-induced hearing loss for the group (p=0.000). This is supported by direct observation where 60% of exposed workers wore hearing protection device (HPD) as required. Since evidence indicated that they were symptoms and development of hearing loss, audiometric testing is suggested to be performed within the first six months of employment to monitor workers hearing ability.

Keyword: *Wood Industry, Noise Exposure Level, Time-weighted Average (TWA), Noise-induced Hearing Loss (NIHL), Audiometric Test*