UNIVERSITI TEKNOLOGI MARA

A STUDY ON EXPOSURE OF NOISE AMONG VECTOR CONTROL WORKERS IN KLANG DISTRICT HEALTH OFFICE

MOHD SIRAJUDIN BIN SABRI

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

Faculty of Health Sciences

July 2017

DECLARATION BY STUDENT

Project entitled “A Study on Exposure of Noise among Vector Control Workers in Klang District Health Office” is a presentation of my original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Project Supervisor, En Nasaruddin bin Abd. Rahman. 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).

Student’s signature:

.....

(Mohd Sirajudin Bin Sabri)

2013818784

871115-06-5247

Date: July 2017

ACKNOWLEDGEMENT

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

I hereby would like to extend my sincere appreciation to all those who have provided me with guidance, support and encouragement in my process of studying. Alhamdulillah, praise to Allah for giving this opportunity to complete this project with the time that has been provided without facing too much problem. Firstly, I would like to give special thanks to my supervisor, En Nasaruddin bin Abd. Rahman with the advices, guidance and constant support in supervised my project. He has been deeply concerned about my thesis, patiently revising the drafts. Without his willingness to share knowledge and ideas with me, it would have been much more difficult for me to work through the thinking and writing process.

Likewise, sincere gratitude is given to Dr. Affendi Bin Ahmad, Head of Vector Control Unit in Klang District Health Office for his help in approval and data collection in this study. Finally, heartfelt thanks are extended to all my family members for their unfailing support and absolute confidence in me. Their constant dedication and encouragement have always supported me to overcome the obstacles in my studies and their understandings have eventually made my thesis-writing much easier. Besides, I received a lot of help from many dearest friend and people during these periods of time to complete this project. Therefore, the gratitude goes to those who assist until I'm able to complete this project.

TABLE OF CONTENTS

ABSTRACT

Excessive sound is one of the environmental pollution that had widespread detrimental effect on the physical and mental health as noise pollution. Vector control workers have a high impact of exposed to loud noise due to routine job or activities conducted. The objective of this study is to assess occupational health status of vector control workers, the exposure of noise from the activities being conducted and recommendation to organization in improving the worker's health status by implementing suitable control measure. A cross sectional study was conducted to identify the hearing loss and noise exposure among 60 respondents of vector control workers in Klang District Health Office. The respondent's comprising of 30 foggers who are exposed to hazardous noise is chosen by purposive sampling and 30 respondents as the comparison group who are not exposed to loud noise. In the first part, results of an audiometric test are presented. Early hearing loss level was measured by undergo audiometric tests including pure-tone audiometry. Results of this study indicates that the mean of pure tone audiometry of the exposed group is slightly higher at 18.3611dB (A) as compared to the comparison group at 15.9167 dB (A). The differences is statistically significant ($t = 1.902$, $p = 0.031$). Distributions of the questionnaire are done to identify knowledge, attitude and practice where the result indicates low respondent level of knowledge regarding noise in workplace. The study then identifies the noise exposure emitted from the fogging machine. Noise exposure was measured by using Quest Noise Dosimeter to obtain personal noise exposure and CR: 800C Series Sound Level Meters to obtain noise emitting from the fogging machine. This study also shows that mean of noise exposure is 103.2 dB and mean of sound pressure level is 99.5dB. In conclusion, the prevalence of hearing loss is 15.0% which indicates that exposure to loud noise can influence the health status of the workers and ineffectiveness of hearing conservation program. This also showed that the noise have an impact to the health status of the workers in long term exposure. Further research is recommended to assess cholinesterase level of the workers and the use of organophosphate pesticides in the control activities which may also impact to the hearing loss.

Keywords: *Excessive noise, occupational health status, hearing loss, pure tone audiometry, noise exposure, sound pressure level*