

CHAPTER 1

INTRODUCTION

1.1 Introduction

Noise is excessive or unwanted sound which potentially results in annoyance or hearing loss. Noise exposure is common in the process industry that use machine for operation. Noise can be described in terms of intensity (perceived as loudness) and frequency (perceived as pitch). Too much noise exposure may cause a temporary change in hearing or a temporary ringing in your ears. These short-term problems usually go away within a few minutes or hours after leaving the affected area of noise. However, repeated exposures to loud noise from the day to day work in an affected environment can lead to permanent, incurable hearing loss, tinnitus or other health issues. Workplace noise monitoring is required to assess the risks to its employee's health and safety created by exposure to noise in the workplace, and put the suitable control measures after the monitoring.

In addition, noise hazard is harmful which could contribute in Noise-induced Hearing Loss. Noise can cause a series of detrimental health effects on human beings, such as hearing Loss, annoyance, cardiovascular disease, sleep disturbance, immune effects, biochemical effects, reproductive effects and performance effects, among which the best studied effect produced by the overexposure to noise is loss of hearing (Li *et al.*, 2016). Therefore, several kinds of measures must be implemented to take care of the safety and health of workers. For example, Guidelines for Control of Occupational Noise 2005 are intended as basic practical guidance to the employer in developing noise

control measures, thereby helping people comply with the requirements of the Factories and Machinery (Noise Exposure) Regulations 1989.

On the other hand, there are so many challenges and issues about how to cope with noise hazards. Even though some control measures are already placed by industries, there are still have many cases occurring with huge impact which harm to human hearing's ability. According to Tahir *et al.* (2014), Malaysia has become part of the world's manufacturer among Asian country. Therefore, this has put manufacturing industry as a major sector in the foreign direct investment in Malaysia. It brought a lot work opportunities to people and revenue to Malaysia, and the indirectly contributed in development of the country. However, this recognition has created occupational safety and health issues among the workers while they are at work. These arising OSH issues impacted additional noise hazards, insufficient number of OSH competent person, lacking of competent service provider and more workers were at risk in developing Noise Induced Hearing Loss (NIHL). Besides that, ineffective and unsuccessful of safety measures or programs could be leading sources to Noise Induced Hearing Loss.

Based on Figure 1.1, Noise-induced Hearing Loss (NIHL) is the highest case which accounted for 5366 cases received in 2015 among occupational diseases and poisoning (Department of Occupational Safety and Health, 2015). It due to most of the workers expose to excessive noise and the control measures might be not enough or not effective. Therefore, Figure 1.1 has shown that noise exposure is one of the main hazards in the workplace that could harm hearing's ability, and it needed to put concern on this hazard.

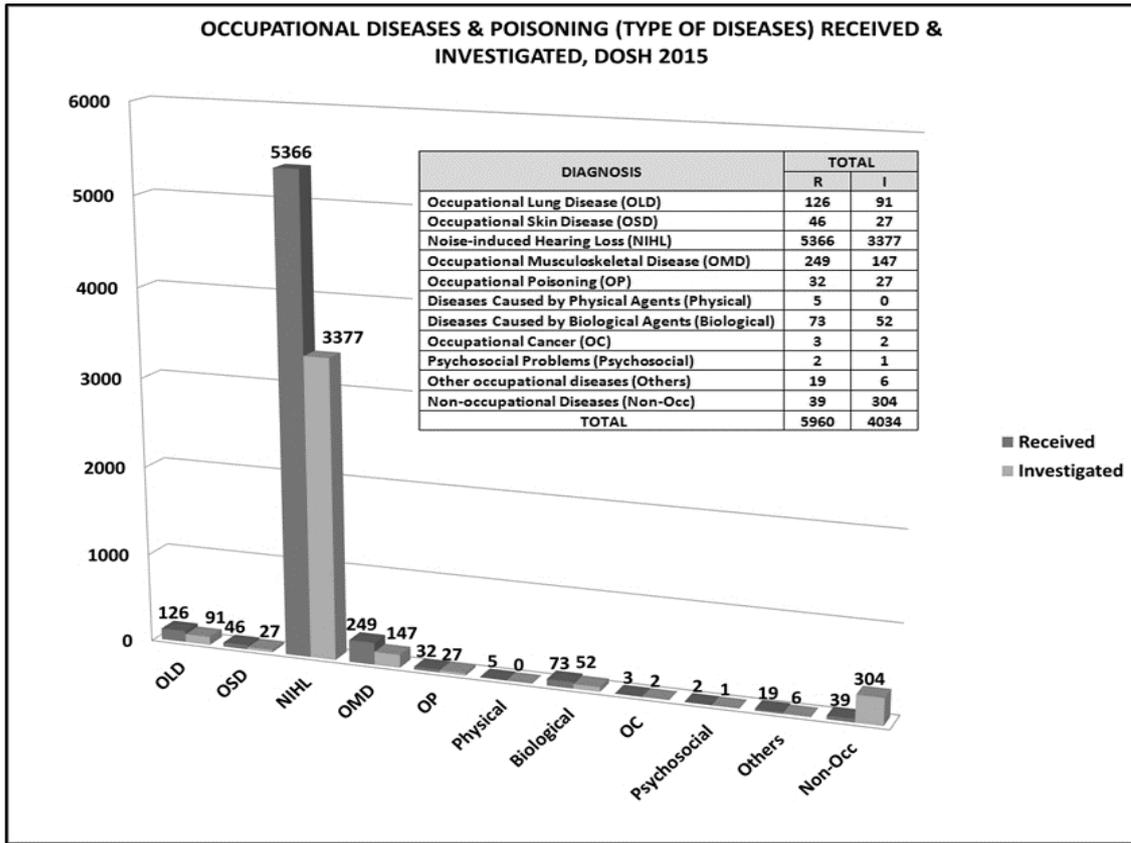


Figure 1.1. Analysis of occupational disease and poisoning by sector.

Source: Department of Occupational Safety and Health (2015)

1.2 Problem Statement

Nowadays, most of the countries are industrializing on a wide scale including Malaysia. It due to the development of industries can help a country to generate more revenue, more job opportunities and lead to the removal of poverty to a great extent. However, there are a lot of safety issues among the industries have arisen in our country. It also means that there are lot of potential hazards such as noise hazard, chemical hazard, biological hazard and other hazard in an industry which can injure workers and affect the health of workers, and then indirectly affect the work's efficiency. On the other hand, nowadays machinery is being extensively used. Most of the industries are using machineries to simplify the work process which can save time and cost. However, noise can be generated through operating machine. Too much noise exposure may cause a temporary change in hearing or a temporary ringing in workers' ears which can