CHAPTER 1

INTRODUCTION

Chapter 1 introduces concept, purpose, objective and nature of the study. The introduction is given a description of the problem that addressed. This chapter provides a detail description on introduction, background of study, problem statement, objectives, research question, hypothesis, significance of study, scope of study, operational definition, and conceptual framework.

1.0 INTRODUCTION

The wooden furniture manufacturing industry is a fastest developing industry and has best known in the production of wood furniture in Malaysia (Ratnasingam et al., 2012). In year 2011, Malaysia External Trade Development Corporation (MATRADE) reported, Malaysia ranked as the eighth largest exporter of furniture in the world. The manufacturers produce a wide range of furniture product such as kitchen furniture, bedroom furniture, living room furniture and office furniture. Wooden furniture industry today has transformed from a cottage based and skill-dependent industry to a technological base and high number of worker industry (Ratnasingam et al., 2012). Shaikh (1998) claimed that, industry using high technology includes heavy machinery and power tool to lighten the workload of the workers, overcome the demand of the population and increase production. However, the existing technology produces high level of noise and high probability to cause hearing damage towards worker (Shaikh, 1998).

A sound brings delightful to some people, but at the same time can cause annoying and even physical or psychological illnesses (Marcos et al., 2009). The
severity effect of noise was caused by accumulation and lead to an obvious physical, psychic and social deterioration (Mohammadi, 2008). According to Medina-Tiencken (2013), when long term exposes to high level of noise generate from machinery, can cause dangerous on hearing ability. Robinowitz (2000) stated that, when a person exposes to high level of noise can impact on the hair cells of the cochlea membrane and lead to hearing loss. The noise level generated from the machine depending on various factors, including the type and power of engine, design solutions, and the type of work being done, whereas high fluctuation in the noise level can be identified during a specific type of work progress, which attributed to different rotational speed, engine load and operator skill (Perez et al., 2004). The way of workers exposes to the hazard can be an important input for a better understanding of hazard management to their safety.

In addition, there were some risk factors should be concerned, such as duration of exposure, intensity of noise and age of worker due to these can lead to hearing loss (Mndeme et al., 2012). In 2010, Razman founded that the prevalence of hearing loss and tinnitus increases with duration of occupational exposure of noise. When noise exposure over an 8 hour working day equals or exceeds 85 dBA, it can lead to hearing loss (Mndeme et al., 2012). Besides that, the old age population was greater probability to get noise-induced hearing loss (NIHL) compared to other population, although every age group significant to NIHL when exposed to noise (Medina-Tiencken, 2013). According to Sorainen et al. (2000), when compared with different kind of industry, the woodworking industry was the fourth highest prevalence of getting hearing impairment. Therefore, the assessment of noise exposure towards workers within the working environment of wooden furniture manufacturing workplace is an essential. This paper is to assess the risk of noise exposure towards worker in wood furniture manufacturing industry and factor of noise exposure and subsequent noise-induced hearing loss (NIHL) symptoms by workers.
1.1 BACKGROUND OF STUDY

Noise is a sound which is loud and unpleasant and cause disturbance and occupational disease (Hong et al., 2013). Wood furniture manufacturing industry was one of the noisiest environments to work. According to Ratnasingam et al. (2010) in comparison between Europe and Scandinavian countries, Malaysia wooden furniture industry worker exposed to a higher noise level than the permissible standards and less strict enforcement of the existing regulation in Malaysia. Therefore, noise compromised safety and health among worker in wood furniture manufacturing industry. Besides that, Ohiemiller (2008) claimed that, there were 10 million of people in the United State impacted by noise injury get from occupational setting. Noise able to cause psychological issues such as annoyance, cognitive failure, stress and interference concentration and if exposed to noise where over 85 dBA can develop noise-induced hearing loss (Mndeme et al., 2012). Besides that, tinnitus is a ringing sound in the ear and the main symptom to get NIHL (Rabinowitz, 2000).

Furthermore, due to low cost economy, most of the wooden furniture manufacturing industry not willing to put investment and budget on safety and health and always overlook about worker welfare, mainly focus on cost competitiveness (Medina-Tiencken, 2013). Ratnasingam et al. (2010) stated that, in the furniture manufacturing industry, workers exposed to high level of noise which emitted from many kinds of machinery and tools such as circular saws, planers, sanders, driller, structural vibration of machine frame, dust and wood chip extraction system, aerodynamic turbulence of the rotating tools and wood lathes. When long term exposed to high intensity of noise from the sources can lead to noise induce hearing loss (NIHL) and other negative effects such as sleep disturbance, interference of speech and cognitive disorder (Picard et al., 2008). NIHL had reported the main cause was exposed to high level of noise (Rachiotis et al., 2006 and Hong et al., 2013) and it was a major health issue affecting million of people worldwide (Sliwinska-Kawalska et al., 2013).

There was a strong association between noise exposure and NIHL in industry had been found in numerous studies and the risk of hearing damage increase as the duration and dose of noise exposure increase (Celik et al., 1998; Pourbakht et al., 2003;