

Noise Pollution In Wooden Furniture Industry

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Abstract

A study was carried out to evaluate the noise exposure among workers in the wooden furniture industry in the Selangor. A total of 8 factories were selected from each city for the study. Portable noise-level measurements showed that the rough-milling operations recorded the highest noise-level in the furniture factories. Noise can be defined as unwanted sound which is very loud irritating to our ears. The workers in wooden furniture are working in the noisy area. Hence, workers in the factories must be provided with hearing protection. They are working without using hearing protection whether their employer provides it or not. So that, because of that the noise effect on their daily health. This study also revealed that despite the existence of occupational health and safety regulations in Malaysia, its implementation and enforcement within the wooden furniture industry must be improved to ensure the workers' safety and health.

Keywords: Noise Pollution, workers, wooden furniture industry

INTRODUCTION

Noise is unwanted sound. Noise is a serious health and safety concern among workers in wooden furniture manufacturing. The high noise-level emanating from the use of many different types of machines in the production process has strong effects on the workers' health and safety in the furniture factories. In woodworking environments, where noise reduction measures implemented are often insufficient due to the variable processing parameters, the use of hearing protection among workers is highly recommended. Further, the woodworking industry is also known to be relatively low in investments into low-noise processing technologies and tools, as hearing protection is often deemed as sufficient to safeguard the workers' hearing.

MATERIALS AND METHODS

This study will be beneficial to the furniture industry especially if proven to be successful. The study was carried out in 8 large-sized wooden furniture-manufacturing factories (i.e., large factories are defined as those employing more than 100 workers, with an annual sales turnover in excess of RM 10 million). The factories located throughout Peninsular Malaysia, were selected on the basis of their reportedly good health and safety records and also their voluntary consent to participate in the study. These factories were chosen from the membership listing of the Malaysian Furniture Industry Council. The study was carried out over a 5-month period, between May to September, 2011.

RESULTS AND DISCUSSIONS

This study was carried out through questionnaires over 100 respondents who are the employee of the selected company. All respondents are male in gender because mostly male work in this industries rather than female. Through the questionnaires, 55 respondents are below 25 years old, 28 respondents are 35-49 years old and 17 above 50 years old. Besides, 56 respondents already work around 3-5 years, 36 respondents working less in 1years, 12 respondents working around 6-9 years and 2 respondents working over 10 years. In addition, 90 respondents are using hearing protection during working hours while 10 respondents not use any protection. They need to use protection to avoid from any bad effect to their healthy. Based on the questionnaires; all respondents already know what noise pollution is.

Figure 1

60% respondents agree with question. This means that their work in areas that are noise which noise maybe comes from the machine that used. As we know, some machines produce loud noise when we used it. 34% fairly agree means that they maybe work in area or department that not loud noise are produce during working time. Besides, maybe the machine that used in that particular area not produces loud noise when used it. Meanwhile, 6% respondents strongly agree which means that they work in area that produces too noisy. Maybe in this area, a lot of machine used during working time, so more the machines area used more the noise was produce.

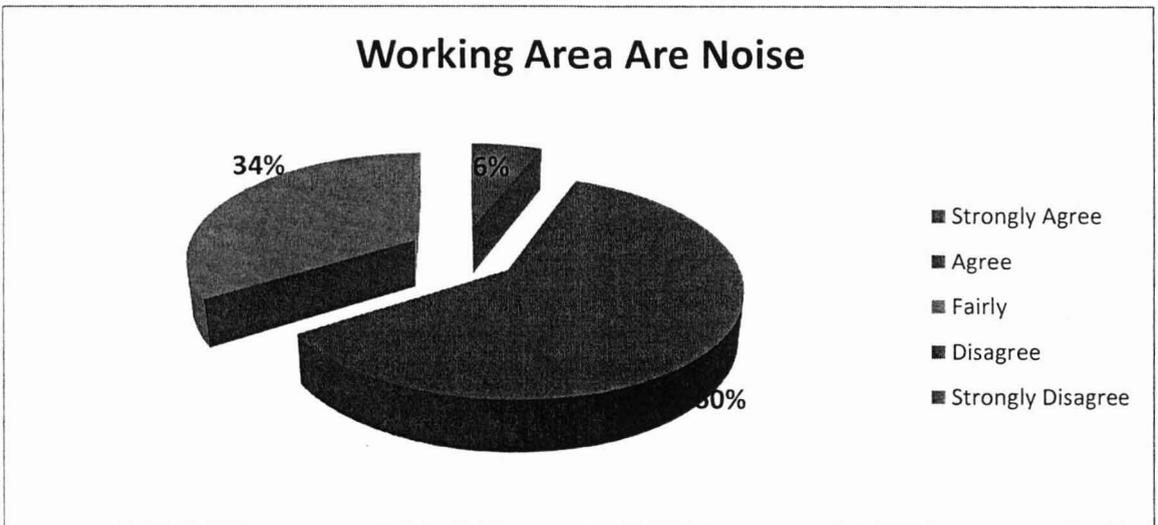


FIGURE 1

The Important Using Hearing Protection In Working Area



FIGURE 2

Get Hearing Problem Without Using Hearing Protection



FIGURE 3

Noise Pollution in Working Area Effect Daily Health



FIGURE 4

Figure 2

10% strongly agree with that statement, 82% agree and 8% fairly agree. All workers that working in these areas need to use hearing protection like headphone in order to avoid hear loud noise during working. As we know, if we always hear loud noise it will effects our healthy especially our sense of listen. If it affects our sense of listen, we will become deaf. So, it is important to use hearing protection during working time.

Figure 3

72% agree they will get hearing problem when not used hearing protection. 13% respondents strongly agree and 10% fairly agree. Meanwhile, 5% respondents disagree with that statement. Using hearing protection basically depends on which area that you work and level of noise produce during working time. Mostly respondents agree with this statement because they work in area that produce a lot of noise, so they need to use hearing protection. They know if not used protection, they will get healthy problems. While the respondents that disagree with statement means they work in area that not produce loud noise. So, they no need to use hearing protection during working.

Figure 4

65% agree the noise pollution in their working area are effected their daily health. they will get physiological effects like breathing amplitude, blood pressure, heart-beat rate, pulse rate, blood cholesterol are affected. 21% respondents fairly and 10% strongly agree. Meanwhile, 4% respondents disagree with that statement. Without using hearing protection when working in noise area, they will get loss of hearing and also the working performance of human will be affected as they'll be losing their concentration. It also causes pain, ringing in the ears, feeling of tiredness, thereby effecting the functioning of human system also it affects the sleeping there by inducing the people to become restless and loose concentration and presence of mind during their activities.

CONCLUSIONS

In conclusion, the noise pollution exposure in the Malaysian wooden furniture industry reveals that the workers are exposed to levels higher than permissible limit. The high noise exposure suggested that protective gadgets such as hearing protection must be provided to all workers and its' wearing must be made compulsory to minimize exposure.

Although, worker's health and safety has a strong bearing on overall labour productivity, the results from this study shows that efficient and environmental friendly manufacturing practices is not widely practiced within the Malaysian wooden furniture industry.

It is also apparent that the existing occupational safety and health regulations must be implement and enforced strictly to ensure compliance within the wooden furniture manufacturing industry, which it turn will boost labour productivity, thereby enhancing competitiveness.

References

Anonymous, 2008. Health hazards among woodworking industry workers-A review. International Furniture Research Group (IFRG), Report No. 6/08.

Craik, R.J.M. and Stirling, J.R., 1986: Amplified music as a noise nuisance. *Appl. Acoust.*, 19,335-356.

Eleftheriou, P.C., 2002. Industrial noise and its effects on human hearing. *Applied Acustics*, 63: 35-42.

Hay, B.,1975: Occupational noise exposure - the laws in the EEC, Sweden, Norway, Australia,Canada and the USA. *Appl. Acoust.*, 299-314

Petrusewicz S.A. and Longmore D.K., 1974. *Noise and Vibration Control for Industrialists*