

## **CHAPTER FIVE**

### **CONCLUSION, DISCUSSION AND RECOMMENDATIONS**

This chapter presents the summary of the study and the findings, discussion of the results and the conclusion, as well as the recommendations for further study.

#### **5.1 SUMMARY OF THE STUDY**

The objectives of this study were to find out the opinions of people working the nightshift toward the ill-health effects caused by working the nightshift, the opinions of people working the nightshift toward the approaches used to gain effective sleep when working the nightshift, as well as gathering the opinions of people working the nightshift regarding why they chose to work the nightshift. Because today's business runs around the clock, employees are required to work at night and people working the nightshift have to stay awake instead of sleep. Working the nightshift will disrupt the body's biological clock, which can lead to a variety of ill-health effects. To find out whether people working the nightshift agreed that working the nightshift can cause ill-health effects, 120 nightshift workers (the sample of this study) were asked to complete a Thai-translated questionnaire. Moreover, five people working the nightshift were interviewed to evaluate whether they possessed knowledge about the ill-health effects caused by working the nightshift, knowledge about how to gain effective sleep or how to look after their health when working the nightshift. The data collected were analyzed using Statistical Package for the Social Sciences (SPSS) version 16.0 and Microsoft Excel 2003.

#### **5.2 SUMMARY OF THE FINDINGS**

The results of the study can be summarized as follows:

##### **5.2.1 General information**

The respondents were 70 women and 50 men who worked the nightshift. The majority of the respondents were between 21-30 years old (67.5%). About 33.3% of the respondents had graduated from secondary school and 24.2% of the respondents had earned a Bachelor's degree. About 48.3% of the respondents earned less than

10,000 baht (48.3%) and 43.3% of the respondents earned 10,001 - 20,000 per month. The respondents worked in a rotating shift system for 1 week (45.8%) and 2 weeks (30.8%). 55.8% of the respondents who answered the questionnaires had not attended any training courses on how to take care of themselves when working the nightshift, while the respondents (44.2%) who had attended the training courses mostly worked in factories or as a nurse.

### **5.2.2 Opinions toward ill-health effects**

Most of the respondents agreed that working the nightshift increased the risk of fatigue (78.3%), risk of digestive disorders (60.8%), risk of neurological disorders (56.7%), risk of sleep disorders (55.8%), and risk of gastrointestinal disorders (54.2%). The results also showed that more women than men agreed that working at night increased the risk of ill-health effects, except for the item of sleep disorders (Q11), where a larger percentage of men agreed with this item than women.

### **5.2.3 Opinions toward approaches used to gain effective sleep**

The results showed that most of the respondents agreed that the best approaches to gain good sleep were to exercise every day (76.7%), take a nap (72.5%), and sleep in a dark and cool room (56.7%), while 46.7% of respondents agreed that drinking beer helped them get good sleep. In terms of opinions toward approaches used to gain effective sleep, the majority of the respondents who agreed with the questions were also women. However, a larger percentage of men agreed than women on the item of taking a 45-minute nap and doing exercise (78.0% of 50 men for both items).

### **5.2.4 Knowledge of ill-health effects and approaches used to gain effective sleep**

Data collected from 5 interviewees were used to evaluate whether people who worked the nightshift possessed knowledge about ill-health effects caused by working the nightshift, knowledge about how to gain effective sleep, or how to look after their health when working the nightshift. From the results of the interviews, it can be said that the interviewees knew about the ill-health effects and approaches to gain effective sleep. However, only 20% of the interviewees possessed knowledge about the risk of

cancer or risk of menstrual disorders caused by working the nightshift. Furthermore, only 40% knew that being exposed to bright light at night could help them regulate the sleep-wake cycle.

### **5.2.5 Sleep behavior**

About 55.8% of the respondents did not experience sleep problems. Most of respondents (80%) did not go to bed at the same time every day and 79.2% of respondents watched TV or used the computer before going to bed.

### **5.2.6 Opinions toward nightshift duty**

The result showed that 107 persons out of the 120 respondents (89.2%) worked the nightshift because it was part of the job responsibilities, while 26 persons chose to work the nightshift in order to earn more money.

### **5.2.7 Respondents' opinions and suggestions**

Respondents expressed that working the nightshift provided them with time to do personal business during the daytime without taking leave. Some mentioned that there was less traffic when going to work. However, the negative side of working the nightshift related to their health and the time being different to others. Respondents admitted that when working the nightshift they could not gain good sleep and felt more exhausted and weaker than when they worked the dayshift. Some of the respondents took a nap during the night, while some thought that taking a nap would make it harder to fall asleep. Some people drank beer, played games, and watched TV in order to sleep better.

## **5.3 DISCUSSION**

According to the findings, most of the respondents agreed that working the nightshift led to ill-health effects. The findings showed that the respondents agreed that the most common ill-health effect when working the nightshift might be developing chronic fatigue. According to the open-ended part of questionnaire, most of the respondents admitted that working the nightshift made them more exhausted than working the dayshift because they were unable to gain effective sleep. However,

the respondents did not seem to agree with Stevens (2006) that working the nightshift could increase the risk of developing cancer and cause more stress.

Regarding the approaches used to gain effective sleep, most of the respondents mentioned exercising every day, and sleeping in a dark and cool room. The majority of the respondents (72.5%) agreed that taking a nap during the night could help them sleep better, which is in accordance with sleep hygiene practices mentioned in the review of literature (Moore-Ede & LeVert, 1998; Postawski, 2004). It was quite interesting to find that 46.7% of respondents agreed that drinking beer could help them gain good sleep. Concerning with this issue, there were some respondents who answered in the open-ended part of the questionnaire that drinking beer was the approaches they used to gain effective sleep. According to Moore-Ede and LeVert's suggestions, while alcohol might help them to fall asleep faster, it would not help them to gain effective sleep. Moreover, most of the respondents also disagreed with Stevens (2006) that getting bright light during the night while working the nightshift and trying not to be exposed to sunlight before going to bed could help regulate the sleep-wake cycle and lead to effective sleep.

Considering the respondents' sleep behavior when they worked the nightshift, the findings found that about 55.8% of the respondents still did not experience sleep problems even though they (80%) did not go to bed at the same time every day and also (79.2%) watched TV or used the computer before going to bed, which is not in accordance with sleep hygiene practices mentioned in the review of literature.

The study also showed that the reason respondents worked the nightshift was because it was part of their job responsibilities. Besides ill-health effects, respondents said that their time for doing activities was different from family and friends. Moreover, regardless of the ill-health effects, the study found that respondents felt that working the nightshift allowed them to do personal business during the daytime without having to take leave. Additionally, it was more convenient to go to work as there was less traffic in the evening.

#### **5.4 CONCLUSION**

Even though most of the respondents agreed that working the nightshift caused ill-health effects; some respondents did not agree that working the nightshift could

cause cancer and stress; respondents continued to work the nightshift because it was the part of their job responsibilities. When working the nightshift, the respondents agreed that exercising, sleeping in a dark and cool room, and taking a nap could help them to gain effective sleep; however, some respondents agreed with the approaches of drinking beer. In addition, respondents did not agree that getting bright light during the night and avoiding exposure to sunlight before going to bed could help them sleep better. Even though respondents agreed that working the nightshift caused ill-health effects, their sleep behavior did not reflect this; most of the respondents did not go to bed at the same time every day and also watched TV or used the computer before going to bed.

## **5.5 RECOMMENDATIONS FOR FURTHER RESEARCH**

Based on the findings of this study, the following recommendations are made for further research. First, further study should increase the number of respondents and focus more on a specific group or specific type of job in order to get more precise results. Second, further study should focus on specific ill-health effects or find out more about which ill-health effects people working the nightshift encounter most frequently. Third, further study may look into the level of knowledge about ill-health effects people working the nightshift possess. Finally, further study might collect data about the ill-health effects people working the nightshift encounter when working the nightshift by the interview method as this would obtain more specific results.