

Correlation Between Quality of Sleep and Occupational Burnout Among Hospital Workers

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Abstract

The objective of this research was to study the correlation between quality of sleep and occupational burnout. The sample of the study consisted of 299 hospital workers. The result shown that 25.75 percent of the workers had poor sleep quality with risky and high level of occupational burnout, were greater than the population mean and greater than the average of general healthcare workers. From the study of correlation between quality of sleep and level of occupational burnout, it was found that significant correlation between quality of sleep and level of occupational burnout symptoms was at 0.01 level ($p < 0.001$). It is recommended that the hospital management shall develop policies to provide assistance to corporate-level and individual workers to prevent other possible physical and mental illnesses in future.

Keywords: Quality of Sleep, Hospital Workers, Occupational Burnout

Introduction

At present, in daily life, most people would spend approximately 90 percent of their time indoor. This behavior is repeated 5-6 days a week (Gunnarsen L & Afshari A, 2006). Busy and repetitive working lifestyles as well as more intense competition cause working people to take lesser care of their own health and lose sleep, leading to both physical and mental health.

Common problems encountered by workers are occupational burnout symptoms. The presently widely accepted occupational burnout theory is Christina Maslach's theory. Occupational burnout symptoms can be evaluated using Maslach Burnout Inventory (MBI) and Shirom-Melamed Brunout Measure (SMBM) evaluation forms (Maslach &

Jackson, 1981). Despite several assessments, surveys and publications on burnout symptoms, there is still no definitive conclusion of these conditions. There is only one theory which stated that occupational burnout symptoms often occur in people with good intentions and ideology to sacrifice themselves in the first place (Prasert Palitpolkarnpim, 2019). One of the key factors that contributes to occupational burnout symptoms is lack of adequate rest and sleep in accordance with the body's requirements (Salvagioni et al., 2017). Occupational burnout symptoms can affect organizations and work outcomes, as well as has a direct impact on the corporate culture and perceptions of the behavioral culture of employees in the organizations (Nuanluk Sangperm, 2018). These symptoms would affect efficiency, commitment, interaction and communication with colleagues, job satisfaction, absenteeism (Chienwattanasook &

Jermstittiparsert, 2019). This may lead to serious mental health problems, such as depression, smoking and drinking alcohol (Salvagioni et al., 2017) and obesity due to unhealthy lifestyles. In addition, occupational burnout also affects mental and psychosocial conditions, such as increase in stress, physical inactivity and smoking. These factors can eventually cause ischemic heart disease and cerebral ischemia (Salvagioni et al., 2017; Toker, Melamed, Berliner, Zeltser, & Shapira, 2012).

Occupational burnout symptoms can be prevented and alleviated by relaxation from work and getting sufficient rest (SRIPRASERTSUK, 2015). The objectives of this research are to study correlation between quality of sleep and occupational burnout of workers in hospital in Rayong province. The data would then be used for further improvement in the management of occupational burnout symptoms of hospital workers to prevent, alleviate and rehabilitate this condition in the future.

Research Methodology

This research was based on cross-sectional study which determined the correlation between quality of sleep and occupational burnout.

The populations in this study consisted of 913 workers who were working at a hospital in Rayong province. The number of samples was calculated using Taro Yamane (Taro Yamane, 1964) at a confidence level of 0.05. A total of 299 people was chosen in the sample group. The researcher adopted a simple random sampling method. The inclusion criteria were full-time workers who have worked in the hospital for more than 3 months and agreed to participate in this research. The exclusion criteria

were questionnaire which has not been completed in accordance with the form required by the study and workers who had to leave the research.

The researcher collected personal information of hospital workers by electronic system and collected general personal data including gender, age, smoking behavior, physical activity, number of years worked in the organization, responsibility, nature of employment, working hours, health restrictions, number of sick days and occupation code accordingly International Labor of Organization (ILO). Sleep quality was calculated using Pittsburgh Sleep Quality Index (PSQI) (Thai version).

In addition, occupational burnout symptoms were measured using occupational burnout test for health workers which was translated from occupational burnout test of Maslach & Jackson (Maslach & Jackson, 1986).

Data were analyzed by Descriptive statistic and Regression Analysis.

Research results

From the study of quality of sleep of hospital workers, it was found that 38.46 percent of workers went to bed at 11:00 p.m. The sleep latency time with the highest frequency were 26 - 60 minutes and average amount of sleep cycle per night was 380.26 minutes (6.37 hours). According to translation of Thai version of quality of sleep (Thai-PSQI), it was indicated that 11.37 percent of hospital workers had good quality of sleep. Meanwhile, 88.63 percent of hospital workers had poor quality of sleep are displayed in Table 1.

Table 1: Number and percentage of workers classified by quality of sleep data

Quality of Sleep Data (n = 299)	Number (Person)	Percentage
Sleep latency time (minutes)		

Less than 5	18	6.02
5 - 10	55	18.39
11 - 25	103	34.45
26 - 60	114	38.13
More than 60	9	3.01
Actual amount of sleep cycle per night (hour)		
Less than 7	171	57.19
7 - 9	126	42.14
More than 9	2	0.67
Mean ± SD = 380.26 ± 77.63 minutes		
Min = 120 minutes, Max = 660 minutes		
Quality of Sleep	Number (Person)	Percentage
Good	34	11.37
Poor	265	88.63

When analyzing quality of sleep data classified by levels of occupational burnout symptoms of hospital workers, it was found that 61.20 percent of workers had poor sleep quality and low occupational burnout symptoms, 25.08 percent of workers experienced

poor sleep quality and high occupational burnout symptoms, and 2.34 percent of workers had poor sleep quality and medium occupational burnout symptoms are displayed in Table 2.

Table 2: Number and percentage of workers classified by quality of sleep and levels of occupational burnout symptoms

Quality of Sleep	Level of occupational burnout symptoms			Total n (%)
	Low n (%)	Medium n (%)	High and Risky n (%)	
Good	32 (10.70)	0 (0.00)	2 (0.67)	34 (11.37)
Poor	183 (61.20)	7 (2.34)	75 (25.08)	265 (88.63)
Total	215 (71.91)	7 (2.34)	77 (25.75)	299 (100.00)

From analysis of correlation between quality of sleep and occupational burnout, it was found that significance level of correlation between quality of

sleep and level of occupational burnout symptoms was at 0.01 ($p < 0.001$) are displayed in Table 3.

Table 3: Correlation between quality of sleep and level of occupational burnout symptoms

Data	95% CI	RR	p-value
Correlation between quality of sleep and level of occupational burnout symptoms	4.37-4.93	0.78	< 0.001

Discussion and Conclusion

Sample group of the study consisted of 299 hospital workers. The data were collected via electronic system for 2 weeks. It was found that 38.46 percent of workers went to bed at 11:00 p.m. The sleep latency time with the highest frequency were 26 - 60 minutes which is longer than the NREM (Non Rapid Eye Movement) which has standard Non-Rem Sleep time of 5-10 minutes. According to Stanford's Theory of Sleep (Seiji Nishino, 2017). Most important sleeping phase is the first 90 minutes of sleep when the sympathetic-nerve activity gradually decreases and replaces by parasympathetic nervous system. In this stage, a body would start to rest and organize information for the day to prepare to wake up again and refresh the brain as much as possible. Therefore, the longer the sleep latency time, the lesser the amount of sleep cycle (deep sleep stage). As a result, the quality of sleep will be reduced (Ding et al., 2016). The average amount of sleep cycle per night was 380.26 minutes (6.37 hours), which is less than recommendation of the US National Sleep Foundation that adults should sleep 7-9 hours a day (National Sleep Foundation, 2006).

25.08 percent of hospital workers experienced poor sleep quality and high occupational burnout symptoms which is higher than the research of Houkes I., Winants Y., Twellaar M. et al. (2011). About 20 percent of doctors or public healthcare workers would experience occupational burnout symptoms (Houkes, Winants, Twellaar, & Verdonk, 2011). From the survey, only 12 percent of general

working populations in Bangkok experienced occupational burnout symptoms (College of Management Mahidol University, 2019).

From analysis of correlation between quality of sleep and occupational burnout, it was found that significance level of correlation between quality of sleep and level of occupational burnout symptoms was at 0.01 ($p < 0.001$). This may be because hospital workers would involve in provision of cares and services to others. Service providers with good characters are often expected to be empathetic (sensitive to emotions and understand the mood of service recipients). However, sometimes, this ability may be developed to hyper-empathy which allows hospital workers to have innate ability to be completely connected and in-tune with another's emotions and develop further to sympathy (Rakel E Robert & Rakel P David, 2016). Hospital workers, who committed and dedicated to service until they were in a state of empathy, may experience emotional fluctuations from deep depressions to overly exuberant. These symptoms are considered barriers to work that directly affect job satisfaction (Kittisak Jermisittiparsert, Pattanant Petchchedchoo, Siridech Kumsuprom, & Panarat Panmanee, 2021). These individuals will not be able to maintain work life balance and workplace. In addition, there may be additional factors from other works such as feeling of unfair performance evaluation and not receiving support from supervisors despite substantial efforts and dedications in the works (Chienwattanasook & Jermisittiparsert, 2019). These are factors that

triggerred work stress, discourage and demotivate workers.

Ultimately, they will not be able to carry the responsibilities and emotions and may even lead to resignation from their jobs (Chayanan Kerdpitak. & Kittisak Jermstittiparsert., 2019). The findings conformed to study of Prasert Palitpolkarnpim (2019) which indicated that workers, who tend to experience occupational burnout symptoms, would intentionally involve with factors of occupational burnout symptoms as they would exert their effort and energy to work harder to overcome significant obstacles. Eventually, they would end up in physical and mental fatigue and subsequently experience occupational burnout symptoms. Therefore, it is recommended that the hospital management shall develop policies to provide assistance to corporate-level and individual workers, including Employee Assistance Program (EAP), an occupational health service related to mental health, as guidelines to prevent burnout symptoms from working at the corporate level, and to educate workers at a personal level on cognitive and behavioral coping. The objectives are to eradicate the problems and to prevent other possible physical and mental illnesses in the future.

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