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Job stress among nurses in public hospitals in Ratchaburi province, Thailand

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ABSTRACT

Aoki M, Keiwkarnka B, Chompikul J. Job stress amony nurses in public hospitals in Ratchaburi province, Thailand. J Pub. Health Dev. 2011; 9(1): 19-27.

A cross-sectional descriptive study was conducted to study job stress among nurses in public hospitals in Ratchaburi province, Thailand. The objectives were to describe the prevalence of job stress, the socio-demographic factors, the work characteristics and the social support, as well as to identify the associations between the independent variables and dependent variable. The subjects in this study were 194 nurses and data were collected from January to February, 2010. Descriptive statistics were used to explain the characteristics of the study variables and the chi-square test was used to identify the relationship between dependent and independent variables.

The result showed slightly over a quarter of the respondents (26.2%) were categorized into the high-risk group for job stress. Moreover, job stress was found to be significantly associated with workload, work relationships and social support. More than 70% of the respondents thought that their workloads were heavy. It was also found that heavy workloads caused high stress to nurses. Over 60% of respondents thought their work relationships were good. The nurses who thought that they had good relationships at work had lower job stress. The proportion of the subjects who thought that social support was good and thought it was moderate were almost equal, whereas no one thought their social support was poor. The more support they received, the less job stress they experienced.

This study revealed that appropriate workloads, work relationships and social support can reduce job stress. In order to decrease job stress, it is recommended that nurses' workloads, work relationships and social support should be carefully considered and managed by hospital administrators with a view to reducing job related stress.

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ความเครียดจากการทำงานของพยาบาลโรงพยาบาลของรัฐ ในจังหวัดราชบุรี ประเทศไทย

บทคัดย่อ

มาซากิ เอโอกิ บุญยง เกี่ยวการค้า จิราพร ชมพิกุล. ความเครียดจากการทำงานของพยาบาลโรงพยาบาลของรัฐในจังหวัดราชบุรี ประเทศไทย. ว.สาธารณสุขและการพัฒนา, 2554; 9(1): 19-27.

การศึกษาแบบตัดขวางเชิงพรรณนา ดำเนินการศึกษาความเครียดจากการทำงานของพยาบาลโรงพยาบาลของรัฐ ในจังหวัดราชบุรี ประเทศไทย มีวัตถุประสงค์เพื่อศึกษาอัตราความเครียดจากการทำงาน คุณลักษณะด้านประชากรและสังคม คุณลักษณะงานและการสนับสนุนทางสังคมของพยาบาล รวมทั้งศึกษาความสัมพันธ์ระหว่างตัวแปรอิสระกับตัวแปรตาม กลุ่มตัวอย่างเป็นพยาบาล จำนวน 194 คน และเก็บข้อมูลระหว่างเดือนมกราคม ถึงเดือนกุมภาพันธ์ พ.ศ. 2553 สถิติเชิงพรรณนาใช้ในการอธิบายคุณลักษณะของตัวแปรต่างๆ ที่ใช้ในการศึกษา และการทดสอบไคสแคว์เพื่อหาความสัมพันธ์ระหว่างตัวแปรตามกับตัวแปรอิสระ

ผลการศึกษาพบว่า ร้อยละ 26.2 ของกลุ่มตัวอย่างมีความเสี่ยงสูงที่จะเกิดความเครียดจากการทำงาน นอกจากนี้ ยังพบความสัมพันธ์ของความเครียดจากการทำงานกับภาระงาน ความสัมพันธ์ในการทำงานและการสนับสนุนทางสังคม มากกว่าร้อยละ 70 ของกลุ่มตัวอย่าง คิดว่าภาระงานที่รับผิดชอบเป็นภาระงานที่หนักมากและเป็นผลทำให้เกิดความเครียด มากกว่าร้อยละ 60 ของกลุ่มตัวอย่าง คิดว่าความสัมพันธ์ในการทำงานอยู่ในระดับดี พยาบาลที่มีความสัมพันธ์ในการทำงานดีมีความเครียดจากการทำงานในระดับต่ำ กลุ่มตัวอย่างที่คิดว่าได้รับแรงสนับสนุนทางสังคมในระดับดี และกับระดับปานกลางมีสัดส่วนใกล้เคียงกัน และไม่มีผู้ใดคิดว่าได้รับแรงสนับสนุนทางสังคมในระดับต่ำ กลุ่มตัวอย่างที่ได้รับแรงสนับสนุนทางสังคมยิ่งมากขึ้นก็ยิ่งทำให้ความเครียดจากการทำงานน้อยลง

การศึกษานี้แสดงให้เห็นว่าภาระงานที่เหมาะสม การมีความสัมพันธ์ในการทำงานที่ดีและการได้รับแรงสนับสนุนทางสังคมสามารถลดความเครียดจากการทำงานได้ ดังนั้นในมุมมองของการลดความเครียดจากการทำงาน ผู้บริหารโรงพยาบาลควรพิจารณาอย่างจริงจังเกี่ยวกับการมอบหมายภาระงาน การสร้างความสัมพันธ์ที่ดีในการทำงาน และการให้แรงสนับสนุนทางสังคมแก่พยาบาล

คำสำคัญ ความเครียดจากการทำงาน ความไม่สมดุลของความพยายามกับรางวัลที่ได้รับ โรงพยาบาลของรัฐ ภาระงาน ความสัมพันธ์ในการทำงาน แรงสนับสนุนทางสังคม

INTRODUCTION

Job stress is a physical condition that poses a threat to the well-being of workers. Prolonged job stress will disrupt work effectiveness, lead to increased sick time, and higher job turnover[1]. Nursing is generally perceived as a demanding profession. It is both physically and psychologically challenging. Over the past several years, signs of occupational stress appear to be increasing among nurses. This has been attributed to many factors including downsizing, restructuring, and merging role boundaries and responsibilities[2]. Nurse stress is defined as the emotional and physical reactions resulting from the interactions between the nurse and her/his work environment where the demands of the job exceed capabilities and resources[3]. It is well known that prolonged stress is a precursor to burnout which is considered a major problem for many professions, and nurses are considered to be particularly susceptible.

Public hospitals often do not receive enough funding from the government. Even if they are in dire financial straits, it is not easy for public hospitals to stop their operations because they have practical responsibility for the health of all citizens. Given the Thai financial crisis, funding for public hospitals may be precarious. In Thailand, patients can come to a hospital to see a doctor even if they do not have money. Consequently, public hospitals are often crowded, waiting times can be long, and the facilities may not be as good as in private hospitals.

Due to the heavy workload of public hospitals, it is important for hospital administrators to know about nurse stress in order to utilize staff efficiently and retain them. It is also important for nurses to understand what makes them have stress. There are many reports in developed countries that nurses or medical professionals are experiencing high levels of stress. However, although there is increasing concern about the poor mental and physical health of nurses, there has been little investigation of these issues in Thailand.

Therefore, this study focuses on stress among nurses working in the public hospitals. The purpose of this study is to investigate the prevalence of job-related stress and its relationship with various factors among nurses in public hospitals in Ratchaburi province.

METHODOLOGY

A cross-sectional descriptive study was carried out from January to March, 2010, to identify the prevalence of job stress and determine its related factors. The data collection was conducted in Ratchaburi province in Thailand. There were three large district hospitals in Ratchaburi province: Damnoensaduak Hospital, Ban Pong Hospital, and Photharam Hospital. From these three district hospitals, Damnoensaduak Hospital was randomly selected for the site of study. From the 198 eligible staff of Damnoensaduak Hospital, 194 agreed to participate in the study by response to a self-administered questionnaire. The questionnaire

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consisted of four parts: socio-demographic factors, work characteristics, social support and effort/reward imbalance. Cronbach's alpha was used to test reliability of the instrument which revealed Cronbach's α coefficient of the work environment 0.831, work relationship 0.812, social support 0.720 and effort reward imbalance 0.847. Effort/reward imbalance standard questionnaire had effort (6 items) and reward (11 items) questions. These 17 questions were used to calculate effort/reward ratio. The ratio of job stress was grouped into two groups by using effort/reward ratio of top quartile (Q3) at a cut-off point. When the effort/reward ratio was equal to or more than Q3, the stress level was categorized as high-risk. When the effort/reward ratio was less than Q3, the level was considered as low-risk.

The statistical software Minitab was used to analyze the data. Descriptive statistics were employed to display frequency, percentages, mean, standard deviations and spread of the variables under study. Chi-square test was used to determine association between independent and dependent variables.

The protocol of this study was approved by Ethic Committee of Mahidol University (No. MU-IRB 2009/316.0812). The researcher contacted and asked permission from the target hospital. The participant information sheet and the informed consent form were given to the nurses.

RESULT

Table 1 shows the socio-demographic characteristics of nurses in Damnoensaduak Hospital. One hundred ninety and four questionnaires were completed and submitted for analysis.

With regard to age, the median was 40.0 years old. The largest age group (42.7%) was 36 to 45 years. Over a quarter of the respondents (26.7%) earned 30,000 to 34,999 Baht per month. Almost a half of the respondents (46%) had been registered for 11 to 20 years as nurses. Regarding working duration of the respondents, 43.0% had worked from 11 to 20 years. With regard to work shifts, 64.2% worked rotating 8 or 12 hour shifts.

Table 1 Percentage of respondents by socio-demographic characteristics

Socio-demographic characteristics	Number	%
Age Group	194	
≤ 35	61	31.4
36 - 45	83	42.7
> 46	50	25.9
Median = 40.0, QD = 6.0, Min = 29, Max = 59		
Marital Status	193 *	
Single	66	34.1
Married	117	60.3
Divorce/Separate	10	5.6
Monthly Income (Bath)	191 *	
≤ 19,999	25	13.1
20,000 - 24,999	39	20.4
25,000 - 29,999	41	21.5
30,000 - 34,999	51	26.7
> 35,000	35	18.3
Median = 26,920, QD = 5,000, Min = 10,000, Max = 50,000		
Nurse Registration Term (year)	191 *	
≤ 10	32	10.5
11 - 20	83	46.0
21 - 30	66	36.2
≥ 31	10	7.3
Median = 18.0, QD = 6.0, Min = 3, Max = 39		
Working Duration at the hospital (year)	193 *	
≤ 10	43	22.2
11 - 20	83	43.0
21 - 30	57	29.5
> 31	10	5.3
Mean = 16.9, SD = 8.0, Min = 1, Max = 39		
Work Shift	193 *	
Rotating 8 hours or 12hours shift	124	64.2
Day Shift	43	22.3
Others	26	13.5

*missing data as the respondents had their right to skip some questions.

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According to Best's Rating Criteria[4], workload, work relationship and social support were classified into 3 levels. Table 2 shows that the respondents assessed their workloads were heavy and moderate at 72.2% and 27.8%, respectively. In terms of work relationships two thirds perceived that they had good relationships and the rest had modulate relationships. The proportion of perceived good and modulate social support were more less equal.

Table 2 Percentage of respondents by level of workload, work relationship and social support

Variables	Number	%
Workload		
Low	0	0.0
Moderate	54	27.8
Heavy	140	72.2
Work relationship		
Good Relationship	118	60.8
Moderate	74	38.1
Poor Relationship	2	1.1
Social support		
Good Support	98	50.6
Moderate	96	49.4
Poor Support	0	0.0

Based on the effort/reward ratio, the prevalence of job stress was categorized into high and low risk groups. Table 3 shows that the high risk group was about one third the size of the low risk group.

Table 3 The Prevalence of job stress by categories

Level of job stress	Number	%
High	51	26.2
Low	143	73.8

Table 4 displays the association between stress level and each variable. It shows that there was a significant association between workload and stress level (p-value = 0.009). Both work relationship and social support also had a significant association with stress level (p-value = 0.007 and 0.004 respectively).

Table 4 Association between stress level and each variable

Variables	n	Stress level		p-value of χ^2
		High (%)	Low (%)	
Workload				
Heavy	140	31.43	68.57	0.009**
Moderate	54	12.96	87.04	
Work relationship				
Good	118	19.49	80.51	0.007**
Moderate+Poor	76	36.84	63.16	
Social support				
Good	98	17.35	82.65	0.004**
Moderate	96	35.42	64.58	

** p-value<0.01

DISCUSSION

Effort-reward ratio was used to identity the prevalence of job stress. The effort-reward ratio was considered an indicator of job stress in this study. The mean of this ratio was 0.69. The top quartile was categorized as a high-risk job stress group. The study shows that 26.2% of the respondents had high stress and 73.8% had low stress. A similar study of physicians in Bangkok showed that the mean of effort/reward ratio was 0.503 and the high stress group constituted 25.1% of the study group [5]. Furthermore, a study of garment workers in Thailand showed that the ratio was 0.46[6].

It was found that heavy workloads caused high stress in nurses. There was an association between the workload burden and stress level. More than 70% of the respondents thought that their workloads were heavy. Heavy workloads are stressful for nurses and may lead to serious medical accidents. House JS [7] revealed that high physical demands such as overtime, shift work and changes, and where physical work exceeds the number of hours for the shift can produce job stress and are also related to heart disease. Rainham DC[8], Gray-Toft P, et al.[9], Phillips S[10], French SE, et al.[11] revealed that nurses experienced many demands on the job and were

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constantly coping with time pressures, maintaining their competence in a rapidly changing field, placing themselves at risk of physical assault, and experiencing ethical dilemmas. Nurses have to heed patients' requests even if they make unreasonable requests. Nurses also have to deal with patients' families at the same time. To make matters worse, patients' conditions sometimes deteriorate, and suddenly nurses have to deal with such situations as well as cope with their routine work. It is predicted that the workloads of nurses will only increase in the future. Reducing nursing workloads may become very important.

It was also found that work relationship had an association with job stress. The nurses who thought that they had good relationships at work had lower job stress. Duxbury M[12], Field T[13], Agervold M, et al.[14] revealed that a bullying management style by superiors was detrimental to workers' health. This study showed that encouraging good relationships might be a good intervention to reduce job stress.

There was association between the amount of social support and stress level. The nurses who got good support from others had lower stress. In the conceptualization of coping patterns, social support is one method of emotion management. If help is needed, social support might be a key factor in effectively promoting physical and psychological health. Nad P[15], Wei-Qing C, et al.[16], Nakata A, et al.[17] identified an association between job stress and social support. In this study, nurses developed a tendency to lean more on family members for emotional and instrumental support rather than supervisors and colleagues at work.

RECOMMENDATIONS

This research revealed that many nurses felt their workloads were heavy, and that workload was significantly associated with job stress. Therefore, it is recommended that workloads should be arranged properly. Furthermore, it is necessary to offer counseling and various activities to make interpersonal relationships strong. In addition, it is also recommended that nurses should actively consult their supervisors and colleagues when they have troubles.

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