Social Support and Job Performance of ICU Nurses in Kunming Tertiary Hospitals, People's Republic of China*

การสนับสนุนทางสังคมและการปฏิบัติงานของพยาบาลไอซียูในโรงพยาบาลตติยภูมิของคุนหมิง สาธารณรัฐประชาชนจีน*

ไคยอง ใบ ** Kaiyong Bai **
บุญพิชชา จิตต์ภักดี *** Bunpitcha Chitpakdee ***
ทรียาพรรณ สุภามณี *** Treeyaphan Supamanee ***

บทคัดย่อ

การปฏิบัติงานของพยาบาลแผนกไอซียู เป็นประเด็นสำคัญในการดูแลระยะวิกฤติที่มีผลนำไปสู่คุณภาพการดูแลในระดับสูง การวิจัยเชิงพรรณาเพื่อหาความสัมพันธ์นี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างการสนับสนุนทางสังคมและการปฏิบัติงานของพยาบาลแผนกไอซียูในโรงพยาบาลระดับตติยภูมิของคุนหมิง สาธารณรัฐประชาชนจีน กลุ่มตัวอย่างคือพยาบาลแผนกไอซียูที่ปฏิบัติงานในโรงพยาบาลระดับตติยภูมิของคุนหมิง สาธารณรัฐประชาชนจีน 4 แห่ง จำนวน 299 คน เครื่องมือที่ใช้ในการวิจัย ประกอบด้วย แบบวัดการสนับสนุนทางสังคมที่พัฒนาโดย Tsai (2007) แบบวัดการปฏิบัติการพยาบาลแบบย่อ ที่พัฒนาโดย Greenslade (2008) และแปลเป็นภาษาจีนโดย Lin (2012) วิเคราะห์ข้อมูลโดยใช้ สถิติบรรยาย และ การหาค่าสหสัมพันธ์แบบลำดับที่ของสเปียร์แมน

ผลการวิจัยพบว่า การสนับสนุนทางสังคมของพยาบาลแผนกไอซียู อยู่ระดับปานกลาง ($\bar{X}$ = 50.01, SD = 6.05) การปฏิบัติงานตามหน้าที่ของพยาบาลไอซียูในอยู่ในระดับสูง ($\bar{X}$ = 57.37, SD = 10.03) ในขณะที่การปฏิบัติงานตามบริบทของพยาบาลแผนกไอซียูอยู่ในระดับปานกลาง ($\bar{X}$ = 53.2, SD = 6.62) การสนับสนุนทางสังคมมีความสัมพันธ์ทางบวกในระดับต่ำกับการปฏิบัติตามหน้าที่หลักและการปฏิบัติงานตามบริบทอย่างมีนัยสำคัญทางสถิติ (r = 0.15 และ 0.24, p < 0.05 ตามลำดับ)

ผลของการวิจัยนี้ให้ข้อมูลพื้นฐานสำหรับโรงพยาบาลและผู้บริหารการพยาบาลเพื่อให้ตระหนักถึงการเพิ่มการสนับสนุนทางสังคมให้แก่พยาบาลประจำการเพื่อให้พยาบาลปรับปรุงการปฏิบัติงานของตนเองต่อไป

คำสำคัญ: การสนับสนุนทางสังคม ผลการปฏิบัติงาน พยาบาลไอซียู

Abstract

The job performance of ICU nurses is a significant issue in critical care towards reaching a high level of quality of care. This study aimed to explore the level of social support and job performance, and to examine the relationship between social support and job performance of ICU nurses in tertiary hospitals in Kunming, People's Republic of China. The sample included 299 ICU nurses working in four tertiary hospitals in Kunming. Research instruments consisted of the Social Support Scale developed by Tsai (2007) and the Chinese Version Shortened Nursing Performance Scale was translated from Greenslade (2008) by Lin (2012). Descriptive statistics and Spearman's rank-order correlation analysis were used to analyze data.

The study found that ICU nurses had a moderate level of social support ($\bar{X}$ = 50.01, SD = 6.05) and ICU nurses had a high level of task performance ($\bar{X}$ = 57.37, SD = 10.03). Contextual performance of ICU nurses was also at a moderate level ($\bar{X}$ = 53.2, SD = 6.62) though social support had a weak positive relationship with task performance and contextual performance (r = 0.15 and 0.24, p < 0.05, respectively).

The results of this study provide baseline information for hospital and nursing administrators to consider providing more social support to staff nurses in order to improve their job performance.

Keywords: Social support, Job performance, ICU nurses

Background and Significance

The intensive care unit (ICU) is a special unit for gathering and treating critically ill patients. The ICU has advanced equipment and facilities and patients have serious conditions with emergencies occurring at any time. Gurses & Carayon (2009) proposed that improving the quality and safety of nursing care is a major challenge of the ICU. Job performance is supposed to be an important indicator of quality of care. ICU nurses have an important role in providing nursing care (McSteen & Peden-McAlpine, 2006). Thus, ICU nurses need to have high job performance.

Greenslade & Jimmieson (2007a) defined job performance of nurses as behaviors that contribute directly to the organization's technical core (task performance) which includes activities that are typically recognized as part of a nurses' job, and those behaviors that maintain the broader social environment (contextual performance) in which the technical core must function which includes the more discretionary behaviors that assist the hospital to function. Tourangeau, Cranley, & Jeffs (2006) believed that job performance directly determines patient expectation and satisfaction. Administrators and leaders of healthcare organizations devote themselves to provide high quality care by improving the job performance of their employees, ensuring the safety of the patients, reducing medical errors, reducing the medical costs of both hospitals and patients, as well as providing necessary service for

patients and customers (Kling, 1995). Fathimath (2012) conducted a descriptive correlational study on the performance of nurses who work in a tertiary care hospital in Maldives and the results showed that these nurses had high task performance scores, while their contextual performance scores were moderate. Lin (2012) and Tong (2014) found that the job performance of nurses in China were at a moderate level, as a special group which are required to have high performance. Since ICU nurses are a significant group in hospitals, their performance is a significant indicator of quality of care, but there is hardly any research on this topic. Therefore, it is necessary to investigate the performance of ICU nurses.

Some factors related to job performance are nursing competencies (Tzeng, 2004), job satisfaction (Platis, Reklitis, & Zimeras, 2015), organizational justice (Jankingthong & Rurkkhum, 2012), emotional intelligence (Shamsuddin & Rahman, 2014), as well as social support which was significantly associated (r = 0.695, p < 0.01) with job performance. However, Branscum, Haider, Brown, & Sharma (2016) proposed that there was no association between these two variables. According to these studies, the association between social support and job performance of nurses is inconclusive.

House (1981) defined social support as attachments among individuals or between individuals and groups that serve to improve adaptive competence. House proposed that there were four supportive behavior categories: 1) Emotional support, the provision of empathy and demonstration of love, trust, and caring;

2) Material support, access of the individual to behaviors that directly help in times of need; 3) Informational support, providing information that individuals can use to address personal and environmental issues; and 4) Appraisal support, the transmission of information related to self-assessment. House's model, based on Caplan (1976) theory, points out that social support comes from a variety of sources such as organizations, supervisor, coworkers, and family members.

Social support is a factor in which both colleagues and administrators can support each other. Social support from different sources especially from the workplace has been found to have a significant effect on relieving the job performance barriers of nurses such as job stress and burnout. Support from supervisors can help employees to ease their job stress and help employees feel appreciated by their boss. Moreover, social support can improve employee motivation towards work and job performance (Carlson, Kacmar, & Williams, 2000). As a group that suffers from a high level of job performance barriers, the investigation of social support among ICU nurses is necessary.

Due to the nursing shortage and institutional problems, ICU nurses in tertiary hospitals in Kunming face a very heavy work load. A total of 611 ICU nurses among these hospitals have to care for 314 patient beds. Thus, the bed-nurse ratio is only 1:1.94, which is below than the national standard (1:2.5) issued by the Ministry of Health of China. Unfortunately, the distribution of nurses is not balanced as some of nurses do not provide direct patient care

(Critical Medical Association of Yunnan Province, 2017). ICU nurses need to do all the work such as treatment, communication, teaching, feeding, helping excretion, cleaning, carrying and other menial tasks as there is no support from helper nurses. A heavy workload makes it hard for ICU nurses to take care of their patient's emotional needs. As a result, a study found that 19.4% ICU nurses reported that they seldom provide treatment information and emotional care to patients and their family because they are too busy (Ma, 2016). Furthermore, due to work overload and lack of rest, 43.6% of nurses reported that they do not want to take on extra work in the hospital (Huang & Xie, 2016), and are not interested in attending most conferences and training activities, indicating a lack of interest and motivation to contribute to their organization. In addition, according to a report by the Chinese Medical Association, more new nurses were recruited and qualified experienced nurses quit. Al-Ahmadi (2009) indicated that job performance was positively related to years of experience and negatively related to level of education.

Support from supervisors and co-workers is considered extremely important (Allen, Amason, & Holmes, 1998), while Guo & Pu (2009) found that nurses report low levels ($\bar{X}$ = 11.40, SD = 0.87) of perceived support from their supervisors in tertiary hospitals of Yunnan province. It is also difficult for ICU nurses to provide support to their colleagues when they are extremely busy. Zhou, Ji & Li (2015) found that ICU temporary nurses complained that they lack social support from both their

supervisor and co-workers. Nurse managers are busy with their duties then neglect showing concern for staff nurses. Invisible competition and jealousy also contributes to the absence of real support among co-workers (Xiao, 2008).

ICU nurses are a specific group which requires a high level of job performance however there is no research to identify job performance among ICU nurses. No studies have identified an association between social support and job performance in ICU nurses, even though social support was proven to be a factor influencing job performance. Therefore, this study on social support and job performance of ICU nurses is necessary.

Objectives

This study aims to explore the level of social support and job performance, and to examine the relationship between social support and job performance of ICU nurses in tertiary hospitals in Kunming, People's Republic of China.

Conceptual Framework

This correlational study explored the social support of ICU nurses based on the social support model of House (1981), which is composed of three dimensions: supervisor support, co-worker support, and kinship support. This study explored job performance of nurses based on the nursing job performance model which was developed by Greenslade (2008). Job performance included two domains: task performance which refers to the behaviors performed by nurses that contribute directly

to the technical core of organization and contextual performance which refers to activities that maintain the broader social environment in which the technical core must function. Employees who receive a high level of social support especially from their supervisor usually have a high level of motivation for their work thereby improving job performance (Carlson, Kacmar, & Williams, 2000). The relationship between social support and job performance of ICU nurses in tertiary hospitals in Kunming was identified.

Methodology

A correlational study was conducted among ICU nurses in tertiary hospitals of Kunming, China.

Population and samples

The target population of this study included 611 ICU nurses who were employed in tertiary hospitals in Kunming, China. Sample size was calculated using n= N/1+N (e)2 with a significance level of 0.05. Cluster sampling was adopted and participants were recruited from four tertiary hospitals according to the calculated sampling percentage of each hospital. Finally, 323 ICU nurses from four tertiary hospitals in Kunming were recruited as the sample.

Research Instruments

The research instrument included a series of questionnaires focused on three areas: 1) the Demographic data form developed by the researcher, with open and closed ended questions to collect the demographic data of the participants such as gender, age, marital status, education level and so on; 2) the Social Support Scale developed by Tsai (2007) which includes three sub-dimensions: supervisor support, co-work-support and kinship support. Each sub-dimension contained five items focusing on emotional support (two items), appraisal support, information support, and instrumental support. Each item was scored on a five-point Likert scale (strongly disagree = 1, disagree = 2, sometimes = 3, agree = 4, strongly agree = 5). The scoring range spanned 15.00-75.00, with 15.00-35.00 indicating low support, 35.01-55.00 indicating moderate support, and 55.01-75.00 indicating high level of support; 3) The Chinese Version Shortened Job Performance Scale was translated from Greenslade (2008) by Lin (2012). It consisted of 25-items covering the three sub-dimensions under each domain of task performance and contextual performance respectively. Task performance items were answered by a 7-point Likert scale which ranged from poor (1) to excellent (7). Questions related to contextual performance were answered by a 7-point Likert scales ranked from never (1) to often (7) (see table 1).

Table 1 The Interpretation of Chinese Version Shortened Job Performance Scale

Category	Low	Moderate	High
Social support	4.00-12.00	12.01-20.00	20.01-28.00
Information provision	4.00-12.00	12.01-20.00	20.01-28.00
Technical care	3.00-9.00	9.01-15.00	15.01-21.00
Task performance	11.00-33.00	33.01-55.00	55.01-77.00
Interpersonal support	5.00-15.00	15.01-25.00	25.01-35.00
Job-task support	4.00-12.00	12.01-20.00	20.01-28.00
Organizational support	5.00-15.00	15.01-25.00	25.01-35.00
Contextual performance	14.00-42.00	42.01-70.00	70.01-98.00

The Social Support Scale was confirmed to have high content validity by the author through a pilot study which produced a Cronbach's α of 0.86. Greenslade (2008) reported good convergent and criterion validity of the Shortened Job Performance Scale. Lin (2012) translated the instrument without any modifications to content or structure. The pilot study showed the Cronbach's α of task and contextual performance was 0.96 and 0.92 respectively.

Ethical Consideration

The research was approved by Research Ethics Committee (Research ID:2018-033, STUDY CODE: 2018-EXP027) at the Faculty of Nursing, Chiang Mai University, Thailand. Permission was obtained from each hospital participating in the study. Study informed consent forms were distributed to participants to provide information on the purpose and method of the study. ICU nurses who agreed to participate were asked to complete the questionnaire and put it in a sealed envelope. This study followed the principle of voluntariness and confidentiality and no incentives or advertisements were used in the research project.

Data Collection

Data collection was conducted from March to May 2018 from four tertiary hospitals in Kunming. The secretaries of each director were assigned to coordinate and help distribute and collect the questionnaires. A total of 323 questionnaires were distributed and 311 questionnaires were returned with 299 (92.60%) of them completed and qualified for data analysis. The data were analyzed using the SPSS. The descriptive and correlational analysis were used.

Data Analysis

Data were analyzed using SPSS and the alpha significance was set at a level of .05. Descriptive statistic such as frequency, percentage, range, mean and standard deviation were used to analyze demographic data. Spearman's rank-order correlation was used to analyze the relationship between social support and job performance since the data had a non-normal distribution.

Results

Among the 299 nurses, 77.59% were female with an average age of 30 years old (SD =

5.48) and 59.87% of them were married. Most (70.90%) of the participants had bachelor degrees. About half (50.50%) had worked as an ICU nurse for 1-5 years, and the majority (85.28%) had worked both day and night shifts. A total of 88.29% of the participants reported that their monthly income was less than 8000 RMB.

The findings of this study showed that overall, participants received a moderate level of social support ($\bar{X}$ = 50.01, SD = 6.05), with both co-worker support ($\bar{X}$ = 12.71, SD = 2.96) and supervisor support ($\bar{X}$ = 15.42, SD = 3.47) also at moderate levels. Participants experienced a high level of kinship support ($\bar{X}$ = 21.88, SD = 3.20). Participants had a high level of task 57.37 (SD = 10.03). Participants had a moderate level of social support ($\bar{X}$ = 19.51, SD = 4.38) and high levels of information support ($\bar{X}$ = 20.06, SD = 4.50) and technical care ($\bar{X}$ = 17.81, SD = 3.10). All dimensions of contextual performance were at a moderate level with the following individual dimension scores: interpersonal support was 20.55 (SD = 2.87), job-task support was 14.14 (SD = 2.79), and organizational support was 18.52 (SD = 3.38). The overall score of contextual performance was also at a moderate level ($\bar{X}$ = 53.20, SD = 6.62). There was a weak and significantly positive relationship between social support and task performance (r = 0.15, p < 0.05), as well as between social support and contextual performance (r = 0.24, p < 0.05) (see table 2).

Table 2 The relationships between social support and task and contextual performance of samples (n = 299)

	Task performance	Contextual performance
Social Support	r = 0.15, p < 0.05	r = 0.24, p < 0.05

Discussion

This study revealed that ICU nurses received a moderate level of support from their co-workers and supervisor which may be explained by the heavy workload of ICU nurses. Due to the nursing shortage and institutional problems, ICU nurses in tertiary hospitals in Kunming face a very heavy workload; they need to do all the work such as providing treatment, communicating, teaching, feeding, helping excretion, cleaning, carrying and other menial work by themselves. This heavy workload causes them to have no energy to care and support other colleagues. Competitive organizational culture may be another factor. Nurses in China usually strive for good performance at work so that they can be more competitive in the face of opportunities and promotion (Bi, Qian, & Zhi, 2001). Glazer (2006) proposed that if the organizational culture is biased towards competition and personal development, then employees will be not willing to help others.

Indirect management of ICU head nurses may be one reason that causes nurses to lack supervisor support. The head nurse of ICU usually authorizes 1-2 group leaders to take charge of the daily management while the head nurses themselves are busy with official administrative

work and seldom appear in the ward therefore there is a lack of opportunities to communicate with staff nurses. In addition, Kottke & Sharafinski (1988) found that supervisors are more willing to provide care and support for subordinates who they think are experienced and responsible. This study showed that 80.93% of the participants have less than ten years of work experience. Simultaneously, subordinates who have a lot of work experience are more likely to establish good relationships with their supervisors and have more opportunities to receive their supervisor's support and care.

Family members are considered to have the greatest opportunity to provide emotional support and material to employees outside the work environment (Xiao, 2008). Adequate communication could help family members fully understand nurses' work status and workload then respond with supportive behaviors such as taking on more housework or other tasks (Huang, Wu, Xu, & Li, 2014). On the other hand, employees who perceived high levels of family support may invest more time and energy to their families, thereby increasing the opportunities and motivation for families to feed back more support (Adams, King, & King, 1996).

Task performance consist of three dimensions of social support, information support, and technical care that are concerned about the behaviors directly targeting the patients. The results revealed that the task performance of participants was at a high level with a mean score of 57.37 (SD = 10.03). In terms of the dimensions of task performance, social support was at a moderate level ($\bar{X}$ = 19.51, SD = 4.38)

while information support ($\bar{X}$ = 20.06, SD = 4.50) and technical care ($\bar{X}$ = 17.81, SD = 3.10) were found at high levels.

Social support refers to the provision of emotional support and comfort to patients and family members (Greenslade & Jimmieson, 2007a), which the study shows at a moderate level. One reason may be the ICU nurses pay more attention to behaviors that are the most urgent and the most necessary for patients such as medication administration, indwelling catheter, and respiratory needs (Lan, Zhao & Yang, 2007). The large number of patients cause most hospitals in China to only concentrate on curing the patient's physical illness but ignore caring for the patient's psychological and emotional needs since these will create more work for nurses but without extra payment (Chen, 2005). The study showed that the information provision of participants was at a high level. Information provision relates to the provision of relevant information such as health education and information about the condition and treatment planning of patients (Greenslade, 2008). Since the Ministry of Health of China proposed the "High Quality Nursing Service Demonstration Project" in 2010, hospitals in China are working on improving the quality of nursing care services and urge nurses to provide patients and families with psychological care and other related treatment information during hospitalization (Ministry of Health of China, 2011). And most hospitals even assess nurses by their performance on information provision and psychological care (Chen, 2017).

The technical care by ICU nurses was found to be at a high level. Technical care relates to nursing behaviors which mainly focuses on the specific care technique such as managing medication and treatment of patients. This may be because both hospitals and nurses all pay attention to improving the technical care of nurses (Wan & Huang, 2007). Hospitals also invested a lot of resources to train ICU nurses (Tzeng, 2004) and as a result the educational background of ICU nurses has significantly improved in recent years. This study showed that 70.90% of the participants hold a bachelor's degree, which is higher percentage than what Pu (2010) and Lin (2012) reported which showed that the percentage of nurses with a bachelor's degree in Yunnan was 40.59% and 57.60% respectively.

Contextual performance consists of three dimensions of interpersonal support, job-task support and organizational support that concern the behaviors that support the broader environment in which the technical core must function (Greenslade & Jimmieson, 2007a). The results revealed that all dimensions of contextual performance showed a moderate level in which the score of interpersonal support was 20.55 (SD = 2.87), the job-task support was 14.14 (SD = 2.79) and organizational support was 18.52 (SD = 3.38).

Interpersonal support refers to behaviors that assist team members and the results showed a moderate level. Again, a heavy workload may be one of the reasons. The serious condition of ICU patients causes the biggest burden for nurses and they frequently work overtime, which limits their ability to provide support to team members. In addition, the competitive organizational climate may be another reason that nurses provide poor interpersonal support to their team members (Glazer, 2006).

Job-task support refers to nursing activities that are beyond patient care job requirements, such as working past their shift time in order to assist patients or making some special arrangements for patients (Greenslade &Jimmieson,2007a). The moderate level of job-task support in this study could be explained by the heavy workload of ICU nurses. An ICU nurse in Kunming usually needs to care for three critically-ill patients and do all the work whether it is directly or indirectly related to patient care. Every shift, ICU nurses work more than 13 hours so they already have to work overtime on a regular basis. For nurses who bear a heavy burden of responsibilities, it is difficult for them to provide extra work beyond the job requirements (Wang, Zhao & Gao, 2007).

Organizational support refers to the additional duties that nurses perform for the hospital such as assisting committees of the hospital without protest and ensuring that materials and equipment are not wasted (Greenslade & Jimmieson,2007a). Study results showed that organizational support was at a moderate level. Jin, Fang, Feng & Dai (2012) found that job satisfaction of nurses in Kunming was at a low level, that nurses often were regarded as the bottom of the hierarchy in the hospitals with less opportunity for further development and many were not satisfied with their pay, causing a

lack of motivation from nurses to support their organization (Qiao & Wang, 2010).

Relationship between social support and job performance

The results showed a weak and significantly positive relationship between social support and task performance as well as between social support and contextual performance. It indicated that ICU nurses who perceived high social support usually feel that they had high job performance.

Support from a co-worker can help nurses reduce anxiety, fear and doubts when they have problems making nurses more efficient at patient care (Wittenberg, Gold & Reno, 2014). Wu & Parker (2014) proposed that employees will perceive the encouraging attitude of the supervisor and demonstrate more enthusiasm in their work to improve job performance. Xue (2014) indicated that the support from family reduces individual stress from work and life. This makes the employees feel relaxed and improves their efficiency at work. Family support reduces worries about handling family affairs, and objectively guarantees that employees have enough energy to invest their hard work in the ICU.

Social exchange theory proposes that social exchange occurs based on the notion that goodwill gestures will be rewarded in the future (Blau, 1964). Therefore, employees who are satisfied with support from their superior are more likely to "give back" to their organizations with a more favorable attitude (Meyer & Allen, 1991). Thus, when perception of executive support is high, nurses are willing to generate a

psychological reward for the hospital, and thus also care about the hospital's interests and be positive to help to achieve the goals of their organization.

Recommendation

Based on this study, hospital managers should consider developing strategies and policies to enhance the social support and job performance of ICU nurses, such as optimizing the nurse staffing plan to reduce nurses' work which is unrelated to direct patient care; and creating a harmonious atmosphere such as encouraging mutual assistance among employees and avoiding vicious competition to enhance interpersonal relationship among nurses. Formulating policies to encourage and prize nurses' extra work and reward them when necessary can also be considered in the future.

The job performance of nurses and related factors, such as demographic characteristics, needs to be studied in future research. The impact of each dimension of social support on job performance should also be studied in the future.

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