Factors Related to Quality of Nursing Care in Tertiary Care Hospitals, The Kingdom of Bhutan

ปัจจัยที่เกี่ยวข้องกับคุณภาพการพยาบาลในโรงพยาบาลระดับตติยภูมิ ราชอาณาจักรภูฏาน

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บทคัดย่อ

คุณภาพการพยาบาลเป็นส่วนหนึ่งที่มีความสำคัญต่อผู้บริหารทางการพยาบาลในขณะที่ระบบบริการทางสุขภาพมีการเปลี่ยนแปลง การศึกษานี้มีวัตถุประสงค์เพื่ออธิบายระดับคุณภาพการพยาบาล และหาความสัมพันธ์ระหว่างคุณภาพการพยาบาลกับปัจจัยที่เกี่ยวข้องซึ่งประกอบด้วย ระดับการศึกษา ประสบการณ์การทำงาน และความร่วมมือระหว่างพยาบาลกับแพทย์ กลุ่มตัวอย่างประกอบด้วยพยาบาลจำนวน 230 คนที่ถูกคัดเลือกโดยการสุ่มตัวอย่างจากโรงพยาบาลระดับตติยภูมิ ในราชอาณาจักรภูฏาน เครื่องมือที่ใช้ในการวิจัยประกอบด้วย 1) แบบวัดทัศนคติเกี่ยวกับความร่วมมือระหว่างแพทย์ และพยาบาลของเจฟเฟอร์สัน (Jefferson Scale of Attitudes towards Physician-Nurse Collaboration: JSAPNC) และ 2) แบบวัดการพยาบาลที่ดี (Good Nursing Care Scale: GNCS) ที่พัฒนาโดยใลโน คิวปิ ในปี 1996 ซึ่ง JSAPNC และ GNCS ได้รับการตรวจสอบความตรงโดยผู้พัฒนาเครื่องมือ ค่าสัมประสิทธิ์สหสัมพันธ์ของครอนบาคของแบบวัดทัศนคติความร่วมมือการทำงานระหว่างแพทย์ และพยาบาลของเจฟเฟอร์สัน และแบบวัดการพยาบาลที่ดีมีค่า เท่ากับ 0.70 และ 0.91 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และค่าสัมประสิทธิ์สหสัมพันธ์แบบลำดับที่ของสเปียร์แมน ผลการวิจัย พบว่า

1. คุณภาพการพยาบาลตามการรับรู้ของพยาบาลอยู่ในระดับสูง
2. ความร่วมมือระหว่างแพทย์ และพยาบาลมีความสัมพันธ์เชิงบวกกับคุณภาพการพยาบาลอย่างมีนัยสำคัญทางสถิติ แต่ระดับการศึกษา และประสบการณ์การทำงานไม่มีความสัมพันธ์กับคุณภาพการพยาบาล

ผลการศึกษาครั้งนี้สามารถใช้เป็นข้อมูลพื้นฐานสำหรับผู้บริหารทางการพยาบาล ในการคงไว้ซึ่งคุณภาพการพยาบาล และพัฒนาความร่วมมือระหว่างแพทย์ และพยาบาลเพื่อที่จะทำให้คุณภาพการพยาบาลโรงพยาบาลระดับตติยภูมิ ราชอาณาจักรภูฏาน

คำสำคัญ: คุณภาพการพยาบาล ความร่วมมือระหว่างพยาบาลกับแพทย์ ราชอาณาจักรภูฏาน

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Abstract

Quality of nursing care is an essential factor for nursing administrators in the changing of a health care system. The aim of this study was to describe the level of quality of nursing care and to explore the relationship between quality of nursing care and related factors including educational level, years of experience and nurse-physician collaboration. Subjects were 230 nurses, randomly selected from three tertiary care hospitals in Bhutan. The research instruments were the Jefferson Scale of Attitudes towards Physician-Nurse Collaboration (JSAPNC) developed by researchers at Jefferson Medical College (Hojat et al., 2003), and the Good Nursing Care Scale (GNCS) developed by Leino-Kilpi (1996). The JSAPNC and GNCS were confirmed for validity by the developers. Cronbach's alpha coefficient of the JSAPNC and the GNCS were 0.70 and 0.91, respectively. Data were analyzed using descriptive statistics and Spearman's rank-order correlation coefficient.

The results of the study were as follows:

1. The quality of nursing care as perceived by nurses was at a high level.
2. There was a statistically significant positive relationship between nurse-physician collaboration and quality of nursing care. However, there was no relationship between educational level, years of experience and the quality of nursing care.

Results of this study can be used as baseline information for nurse administrators to maintain quality of nursing care and improve nurse-physician collaboration in order to enhance quality of nursing care in tertiary care hospitals of The Kingdom of Bhutan.

Key words: Quality Of Nursing Care, Nurse-Physician Collaboration, Bhutan

Background and significance of the research problem

Health care is considered a major industry that is accountable to its customers and is of global concern in today's world. Improving the quality of care has been a core concern for all health care providers and the patients who receive the care (Institute of Medicine, 2004). Quality of nursing care is part of quality of care and an important part of health care services. Quality of nursing care is defined as the degree of excellence in providing nursing care to patients that meets the patient's spiritual, mental, social, physical and environmental needs (Leino-Kilpi, 1996). The conceptual model for quality of nursing care is based on the Good Nursing Care Model developed by Leino-Kilpi, which includes six dimensions: staff characteristics, care-related activities, preconditions for care, physical environment, progress of nursing process, and cooperation with relatives.

In Bhutan, nurses comprise the largest group of health care providers in health care settings, and they have different socio-cultural backgrounds. With the changes in the health care system and demand for quality of nursing care, nurses must seek their perspective on quality of nursing care to provide better care. The majority of the nurses hold three-year nursing diplomas, others may hold two-year

certificate. On average, a single nurse is attending to twelve patients during the day shifts (Phuntsho, 2012). Whereas nurses in other countries often have different responsibilities in the hospital due to their educational level, Bhutanese nurses perform the same jobs, such as providing bedside nursing care, performing technical task like giving medication, and other nursing procedures. Any nurse can give health education despite their lack of educational background and years of experience (MOH, 2007).

Several studies investigated factors related to quality of nursing care and demonstrated relationships between educational level, years of experience, and nurse-physician collaboration. Educational level refers to academic credentials and degrees an individual have obtained (Thomas & Daniel, 2009). Some studies found a significant and positive relationship between educational level and quality of nursing care (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; Aiken, Clarke, Sloane, Lake & Cheney, 2008; Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005; Tourangeau et al., 2007; Blegen, Goode, Park, Vaughn, & Spetz, 2013); others have revealed insignificant findings (Blegen et al., 2001; Kane et al., 2007; Weinberge et al., 2012).Years of experience is defined as years elapsed since the start of a nurse's first professional job (Reder, 1962). Researchers have explored the relationship between years of experience and quality of nursing care, finding a significant and positive relationship (Blegen et al., 2001; Gillespie, Chaboyer, Wallis, & Werder, 2011); others have revealed insignificant findings (Aiken et al., 2003). Other than educational level and years of experience, studies have demonstrated relationships between nurse-physician collaboration and quality of nursing care (She, Chiu, Lee, Hu, & Chang, 2011). Nurse-physician collaboration is defined as actions related to sharing information about patients, participating in decision-making about patient care, and the relationship between nurses and physicians (Nair, Fitzpatrick, McNulty, Click, & Glembocki, 2011). The concept of nurse-physician collaboration is based on the social role theory with hierarchical model where nurses have less autonomy and physician have total dominance in patient care decisions (Champion, Austin, & Tzang, 1987). It was measured by the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration developed by researchers at Jefferson Medical College (Hojat et al., 2003) which consists of four subscales: sharing education and teamwork, caring versus curing, autonomy, and physician dominance. Nurse-physician collaboration in Bhutan still often follows the old traditional method of physicians giving orders and nurses carrying them out. On the other hand, the working environment in the hospital is sometimes more complementary where nurses and physicians work together cooperatively, sharing the responsibilities regarding patient care. Unfortunately, no data were available.

Although there were numerous studies related to quality of nursing care, no published studies were found in Bhutan that examine the factors related to quality of nursing care. Therefore, this study aimed to determine the level of quality of nursing care and examine the relationships between educational level, years of experience, nurse-physician collaboration and quality of nursing care among nurses in tertiary care hospitals in Bhutan.

Blegen et al., 2013

Objectives

The objectives of this study were to describe the level of quality of nursing care and to examine the relationships between quality of nursing care and related factors including educational level, years of experience, and nurse-physician collaboration among nurses in tertiary care hospitals in the Kingdom of Bhutan.

Conceptual Framework

The conceptual framework for perception of quality of nursing care is based on the Good Nursing Care Model, developed by Leino-Kilpi (1996), and is defined as the degree of excellence in providing nursing care to patients that meets the patient's spiritual, mental, social, physical and environmental needs including six categories: staff characteristics, care-related activities, preconditions for care, physical environment, progress of nursing process, and cooperation with relatives. The conceptual framework for factors related to quality of nursing care in this study was developed from the literature review. The related factors of quality of nursing care are educational level, years of experience, and nurse-physician collaboration. When nurses have higher educational levels, more experience, and when there is good nurse-physician collaboration, quality of nursing care is likely to be good. The relationship between these three factors and quality of nursing care in tertiary care hospitals in Bhutan were explored in this study.

Methodology

Population and Sample

This descriptive correlation study was designed to study in three tertiary care hospitals in Bhutan with a population of 240 staff nurses and 107 assistant nurses. Proportionate random sampling was adopted to determine the number of nurses selected from each hospital. There were 188 nurses from Jigme Dorji Wangchuck National Referral Hospital, 43 nurses from Gelephu Regional Referral Hospital and 50 nurses from Mongar Regional Referral Hospital, who had worked for at least one year in these three tertiary care hospitals in Bhutan. A total of 281 questionnaires were distributed to the sample of nurses.

Research Instruments

The research instruments used in this study were self-report questionnaires in a package which included three parts: (1) the Demographic Data Form: designed to collect the subjects' information including hospital name, age, gender, marital status, educational level, current job position, and years of experience in nursing career, (2) the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration developed by researchers at Jefferson Medical College (Hojatet al., 2003): consisted of four subscales-shared education and team work (7 items), caring versus curing (3 items), autonomy (3 items), and physician dominance (2 items)-answered on a four point Likert scale ranging from 1 = strongly disagree to 4 = strongly agree, the items on physician dominance are reversed score. Higher total scores reflected more positive attitudes regarding nurse-physician collaboration. (3) the Good Nursing Care Scale developed by Leino-Kilipi (1996): Had 58 items with six subscales-staff characteristics (7 items), care-related activities (19 items), preconditions for care

(8 items), physical environment (2 items), progress of nursing process (10 items), and cooperation with relatives (12 items)- answered on a seven point Likert scale ranging from 0 = 'do not know' to 6 = 'always' with a total score ranging from 0-348. A higher score meant the nurses' perception on quality of nursing care was higher.

The Cronbach's alphas for Jefferson Scale of Attitudes toward Physician-Nurse Collaboration and Good Nursing Care Scale were 0.70 and 0.91, respectively.

Data Collection and Protection of Rights

The research proposal was reviewed and approved by the Research Ethics Review Committee of the Faculty of Nursing, Chiang Mai University, Thailand, as well as by the Research Ethics Board of Health, Ministry of Health, The Kingdom of Bhutan. Data collection was carried out between February and March2014. With permission from the Medical and Nursing Superintendents of all the tertiary care hospitals, the identified coordinator distributed the questionnaires in an envelope containing the research questionnaires, brief summary of the research study, a consent form and a letter of confidentiality to the nurses that were randomly selected from each hospital using their code numbers. All the participants were requested to return the filled questionnaires into a designated box which was kept in each hospital. The questionnaires were collected every week for three weeks from the coordinator by the researcher in Jigme Dorji Wangchuck National Referral Hospital. The questionnaires from other two hospitals were collected through postal service. All the participants were informed about their right to refuse or withdraw from the study at any time without any punishment. Consent forms were provided to all the subjects to assure protection of human rights. Confidentiality of the participants' identities was maintained by using code numbers, which clearly informed them that their personal information would be used for the study only.

Data Analysis

There were 241 responses (85%), and among them, 230 questionnaires (81%) were completed for data analysis. Data from the 230 completed questionnaires were analyzed by using a statistical software package. Significance was set at a level of 0.05. Descriptive statistics was used to analyze frequency, percentage, range, mean and standard deviations of demographic data of the subjects and the quality of nursing care. Spearman's rank-order correlation was used to examine the relationship between quality of nursing care and related factors as the data were not normally distributed.

Results

1. Demographic data of the subjects

The ages of the nurses ranged from 22-51 with a mean age of 31.33 years old. The majority of the age group was between 22-30 years old. Approximately 68.26% of the nurses were female, and 66.96% of the nurses were married. Slightly more than half of the nurses had earned a diploma degree (53.05%). The largest number of nurses (67.83 %) held the position of staff nurse. As for working experience, the largest group of nurses (49.13%) had been working as a nurse for 1-5 years.

2. Level of quality of nursing care

Overall scores of quality of nursing care as perceived by nurses ranged from 141-348 ($\bar{x}$ = 284.74, SD= 37.13). For the subscales of quality of nursing care, the scores of staff characteristics ranged from 10-42 ($\bar{x}$ = 36.96, SD= 4.98); the scores of care-related activities ranged from 55-114 ($\bar{x}$ =96.88, SD= 12.48); the scores of preconditions for care ranged from 13-48 ($\bar{x}$ =38.79, SD= 6.29); the scores of physical environment ranged from 3-12 ($\bar{x}$ = 10.86, SD=1.51); the scores of progress of nursing process ranged from 21-60 ($\bar{x}$=45.53, SD= 8.11); the scores of cooperation with relatives ranged from 20-72 ($\bar{x}$ = 55.7, SD = 9.9) (Table 1).

Table 1 Range, Mean, Standard Deviation and Levels of Quality of Nursing Care as Perceived by the Nurses (n=230)

Variable	Range	Mean	S.D.	Level
Overall Quality of Nursing Care	141-348	284.74	37.13	High
Staff Characteristics	10-42	36.96	4.98	High
Care-related Activities	55-114	96.88	12.48	High
Preconditions for Care	13-48	38.79	6.29	High
Physical Environment	3-12	10.86	1.51	High
Progress of Nursing Process	21-60	45.53	8.11	High
Cooperation with Relatives	20-72	55.70	9.90	High

3. Factors related to quality of nursing care

The results of Spearman's rank-order coefficient showed that nurse-physician collaboration was significantly and positively related to quality of nursing care (r=0.208, p<0.01). However, quality of nursing care was not significantly correlated to educational level or years of experience (Table 2).

Table 2 Spearman Rank-Order Correlation Coefficients for Factors Related to Quality of Nursing Care (n=230)

Variables	Quality of Nursing Care	Educational Level	Years of Experience	Nurse-Physician Collaboration
Quality of Nursing Care	1.00			
Educational Level	0.035	1.00		
Years of Experience	-0.080	-0.117	1.00	
Nurse Physician Collaboration	0.208*	0.212*	-0.023	1.00

* p< .01

Discussion

1. Level of quality of nursing care

The overall mean score of nurses' perception of quality of nursing care in the study was at a high level ($\bar{x}$= 284.74, SD= 37.13) with scores ranging from 141- 348 (Table 1). This could be explained by the fact that nurses believed in themselves in that they have provided care according to the patients' needs. The overall motto of service delivery to the Bhutanese is in line with the principles of "professionalism" and "Service with Humane Face" (Gurung, 2003). Another explanation is that of the high level may be due to the introduction of Hospital Administration and Management Transformation, which encouraged nurses to be committed to professional excellence in providing the highest quality care according to the Tenth Five Year Plan of Bhutan's health sector to improve the quality of health services (MOH, 2011). In addition, Bhutanese nurses may be fulfilling their mission and vision of nursing service in providing excellent nursing care (MOH, 2007). Moreover, Bhutan is a country with a rich culture and hierarchical societal order, so women are known to be modest, shy, and unable to fully express themselves due to the social and cultural contexts (Pem, 2002 as cited by Acharya, 2002). Since the sample (and the nursing profession, in general) is primarily female dominated, the answered questionnaires might not reflect the actual levels of quality of nursing care. Overall, nurses had a high perception on their profession resulting in a high level of quality of nursing care.

2. Relationships between quality of nursing care and related factors

The study found that the nurse-physician collaboration was significantly and positively related to quality of nursing care as perceived by the nurses (r=.208, p<.01) (Table 2). This finding indicates that the high level of nurse-physician collaboration was positively related to the high level of quality of nursing care as perceived by the nurses. A possible explanation may be that despite the presence of the old traditional method of physicians giving orders and nurses carrying them out, the working environment in the hospital is more complementary, where nurses and physicians work together cooperatively, sharing the responsibilities regarding patient care. All the nurses on duty are asked to join the ward round with doctors to share their knowledge and opinion on patient care. This is because nurses are on duty for 24 hours and patients share their problems freely with nurses rather than with doctors. They are able to assess the physical and psychological needs of the patients. Physicians usually ask the nurses' opinion on discharge of the patient related to deliveries. Therefore, physician and nurse share their decision on discharge of a patient thus contributing to high quality of nursing care. Because of these possible explanations, nurses perceive high collaboration results in high performance, thus providing high quality of nursing care.

According to this study, educational level was not a significant factor that related to quality of nursing care as perceived by nurses (r= 0.035) (Table 2). A possible reason may be that, unlike other countries where nurses specialized in different areas, the entire nursing populations in Bhutan perform the same jobs, such as

providing bedside nursing care, performing technical tasks like giving medication, other nursing procedures, and giving health education despite their educational background. Another reason may be that more than 80% of the nurses held certificates or diplomas and only 15.51% of the nurses hold bachelors or master's degrees. Because of this small proportion of higher degrees, it is difficult to determine whether educational level is truly significant in quality of nursing care. Another explanation may be that most of the studies reviewed on educational level were done on patient outcome and not directly on quality of nursing care.

In addition, years of experience was found not to be a significant factor that related to quality of nursing care as perceived by nurses (r= -0.080, p <.01) (Table 2). The lack of significant relationship between years of experience and quality of nursing care in this study may be that even though there were almost equal numbers of nurses with less than five years of experience (49.13%) and nurses with more than six years of experience (50.87%), the nurses provide similar quality of nursing care as all the hospitals have standard operating procedures to follow. Thus, nurses perceived that they have provided the same high level of quality of nursing care despite their various numbers of years in nursing service. Moreover, in most of the studies on years of experience, quality of nursing care was indicated by patient outcome.

After matrix analysis of relationship among research variables, a statistic significant was found between educational level and nurse-physician collaboration (r = 0.212, p<.01) (Table 2). The result indicated that nurses with higher educational level or nurses with bachelor degree could collaborate better than nurse with diploma degree. Nursing in the modern world is more than care to patient for particular sickness or disease. It is more about responding to the need of patient with intelligence and technical knowledge. In addition, physician also perceived that nurses with limited knowledge about patient care hinder collaboration (Thompson, 2007). Thus, education plays a key role in improving the nurse-physician collaboration (Sterchi, 2007). The educational level and nurse-physician collaboration works with the general principle of affinity to the subject. It is easier to provide better care to a patient when the nurse and the physician understand about the subject through a common lens which can only happen when the educational level of a nurse is higher and has more knowledge about the subject. With the increase in nurses' educational level, nurses are involved in diagnosis, clinical management and doing research for improvement of the patient care (Arcangelo, Fitzgerald, Carrol, & Plumb, 1996). Higher the educational level nurses will show higher innovative thinking to add value to the work she does. For example a nurse who has under gone higher studies in Nursing Administration clearly defines the importance of time and therefore prioritize the works efficiently which enhances the collaboration of physician in meaningful time engagement rather than supervising whole ward management. All these factors added a value to the nursing image thus fostering collaboration rather than physician's assistant. As a result physicians and nurses work and learn together becoming more open minded.

Conclusion

The results of this study showed that the overall level of quality of nursing care as perceived by nurses was at a high level. There was a statistically significant weak positive relationship between nurse-physician collaboration and quality of nursing care. However, there was no relationship between educational level, years of experience and the quality of nursing care.

Implications and Recommendations

The results have provided a better understanding of how nurses view quality of nursing care and nurse-physician collaboration as perceived by the nurses in tertiary care hospitals in Bhutan. Nursing administration can use the research results as evidence to encourage nurses to maintain their quality care provided to the patients and to maintain the collaboration between nurse and physician. The result of this study suggest that nurses should be educated with a higher level in order to work collaborate well with physician. Topics related to quality of nursing care and other factors such as nurse staffing, professional autonomy, and nurse practice environment can be further investigated among nurses. Further research also needed to compare the perceptions of quality of nursing care between nurses and patients.

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