



ปัจจัยที่เกี่ยวข้องกับคุณภาพการพยาบาลของพยาบาลในโรงพยาบาลวิทยาลัย การแพทย์กรุงธากา ประเทศสาธารณรัฐประชาชนบังกลาเทศ Factors Related to Quality of Nursing Care among Nurses in Medical College Hospitals, Dhaka, The People's Republic of Bangladesh

เรวา มอนดอล

M.N.S.*

Reva Mondal

M.N.S.*

รัตนาวดี ชอนตะวัน

Ph.D.**

Ratanawadee Chontawan

Ph.D.**

จิตินันท์ อักคะเดชอนันต์

Ph.D.***

Thitinut Akkadechanunt

Ph.D.***

บทคัดย่อ

สภาพแวดล้อมในการปฏิบัติการพยาบาลและความเหนื่อยหน่ายในงานเป็นปัจจัยที่มีความสำคัญต่อการพัฒนาคุณภาพการพยาบาล การวิจัยเชิงพรรณนาหาความสัมพันธ์ครั้งนี้มีวัตถุประสงค์เพื่อศึกษาระดับสภาพแวดล้อมในการปฏิบัติการพยาบาล ความเหนื่อยหน่ายในงาน และคุณภาพการพยาบาล และศึกษาความสัมพันธ์ระหว่างคุณภาพการพยาบาลกับปัจจัยสภาพแวดล้อมในการปฏิบัติการพยาบาลและความเหนื่อยหน่ายในงานของพยาบาล กลุ่มตัวอย่างประกอบด้วยพยาบาลวิชาชีพจำนวน 305 ราย ซึ่งปฏิบัติงานในโรงพยาบาลวิทยาลัยการแพทย์ กรุงธากา ประเทศสาธารณรัฐประชาชนบังกลาเทศจำนวน 3 แห่ง เครื่องมือที่ใช้ในการรวบรวมข้อมูลประกอบด้วย 4 ส่วนคือ แบบสอบถามข้อมูลส่วนบุคคล แบบประเมินสภาพแวดล้อมในการปฏิบัติการพยาบาล (PES-NWI) แบบประเมินความเหนื่อยหน่ายในงานของแมสแลซ (MBI) และแบบประเมินคุณภาพการพยาบาลในโรงพยาบาล (NAQS-ACV) ค่าความเชื่อมั่นของแบบวัด PES-NWI, MBI และ NAQS-ACV มีค่าเท่ากับ 0.82 0.93 และ 0.83 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา และค่าสัมประสิทธิ์สหสัมพันธ์ของ สเปียร์แมน

ผลการวิจัย พบว่า

1. สภาพแวดล้อมในการปฏิบัติการพยาบาลของพยาบาลโดยรวมและรายด้านพบว่าไม่เอื้อต่อการปฏิบัติการพยาบาล
2. ความเหนื่อยหน่ายในงานของพยาบาลอยู่ในระดับสูง
3. คุณภาพการพยาบาลโดยรวมอยู่ในระดับปานกลาง
4. สภาพแวดล้อมในการปฏิบัติการพยาบาลมีความสัมพันธ์เชิงบวกในระดับสูงกับคุณภาพการพยาบาลอย่างมีนัยสำคัญทางสถิติ
5. คุณภาพการพยาบาลมีความสัมพันธ์ในระดับต่ำกับความเหนื่อยหน่ายในงาน 2 ด้านคือด้านความอ่อนล้าทางอารมณ์ และด้านความสำเร็จส่วนบุคคลอย่างมีนัยสำคัญทางสถิติ ในขณะที่คุณภาพการพยาบาลไม่มีความสัมพันธ์กับระดับความเหนื่อยหน่ายในงานด้านการลดความเป็นบุคคล

* อาจารย์ วิทยาลัยกุลนา ประเทศบังกลาเทศ

* Lecturer, Khulna Nursing College, Bangladesh

** รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่

** Assistant Professor, Faculty of Nursing, Chiang Mai University

*** ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่

*** Associate Professor, Faculty of Nursing, Chiang Mai University



ผู้บริหารโรงพยาบาลและผู้บริหารทางการพยาบาลสามารถใช้ผลการศึกษานี้เป็นแนวทางในการพัฒนากลยุทธ์เพื่อจัดการสิ่งแวดล้อมในการปฏิบัติการพยาบาล และลดความความเหนื่อยหน่ายในงานของพยาบาล เพื่อพัฒนาคุณภาพการพยาบาลในโรงพยาบาลวิทยาลัยการแพทย์ กรุงธากา ประเทศสาธารณรัฐประชาชนบังกลาเทศ

คำสำคัญ: สภาพแวดล้อมในการปฏิบัติการพยาบาล ความเหนื่อยหน่ายในงาน คุณภาพการพยาบาล

Abstract

Nursing practice environment and burnout are key factors for improving the quality of nursing care. This descriptive correlational study aimed to determine the level of nursing practice environment, burnout and quality of nursing care, and explore the relationships between quality of nursing care and the factors of nursing practice environment and burnout. The study sample consisted of 305 registered nurses in three medical college hospitals in Dhaka, The People's Republic of Bangladesh. Research instruments used for data collection comprised of four parts: Demographic Data Form, Practice Environment Scale of the Nursing Work Index (PES-NWI), Maslach Burnout Inventory (MBI), and the Nurses' Assessment of Quality Scale- Acute Care Version (NAQS-ACV). The validity and reliability of research instruments were tested prior to data collection. Data were analyzed using descriptive statistics and the Spearman's rank-order correlation.

Results of this study indicate that:

1. The level of overall nursing practice environment and each subscale of nursing practice environment among nurses were unfavorable.
2. The level of burnout among nurses was at a high level.
3. The level of overall quality of nursing care was at a moderate level.
4. There was a significantly strong positive correlation between nursing practice environment and quality of nursing care.
5. Quality of nursing care had a significant weak correlation with two dimensions of burnout: emotional exhaustion and personal accomplishment. There was no correlation between the dimension of depersonalization and quality of nursing care.

The results of this study could be used by hospital and nurse administrators to develop strategies to manage nursing practice environment and decrease burnout among nurses in order to improve quality of nursing care in medical college hospitals, Bangladesh.

Key Words: Nursing Practice Environment, Burnout, Quality of Nursing Care



Background

The nursing shortage is a major situation that affects nursing and healthcare globally. Oulton and Hickey (2009) found that almost every country experiences some sorts of shortage. The greatest shortage in absolute terms is in Asia, especially in Bangladesh, India and Indonesia. One of the major effects of nursing shortage is the quality of nursing care in the organization. As nurses are the majority of healthcare personnel who provide care to patients both in acute care and community, quality of nursing care in the hospital then therefore depend on number of nursing personnel (Cho *et al.*, 2009). Hospital nurse staffing is a subject of major concern because of the effects it can have on patient safety and quality of care. Aiken, Clarke, and Sloane (2002) found hospitals in the United State nurse staffing and organizational support were directly associated with quality of nursing care. In nursing, quality of nursing care is defined from different perspectives (Lynn, McMillen & Sidani, 2007). Lynn and McMillen (1999) defined quality of nursing care as a degree of providers in nursing practice with skillful, establish a trust relationship, comfortable, organize, and vigilant in checking on receivers.

Several researches found factors related to quality of nursing care which can classify into three groups: environmental factor, organizational factor, and personnel factors (Irurita, 1999). These factors are either inhibiting or enhancing the quality of nursing care. Aiken *et al.*, (2012) reported that poor hospital work environments, between one-quarter and one-third in USA, Canada, and UK, were associated with negative

outcomes for quality of nursing care. Improving work environments holds promise for nurse retention and better quality of patient care. Additionally, Tervo-Heikkinen *et al.* (2009) found that the quality of nursing care influenced by nursing practice environment. Lake (2002) defined nursing practice environment as the organizational characteristics of a work setting that facilitate or constrain professional nursing practice include 5 dimensions namely: 1) nurse participation in hospital affairs, 2) nursing foundations for quality of care, 3) nurse manager ability, leadership and support of nurses, 4) staffing and resource adequacy and 5) collegial nurse-physician relations.

Better work environment were associated lower burnout, and higher quality care (Rochefort and Clarke, 2010). Burnout among hospital-based nurses appears to be a serious problem affecting the delivery of health care. Findings from previous empirical research indicate that burnout among these nurses' results from reactions to adversities inherent in the hospital work environment, and that burnout can lead nurses to change jobs and/or abandon the practice of nursing (Joseph & Russell, 1986). Recently, Klein *et al.*, (2010) mention that high nurse burnout levels significantly associated with quality of care. Maslach (1981) defined burnout as a syndrome of physical and emotional exhaustion, involving the development of negative self-concept, negative job attitudes, and loss of concern and feeling for clients and described burnout as three dimension syndromes include: emotional exhaustion, depersonalization and reduced personal accomplishment.

Nurses who work in government hospitals



in Bangladesh, especially Medical College Hospitals (MCHs), always have a heavy workload and work with insufficient resources. In Bangladesh, a bed-nurse ratio is 13:1. In terms of quality of care delivery, several studies have revealed nursing services at public hospitals in Bangladesh to be inefficient and ineffective (Mahmud, 2013). Nurses in Bangladesh also perform non-nursing jobs and found nearly half of the health workers reported difficulties fulfilling their duties (Cockcroft *et al.*, 2011).

The association between quality of nursing care and nursing practice environment and burnout is not yet been demonstrated empirically in Bangladesh. Therefore the objectives of this research were to determine the level of nursing practice environment, burnout, and quality of nursing care among nurses and to explore the relationship between nursing practice environment and quality of nursing care and to explore the relationship between burnout and quality of nursing care among nurses in Medical College Hospitals, Dhaka, the People's Republic of Bangladesh.

Conceptual Framework

The conceptual framework of factors related to quality of nursing care is based on the literature review. Quality of nursing care is the degree of providers in nursing practice with skill, can establish a trust relationship, comfortable environment, is organized, and vigilant in checking on receivers (Lynn & McMillen, 1999). It consists of eight factors: 1) interaction, 2) vigilance, 3) advocate, 4) individualization, 5) work environment, 6) unit collaboration, 7) personal characteristics, and 8)

mood (Lynn, McMillen, & Sidani, 2007). The nursing practice environment, based on Lake (2002), is defined as the organizational characteristics of a work setting that facilitates or constrains professional nursing practice. This consists of five subscales: 1) nurse participation in hospital affairs, 2) nursing foundations for quality of care, 3) nurse manager ability, leadership and support of nurses, 4) staffing and resource adequacy, and 5) collegial nurse-physician relations. Maslach (1981) defines the burnout concept as a syndrome of physical and emotional exhaustion, involving the development of negative self-concept, negative job attitudes, and loss of concern and feeling for clients. It consists of three dimensions: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). The association between two factors including nursing practice environment and burnout and quality of nursing care was examined in this study.

Methodology

This is a descriptive correlational study conducted among nurses in three medical college hospitals in Dhaka, Bangladesh, including Dhaka Medical College Hospital (DMCH), Sir Salimullah Medical College Mitford Hospital (SSMCMH), and Shaheed Suhrawardy Medical College Hospital (SSMCH). Simple random sampling technique was used to select sample from nurses who provide direct care for patients and worked at least one year in these three medical college hospitals. A total of 343 questionnaires were distributed and 305 (89%) were completed for data analysis.

The research instrument used consisted of



four parts: 1) The Demographic Data Form, 2) Practice Environment Scale of the Nursing Work Index (PES-NWI), 3) Maslach Burnout Inventory (MBI) and 4) Nurses' Assessment of Quality Scale - Acute Care Version (NAQS-ACV).

PES-NWI, MBI, and NAQS-ACV were used in this study with permission of the developers. PES-NWI developed by Lake (2002), consisted of 31-items questionnaire with five sub scales. The potential score ranges from 1 to 4 higher scores indicate more agreement. Mean values above 2.5 (midpoint values) indicated favorable environment and values below 2.5 indicated unfavorable environment and mean value of 2.5 indicated mix environment.

MBI developed by Maslach & Jackson (1981), used to measure burnout in three dimensions namely: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). This self-report questionnaire consists of 22 items with 7-point Likert-type items, ranging from "Never=0", to "every day=6." The categorization of burnout was classified into three levels: high, average, or low burnout by Maslach et al., 1996 (as cited in Jenkins & Elliott, 2004).

NAQS-ACV developed by Lynn, McMillen and Sidani (2007) has 77 items scale with 8 factors: 1) interaction (19 items), 2) vigilance (10 items), 3) advocate (10 items), 4) individualization (6 items), 5) work environment (12 items), 6) unit collaboration (9 items), 7) personal characteristics (7 items), and 8) mood (4 items). It is a 4-point Likert type scales, ranging from "strongly disagree" to "strongly agree". The total score was divided by three and classify into three levels (Best & Kahn, 2003).

The validity of PES-NWI, MBI and NAQS-ACV were tested and confirmed by the developers. The reliability was tested with 15 nurses from DMCH whom met the same criteria of the study samples. The Cronbach's alpha reliability of PES-NWI, MBI, and NAQS-ACV were .82, .93, and .83 respectively.

Protection of Human Subjects:

The research proposal was approved by the Research Ethics Committee of the Faculty of Nursing, Chiang Mai University, Thailand. To assure the protection of human rights, nurses were informed the participation in this study was entirely voluntary and may withdraw or discontinue at any time without any negative consequences. Additionally, anonymity and confidentiality was maintained by using numerical codes in the questionnaires instate of subjects names. Information provided by the nurses was used only for the purposes of this study and remained confidential. The results of this study were presented as a group.

Data Analysis

Data were analyzed using a statistical software package. Descriptive statistics were used to describe the characteristic of the sample as well as the three variables. Spearman's rank-order correlation was used to explore the relationship between nursing practice environment and quality of nursing care and each dimension of burnout and quality of nursing care. The value of correlation coefficient (r) was interpreted according to Burns and Grove (2005), the r value between .10 and .29 indicated weak relationship, the r value between 0.30 and



.50 indicated moderate relationship and the r value more than 0.50 indicated strong relationship.

Results

1. Among the 305 subjects, the majority of the subject was female (97.05%) with the average age of 41.76 years old. The largest age group was between 41-50 years old (51.80%). Almost all of the subjects were married (92.79%) and majority of group hold diploma degree (66.56%). The largest group of the subjects has working experience 11-15 years (33.011%) with 86.22% were senior staff nurse. More than half of the subjects worked in Dhaka medical college

hospital (56.39%) and 30.82% subjects worked in medicine department.

2. The level of nursing practice environment among nurses were at an unfavorable level (Mean=2.00, S.D.=.54).In addition, nurses perceived each dimension of nursing practice environment include nurse participate in hospital affairs (Mean=2.03, S.D.=.56), nursing foundations for quality of care (Mean=1.64, SD=.52), nurse manager ability, leadership and support of nurses (Mean=2.25, SD=.65), staffing and resource adequacy (Mean=1.59, SD=.76), and collegial nurse-physician relations (Mean=2.47, SD=.57) were also at unfavorable levels (Table 1).

Table 1 Range, mean, standard deviation and level of overall and each subscales NPE as perceived by the subjects (n=305)

Nursing Practice Environment	Range	Mean	S.D.	Level
Overall NPE	1.16-3.55	2.00	0.54	Unfavorable
Nurse participate in hospital affairs	1.11-3.78	2.03	0.56	Unfavorable
Nursing foundations for QC	0.90-3.30	1.64	0.52	Unfavorable
Nurse manager ability, leadership & support of nurses	1.00-3.80	2.25	0.65	Unfavorable
Staffing and resource adequacy	1.00-4.00	1.59	0.76	Unfavorable
Collegial nurse-physician relations	1.33-4.00	2.47	0.57	Unfavorable

3. The level of burnout was at high level among nurses. Two dimensions of burnout include emotional exhaustion (Mean=24.93, SD=9.90) and depersonalization (Mean=11.86, SD=4.85) were at high level whereas personal accomplishment level (Mean=28.03, SD=7.63) was at a low level (Table 2).

4. The level of quality of nursing care among nurses was at a moderate level (Mean=2.34, S.D.=.30). Among the eight dimensions of QNC three dimensions of vigilance (mean=2.00, S.D.=.48), individualization (Mean=1.48, S.D.=.59), work environment (Mean=1.91, S.D.=.38) were at low levels



whereas four dimensions of advocate (2.37, SD=.36), interaction (Mean=2.66, S.D.=.31), unit collaboration (Mean=2.22, S.D.=.45), and mood (Mean=2.60, S.D.=.45) were at moderate level

among nurses. However, a high level of characteristics was found among nurses (Mean=3.10, S.D.=.26) (Table 3).

Table 2 Range, mean, standard deviation, range and level each dimension of burnout as perceived by the subjects (n=305)

Burnout subscales	Range	Mean	S.D.	Level
Emotional Exhaustion	46	24.93	9.90	High
Depersonalization	26	11.86	4.85	High
Personal Accomplishment	10-33	28.03	7.63	Low
Overall burnout				High

Table 3 Range, mean, standard deviation and level of overall and each factor quality of nursing care as perceived by the subjects (n=305)

Quality of nursing care	Range	Mean	S.D.	Level
Overall score of QNC	1.52-3.39	2.34	0.30	Moderate
Vigilance	1.00-3.30	2.00	0.48	Low
Advocate	1.60-3.30	2.37	0.36	Moderate
Individualization	1.00-3.67	1.84	0.59	Low
Interaction	1.58-3.74	2.66	0.31	Moderate
Work Environment	1.25-3.42	1.91	0.38	Low
Unit Collaboration	1.00-3.56	2.22	0.45	Moderate
Characteristics	2.43-4.00	3.10	0.26	High
Mood	1.00-3.75	2.60	0.45	Moderate

5. There were strong positive relationship between overall and each dimension of NPE and quality of nursing care among nurses (Table 4).

6. There was weak negative correlation between emotional exhaustion and quality of nursing care whereas, personal accomplishment

was found a weak positive correlation with quality of nursing care. However, there was no relationship between depersonalization and quality of nursing care (Table 5).



Table 4 Relationship between overall and each subscale of nursing practice environment, and quality of nursing care as perceived by the subjects (n=305)

Nursing Practice Environment	QNC	
	r	p
Overall NPE	0.80	0.000
Nurse participate in hospital affairs	0.76	0.000
Nursing foundations for QC	0.73	0.000
Nurse manager ability, leadership& support of nurses	0.63	0.000
Staffing and resource adequacy	0.67	0.000
Collegial nurse-physician relations	0.57	0.000

Table 5 Relationship between each dimension of burnout and quality of nursing care as perceived by the subjects (N=305)

Burnout subscales	QNC	
	r	p
Emotional Exhaustion	- 0.22	0.000
Depersonalization	0.03	0.961
Personal Accomplishment	0.14	0.014

Discussion

The nursing practice environment among nurses

This study found that nursing practice environment as perceived by subjects was unfavorable, the results of all five subscales of PES-NWI were also unfavorable. The results of all five subscales of PES-NWI including, nurses participation in hospital affairs, nursing foundations for quality of care, nurse manager ability, leadership and support of nursing, staffing and resource adequacy and collegial nurse-physician relationship were also unfavorable (Table 2). Nursing practice environment was

perceived by the subjects as unfavorable, indicating that nurses perceived the organizational characteristics of medical college hospitals did not support nursing practice.

A possible explanation may be due to the nursing staff and resource shortage. The nurse-patient ratio in hospitals is 1:15 (Zaman, 2009). Hadley and Roques (2007) found that Bangladeshi nurses' main duties are paperwork, keeping track of all instruments on the unit, medication administration (injections), dressing changes, and diet monitoring. Nurses are busy with their routine work and pay more attention to their specific responsibilities than participating in



hospital affairs. This situation confirmed by the result of this study that revealed the lowest mean score of staffing and resource adequacy subscales of nursing practice environment questionnaires. Another possible reason was high level of paper work (32.4% of nursing time) and non-nursing work made nurses feel they have little time for spending for patient care or for discussing patient's problems (Hadley & Roques, 2006). Thirty three percent of patient claimed that they did not receive good behavior and 16% of them did not get regular services from the nurses (Akter and Islam, 2006).

Nurses also perceived unfavorable in the subscale of nursing foundations for quality of care. Nursing foundation for quality of care which enquired about access to continuing education and nursing standards that are based on a nursing model. According to Lake (2002), nursing foundations for quality of care was a high standard of patient care includes a pervasive nursing philosophy, a nursing model of care, and nurses' clinical competence. Nurses in MCHs have less opportunity to received job training, or attend nursing conference outside of hospitals. Furthermore, there is no provision for a preceptor program for new nurses and nursing care is entirely based on medical diagnosis and doctor's prescription. Consequently, nurses perceived low support for knowledge development. The result of this study was different from previous studies in Australia by Middleton et al. (Mean=2.71, S.D.= 0.39); and in Magnet hospital, USA (Mean=2.72, S.D.= 0.56). For the subscale of nurse manager ability, leadership and support of nursing, nurses perceived these aspects as unfavorable with a

mean score of 2.25 (Table 2). The results depicted that nurse managers and nurse leaders in MCHs were not able to properly provided/ create an environment that supported and recognized achievements of nursing staff especially during conflict with a physician. In addition, they did not provide enough praise or recognition when nurses performed good work. The last subscale of NPE was the collegial nurse-physician relationship, which nurses' perceived as unfavorable. The questionnaire in this subscale asked nursing staff about teamwork and collaboration between nurses, doctors and other healthcare providers. The analysis of each item also confirms that the collegial nurse-physician relationship was insufficient in this current job of nurses. The results implied that Bangladeshi nurses were dissatisfied with teamwork and collaboration between nurses and doctors.

2. Nurse Burnout

Subjects perceived the subscale of emotional exhaustion and depersonalization at a high level and perceived the subscale of personal accomplishment at a low level. This result indicated that the subjects perceived a high level of burnout over their work. Major reason was due a heavy workload in MCH which consistent with a study of Laschinger et al, (2006) indicated that heavy workload was a predictor of nurses' emotional exhaustion. Second explanation was because of the majority of nurses (97%) were female and (92%) were married. They may experience higher burnout in the subscales of emotional exhaustion compared to male nurses (Tunc & Kutains, 2009). Maslach and Jackson (1981) also emphasized



the vulnerability of women as they act with more empathy than men. Additionally Lin et al. (2009) found married nurses with more personal responsibilities and with more senior position experience higher levels of emotional exhaustion. For depersonalization, Maslach & Jackson (1981) found that people who have lower educational level, experience higher depersonalization and Higashiguchi et al. (1999) stated that nurses with more experience, had higher PA scores than those with less experience. In this study, the majority of the subjects (66.6%) hold a diploma in nursing and more than half of nurses (54%) had more than 15 years of work experience. Therefore two personal characteristics of the subjects may lead to high level of depersonalization.

Quality of nursing care as perceived by nurses

The overall mean score of nurse's perception of quality of nursing care in medical college hospitals was at a moderate level. This indicates that nurses' perceived quality of nursing care delivered in their hospitals was at an acceptable level for their patients. They also perceived that somewhat of quality of nursing care need to be improved. This finding was different from the previous study by Zhao and Akkadechanunt (2011) found a high level of quality care as perceived by nurses.

The mean score of nurse's perception on vigilance was at a low level (Table 3). Vigilance focuses on nurses' monitoring of patient, availability, punctuality, and use of time (Lynn, McMillen & Sidani, 2007). The results indicate that nurses do not have enough time to monitor patients effectively. One possible reason was

the heavy workload, shortage of staff, burden of non-nursing duties. Therefore, nurses could not provide quality nursing care to patients and family.

The result of this study showed that the work environment was at a low level perceived by the nurses. The possible explanation was that the work environment of medical college hospitals was not enough supported nurses for providing quality patient care. Most of the wards in each hospital did have enough space and sufficient supplies and equipment for patients care. Moreover, some wards have extra beds for additional patients and were crowded with family and relatives who were 24 hours permitted to stay in hospitals. Nurses may not be able to make changes in the patient's environment. This situation was similar to prior study by Lynn and McMillen (1999), illustrated that nurses can deliver quality care practice in an environment that provides sufficient space and supplies and have a work assignment that is feasibly complete.

The results showed that only the nurse's characteristics factor was at a high level as perceived by the nurses. This result indicated to nurses in MCHs perceived that their behaviors were sensitivity, patience, and efficiency. All these factors influences the quality of care (Lynn, et al 1999).

The relationship between nursing practice environment and quality of nursing care
There was a significant positive correlation between overall nursing practice environment and overall quality of nursing care of the subjects at the level of ($r = 0.80, p < 0.01$) (Table



4). The relationship indicates the better the nursing practice environment, the higher level of quality of nursing care perceived by nurses at MCHs. Nursing practice environment consists of manpower and resources, nurse's involvement in policy and decision making hospital wide, administrative support and relationship with colleagues which directly influence quality of nursing care. Whenever nurses perceived their practice environment favorably, they are satisfied with their organization which in turn provides quality of nursing care to their patients. The results of this study also show that each subscale of nursing practice environment including nurse participation in hospital affairs, nursing foundations for quality of care, nurse manager ability, leadership and support of nursing, staffing and resource adequacy and collegial nurse-physician relationship were positively associated with overall quality of nursing care (Table 4). The findings of relationship between subscale of nursing practice environment and quality of nursing care were similar to a prior study by Julie (2004) found that quality of nursing care ratings were significantly associated with the number of patients who nurses care for, rates of unfinished care for those patients, and the frequency of patient safety problems. Vahey et al. (2010) also found that the adequate staffs, good administrative support for nursing care, and good relations between doctors and nurses were more than twice likely as other patients to report high satisfaction with their care.

The relationship between burnout and quality of nursing care

The results relationships between each

dimension of burnout and quality of nursing care indicated that there were a negative correlation between emotional exhaustion and quality of nursing care as perceived by nurses ($r = -.22$, $p < 0.01$), a weak positive correlation relationship between personal accomplishment and quality of nursing care ($r = .14$, $p < 0.05$) and no relationship between depersonalization and quality of nursing care ($r = -.03$, $p < .61$) (Table 5). Finding of a negative correlation between emotional exhaustion and quality of nursing care indicated that nurses with high emotional exhaustion tended to provide low quality of nursing care. This result supported the conceptual framework of burnout by Maslach & Leiter (2008), people with emotional exhaustion feel that they are no longer able to give themselves to others. They lack of energy to face another day. This finding consistent with the previous study conducted by Van Wyk (2010) indicated that emotional exhaustion demonstrated a negative relationship with the quality of nursing care in the unit ($r = -0.275$; $p = 0.00$). Kanai-Pack (2008) mention that inadequate staffing, less adequate resources and less favorable relations, communication and teamwork between physicians and nurses are more apt to be related with higher burnout and poorer quality patient care. Additionally, the result of the weak positive correlation relationship between personal accomplishment and quality of nursing care mean that nurses with high personal accomplishment tended to provide high quality of nursing care to their patients. The study result was consisted with previous study conducted by Van Wyk (2010) found that the personal accomplishment



demonstrated a weak positive relationship with the quality of nursing care in the private critical care unit ($r = 0.197$; $p = 0.003$).

The finding of this study did not find any relationship between depersonalization and quality of nursing care ($r = -0.03$, $p < 0.61$). It can be depicted that even though nurses in Medical College Hospitals felt depersonalized according to the high workload and relationship between nurses and physician, they attempted to provide quality care to their patients. The result was different from a study by Van Wyk (2010) that

found a significantly negative relationship between depersonalization and quality of care in the nursing unit ($r = -0.249$; $p = 0.00$).

Implications and recommendations

Nurse administrators can use the findings as the database to design strategies or develop interventions to improve the nursing practice environment, manage the burnout which will enhance quality of nursing care in MCHs. Further research exploring other factors associated to quality of nursing care is needed for both MCHs and hospitals in other regions in Bangladesh.

References

- Aiken, L. H., Clarke, S. P., Sloane, D. M., Lake, E. T., & Cheney, T. (2008). Effects of hospital care environment on patient mortality and nurse outcomes. *Journal of Nursing Administration*, 38(5), 223-229.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *The Journal of American Medical Association*, 288(16), 1987-1993.
- Aiken, L., Sermeus, W., Van den Heede, K., Sloane, D., Busse, R., McKee, M., et al. (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ*, 344:e1717 doi: 10.1136/bmj.e1717.
- Akter, T. & Islam, S. (2006). Dhaka medical College Hospital: A diagnostic study transparency in international Bangladesh, social movement against corruption. Retrieved from <http://www.ti-bangladesh.org>.
- Bogaert, P. V., Kowalski, C., Weeks, S. M., Heusden, D. V., & Clarke, S. P. (2013). The relationship between nurse practice environment, nurse work characteristics, burnout and job outcome and quality of nursing care: A cross-sectional survey. *International Journal of Nursing Studies*, 50(2013) 1667-1677.
- Burns, N., & Grove, S. K. (2005). The practice of nursing research conduct, critique, and utilization. Philadelphia: W. B. Saunders.
- Cho, S. H., June, K. J., Kim, Y. M., Cho, Y. A., Yoo, C. S., Yun, S. C., & Sung, Y. H. (2009). Nursing staffing, quality of nursing care and nurse job outcome in intensive care units. *Journal of Clinical Nursing*, 18, 1729-1737.



- Cockcroft, A., Milne, D., Oelofsen, M., Karim, E., & Andersson, N. (2011). Health services reform in Bangladesh: hearing the views of health workers and their professional bodies. *BMC Health Service research*, 11(2), 2-8.
- Hadley, M. B., & Roques, A. (2007). Nursing in Bangladesh: Rhetoric and reality. *Social Science and Medicine*, 64(2007), 1153-1165.
- Higashiguchi, K. Morikawa, Y. Miura, K. Nishijo, M. Tabata, M. Ishizaki, M., & Nakagawa, H. (1999). Burnout and related factors among hospital nurses. *Journal of Occupational Health*, 41, 215-224.
- Irurita, V. (1999). Factors affecting the quality of nursing care: The patient's perspective. *International Journal of Nursing practice*, 5(2), 86-94.
- Jenkins, R., & Elliott, P. (2004). Stressors, burnout and social support: nurses in acute mental health setting. *Journal of Advanced Nursing*, 48(6), 622-631.
- Joseph, F. & Russell, D. W. (1986). The effect of social support and the work environment upon burnout among nurses. *Journal of Human Street*, 12(1), 20-26.
- Kanai-Park, M., Aiken J.H., Soloane, D. M., & Poghosyan, L. (2008). Poor work environments and nurse experience are associated with burnout, job dissatisfaction and quality deficits in Japanese hospitals. *Journal of Clinical Nursing*, 17 (24), 3324-3329. Doi: 10.1111/j.1365-2702.2008.02639.x
- Lake, E. T. (2002). Development of Practice Environment Scale of the Nursing Work Index. *Research in Nursing & Health*, 25, 176-188.
- Laschinger, H. K. S., & Leiter, M. P. (2006). The impact of nursing work environments on patient safety outcomes: The mediating role of burnout engagement. *Journal of Nursing Administration*, 36 (5), 259-267.
- Leinonen, T., Leino-Kelpi, H., Stahlberg, M. R., & Lertola, K. (2003). Comparing patient and nurse perceptions of perioperative care quality. *Applied Nursing Research*, 16(1), 29-37.
- Li, B., Bruyneel, L., Sermeus, W., Van den Heede, K., Kinan, M., Aiken, L., Lesaffre, E., (2013). Group-level impact of work environment dimensions on burnout experiences among nurses: a multivariate multilevel probit model. *International Journal of Nursing Studies* 50(2) 281-291.
- Lin, F., John, W. S., & McVeigh, C. (2009). Burnout among hospital nurses in China. *Journal of Nursing Management*, 17(2009), 294-301.
- Lynn, M. R., & McMillen, B. J. (1999). Do nurses know what patients think is important in nursing care? *Journal of Nursing Care Quality*, 13(5), 65-74.
- Lynn, M. R., McMillen, B. J., & Sidani, S. (2007). Including the provider in the assessment of quality care development and testing of the Nurses' Assessment of Quality Scale-Acute Care Version. *Journal of Nursing Care Quality*, 22(4), 328-336.
- Mahmud, S. (2013). Health workforce in Bangladesh. Retrieved on 8th May, 2013 from <http://opinion.bdnews24.com/2013/03/24/health-workforce-in-bangladesh/>
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99-113.



- Maslach, C., & Jackson, S. E. (1986) *Maslach Burnout Inventory*, (2nded.). Palo, CA: Consulting Psychologists Press.
- Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93, 498-512.
- Oulton, J. & Hickey, B. (2009). Review of the nursing crisis in Bangladesh, India, Nepal and Pakistan. Retrieved 10 September, 2012 from
- Poghosyan, L., Clarke, S. P., Finlayson, M., & Aiken, L. H. (2010). Nurse burnout and quality of care: Cross-national investigation in six countries. *National Institute of Health*, 33(4), 288-298. doi:10.1002/nur.20383
- Rocheftort, C. M., & Clarke, S.P. (2010) Nurses' work environments, care rationing, job outcomes, and quality care on neonatal units. *Journal of Advanced Nursing*, 66(10), 2213-2224.
- Tervo-Heikkinen, T., Kiviniemi, V., Partanen, P. & Vehvilainen-Julkunen, K. (2009). Nurse staffing levels and nursing outcomes: A Bayesian analysis of Finnish-registered nurse survey data. *Journal of Nursing Measurement*, 17(8), 986-993. Doi: 10.1111/j.1365-2834.2009.01020.x
- Tunc, T. & Kutanis, R. O. (2009). Role conflict, role ambiguity, and burnout in nurses and physicians at a university hospital in Turkey. *Nursing and Health Science*, 11, 410 - 416.
- Van Wyk, A. (2010). The relationship between burnout and the safety and quality of patient care in private critical care units in Gauteng province. Retrieved on 7 April, 2013 from <http://dspace.nwu.ac.za/handle/10394/4951>
- Zhao, S. H., & Akkadechanunt, T. (2011). Patients' perception of quality nursing care in a Chinese hospital. *International Journal of Nursing and Midwifery*, 3(9), 145-149.