Abstract

Continuing professional education and quality nursing care are very important in nursing profession, leading to enhance quality of services and career development. The purposes of this descriptive correlational study were to explore continuing professional education, barriers to continuing professional education, and quality nursing care as well as to examine the relationships between continuing professional education and the overall quality and various categories of quality of nursing care among nurses, at military hospitals in the Republic of the Union of Myanmar. The sample was 260 nurses who worked in two general military hospitals. Research instruments included a Demographic Data Form, a Continuing Professional Education Questionnaire, a Deterrent to Participation Scale, and a Good Nursing Care Scale. The Cronbach’s alpha coefficient of the Deterrent to Participation Scale and the Good Nursing Care Scale was 0.83 and 0.88. Data were analyzed by using descriptive statistics and Pearson’s product-moment correction coefficient. The results revealed that continuing professional education of nurses was at a low level (\( \bar{x} = 8.76, \text{S.D.} = 5.41 \)). Barriers to continuing professional education was at a moderate level (\( \bar{x} = 69.58, \text{S.D.} = 13.01 \)). Quality nursing care as perceived by nurses was at a moderate level (\( \bar{x} = 222.81, \text{S.D.} = 13.19 \)). There was a significant positive correlation between quality nursing care and continuing professional education among nurses.
nurses ($r = 0.31$, $p < 0.01$). Nurse administrators can use the results of this study to facilitate continuing professional education for nurses and to develop strategies to enhance the quality of nursing care.

Key words: Continuing Professional Education, Barrier to Continuing Professional, Quality Nursing Care, Military Hospital, Republic of the Union of Myanmar

Introduction

Nowadays, quality health care is a global concern in both provider and consumers. Williams (1998) stated that quality nursing care included themes of patient need fulfillment and therapeutic effectiveness mediated through selective focusing. Kunaviktikul, Anders, Chontawan, Nuntasupawat, Srisuphan, & Purnarporn, (2001) proposed that quality nursing care was related to the degree to which the patient’s physical, psychological and emotional, social, and spiritual needs provided by nurses. Quality nursing care is a set of elements of human-oriented and task-oriented activities, staff characteristics, preconditions, environment, progress of nursing care and cooperation with relatives that the patient and nurse perception of the quality nursing care (Lenio-Kilpi & Vuorenheimo, 1994).
Continuing education on the nursing profession is also of greatest importance in terms of maintaining and improving quality of nursing care. Continuing Professional Education (CPE) refers to study or educational activities relevant to give profession, after initial nurse education which is included of two types there are formal and informal continuing education programs (Aoki & Davies, 2002). CPE dramatically improved professional practice, most of nurses did not update their knowledge, develop their skills because no assurance that the desired changes in professional competency and performance, barriers presented within nursing practice have made ongoing participation in CPE activities challenging (Penz, Arcy, Stewart, Kosteniuk, Morgan, & Smith, 2007).

Working nurses do face various problems in advancing their career development. Most of nurses are encountered barriers to participating in CPE. Darkenwalk and Valentine (1985) mentioned that adult learners have experience difficulties to assess continuing education opportunities and barriers included six factors which are 1) lack of confidence, 2) lack of course relevance, 3) time constraints, 4) low personal priority, 5) cost and indirect costs and 6) personal problem. Thus, it is important that these problems be brought to some degree of solution for all nurses to advance in education and to gain knowledge, skill, and practice of the delivery of nursing care.

Continuing education has advanced the delivery of better patient care, provided an ability to gain up-to-date knowledge, to question to change practice and to promote academic creditability Wood (1998) showed that continuing education had a positive impact on the quality of nursing care as well as nurse personal development. Continuing education not only improved communication skills, and enhanced individualized activity and research centered practice but also increased nurse’s confidence, self awareness of professional issues, and knowledge in quality nursing care. In Myanmar, the Nation Health Plan stated that there is enhancing the quality of health to uplift the health status of the entire nations, high quality nursing care is not always achieved in the each hospital setting (Hlaing & Soe, 2000). Sometime warmly and friendly treatments of patients were not found on the hospital setting and when performing nursing duties, professional appearance was required. (Hlaing & Soe, 2000).

In Military setting, nurses are served nursing care as well as extra activities at the hospital and other areas such as battalion, cantonment area, and medical cover for other community. Inadequate manpower and heavy workload are faced in some general hospitals (New, 1997). Workload is related to indicators of the process of nursing care that also associated with quality of nursing care. Nurses are do not emphasized peaceful environment, keeping the ward clean at all time within the nursing unit and unit environment was crowded with extra patient beds and patient’s relative(Shee, than, Htoo, & Agxtha, 2005) Most nurses are confronting many barriers factors; insufficient number of qualified nurse educators, services providers, inadequate learning materials, limited opportunities for in-service continuing education for nursing services personnel, and low level of interest towards research.
In Myanmar, University of Nursing (UON), Military Institute of Nursing and Paramedical Sciences (MINP), Government and NGOs (Non-government organization) hosted conferences, seminar and workshops for continuing nursing education on manually (Ministry of Health [MOH], 2009) and four times per year in military setting. Most of nurses were not participate those programs because of lack of information, heavy workload, long working hours, lack of nursing authority, and inadequate supplies and equipment (Hla, 2002). Inadequate preparedness of nurses, inadequate recognition of the nurse’s status in the military health care system because nurses are limited active involvement of the related professional organizations, do not have good library, and do not have up to date professional journal. Then, most of nurses do not want to attend continuing professional education. Nursing as professional also have a responsibility to their continuing professional education in order to provide the highest level of quality nursing care, a well-educated and competent nursing workforce, in Myanmar at all levels of health care setting (Maung, 2009).

There is no study on continuing professional education and quality of care, military setting in Myanmar and the result of this study may be great benefit for the nurses who are importance of continuing professional education and to improve knowledge, skill, nursing services, and quality of care in their organization. This study will be useful to improve not only nursing professionals but also quality of nursing care to be provided in the future.

**Objective**

This study aimed to examine the level of continuing professional education, barriers of continuing education, and quality nursing care and to explore the relationship between continuing professional education and each dimension of quality of nursing care.

**Conceptual framework**

The conceptual framework for this study of continuing professional education was the concepts based on (Aoki & Davies 2002). Barriers to continuing professional education base on Darkenwald & Valentine, (1985), and the Quality Nursing care concepts based on the Good Nursing Care Model (leino-Kilpi, 1996). In this study, the relationship between two variables which are continuing professional education and quality nursing care were tested.

**Figure 1** The relationship between two variables
Methodology

Population and sample

The population of this study was 510 nurses working in two military general hospitals in the Republic of the Union of Myanmar. The sample subjects were selected by using stratified random sampling from these hospitals except out-patient department and emergency room and working in-service year at least one year. According to the formula of Yamane’s (1973) \( n = \frac{N}{1+N(e)^2} \) the sample size in this study was 224 nurses. Considering the possible loss of subjects, 20 percent of sample size which is 44 nurses was added. The total sample size was 268 nurses.

Instruments

Nurses were given a set of questionnaire comprising Demographic Data Form, Continuing Professional Education Questionnaire (CPE), Deterrent to Participation Scale-General (DPS-G), and Good Nursing Care Scale (GNCS). CPE questionnaires has 10 items, it was based on the hours of continuing professional education per year for both formal and informal continuing professional education. DPS-G was consisted of 34 items divided into six dimensions: lack of confidence, lack of course relevance, time constraints, low personal priority, cost and indirect costs and personal problem, with five-point Likert-type scale. The GNCS has 58 items with six subscales: staff characteristics, care-related activities, precondition for care, physical environment, progress of nursing care, and cooperation with relative, use of quality nursing care were 0.36, 0.78, 0.56, 0.40, 0.45, and 0.62 respectively.

Ethical considerations

The study was approved by the Research Ethics Review Committee, Faculty of Nursing, Chiang Mai University. Permission to collect data was obtained from the director of each hospital. All subjects were informed about the objectives and methods of this study and notified about the right to refuse, or withdraw this study any time without being penalized or losing any benefit. A research consent form was handed to the subjects to assure the protection of human rights. Statements were included in a cover letter to guarantee confidentiality and anonymity of individual responses.

Data analysis

A Statistical Package program was used to analyze data in this study. Frequency, percentage, mean and standard deviation were used to analyze the descriptive data, and Pearson’s product moment Correlation was used to...
analyze the relationship between CPE and QNC of each dimension.

Results

Demographic characteristics
The majority of the subjects were male, accounting for 170 (65.39%) of the 260 subjects. More than half of subjects were single (58.51%) and the number of children of the subjects 170 (65.39%) did not have children. Moreover, the majority of the subjects 84.60% of them, were Bachelor of Nursing Sciences (BNSc), 10.01% had completed Master of Nursing Sciences (MNSc). Above one third of subjects were senior nurses (36.87%) and sisters were (34.63%).

Continuing professional education
As illustrated in table 1, number of hours per year of continuing professional education of 260 subjects, the majority, 176 (67.69%) of the nurses in continuing professional education equal and less than 10 hours, and 84 (32.31%) of the subjects had more than 10 hours in continuing professional education ($\bar{X} = 8.79$, S.D. = 5.41).

Table 1 Frequency, percentage, and level of number of hours per year of continuing professional education of the subjects (n=260)

<table>
<thead>
<tr>
<th>Number of hours per year of CPE</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal and less than 10 hours</td>
<td>176</td>
<td>67.69</td>
<td>below</td>
</tr>
<tr>
<td>More than 10 hours</td>
<td>84</td>
<td>32.31</td>
<td>above</td>
</tr>
</tbody>
</table>

Barrier to participation in continuing education
As shown in Table 2, the overall mean score of barrier to continuing professional education among subjects was 69.58 (S.D.= 13.01) and the level of barrier to continuing professional education and each categories was moderate.

Quality nursing care
As illustrated in Table 3, the overall mean score of quality nursing care among subjects was 222.81 (S.D. = 13.19) and the level of total quality nursing care and each subscale was moderate. However, a staff characteristic of quality nursing care was high level.

Continuing professional education and each subscale of quality nursing care
Table 4 showed that there were statistically significant positive correlation of continuing professional education and four components of QNC: care related activities ($r =0.26$, $p<0.05$); progress of nursing process ($r=0.22$, $p<0.05$); cooperation with relatives ($r =0.27$, $p<0.05$); preconditions for care ($r =0.18$, $p<0.05$); physical environment ($r=0.12$, $p<0.01$).
Table 2 Rang, mean, standard deviation and level in overall and each dimension of barriers to continuing professional education of the subjects (n=260)

<table>
<thead>
<tr>
<th>Dimension of Barriers to CPE</th>
<th>Range</th>
<th>Mean</th>
<th>S.D.</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall score of barrier to CPE</td>
<td>44-98</td>
<td>69.58</td>
<td>13.01</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lack of confidence</td>
<td>9-28</td>
<td>14.15</td>
<td>3.04</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lack of course relevance</td>
<td>6-20</td>
<td>11.89</td>
<td>2.68</td>
<td>Moderate</td>
</tr>
<tr>
<td>Time constraint</td>
<td>5-16</td>
<td>9.54</td>
<td>3.19</td>
<td>Moderate</td>
</tr>
<tr>
<td>Low Personal priority</td>
<td>7-22</td>
<td>12.27</td>
<td>3.74</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cost</td>
<td>3-13</td>
<td>7.62</td>
<td>2.18</td>
<td>Moderate</td>
</tr>
<tr>
<td>Personal problem</td>
<td>9-23</td>
<td>14.12</td>
<td>2.99</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Table 3 Range, mean, standard deviation and level in overall and each dimension of quality nursing care of the subjects (n=260)

<table>
<thead>
<tr>
<th>Categories of Quality of nursing care</th>
<th>Range</th>
<th>Mean</th>
<th>S.D.</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall score of QNC</td>
<td>157-234</td>
<td>222.81</td>
<td>13.19</td>
<td>Moderate</td>
</tr>
<tr>
<td>Staff Characteristics</td>
<td>26-37</td>
<td>32.13</td>
<td>2.05</td>
<td>High</td>
</tr>
<tr>
<td>Care Related Activities</td>
<td>65-86</td>
<td>86.88</td>
<td>5.98</td>
<td>Moderate</td>
</tr>
<tr>
<td>Preconditions for Care</td>
<td>25-36</td>
<td>32.08</td>
<td>3.08</td>
<td>Moderate</td>
</tr>
<tr>
<td>Physical Environment</td>
<td>6-10</td>
<td>8.02</td>
<td>0.97</td>
<td>Moderate</td>
</tr>
<tr>
<td>Progress of Nursing Process</td>
<td>21-36</td>
<td>33.20</td>
<td>2.86</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cooperation with Relatives</td>
<td>19-41</td>
<td>30.51</td>
<td>3.95</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
Discussion

Continuing professional education

The finding of this study showed that subjects in military hospitals of Myanmar, CPE at a low level ($\bar{X}$ = 8.79, S.D. = 5.41). The results of this study congruence with Thi’s (2010) study finding indicated that participation in continuing education was low level in Vietnam. In current study, a possible reason for this situation may be due to increase amount of work, long working time, and ineffective legislation for CPE and 64.5% of subjects were male nurses. They are assigned at hospitals as well as cantonment areas, battalions, and medical covers to serve and promote the health of military persons. The majority respondents were working in full time and do not have spent to attend CPE. In addition, the possible reasons of in this study that nurses did not participate in CPE programs were lack of policies to attend the CPE program, work responsibility, time constraint, family commitment, and poor health along with consequent lack of incentive (New, 1997; Hla, 2002).

The laws, role and regulation, policies and licensing systems are unobtainable, therefore continuing education is not mandatory and may be nurses feel that they have no chance of being promoted and this continuing professional education becomes less important and unnecessary to them. As a consequence, there are fewer incentives to give confidence nurses to attend in continuing professional education. These causes may influence nurses were concentrated continuing professional education programs to be low level.

Barriers to continuing professional education

The results indicated that barrier to continuing professional education in this study

Table 4 Correlation coefficient of total scores of continuing professional education and each subscale of quality nursing care (n=260)

<table>
<thead>
<tr>
<th>Quality Nursing Care</th>
<th>Continuing Professional Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care Related Activities</td>
<td>0.26**</td>
</tr>
<tr>
<td>Progress of Nursing Process</td>
<td>0.22**</td>
</tr>
<tr>
<td>Cooperation with Relatives</td>
<td>0.27**</td>
</tr>
<tr>
<td>Preconditions for Care</td>
<td>0.18**</td>
</tr>
<tr>
<td>Physical Environment</td>
<td>0.12*</td>
</tr>
<tr>
<td>Staff Characteristics</td>
<td>0.04</td>
</tr>
</tbody>
</table>

*p < 0.01, **p < 0.05
was at a moderate level (X̄ =69.58, SD= 13.01). The result of in this study congruent with Chindathong’s (2007) study results that overall mean score of deterrents level at a moderate in Thailand. Previous studies results found a range of factors that barrier to continuing professional education. These included financial status (Kersaitis, 1997), work responsibility family commitments lack of information (Kersaitis, 1997), time (Kersaitis, 1997), and inappropriate for or unrelated to the current work environment or setting (Kersaitis, 1997).

The possible reasons of current study may be because of despite the fact that most of nurses perceived positive reinforcement of staff development, they are facing hinder factors to continuing professional education that lack of supportive environment may be due to staff shortages, lack of knowledge about learning opportunities, lack of necessary program, lack of encouragement from management and co-worker, and the challenges of studying and working simultaneously not being appreciated. On the other hand, CPE has vital role and has improved knowledge, skills and nurses’ performance, which is shown by local study (Hla, 2002). Therefore, some nurses with full confidence are willing to improve knowledge, skills, and ability to carry out the required job, and seeking information about CPE programs and trying to attend the continuing professional education programs.

Quality Nursing Care

The overall mean score of quality nursing care as perceived by nurses in this study was (X̄ =222.81, S.D= 13.19). The result indicated that the subjects in this study demonstrated a moderate level of all subcategories. the result of current study are consistent with the result of Oo et al., (2003) and Lwin et al., (2004) that study found a moderate level of nurses’ perception on quality nursing care. Previous studies results finding indicated that quality nursing care based on shortage, workload, job satisfaction, education, staffing, and organization structure Moreover, Shiou-Hue Wu et al., (2006) results finding indicated that nurses were younger and unmarried, less working experience that their qualities were slightly lower than older nurses, mostly married, and had more working experience nurses. Similarity, the result of in this study the subjects of (64%) were male nurses of the gender, (52%) were younger and (58%) of respondents were unmarried.

In current study results finding revealed that most of nurse experience many stressful situations in hospital environment and shortage of nurses, heavy workload, and dissatisfaction of job (Hla, 2002). Nursing has been suffering from a lack of support and a lack of power as a consequence, efforts to establish standard of care and ability for nurses to make decisions were limited. Nurses may be powerless to direct their practice within the hospitals, and there is a strong feeling that they must do as they are told. Nurses are always confronting inadequate supplies and equipment, and internal and external personal conflict (Hla, 2002). Emotional strains are often overwhelming and give rise to stressful working conditions, low morale and poor performance (New, 1997). But some nurses knew how to motivate and justify their action. No matter how unpleasant they were, they still
contained their own emotion tempered. Redfern & Norman (1999) stated that nurses have the ability of coping with their feelings and those of patients.

In addition, nurses are committed to professional excellence in providing the highest quality of care according to the objective NHP (2006-2011) (MOH, 2009). Moreover, quality nursing care was announced as an important factor of patient care is the policy statement of general hospital, Yangon (MOH, 2000). Therefore, most of nurses may be tended to perceive quality nursing care they have provided in positive way. According to Attribution Theory, nurses acknowledged what happens in a form of defensive attribution and tried to avoid putting the blame of mistakes or failure on themselves to preserve self-worth (Heider, 1958, as cited in Waraporn, 2002). Nurses were the most reliable source for perceiving quality nursing care that they have provided (Shihong et al., 2008). The nurses knew what constituted quality care and how they could achieve it, the reality of nursing in the current context was that for a high proposition of the time struggling to reach their goal. Nurses may be the reliable source for perceiving quality nursing care they themselves have provided.

Relationship between Continuing Professional Education and Quality Nursing Care

The results of this study showed that there was a statistics significant positive relationship between continuing professional education and quality nursing care ($r =0.000, p<0.05$). Further finding showed the statistically significant correlation between continuing professional education and four subscales (care related activity, progress of nursing process, cooperation with relatives, and precondition of care, physical environment) of quality nursing care. However there was no significant correlation of participation in continuing professional education and one subscale, staff characteristic of quality nursing. In current results consistent with Waddell’s (1991) study who conducted a meta-analysis 34 published and unpublished studies relating to the causal relationships between continuing education and nursing care and practice. The overall mean effect size of 0.73 indicated that continuing professional education positively affect nursing practice. However, the relationship of learner characteristics and continuing education were no significant.

Literature stated that factors related to quality of nursing in the hospital shortage of nurses, heavy workload, job satisfaction, staffing mix, and organization structure. Therefore, the relationship between continuing professional education and quality of nursing care is extensively acknowledged and supported even though there can be difficulties in making explicit in practice.

Conclusion

The result of this study showed as follows: The overall, formal and informal of CPE among nurses were at a low level. Barriers to continuing professional education and each subscale as perceived by nurses were at a moderate level. The level of total quality nursing care and each dimension as perceived by nurses were at a moderate level. Nevertheless, the category of staff characteristics was at a high level. There were a positive significant correlation between
CPE and total and each dimension of QNC except staff characteristics.

**Implications and recommendation for further study**

The results of this study provide baseline information for nurse administrators in developing continuing education, releasing barriers to continuing education, and maintaining and improving quality nursing care. Moreover, they can develop strategies and policies to enhance continuing professional education programs, to exclude barriers to continuing professional education and to provide highest quality nursing care among nurses. The results of this study provide the baseline data and helpful for nurse educators to understand and find the way in recruiting nurses into educational programs and set curriculum for the effectiveness of continuing professional education on nursing profession. This study should replicate with more subjects from different settings and need to conduct additional research in this area across the hospital level (general or private) or at a national level to compare favorably with other international studies.

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