# **CHAPTER 3**

# METHODOLOGY

This chapter describes the method of this study. It is divided in the following main sections: design of the study, research setting, population and sample, instrumentation, protection of human right procedures, data collection procedure, and data analysis procedures.

# Research design

A descriptive, correlational research was designed to describe 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 subscale of quality nursing care among nurses, military hospitals in the Republic of the Union of Myanmar.

# **Research Setting**

Data were collected from nurses who work in No.1 Defense Service General Hospital (DSGH) (Yangon) and No.2 Defense Service General Hospital (DSGH) (Naypyidaw) in The Republic of the Union of Myanmar. Population and Sample

#### Population

The population of this study was 510 nurses working in No.1 DSGH (Yangon) and No.2 DSGH (Naypyidaw) in The Republic of the Union of Myanmar.

## Sample

The sample size was calculated by using the formula of Yamane's (1973). According to the formula, 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. The inclusion criteria for the sample are that nurses from all departments from each hospital who were in-service year would be at least one year and excluded were out-patient department, and emergency room of the nurses.

Sample random sampling method was used to determine the subjects. Finally, in this research, 268 questionnaires were sent, 265 cases were returned. The return rate was 98.88% whereby, 5 uncompleted questionnaires were excluded. Hence, 260(97.01%) cases were used for data analysis.

### Research instruments

The instruments were used in this study consisted of four parts as following. Part I: Demographic Data form The demographic data form was designed to collect the subjects' information including gender, age, rank, marital status, number of children, experience (in service of year), educational level, and working unit.

Part II: Continuing Professional Education Questionnaire

The Continuing Professional Education Questionnaire developed by the researcher based on concept of continuing professional education Aoki & Davies (2002). It consists of both closed-ended and open-ended questions. It includes 10 categories which are in-services training, workshop, seminar, training program, conferences, and degree program, reading professional journals, watching video or television program, accessing the internet, and listening to radio program related to nursing. The subjects were asked whether they participate in any of continuing professional education or not. If "Yes" they required to provide additional information on the number of times per year, total hours per year and the name of topic for each answer. To evaluate the level of continuing professional education, it was based on the hours of continuing professional education per year for both formal and informal continuing professional education. The interpretation scores are as follows.

Number of hours

level of CPE

Equal and less than10 hours/year

below

above

More than 10 hours/year

Part III: Barriers to continuing professional education

Barriers to continuing professional education was used Deterrents to Participation Scale-General (DPS-G) developed by Darkenwald and Valentine (1985) to measure barriers to continuing professional education of nurses in this study after permission from original author and it was translated into Myanmar, using back translation method by a bilingual expert. Six components of barriers included are1) lack of confidence; 2) lack of course relevance; 3) lack of time; 4); low personal priority; 5) cost; 6) personal problem. It consists of 34 items related to barriers to participate in adult educational activities. The internal reliability for the DPS-G is .86. Respondents were rated on a five-point Likert-type scale, which ranges from "Not important" to "Very important".

Score range 0- 56 57-113 114- 170 Level of Barriers to CPE Low Moderate High

## Part IV: Quality Nursing Care

To explore the level of quality nursing care, the Good Nursing Care Scale of nurses developed by Leino-Kilpi (1996) was used to measure quality nursing care of nurses in this study after permission from original author and it was translated into Myanmar, using back translation method by a bilingual expert. It has 58 items with six subscales which including staff characteristics, care-related activities, preconditions for care, physical environment, progress of nursing process, and cooperation with relatives. The 7- point Likert scale ranges from rated (0) to rated (6). Therefore, the possible total score is 0-348. The range of score for GNCS of nurses and the meaning are as follows.

Score range	Level of quality nurse care
0-116	Low
117-232	Moderate
233 - 348	High

Validity and Reliability of the instrument

# 1) The Continuing Professional Education Questionnaire

The Continuing Professional Education Questionnaire developed by the researcher, based on Aokie and Devise (2002) respectfully, to measure continuing professional education in Myanmar. The instrument Content Validity Index (CVI) was validated by four nursing experts. The CVI of developed instrument was .82.

#### 2) Barriers to continuing professional education

The internal consistency reliability of the instrument was tested with 20 nurses, who have similar characteristics to the subjects No (2), DSGH, 500 bedded (Yangon) using Cronbach's alpha coefficient (Polit & Beck, 2005). The result of Cronbach's alpha coefficient of this instrument was .83 and for each dimensions lack

of confidence, lack of relevance, time constraints, cost, low personal priority, and personal problem, use of barriers were .55, .50, .46, .60, .45, and .41, respectively.

# 3) The Good Nursing Care Scale

The internal consistency reliability of the instrument was tested with 20 nurses, who have similar characteristics to the subjects No (2), DSGH, 500 bedded (Yangon) using Cronbach's alpha coefficient (Polit & Beck, 2005). The result of Cronbach's alpha coefficient of this instrument was .88 and for each dimensions staff characteristics, care-related activities, precondition for care, physical environment, progress of nursing care, and cooperation with relative, use of quality nursing care were .36,.78,.56,.40,.45, and .62, respectively.

## Protection of Human Subject

The research proposal was approved from the Research Ethics Review Committee of Faculty of Nursing Chiang Mai University, Thailand. Permission was obtained from Research Ethics Committee of the Rector of Military Institute of Nursing and Paramedical Sciences, Yangon. All participants were noticed about the study purpose and methods and they can refuse to participate, to stop or discontinue the study at the any time. Before data collection to assure the protection on human rights, the subjects who agreed to participate were asked to sign consent form. A statement included in the cover letter guaranteed that their responses were keeping in confidentiality and anonymity. Their identities were not be revealed on research reports and publications of the study. The results of the study were used only for the purpose of the study and remain confidential.

## Data Collection Procedure

The data for this study was collected from May to June at two general military hospitals in Myanmar. The steps that performed in data collection were presented as follows;

1. After receiving approval from the Research Ethics review Committee in faculty of nursing, Chiang Mai University, the research proposal, cover letter, a request for data collection and instrument were submitted to Medical and Nursing superintendent from No (1) DSGH in Yangon and No. (2) DSGH in Naypyitaw respectively for approval and permission of data collection.

2. After receiving the permission from nursing superintendents and matrons, DSGH in Yangon and DSGH in Naypyitaw, the researcher met the Directors of nursing from each hospital to get their permission and asked for their assistance in data collection.

3. The researcher prepared packages for all subjects selected to participate. The package included a cover letter, a consent form, the questionnaires and an envelope the researcher's name. The subjects were explained the objectives and benefits of this study via cover letter.

4. One research coordinator in each hospital was chosen to distribute the questionnaires with a cover letter envelope to all subjects request for cooperation to complete the form. After the subjects completed the questionnaires, they can return to the researcher's box in both hospitals within two weeks time period.

5. The researcher reviewed 265 returned questionnaires. The return rate was 98.88% whereby, 5 uncompleted questionnaires were excluded. Hence, 260(97.01%) cases were used for data analysis.

## Data Analysis Procedure

Before data being analyzed, the researcher scrutinized data before entering it into the computer. Data analyzed by utilizing a statistical software package, the 0.05 level of significance established for all analyses. Both descriptive and Pearson's Product Moment were used for data analysis. This analysis was as in the following steps,

1. Demographic data were analyzed by using frequency, percentage, the mean, and standard deviation.

2. Scores of continuing professional education, barriers of continuing professional education, quality of nursing care were analyzed using the mean and standard deviation.

3. Kolmogorov-Smirnov test was used to test the normality. In this study, the data is in a normal distribution. Homogeneity of variance was tested by using scatter plot.

4. Pearson's product-moment correlation was used to explore the relationship between continuing professional education and total each dimension of quality nursing care. Row scores of continuing professional education and each dimension of quality nursing care were analyzed. According to Burns and Grove (2009), correlation coefficient (r) value represents the relationship among variables: r value < .30 is considered a weak relationship;  $.30 \le r$  value  $\le .50$  it considered moderate relationship; and r value  $\ge .50$  is considered a strong relationship.