CHAPTER 3

METHODOLOGY

This chapter describes the research methodology of the study. It includes a description of the research design, population and samples, setting, research instruments, protection of human subjects, data collection procedure, and data analysis procedures, respectively.

Research Design

A descriptive correlational research was employed to assess clinical learning environment and clinical learning outcomes as perceived by the 4th year BNSs, and to examine the relationship between CLE and CLO as perceived by the 4th year BNSs in The Socialist Republic of Vietnam.

Population and Sample

Population

The target population of this study was 559 4th year BNSs in seven universities that offered baccalaureate nursing program in The Socialist Republic of Vietnam which include Nam Dinh University of Nursing (NDUN), Hanoi Medical University (HMU), Thai Nguyen Medical Univerisy (TNMU), Hai Phong Medical

University (HPMU), Thai Binh Medical University (TBMU), Hai Duong Medical Technology University (HDMTU), and Thang Long University (TLU).

Sample

Samples in this study were students who studied in the fourth-year baccalaureate generic nursing program in seven universities in The Socialist Republic of Vietnam. The sample size was obtained by using the Krejcie and Morgan (1970) formula. According to this formula, the sample size needed in the study was 234 baccalaureate nursing students. Considering the possible loss of subjects, 20% of the sample size was made up (Krejcie & Morgan, 1970); therefore, the number of baccalaureate nursing students for the sample was 281.

Proportional stratified random sampling was adopted to determine the number of students selected from seven universities. Then, the subjects were selected by using the simple random sampling method from each university. There were 118, 48, 24, 23, 23, 23, 23, and 22 nursing students respectively from NDUN, HMU, TNMU, HDMTU, HPMU, TLU, and TBMU included in this study.

Setting

This study was conducted in seven universities in The Socialist Republic of Vietnam which includes Nam Dinh University of Nursing, Hanoi Medical University, Thai Nguyen Medical University, Hai Phong Medical University, Thai Binh Medical University, Hai Duong Medical Technology University, and Thang Long University.

The reason for choosing these universities was due to the fact that they accommodated baccalaureate nursing students who were studying in the fourth-year.

Research Instruments

The research instruments in this study consisted of three parts including the demographic data form, the clinical learning environment scale, and the clinical learning outcomes for nursing student's tool as follows:

(1) Demographic Data Form (Appendix C): It was developed by the researcher. The questions included gender, age, number of students in clinical group, type of students in clinical setting, frequent visiting of clinical facilitator, number of beds in the clinical setting, beds occupying rate, number of staff, clinical venue, and nursing institutions.

(2) Clinical Learning Environment Scales (CLES) (Appendix D): Clinical learning environment was developed by Dunn & Burnett (1995) and it was used in this study. It consists of 23 items divided into 5 dimensions, which are student-staff relationships, nurse manager commitment, student-patient relationships, interpersonal relationships and student satisfaction. The questionnaire was a five point Likert-type scale (1-strongly disagree, 2-disagree, 3-undecided, 4-agree, 5-strongly agree) in which respondents indicated their agreement or disagreement with the statements of clinical learning environment. The higher score indicated the more positive clinical learning environment. The instrument was developed by using both exploratory and confirmatory factors analytical techniques. The factors have strong substantive face validity and construct validity, as determined by confirmatory factor

analysis. Reliability coefficients for the subscales ranged from high (0.85) to marginal (0.70) (Dunn & Burnett, 1995). The reliability coefficient of CLES was further reported by Saarikoski, Isoaho, Leino-Kilpi, & Warne (2005) with Cronbach's alpha for the subscales ranged from 0.53 to 0.90, and for the total instrument was at 0.75.

This instrument was translated into Vietnamese by the researcher. The translated version was checked by two Vietnamese bilingual experts. The original English and back-translated versions were checked for its equal or closest meaning by a native English speaking person. Before analyzing data, the negative items were reversed in order to have equal treatment with the positive items.

The CLES range of total mean score and its meaning were categorized into 3 levels based on Best and Kahn (2003) and calculated by the researcher as follows:

23.00 – 53.66	indicates a low level
53.67 – 84.33	indicates a moderate level
84.34 – 115.00	indicates a high level

(3) Clinical Learning Outcomes for Nursing Students Tool (Appendix E): Clinical learning outcomes was developed by Al-Kandari et al., (2009) which measures the nursing students' perceptions of clinical learning outcomes from various clinical settings. It consists of 45 items divided equally into nine dimensions: knowledge; nursing process; communication; student role; accountability; patient teaching; organization; caring; and psychomotor skills. The nine dimensions and the clinical objectives were comprehensive, covering the cognitive, affective, and psychomotor domains of learning. Each item requires a response on a five-point Likert scale, ranging from 1 = "not applicable" and 2= "strongly disagree" to 5 =

"strongly agree". The content validity was checked by expert panel reviewers, and the reliability tested with Cronbach's alpha for the whole instrument was 0.77. This instrument was also translated into Vietnamese by the researcher. The translated version was checked by two Vietnamese bilingual experts. The original English and back-translated versions were checked for its equal or closest meaning by a native English speaking person. The interpretation of the total mean score was as follows: (Best & Kahn, 2003)

45.00 – 105.00	indicates a low level
105.01 – 165.00	indicates a moderate level
165.01 – 225.00	indicates a high level

Reliability of the instruments

The reliability of these instruments was tested with 25 students by using Cronbach's alpha coefficient. The Cronbach's alpha of the total scale of CLES was .87 and the CLONS was .94. In the present study, the internal consistency of CLES and CLONS were tested again with 252 students and resulted in the Cronbach's alpha of CLES was .83 and the CLONS was .92.

Protection of Human Subjects

The research proposal was submitted to the Research Ethics Review Committee at Faculty of Nursing, Chiang Mai University, Thailand to obtain approval before data collection (Appendix F). Then, approval to collect data was also taken from seven university rectors. All participants were notified about the study purpose and methods. They were informed that they had the right to refuse, stop or discontinue

their participation in the study at any time. The research consent forms were given to the subjects (Appendix B). A statement included in the cover letter (Appendix A) guaranteed confidentiality and anonymity of individual responses. Information provided by the subjects was used only for study and remains confidential. The results of the study were presented as a group.

Data Collection Procedures

Data from this study was collected from April 20th to May 24th in seven universities which taught the baccalaureate nursing students in The Socialist Republic of Vietnam. The following steps were performed:

1. Submitted the proposal for the approval from the Research Ethics Review Committee in Faculty of Nursing, Chiang Mai University.

2. After receiving approval from the Research Ethics Review Committee in Faculty of Nursing, Chiang Mai University, the research package including the research proposal, a cover letter, a request for permission to collect data, and a copy of data collection questionnaires in Vietnamese language were sent to the Rectors of seven universities where nursing students are practising for approval and permission to collect data.

3. After receiving permission to collect data from the rectors of the universities, the researcher informed the lecturers who were responsible for the 4th year BNSs in each university.

4. The researcher selected subjects using simple random sampling technique from the list of the students' code in each class. Those who were in the reliability test were excluded from the sampling.

5. The objectives and benefits of the study were explained in the cover letter to all subjects. The researcher asked the class monitors to deliver questionnaire to the 4th year BNSs in each university. Before filling in the questionnaires, students were asked to sign in the consent form. The student then complete the questionnaires in their personal time and return the questionnaires to the researcher by using the self-addressed envelopes and put it in the researcher's mail box in each university within two weeks.

6. A total of 262 questionnaires were returned which represented 93% response rate. Ten incomplete questionnaires were excluded. Finally, a total of 252 questionnaires were valid for data analysis in this study.

Data Analysis Procedure

The data collected from the survey were coded and entered into the Statistical Software to analyze. Both descriptive and inferential statistics were used for data analysis. The analysis was as in the following steps:

1. Demographic data was analyzed by using frequency, percentage.

2. Scores of clinical learning environment and clinical learning outcomes were analyzed using mean and standard deviation.

3. Data were tested for normal distribution by using Kolmogorov-Smirnov. It is found that clinical learning environment was a normal distribution, but clinical learning outcome was not a normal distribution; therefore, Spearman's Rank-order coefficient was used to identify the relationship between two variables.

4. The Spearman Rank-order coefficient was used to examine the relationship between clinical learning outcomes and clinical learning environment. According to

Burn and Grove (2005), r-value > .10 to .30 was considered as weak relationship, r-value > .30 to .50 was considered as moderate relationship, and r-value > .50 was considered as strong relationship (Burns & Grove, 2005).