

CHAPTER 3

RESEARCH METHODOLOGY

Research Design

Descriptive design was used in this study to describe ethics education for nursing students in Diploma III programs in Central Java regarding nursing ethics course contents, teaching-learning methods and evaluation, teachers' background, students' characteristics, and student participation in ethical decision-making.

Settings

The study took place in all Diploma III (DIII) programs in nursing, Health Polytechnic Semarang. There are five DIII programs in nursing, which are situated in Blora, Pekalongan, Purwokerto, Semarang, and Magelang in Central Java Province.

Briefly, the Health Polytechnic Semarang was established since March 2002, from the merging of some governmental three-years diploma programs in academies of health in Central Java. There are five schools in the Health Polytechnic Semarang, comprising (1) School of Nursing, (2) School of Nutrition, (3) School of Technical Roentgen, (4) School of Dental Care, and (5) School of Hygiene and Environmental Health. In the School of Nursing, there are five DIII nursing programs: (1) DIII Program in Nursing of Blora, (2) DIII Program in Nursing of Pekalongan, (3) DIII

Program in Nursing of Purwokerto, (4) DIII Program in Nursing of Semarang, and (5) D III Program in Nursing of Magelang.

Populations

The target populations in this study were (1) third-year nursing students, (2) ethics teachers, and (3) ethics course coordinators of each DIII program.

The number of DIII programs in nursing in Health Polytechnic Semarang in the year 2003 is five. Usually, the number of third-year nursing students in each DIII program is approximately 80 each year. At the time of this study, the total number of third-year nursing students in Health Polytechnic Semarang was 387. The total number of ethics teachers in Health Polytechnic Semarang was 14 including five course coordinators from each D III program in nursing.

Samples and Sampling

1. Sample Size

- (1) The sample size for students was calculated based on Yamane's formula (Yamane, 1967).

$$n = \frac{N}{1 + N e^2}$$

where, n = the sample size

N = the size of population

e = the error of 5 percentage points.

By using Yamane's formula of sample size with an error 5% and with a confidence coefficient of 95% (Yamane, 1967), the calculation from a population of 400 (previous population approximation) came up with 200 students from all five DIII programs in nursing, Health Polytechnic Semarang. To account for possible attrition, the number of subjects was increased to 250. Because every DIII program in nursing has almost the same number of third year students, approximately 80 students, therefore it was planned to recruit 50 students from each program.

- (2) All coordinators and all teachers of ethics courses in all DIII programs in nursing

2. Sampling Method

- (1) All course coordinators and ethics teachers of all five DIII programs in nursing were included in this study.
- (2) A systematic random sampling without replacements used to recruit students from a sampling frame that was established from the name list of third year nursing students in each program.

Instruments

1. The Development of Instruments

The instruments of this study were modified based on Chaowalit et al. (2004) and Suttharangsee et al. (2004). There were four instruments as follows: (1) Students' Characteristics Assessment (SCA), (2) Teachers' Background Assessment (TBA), (3) Ethics Contents and Learning Process Questionnaire (ECLPQ), and (4) Ethical Decision Making Questionnaire (EDMQ).

1.1 The Students' Characteristics Assessment (SCA)

The SCA consisted of four items including institution, age, gender, religion, and the institution in which students studied. All of the items were closed-ended questions.

1.2 The Teachers' Background Assessment (TBA)

The TBA consisted of 10 items including institution, age, gender, marital status, religion, level of educational, area of expertise, years of teaching experience in DIII nursing program, years of teaching experience in nursing ethics, and special trainings or courses related to ethics. The items were closed-ended questions.

1.3 The Ethics Contents and Learning Process Questionnaire (ECLPQ)

The Ethics Contents and Learning Process Questionnaire (ECLPQ) were used to ask the coordinators of ethics teaching in three main parts: ethics contents, teaching and learning methods, and course evaluation. All of the questions of ECLPQ were in closed-ended form.

1.3.1 Ethics Contents

Ethics contents questionnaire consisted of nine items, which dealt with two main questions: (1) whether there was any specific course an ethics and (2) whether ethics topics had been included in other theory courses or practicum courses. The items covered course title, number of credits, number of hours, study plan, and topics related to ethics.

1.3.2 Teaching and Learning Methods

The teaching and learning methods consisted of seven items, which dealt with ethics teaching methods used in theory courses and practicum courses.

The teaching-learning methods included; lecture, discussion, seminar, role-play, PBL, case analysis, and simulation. The course coordinators were asked to mark the teaching-learning methods provided and rank the most and the least methods used in ethics teaching.

1.3.3 Evaluation of Ethics Teaching

Evaluation methods of ethics teaching consisted of six items asking about evaluation used for ethics teaching in theory courses and practicum courses. The evaluation in theory courses included examination, report, class presentation, discussion, and seminar. The evaluation in practicum course was observation by using an evaluation form. The items also covered the persons who were involved in evaluating ethical behaviours of students in clinical courses.

1.4 The Ethical Decision Making Questionnaire (EDMQ)

The EDMQ was used to examine the ethical decision making of the students. The total numbers of items of EDMQ were 25, divided into three models; (1) the Patient-centered Model with nine items, (2) the Physician-centered Model with eight items, and (3) the Bureaucratic-centered Model with eight items. The EDMQ was measured with a four-point rating-scale from 0 to 3, where 0 was never, 1 was seldom, 2 was sometimes, and 3 was always.

For this study, the possible mean scores were categorized into three levels of frequency of student's participation in ethical decision-making. These were 0 - 1.00 as low frequency, 1.01 - 2.00 as moderate frequency, and 2.01 - 3.00 as high frequency.

The instruments of Ethics Contents and Learning Process Questionnaire (ECLPQ) and Ethical Decision Making Questionnaire (EDMQ) were modified based on the two studies of Chaowalit, Suttharangsee, Nasae, Petpichetchian, Intarasombat, and Khampalikit (2004) and Suttharangsee, Petpichetchian, Chaowalit, Nasae, Khampalikit, and Intarasombat (2004). The following steps were performed to develop the ECLPQ and the EDMQ.

- (1) Based on two studies of Chaowalit, Suttharangsee, Nasae, Petpichetchian, Intarasombat, and Khampalikit (2004) and Suttharangsee, Petpichetchian, Chaowalit, Nasae, Khampalikit, and Intarasombat (2004), the instruments in Thai language were translated into English by a Thai-English bilingual translator (Version I: English).
- (2) The instruments of Version I: English were examined and confirmed by two original investigators who developed the two instruments in Thai language. Then the researcher corrected the instruments based on the original investigators' suggestions (Version II: English).
- (3) Version II: English was reviewed the contents of both instruments using two panel discussions. Using the first panel by two Thai nursing experts' opinions, the researcher corrected the instruments based on their suggestions (Version III: English).
- (4) Version III: English was reviewed using the second panel discussion by five Indonesian nursing experts, then the panel and an Indonesian-English bilingual translator translated the instruments from English to Indonesian language (Version IV: Indonesian).

- (5) The instrument Version IV: Indonesian was used to pretest and examine reliability. EDMQ was pre-tested and tested for the readability with 25 nursing students. The ECLPQ was tested for readability with 11 teachers in nursing schools.
- (6) After pre-testing, the researcher corrected the instruments under advisors' supervision (Version V: Indonesian).
- (7) Then, the Version V: Indonesian was edited by an Indonesian expert before distributing to the subjects.
- (8) After completion of pre-testing using Version V: Indonesian, the researcher and an Indonesian-English bilingual translator translated from Indonesian language into English and edited by an English expert to use in this thesis (Version VI: English)

2. Validity and Reliability

2.1 The validity of instruments

Seven experts in nursing analyzed the instruments for content validity. Two nursing ethics experts were from the Faculty of Nursing, Prince of Songkla University, and five nursing experts were from Indonesia from Health Polytechnic Semarang and Faculty of Nursing, Padjajaran University. Then, the researcher revised the instruments based on experts' suggestions.

2.2 The reliability of EDMQ

The reliability of the EDMQ, was determined by using Cronbach's alpha coefficient. The reliability test of EDMQ by 25 students revealed subscale alpha coefficients as follows: (1) patient-centered subscale was .83 (2), physician-centered

subscale .81, and (3) bureaucratic-centered subscale was .83. The reliability according to Cronbach's alpha coefficient equal or above .70 is considered satisfactory (Polit, Back, & Hungler, 2001).

Data Collection Methods

Data collection was conducted after obtaining permission from the Faculty of Nursing, Prince of Songkla University, by submitting the proposal to the Institutional Review Board (IRB). The procedures of data collection were divided into two phases: preparation phase and implementing phase.

1. Preparation Phase

- (1) Asking permission to collect data by sending a letter from the Faculty of Nursing, Prince of Songkla University, to inform the Director of Health Polytechnic Semarang and the Director of Nursing Program about the research objectives and procedures of data collection as well as asking for research assistants from DIII programs in nursing.
- (2) Asking the willingness of the research assistants to distribute the questionnaires to the nursing students and describing procedure of data collection.
- (3) Describing the objectives and procedures of data collection to the course coordinators of nursing ethics of each DIII program and asking for participation of the teachers and students.
- (4) Preparing packages of questionnaires including in a covering letter, a set of questionnaires for teachers (TBA), a set of questionnaires for students (SCA

and EDMQ), and a set of ECPLQ for the ethics course coordinators in each nursing programs.

2. Implementing Phase

- (1) The questionnaires were sent to the research assistants of two DIII nursing programs. The research assistants consisted of a teacher in each school.
- (2) The questionnaires were distributed by the researcher and two research assistants to the subjects and the subjects asked to complete the questionnaires within one week.
- (3) Researcher collected the instruments directly from the subjects and from the research assistants. Two questionnaires for students were not returned.
- (4) Researcher checked the completion of the instruments. One incomplete questionnaire was excluded.

Ethical Considerations

Permission from the Institutional Review Board (IRB) of the Faculty of Nursing, Prince of Songkla University, was obtained. The thesis proposal was approved by the IRB on June 4th, 2004.

Permission for data collection for this study was obtained from Director of Health Polytechnic Semarang. Then, dispossession letters from the Directors sent to the Heads of five DIII programs in nursing.

In data collection, subjects were informed carefully, in a covering letter and statement to protect human subjects. This included (1) the purposes and data collection methods, (2) assurance of subjects' anonymity, (3) subjects' voluntary

to participation in this study, and (4) subjects' freedom to participate or withdraw from the study at any time. The letter also included the name and address of the researcher.

Data Analysis

Data were analyzed using descriptive statistics for presenting ethics courses and contents, learning processes, teachers' background, students' characteristics, and ethical decision making of students. These data were described in frequencies, percentages, means, and standard deviations.