

CHAPTER III

RESEARCH METHODOLOGY

RESEARCH DESIGN

This study was an "analytic" study in order to determine the relationship between attitudes toward behavior, subjective norm and intention to care for HIV positive persons among nursing students in Bangkok metropolis.

Target population

The target population was those nursing students who were in the last year of the four-year nursing program in Bangkok metropolis. Because difference schools have difference sequence of subjects in the curriculum so it was difficult to study in other classes.

Study population :

Fourth year student nurses in Bangkok metropolis who registered to study during the period of data collection.

Eligible Criteria :

Inclusion criteria :

All the fourth year nursing students of the Four-year nursing program in nursing schools which were cluster sampling were included in this study.

Exclusion criteria

Nursing students who did not register to study in the period of data collection.

Sample selection

1. There were 7 sectors that nursing schools were subjected to. Regrouping nursing school/college to become 5 groups by gathering Thai Red Cross Society into the ministry of academic affair and gathering the Bangkok metropolis into the ministry of interior. Nursing schools/colleges and its number of nursing students were shown as below:

1. Ministry of Academic Affair and Thai Red Cross

1.1 Mahidol University (faculty of Nursing) = 157

1.2 Mahidol University (faculty of Medicine) = 95

1.3 College of Nursing Thai Red Cross Society = 157

2. Ministry of Defense

2.1 Royal Thai Army Nursing College = 67

	31
2.2 Naval Nurse College	= 55
2.3 Royal Thai Air Force Nursing College	= 44
3. Ministry of Interior and Bangkok Metropolis	
3.1 Police Nursing College	= 75
3.2 Kuarkaroon Nursing College	= 155
4. Ministry of Public Health	
Bangkok College of Nursing	= 99
5. Private sector	
6.1 Christian College	= 52
6.2 St. Louis	= 60
6.3 Mission Nursing College	= 50
Thus total number of target population was	= 1,056

2. Randomly select 3 sectors from 5 sectors and then simple random sampling 1 school/ college according to the selected sectors.

3. Only the last-year nursing students of the selected schools were the respondents of the study. All nursing students were recruited in this study from each school/college except some place which had more than 55 students simple random sampling technique was used to select the subject.



Sample size calculation :

$$n = [(Z_1 + Z_0) / C(r)]^2 + 3$$

n = The number of nursing students

Z_1 = The standard score for the normal cumulative probability when the conclusion of the study has erroneously rejecting a null hypothesis that is really true and the chance would be 5 times out of 100 times (Type I error = 0.05) which is equal to 1.96.

Z_0 = The standard score for the normal cumulative probability when the conclusion of the study has erroneously failing to reject a null hypothesis that is, in fact, false and the chance would be 10 times out of 100 times (Type II error = .10) which is equal to 1.28.

r = estimated correlation coefficient from previous study which equal to 0.39.

$$C(r) = (1/2) \log_2 [(1+r)/(1-r)]$$

$$\text{Thus } C(r) = (1/2) \log_2 [(1+0.39)/(1-0.39)]$$

$$= (1/2) (0.99)$$

$$= 0.5$$

$$\text{Thus } n = [(1.96+1.28) / 0.5]^2 + 3$$

$$n = 45$$

The sample size to be needed for this study by calculation was 45. But the measurement for this study was the questionnaire which bigger sample size will be more valid so the investigator used 10 % of population technique instead. For convenient 45 to 55 of nursing students from 3 schools / colleges were used as subjects of this study.

Thus sample population for this study were fourth-year nursing students from Police Nursing College(50), Thai Red Cross College of Nursing (50) and Mission Nursing College (48). Thus the total sample population was 148 nursing students.

Ethical consideration

There is no ethical problem. Because the instrument for this study is un-identified questionnaires which do no harm to the subjects or respondents of the study.

Limitation and obstacle

The limitation of the theory of reasoned action.

1. There may be some behavior that can not be explained by this theory such as emotional expression or some skillful behaviors such as driving a car.

2. In case of any person who has decision making process differ from this theory or any one who behaves without

thinking can not be explained by this theory.

3. To measure the subjective norm may not be the best way.

4. There may be other factors which are not included in this study that is importance for the intention behavior.

Manoeuvre :

1. The instrument for this study was self-administered questionnaire which was developed according to the reasoned action theory and could cover the objectives of this study. The questionnaires had two parts

Part 1. was the demographic data which were religion, experience in taking care for persons who are HIV positive, has close person whom HIV positive, need further study or not, want to change occupation or not and grade point average.

Part 2. was questionnaire for asking the respondents regarding to their intentions to care for HIV positive persons based on the theory of reasoned action. This part divided into 6 sections.

section 1. Behavioral belief scale.

section 2. Evaluation of consequence scale.

section 3. Attitude toward behavior scale.

section 4. Subjective norm scale and Normative belief scale.

section 5. Motivation to comply scale.

section 6. Intention to care for HIV positive persons scale.

2. Questionnaire development

Stage 1. First draft of open response questions were developed to ask 225 nursing students which 45 from Mahidol University (faculty of Nursing), 45 from Naval Nurse College, 45 from Bangkok College of Nursing, 45 from Kurkaroon Nursing, and 45 from St. Louise . These questions could elicit the respondents salient beliefs and salient referents in caring persons who are HIV positive. Here are the questions:

1. When you are a nurse what is the benefit for you to care for persons who are HIV positive ?-----

2. When you are a nurse what is the bad side of caring HIV positive persons?-----

3. When you are a nurse what is other effect of caring HIV positive persons?-----

4. When you are a nurse is there any one agree with you to care for HIV positive persons?-----

5. When you are a nurse who are disagree with you for caring persons who are HIV positive?-----

6. when you are a nurse how will you feel for caring person who are HIV positive?-----

Stage 2. Considered and selected the items to develop pre test questionnaires from salient beliefs.

2.1. The beliefs from questions 1 to 3 were grouped and ordered then selected the first tenth high frequency or 20% response as shown in the table 1.:

Table 1. Frequency of nursing students' behavioral beliefs that to care for HIV positive person lead to consequence. (N=225)

Behavioral belief that leads to consequence (b.)	Frequency
1. know the spread of disease	158
2. gain more knowledge	108
3. has experience and skill	99
4. know and can give psychosocial support	81
5. become careful	48
6. has self actualization	75
7. risk to have HIV positive	187
8. risk to be the carrier	92
9. stress and anxiety	69
10. paranoia	56
11. depress unhappy	52

* Where 20% of 225 = 45

2.2 The normative beliefs that group or individual think when student nurse become a nurse should (or should not) care for HIV positive persons were selected from questions 4 to 5 by the same method as b:

Table 2. Frequency of normative beliefs that group or individual think when student nurse become a nurse should (or should not) care for HIV positive persons.(N=225)

Normative belief (n.)	Frequency
1. parents	163
2. close friend	102
3. relative	102
4. sibling	118
5. senior nurse	79
6. head nurse	63
7. boy friend	55
8. nursing instructor	103
9. physician	68
10. relatives of the HIV positive person	49
11. persons who are HIV positive	58

2.3 The adjectives that describe nursing students attitudes(A_3) when they are nurses to care persons whose HIV positive were selected by the same method as b.

Stage 3. Pre-test questionnaire were created from items which were selected in stage 2. (see the detail in the appendix)

The pre-test questionnaire composed of 6 sections.

section 1. The behavioral beliefs (b.) scale had 11 items.

section 2. The evaluation of consequence (e.) scale had 11 items.

section 3. The attitude toward behavior (A_3) scale had 20 items.

section 4. The subjective norm (S_v) scale had 1 items and the normative belief (n.) scale had 11 items.

section 5. The motivation to comply (m.) scale had 11 items.

section 6. The intention (I) to care for HIV positive person scale had 2 items.

Table 3. Scale scoring

Scale	Bi-polar word	Score
1. b. scale	likely - unlikely	+3 to -3
2. e. scale	good - bad	+3 to -3
3. A ₂ scale	negative - positive	-3 to +3
4. S ₁ and n. scale	likely - unlikely	+3 to -3
5. m. scale	need - do not need	1 to 7
6. I scale	likely - unlikely and percentage(%)	-3 to +3 and 0 to 100 %

Stage 4. Assessment of the questionnaire.

4.1 Assessment of construct validity the researcher made understand and developed the questionnaire according to the steps in the construction of a standard questionnaire. (Fishbein and Ajzen. 1980: 261-273)

4.2 Assessment of content validity of the questionnaire. Four experts: one obstetrician, one psychologist and two nursing instructors were requested to comment on the content, completeness, and clarity of each item in the questionnaire.



4.3 Assessment of discrimination of the questionnaire. According to the theory of reasoned action believes that the modal salient beliefs have discrimination. So it need not to do statistical analysis for the discrimination.

Stage 5. Assessment of reliability of the questionnaire. Fifty nursing students from the Thai Red Cross Society College of Nursing were asked to answer the questionnaire. Internal consistency, Alpha coefficient were calculated by spss pc+ program as shown in the table 4.

Table 4. The reliability of the questionnaire

Scale	Alpha coefficient ₁	Alpha coefficient ₂
A ₃	0.8170	0.8278
Σb ₁ e ₁	0.7436	0.7028
Σn ₁ m ₁	0.8660	0.9043

* Where A = data from the pre test group ,N=50.

B = data from the sample group, N=148.

Outcome measurement

The measured outcomes were :

Independent variables

Attitudes toward behavior , subjective norm and demographic data are independent variables.

Dependent variable .

Intended care behavior is the dependent variable.

Data collection and data analysis

1. Data collection, both pretest and the final questionnaire, were performed after receiving permission from the directors of the Colleges.

2. Nursing students were selected by simple random sampling except the school/college which had students between 45 to 55 all of them were invited to participate in the study. They were assured that their response would be confidential and for research only.

3. Self administered questionnaire were performed in class without identification. The students who absented from class during this period were asked to answer the questionnaire later.

4. Data entry was done by Epi-Info statistical programme.

5. Data analysis by spss pc+ programme. Descriptive statistics : means, standard deviations and percentage of demographic data were performed. Inferential statistics, correlational analyses, were performed for answering hypotheses 1-2. Stepwise multiple regression were used for hypothesis 3, the β which comes from the computation was the relative importance of attitude and subjective norm or weight of each variable that influence to the intention. So β in this case took important roll as determinant of the variable that indicate the intention to care HIV positive persons. Paired T-tests were performed to test hypotheses 4 and 5 for each items of both I. and not I. in b., e., n. and m.. The result from this step could be the information to anyone who are interesting in behavior modification.