

CHAPTER III

RESEARCH METHODOLOGY



RESEARCH DESIGN

This is the cross-sectional explanatory research, which purpose to measure the level of quality of care and satisfaction among a select group of the medical outpatient (OPD Med) and find out the association between them.

To achieve these aims, a survey of OPD Med service in Bamrasnaradura Institute was conducted to evaluate these variables. As a nurse working at this Institute, the Institute had assisted in data collection by circulating a memo to all involved sections and personal. Using a survey questionnaire carried out at the OPD Med collected the data. The questionnaire contains the following aspects: customer satisfactions (45 items), perceptions of customers in quality of care (21 items), and demographic features such as age, sex, and education level. The question has 3 types:

Close-ended rating scale: the participant will choose the best answer from each item listed.

Two open-ended questions; one was on the age of the participant and the time of arrival at and departure from the OPD service.

Also one part of the question was kept for comments on the needs to further improve health care services.

Flow chart as shown in Figure 3.1 will summarize the process of this study.

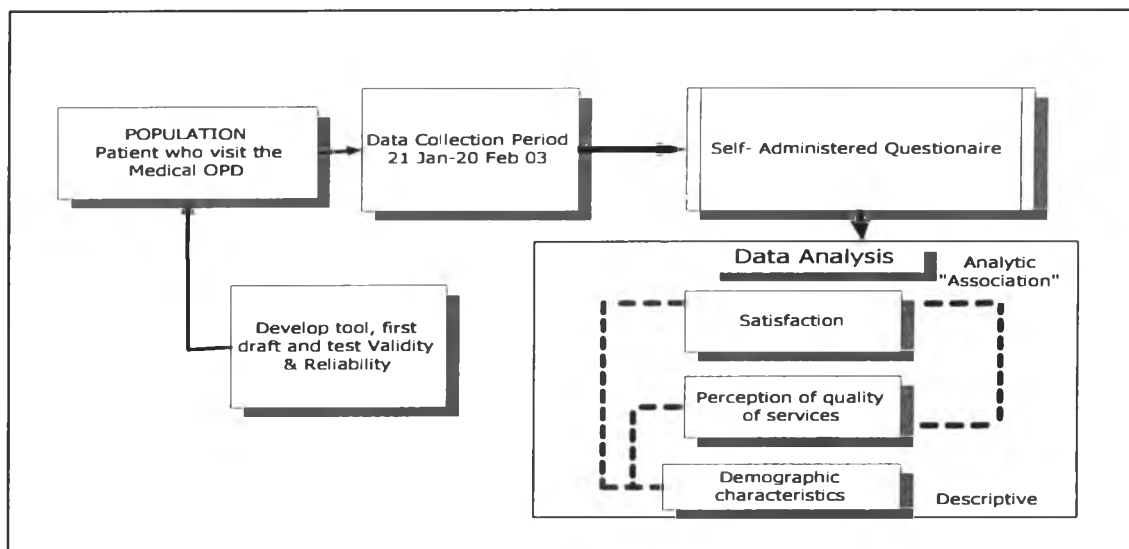


Figure 3.1 Flow chart of the research

SETTING AND TIME OF THE STUDY

The research was conducted during weekdays at Bamrasnaradura Institute in the OPD Med. The time of data collection was from 7:00am to 3:00pm. It was carried out over a period of only one month from January 21 to February 20, 2003. One helper and the investigator herself were involved in gathering the data. The investigator was responsible for the overall management of the study.

SAMPLING AND SAMPLE SIZE

The target population for this study was all patient or caretaker who visited the outpatient department, Bamrasnaradura Institute from January 21 through February 21. Sampled population is the patient or caretaker who visited the medical outpatient department (OPD Med). I used accidental sampling technique to select cases. Based on every year, OPD Med provided the same kind of medical services for the patient.

Inclusion Criteria

1. The customers or the caretakers, 15 years and above, were taken as subjects because they can use their own judgment for decision-making and express their own opinions (Thongkumchuenwiwat, 2000).
2. Both male and female were required to be able to read and write
3. All must be ambulatory patient.

Exclusion Criteria

1. Any non-ambulatory patients
2. Patients with severe symptoms
3. Unwilling customers who do not wish to participate in the study.

There were several approaches in determining the sample size. These included using a census for small populations, imitating a sample size of similar studies, using published tables, and applying formulas to calculate a sample size (Israel, 1992) This study will use applying formulas to calculate sample size. Accordingly, the number of patients in OPD Med was 77,807 cases, statistical formula (Taro Yamane) was used to calculate the sample size. The number of sample sizes is shown as follows (Israel, 1992).

$$n = \frac{N}{1+(Ne^2)}$$

n = the desired sample size

N = the estimated population

e = the level of precision or relative error of estimation = 0.05

Using this formula, the sample size will be as follow;

$$n = \frac{77,807}{1+(77,807 \times .025)} = 398 \text{ cases}$$

The 400 subjects were enrolled in this study.

EXPECTED BENEFITS

1. The study can be used, as a guideline to provide appropriate services, effectiveness, and conform to the customers needs.
2. The result of this study will be helpful to conduct other research and to apply acquired knowledge.

RESEARCH INSTRUMENTS

1. Questionnaire construction (comprises of 3 components) as shown in Table 3.1

Table 3.1 Questionnaire constructions

Section 1. Socio-demographic	Section 2. Customer service perception	Section 3. Customer service satisfaction
Age, Sex	Clinic milieu	Convenience
Educational level	Personal interest	Courtesy,
Occupation	Staff competence	Coordination of service
Income		Medical
Number of OPD visits		information received

In section 2, there are three parts concerning the quality of care in respect to customer perception with twenty-one questions in all, which are as follows:

Question 1-7 on clinical environment.

Question 8-14 on staff competence.

Question 15-21 on personal interests.

In section 3, there were forty-five questions, which touched on aspects, such as satisfaction level of the customer, service at the Registration Room, the Screening Center, the Examining Room, and the Pharmaceutical Room. These are as follows:

Satisfaction questions on convenience are included in items 1, 2, 6, 7, 13, 14, 19, 20, 21, 22, 23, and 36.

Satisfaction questions on courtesy and interpersonal relationship are in items 3, 4, 5, 15, 16, 24, 25, 26, 27, 37, 38, 39, 40, and 41.

Satisfaction questions on coordination are in items 8, 9, 10, 17, 28, 29, 33, 34, and 42.

Satisfaction questions on medical information are in item 11, 12, 18, 30, 31, 32, 35, 43, 44, and 45.

Section 4 has two questions regarding the overall service satisfaction and customers intention to recommend others to use the services.

Section 5 is about the length of the customer's waiting time (arrival and departure time).

Section 6 is on the recommendations or suggestions on the present level of services and any associated problems that the customers faced.

Measurement Method (Designing the scale)

The measurement methods for each variable are as follows:

Table 3.2 Measurement Method (Designing the scale)

Variables/ Name	Level	Value
A. Independent variables		
1. Socio-demographic characteristics		
Age	Ratio scale	In year
Sex	Nominal scale	1 = Male, 2 = Female
Education Level	Ordinal scale	1 = Grade 4 2 = Grade 6 3 = Grade 9 4 = Grade 12 5 = Certificate/Diploma 6 = Bachelor's Degree 7 = Master's Degree 8 = Others
Occupation	Nominal scale	1 = Company's employee 2 = Self-Employed 3 = Government officer /State enterprise 4 = Private business 5 = Farmer 6 = Student 7 = Others

Table 3.2 (cont.) Measurement Method (Designing the scale)

Variables/ Name	Level	Value
Income (Baht per month)	Ordinal scale	0 = None 1 = ≤ 2,000 2 = 2,001 – 4,000 3 = 4,001 – 6,000 4 = 6,001 – 8,000 5 = 8,001 – 10,000 6 = 10,001 – 30,000 7 = > 30,000
Number of OPD visits	Ordinal scale	1 = one time (first visit) 2 = two times 3 = three times or more
2. Customer perception of quality of service regarding: Clinic milieu; Staff competence; and Personal interest	Ordinal scale	4 = Strongly Agree 3 = Agree 2 = Disagree 1 = Strongly Disagree
B. Dependent variables Customer service satisfaction regarding: Convenience; Courtesy Coordination of service; and Medical Information received	Ordinal scale	4 = Very Satisfied 3 = Satisfied 2 = Dissatisfied 1 = Very Dissatisfied

DATA ANALYSIS

In this study, the researcher divided the level of the perception about quality of care and satisfaction into 3 levels. The range of the scale was 1 to 4.

1.00-2.00 means the quality of care is low

2.01-3.00 means the quality of care is moderate

3.01-4.00 means the quality of care is high

This is the same for the satisfaction level.

DATA COLLECTION

1. Informed Consent and Confidentiality

Official letters were sent from the College of Public Health to Bangrouy Hospital and Bamrasnaradura Institute requesting their prior approval to conduct a survey in these two settings. Then, after the formal approval by the institute and hospital were received, the study was initiated with a brief for the participants fully assuring their confidentiality.

2. Validity and Reliability

After the literature was reviewed, the investigator developed all possible questions, which were needed for this study. Then, consulting with the thesis advisor and three experts carried out content validity.

Before the real data collection, pre-test was done with 30 patients at Bangrouy Hospital. This hospital was selected as it had comparable health care services to the real study site, Bamrasnaradura Institute.

Cronbach's alpha coefficient was applied to measure reliability (Internal Consistency). Cronbach's alpha coefficient is one of the most commonly used tools for measuring reliability (Coakes, 2001). The score of this reliability test for 21 items of quality of care was .88, and for the 45 items of the customer's satisfaction, the score was .93.

Statistical Analysis

After this data was collected, the next process was to do the data entry that involved the conversion of raw source material to a useable data file (Coakes, 2001), in a form of data analysis. The variables were defined and coded to facilitate cleaning by using the statistical package named SPSS 10.0. Then through analysis, interpretation of statistical results was done.

The statistical analysis of this study included;

1. Descriptive statistics were used to organize and describe the characteristics of data, such as the demographic characteristics.

2. Inferential statistic

Inferential statistics were used on summarized data to make inferences from a small group of data to a possibly larger one (Salkind, 2000). In this study, a Pearson Correlation Coefficient (r) correlated the association between quality of services and satisfaction. The computation of a simple correlation coefficient was applied to interpret how strong or weak the relationship was between the two variables.

The size of correlation coefficient was interpreted as follow (Salkind, 2000).

.8 to 1.0	means Very strong relationship
.6 to .8	means Strong relationship
.4 to .6	means Moderate relationship
.2 to .4	means Weak relationship
.0 to .2	means Weak or no relationship