

CHAPTER III

RESEARCH METHODOLOGY

1. Research Design

This is a cross-sectional descriptive research, which is to measure the level of quality of care and satisfaction of customers at In-patient department and find out the association of quality of service, accessibility to service and quality perception.

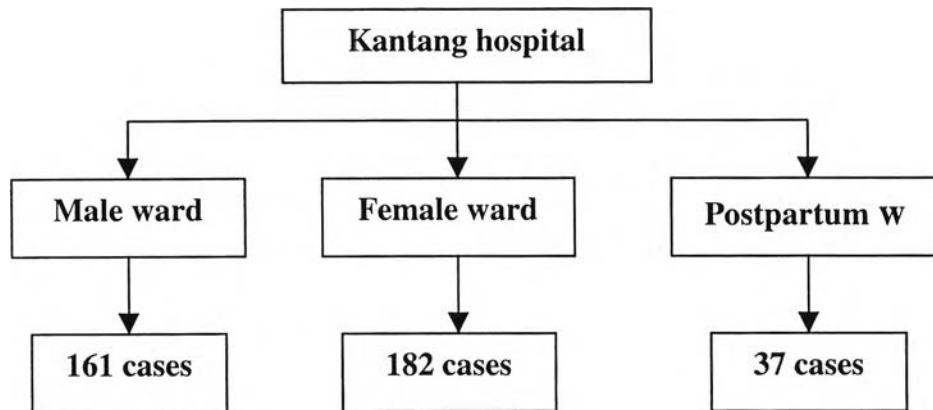
2. Setting and Time of Study

The research was conducted during daytime working from 8.30 am to 4.30 pm, on every Monday, Wednesday, and Friday, including Saturday and Sunday. It was carried out over a period of only a month and a half from June 15, 2003 to August 31, 2003. It was necessary to do this because while collecting data, researcher had to move to Trang hospital temporarily and could not come to Kantang hospital everyday.

3. Sampling and Sample Size

The target populations for this study were all patients who were admitted and discharged from June 15, 2003 to August 31, 2003. Sampled populations were patients who were discharged on each day from three wards, namely, female ward, male ward and postpartum ward of Inpatient department Kantang hospital. Stratified sampling was conducted to select cases. Every year, IPD provides the same kind of medical services for the patients as follow:

Purposive sampling



Stratified random sampling

Inclusion criteria

1. The customers or caretakers, 15 years and over, were taken as subjects because they can use their own judgment for decision-making and express their own opinions.
2. Both male and female customers were required.
3. Patients or caretakers who were just discharged and about to go home.
4. Willingness to participate.

Exclusion criteria

1. Patients who were discharged and referred to other hospitals.
2. Patients who were admitted by referral from other hospitals without OPD service system.
3. Those who were not willing to participate.

There are several approaches in determining the sample size. This is intimating a sample size of similar studies. This study will use applying formulas to calculate a sample size (Yamane, 1973: 725). Accordingly, the number of patients in IPD was 7,283 cases per year in 2002, statistic formula (Yamane) was used to calculate the sample size. The number of sample size is shown as follows.

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

n = the desire sample size

N = the estimated population

e = the level of precision of relative error
of estimation = 0.0025

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

$$n = \frac{7,283}{1 + (7,283 \times 0.0025)^2}$$

$$= 379 \text{ cases}$$

The 380 subjects were enrolled in this study. Accordingly, the number of patients last year was 3,479 cases in female ward, 3,079 cases in male ward, and 707 cases in postpartum ward. The proportion of sample size was allocated based on these data. The sample size of female ward was 182 subjects, male ward 161 subjects, and postpartum ward 37 subjects.

4. Research Instruments

1. Questionnaire constructions (comprises of 3 components) as shown in Table1.

Table 1: Questionnaire constructions

Section 1 Socio-demo Geographic	Section 2 Customer service perception and accessibility	Section 3 Customer service satisfaction
Ward, Bed, Sex, Age, Status, Occupation, Educational level, Income, Number of visit, Number of day stay in, Kind of privilege cards, Reason to select	<u>Perception</u> Physical environment Technical skill Art of care Explanation of care Continuity of care Outcome of care <u>Accessibility</u> Availability Accessibility Accommodation Acceptability	Convenience Co-ordination Courtesy of staff Medical information Quality of service

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

Question 1 – 5 on availability

Question 6 - 10 on accessibility

Question 11 - 15 on accommodation

Question 16 – 20 on acceptability

There are six parts concerning on quality of care in respect to customer perception with thirty questions in all, which as follows:

Question 1 – 5 on physical environment

Question 6 - 10 on technical skill

Question 11 - 15 on art of care

Question 16 – 20 on explanation of care

Question 21 – 25 on continuity of care

Question 26 – 30 on outcome of care

In section 3, There are six parts concerning on quality of care in respect to customer satisfaction. There are six parts concerning in respect to customer satisfaction with twenty-five questions in all, which are as follows:

Question 1 – 5 on convenience

Question 6 – 10 on co-ordination

Question 11 – 15 on courtesy of staff

Question 16 –20 on medical information

Question 21 – 25 on quality of service

Section 4 is on the recommendations or suggestions on the present service and associated problems that the customers faced.

Measurement Method (Designing the scale)

The measurement methods for each variable are follows:

Table 2: Measurement Method (Designing the scale)

Variable/ Name	Level	Value
A. Independent variable		
1. Socio-demographic Ward	Nominal scale	1 = Female ward 2 = Male ward 3 = Postpartum ward
Bed	Nominal scale	1 = Ordinary bed 2 = Extra bed
Sex	Nominal scale	1 = Male 2 = Female
Age	Ratio scale	In year
Status	Nominal scale	1 = Single, 2 = couple 3 = widow, 4 = separated
Occupational	Nominal scale	1 = Agriculture 2 = Employee 3 = Government officer / state enterprise 4 = Company employee 5 = Private business 6 = Housewife 7 = Other
Educational level	Ordinal scale	1 = Primary school and lower 2 = Secondary school 3 = Certificate/Diploma 4 = Bachelor degree and higher

Table 2: (Cont.) Measurement Method (Designing the scale)

Variable/ Name	Level	Value
Income	Ratio scale	Really Baht per month
Number of visit	Ordinal scale	1 = First time 2 = Two time 3 = Three time or more
Number of day stay	Ordinal scale	1 = 1 – 2 days 2 = 3 – 5 days 3 = 5 days or more
Patient's privilege card	Nominal scale	1 = Health assurance card (30 Baht pay) 2 = Health assurance card (30 Baht not pay) 3 = Social security card 4 = Traffic accident assurance 5 = government pay 6 = Other
Reason to select	Nominal scale	1 = Convenience to go 2 = Physician doctor 3 = Rapidly service 4 = Old Patient 5 = By suggestion 6 = Modern instrument 7 = Pay less 8 = Comfort place 9 = Select by employer 10 = Other

Table 2: (Cont.) Measurement Method (Designing the scale)

Variable/ Name	Level	Value
2. Customer accessibility of care, regarding: Available, Accessibility, Accommodation and Acceptability Outcome of care	Nominal Scale	1 = Yes, 2 = No
3. Customer perception of quality of service regarding: Availability, Technical skill, Art of care, Explanation of care	Nominal Scale	1 = Yes, 2 = No
B: Dependent variable Customer service satisfaction regarding: Convenience, Co-ordination, Courtesy, Medical information and Quality of service	Ordinal scale	4 = Very satisfied 3 = Satisfied 2 = Dissatisfied 1 = Very dissatisfied

5. Data Analysis

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

1.00 – 2.00	means the satisfaction is low
2.01 – 3.00	means the satisfaction is moderate
3.01 – 4.00	means the satisfaction is high

The level of accessibility to care and customer perception in quality of service into 3 levels. The range of the scale was 1 to 5.

0 – 1.66	means the accessibility to care and customer perception is low
1.67 – 3.33	means the accessibility to care and customer perception is moderate
3.34 – 5.00	means the accessibility to care and customer perception is high

6. Data Collection

1. 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 the validity.

Before the real data collection, pretest was done with 30 patients at Kantang hospital during June 1, 2003 to June 15, 2003. Cronbach's alpha coefficient was applied to measured reliability (Internal consistency). Cronbach's alpha coefficient is one of the most commonly used tools for measuring reliability (Coakes, 2001 cite in Bunjunt, 2003). The score of reliability test for 20 items of accessibility was .734, for the 30 items of customer perception service was .933 and for the 25 items of satisfaction was .942. It is a strong evidence of reliability and internal consistency.

7. 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 usable data file, 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 result was done.

The statistical analysis of this study include;

1. Descriptive statistics were used to organize and describe characteristics of data, such as the demographic characteristics.
2. Inferential statistics were used on summarized data to make inferences from a small group of data to a possible larger one (Salkind, 2000). In this study a Spearman's Rank Correlation Coefficient (r) was used to find association between accessibility, perception in quality of service and satisfaction. The computation of a sample correlation coefficient was applied to interpret how strong or weak between the relationship was three variables. The size of correlation coefficient was interpret 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