CHAPTER III

RESEARCH METHODOLOGY

RESEARCH DESIGN

The research design that was used in this thesis was cross-sectional explanatory research.

A cross-sectional explanatory survey was conducted among deferred blood donors to measure satisfaction of deferred blood donors with regard to the deferral system of the National Blood Center, and to therefore determine the relationship of deferred blood donor satisfaction with the deferral system of NBC. The survey was conducted during February 1 to February 29, 2004.

SAMPLE POPULATION AND SAMPLE SIZE

1. Sample population

Blood donors who were deferred from donation during regular working hours at NBC from February 1 to February 29, 2004.

2. Sample size

$$ n = \frac{N Z^2 p q}{d^2 (N-1) + Z^2 p q} = \frac{15,511(1.96)^2 \times 0.50 \times 0.50}{(0.05)^2 (15,511-1) + (1.96)^2 \times 0.50 \times 0.50} $$

$$ = 374.899 = \textbf{375 cases} $$

In order to ensure sufficient data, **397 cases** were selected as subjects in this study.

N = previous deferred blood donor (15,511 cases)

Z = the reliability coefficient at the 95% CI = 1.96

p = proportion of deferred blood donor satisfaction assumed 50% = 0.5

    (as it will give the maximum sample size)

q = 1-p = 0.5

d = absolute precision of difference = 0.05 or 5% (acceptable error)

n = sample size

SAMPLING TECHNIQUE

No sampling technique was used in this study. All deferred blood donors who came to donate blood during the working hours at NBC from February 1 to February 29, 2004 were included in this study.

INCLUSION CRITERIA

Participants must be deferred blood donors at NBC. Participants must be able to read and write Thai.

EXCLUSION CRITERIA

Not being able to read and write Thai.

LIMITATIONS

Although NBC, Thai Red Cross Society is the leader in collecting and supplying blood to patients in Thailand, there are other blood banks. This research study, however, was limited to the NBC's headquarters.

RESEARCH INSTRUMENTS

Questionnaire

A self-administered questionnaire was used to evaluate deferred blood donor satisfaction with the deferral process of the blood donor system at NBC, Thai Red Cross Society.

The questionnaire was separated into 5 sections:

-   Section 1: General data or socio-demographic data including age, gender, education, occupation, income and frequency of blood donation.

-   Section 2: Deferred blood donor perception of the deferral system

Question 1-6 focused on Place and Environment

Question 7-10 focused on Staff Competence

Question 11-16 focused on Staff Attention

-   Section 3: Deferred blood donor satisfaction with the blood donor deferral system.

-   Section 4: Opinions of deferred blood donors

-   Section 5: Recommendations of deferred blood donors

Research assistants included NBC staff who administered the questionnaire to the deferred blood donors. Before the data collection step, the research assistant received information about the objectives, sample, and sampling technique of the study from the researcher.

VARIABLE MEASUREMENT

Variable	Scale	Value
Age	Ratio	In years
Gender	Nominal	1 = male, 2 = female
Education	Nominal	1 = Others 2 = No Study 3 = Less than High school 4 = High school 5 = Certificate or Diploma 6 = Bachelor's degree 7 = Master's degree or higher
Occupation	Nominal	1 = Others 2 = Unemployed 3 = Student 4 = Company employee 5 = Self-employed 6 = Non-government officer 7 = Government officer
Personal Income (Baht per month)	Ordinal	1 = No Income 2 = <5,000 3 = 5,000-10,000 4 = 10,001-15,000 5 = 15,001-20,000 6 = 20,001-25,000 7 = 25,001-30,000 8 = >30,000
Number of Donation Time	Ordinal	1 = First time 2 = Second time 3 = Third time 4 = Forth time 5 = More than 4 times
Deferred Blood Donor Perception	Ordinal	1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree
Deferred Blood Donor Satisfaction	Ordinal	1 = Very low 2 = Low 3 = Moderate 4 = High 5 = Very high

DATA ANALYSIS

For data analysis: SPSS/PC+ program was used for analysis.

Descriptive statistics were used to evaluate and describe the general and socio-demographic data.

Perceptions of Deferred Blood Donors about services were presented in terms of Strongly agree, Agree, Disagree and Strongly disagree. Deferred blood donor satisfaction was divided into 5 categories: very low, low, moderate, high and very high.

Chi-square test was used to analyze the association between deferred blood donor socio-demographic characteristics and perceptions.

Chi-square test was used to analyze the association between deferred blood donor perception and satisfaction.

Content analysis and descriptive statistics were used for the recommendation section.

DATA COLLECTION

Reliability and Validity test

Before questionnaire based data collection began, 30 subjects from NBC, Thai Red Cross Society completed the questionnaire to test the quality and appropriation of the questionnaire instrument. Some questions were compared with a previous study of "Customer Satisfaction at National Blood Center" presented by (Viputsiri, 2004).

According to the proposal, the questionnaire pretest should have been conducted at Siriraj Hospital, Mahidol University, but different blood donor selection criteria at Siriraj Hospital Blood Bank may have lead to selection of a different target population.

In addition, the study was analyzed using content validity by the expert and reliability test of Cronbach's alpha coefficient. The score of the test of perception section was 0.91 and satisfaction was 0.92. The criteria for reliability test in this study must more than 0.60.

ETHICAL CONSIDERATIONS

Data from the study will only be collected from the questionnaire and observation. The results of the study will be presented in the view of the overall picture.

In order to clarify the objectives of the study, all participants were provided the informed consent form. The consent form consisted of a full description and explanation of the research, of confidentially, and voluntary participation.