

CHAPTER III

RESEARCH METHODOLOGY



1. Research Design

A hospital based Cross-sectional study design was carried out for the purpose of this study.

2. Study Site and Time

The study was conducted at the Regional Health Promotion Center 1, Bangkok, Thailand. This centre was previously called maternal and child hospital. The reason for selecting this centre was that it had a post-partum ward for delivered women. This centre also provides various health promotion and related services including counseling, pre- and post-natal care, delivery, breastfeeding promotion, infant and preschool care etc. This centre is also acting as in charge of providing comprehensive health promotion services as a demonstration of standard models and research purposes.

The data collection was carried out from January 20, 2003 to February 16, 2003. The detailed time frame is attached in Appendix A.

3. Study Population

All mothers who delivered baby recently at the Regional Health Promotion Center 1, Bangkok, Thailand, were the study populations.

4. Sampling and Sample Size

Every mother at the Regional Health Promotion Center 1, Bangkok, Thailand who had recently delivered baby was taken for the study. Average delivery rate per month

in this centre was about 150. Because of the limited time for the study, all possible respondents were included in the study.

The total sample size for one group data was calculated by using the following formula:

$$n = \frac{Z^2 pq}{d^2}$$

Here,

n = sample size

With Confident Interval 95%, $\alpha = 0.05$ and Z score = 1.96

p = proportion of pregnant women who were estimated to be completed four ANC visits. (In Thailand 80%)

q = percent of incomplete ANC rate (1-p)

d = relative error of estimation (here, it was taken 10% of 'p')

Therefore, using above formula:

$$n = \frac{(1.96)^2 (0.8)(0.2)}{(0.08)^2}$$

$$= (3.841 \times 0.16) / 0.0064$$

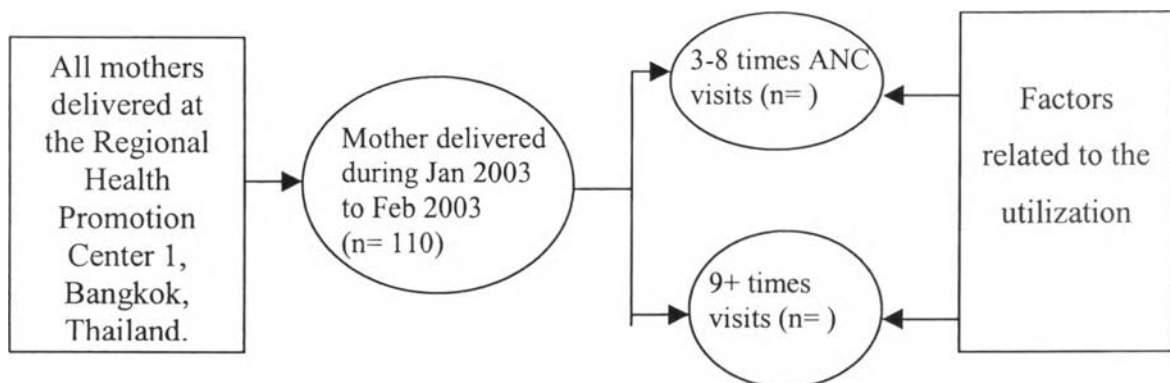
$$= 0.61456 / 0.0064$$

$$= 96.025$$

The sample size (after adding 10% from the above calculation) would be 106.

However, a total of 110 cases were interviewed during the study.

Figure 3 Flow chart of the research design



5. Inclusion criteria

Inclusion criteria for the sample of this study were as below:

- a) Mothers who recently delivered baby from January 2003 to February 2003;
- b) Mothers who had a normal pregnancy. The antenatal care card was used to identify the normal pregnancy; and
- c) All mothers who were willing to co-operate in the study.

6. Research Instruments

Data collected by administering a structured set of questionnaire, which was comprised of 4 parts, as follows:

1. General characteristics: To measure variables in this category 17 questions were asked and measured them as categorical outcomes.

2. Social support, satisfaction, and status of pregnancy: There were six questions to measure social support. Two questions were for status of pregnancy and it was measured as nominal level, "planned" and "unplanned". Likewise, there were 8 statements for measuring satisfaction with antenatal clinic. Three scales- satisfied, neither satisfied nor dissatisfied, and dissatisfied were used to measure it.

3. Knowledge about pregnancy and ANC: To assess knowledge, 14 items on true-false scale was used. It was measure as high knowledge (> 80% correct answers), moderate knowledge (60-80% correct answers), and poor knowledge (<60% correct answers)

4. Attitudes toward pregnancy and ANC: Likert scale using 1-5 rating was used to measure attitudes. There were 14 items with 9 positively and 5 negatively worded statements of attitudes to assess this variable. 1-3-5 standard score based on the scaling were used to categorize respondents' attitudes into three groups. If the score was ranged from 1 to 2.74, it was considered as negative attitudes. If the score was between 2.75 to 3.25, it was considered as neutral attitudes. Likewise, if the score was more than 3.26, was considered as positive attitudes.

7. Reliability and Validity

A questionnaire pre-testing was done to ensure the reliability of the instrument with 30 mothers who attended the antenatal clinic at Burasnaradura Hospital, Nonthaburi, Thailand. Combach's alpha method was used to measure reliability (internal consistency). The reliability was 7.87. Research advisor and subject expert checked the content and construct validity of the instruments. The questionnaire was revised again before preparing the final version.

8. Data Collection

After carefully translated into Thai language and pre-testing it, interview was taken place at the center. Four nurses at the technical department of the center were trained about interview with the help of the directors of the center. The trained interviewer

administered survey questionnaires to 110 interviewee. The sample questionnaires both in English and Thai version are attached in Appendix D and E.

9. Data Analysis

The collected data were cleaned, and coded before analysis. The computer software SPSS 10.0 was used to analyze data. Frequency, mean, mode, median, range, average, percentage, standard deviation was calculated for the descriptive part of the study. Chi-square and spearman's rho correlation tests were also performed to find out the differences and to test the relationship between variables.

10. Ethical Considerations

As this study involved mothers in interview, all the participants would have a right to accept or reject to be a subject in this study. All the activities were carried out after getting a verbal consent from the participants. The proposal committee also reviewed the ethical aspect of the study.

11. Expectations

The research have had the following expectations:

1. The result of this study would be helpful for public health authorities, health personnel and other concerned in understanding the factors related to the utilization of antenatal care.
2. It was also expected to be helpful in pattern designing and/or improving health education and health promotion program to enhance maternal health.

3. This study would be helpful in gaining theoretical and practical knowledge and experience on research methodology; developing knowledge on health services utilization and maternal health.
4. Although the situation of Nepal is different than Thailand, the study would be a good reference for research fellows and other concerned in Nepal.

12. Limitations

There were some limitations in this study, as follows:

- 1. Time:** The study had to be finished within a limited time given by the curriculum. Because of this constraint, the study was designed taking only 110 mothers who came to deliver at the Regional Health Promotion Center 1, Bangkok, Thailand.
- 2. Changes in knowledge:** The post-partum mothers were asked about their recent pregnancy. Since this was retrospective, the chance of changes on knowledge and attitude was very high. Mother might have gained a new knowledge during her stay in the hospital.
- 3. Generalization:** Since the study was conducted taking only a small sample size and focusing on only one hospital, it may not represent all pregnant women in Bangkok.
- 4. The study:** To achieve the objectives of this study a case-control design of study would be the best design to be used, but because of the time constraints, a cross-sectional study was conducted.
- 5. Variables:** There are many other independent variables, but the variables taken for this study are the mostly stated variables in literatures. Therefore, the result of this study may not be complete in understanding the factors related to the utilization of antenatal care. Furthermore, the outcome of antenatal visit was also not studied.