

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This research employed the quasi-experimental study design with two comparable groups: study group and control group. The group that is implemented with participatory learning program is so called study group while group under went the routine learning technique is the control group. The study is aimed to elucidate the results of participatory learning program that had been implemented to promote breastfeeding for pregnant women and supporters. The research followed all of four components of participatory learning, i.e., 1) Experience 2) Reflection and Discussion 3) Understanding and Conceptualization 4) Experiment/ Application to mothers and family supporters.

3.2 Conceptual Framework of Research Design

Research design

Control group (C) -----X₁----- O₁ ----- O₅

Study group (S) -----X₁+ X₂----- O₁ ---- O₂--- O₃ ----O₄----- O₅

C = Control Group

S = Study Group

O₁ = Home visit, Data Collection 1-2 weeks postpartum.

O₂ = Home visit , Data Collection 1 months postpartum.

O₃ = Home visit , Data Collection 2 months postpartum.

O₄ = Home visit , Data Collection 3 months postpartum

O₅ = Home visit , Data Collection 4 months postpartum

X₁ = Routine breastfeeding education for the control group

X₂ = Experimented breastfeeding education that uses participatory learning for study group

3.3 Descriptions of Intervention

This study applied the method of participatory learning to increase breastfeeding rate in study group mothers and supporters from 36 weeks of gestation until 4 months postpartum by home visit approach which can be described in details as follow.

3.3.1 Team preparation for project execution: The team members were health officers in charged of maternity and children of health service center in Nayong district, Trang province. The team composed of two nurses and five health educators. They attended the seminar which the lecturer provided the knowledge and understanding of participatory learning, so that they could implement this method in health education for the study group. The two-day seminar was held at meeting room located on the second floor of provincial health office in Trang Province. The details of team preparation are as follows.

Explain seminar's purpose, its method and all activities for implementation, which included developing the participatory learning program for breastfeeding promotion in the study group. The instrument for intervention which was designed, in accordance with the teaching plan by the team members, can be described as below.

- 1) Study scheme with participatory learning approach that emphasized on the values/benefits of breastfeeding and promoting exclusive breastfeeding including the significance of supporters (as illustrated in Appendix 4.)
- 2) Study scheme with participatory learning approach that emphasized on risk factors/ possible diseases in mothers and baby not nursed by breast milk. (as illustrated in Appendix 4.)
- 3) Study scheme with participatory learning approach that emphasized on lactation, breast-milk sustention, solutions of breastfeeding problems including preparation when mothers have to get return to work. (as illustrated in Appendix 4.)
- 4) Study scheme with participatory learning approach that emphasized on promoting of breastfeeding guidance (as illustrated in Appendix 4.)

3.3.2 Training on Participatory Learning: it can be described by the learning process of participatory learning as follows.

The project team composed of the researcher and health care officer who were responsible for maternity and child at health service center, 9 people in total. They educated the study group, mothers and supporters who voluntarily joined the

participatory learning program about breastfeeding. They were interested and intended to initiate exclusive breastfeeding and continue it at least 4 months. They agreed to participate in all activities provided for the whole course, as predefined in the teaching plan. The women were grouped into 6-8 people each according to their living area at which health service center was located. Health Education was given through the participatory learning program every Thursday while they came to received the antenatal care for four times in one month, 2 hours at one time. The program was set to cover all of four components of participatory learning according to program designed as already described in 3.3.1

Activities implemented in the participatory learning were as followings.

- Get acquaintance within the group using activities and game such as Frisbee to connect and build the rapport and good relationship among the group.
- Explain the purpose of participatory learning to the study group, and guide them through the curriculum.
- Carry out the activities according to the implemented plan which emphasized on participatory learning process. The activities were held to exchange experiences of mothers and family supporters, in order, to demonstrate the successful role model of breastfeeding, the benefit compared between breastfeeding and formula-feeding, value breastfeeding provides to mothers, infants and family, diseases and complication caused from not breastfeeding. Moreover, the mother and supporters participated to share the idea for breastfeeding support

guideline and practiced a child carrying, as well as, how to solve the problem arose from breastfeeding, such as, insufficient breast milk, breast engorgement, cracked nipples, cleansing breast preparation for expressing milk, cup feeding, according to implemented plan in course study. (Appendix 4)

3.3.3 Home Visit

Home visit was carried out by the researcher and the other team members after the participatory learning program which was implemented in July, 2004. For each visit, the researcher addressed the problems and obstacles concerning breastfeeding which could not be solved by the postpartum mother and supporters. The first visit was done at 1-2 weeks postpartum to evaluate the problem arise from breastfeeding, followed by monthly visit until four months postpartum. During each home visit, the researcher collected both quantitative and qualitative data by means of questionnaire, in-depth interview and observation. (as illustrated in Appendix 2.)

3.4 Study Population and Sample

Study Population was pregnant women and supports in Nayong and Wangvisate districts, Trang Province.

Sample in this study can be categorized into two groups as follows:

Study group was the group of 60 pregnant women at 36 weeks of gestation receiving prenatal services between June-July 2004 and due for delivery in July-August

2004 at Nayong Hospital, plus 60 supporters who had been chosen by those pregnant women.

Control group was purposively sampled in a district similar to the study district, which was Wangwisate district, Trang province. In short, the control group was also pregnant women at 36 weeks of gestation that gave birth in July-August of 2004.

3.5 Data Collection

3.5.1 Data collection Instrument

3.5.1.1 Instrument for Quantitative Data collection was questionnaire.

The entire instrument has been developed by the researcher. It was prepared by compiling the related literature and reviews pertinent with the subject. The researcher finalized the instrument for data gathering which consisting of the script to interview the general data of mothers and supports as follows.

- 1) General data of mother include ages, occupation, income, educational level, marital status, number of family's member, and parity at enrollment. The researcher had gathered such data through the questionnaire (Appendix 2)
- 2) General data of supporters include gender, age, marital status, occupation and education, monthly income. Data was gathered through questionnaire method. (Appendix 2)
- 3) Data about knowledge and understanding concerning breastfeeding. The kind of data was gathered by conducting the interview with the objective

test. The samples required to choose between two options, yes or no.

The questions covered the following topics.

- The benefits of breastfeeding, 4 questions (1st - 4th)
- Breastfeeding practice, 13 questions (5th - 17th)

The scores were given as follows

The question with “yes” answer, if the sample group answer “ yes” 1 point

The question with “yes” answer, if the sample group answer “no” 0 point

The question with “no” answer, if the sample group answer “no” 1 point

The question with “no” answer, if the sample group answer “yes” 0 point

The question with “yes” answer, if the sample group answer “do not know”
0 point

The question with “no” answer, if the sample group answer “do not know”
0 point

Score meanings were applied from the study of Pattra NiKommanon (1992) which can be summarized as follow.

14-17 points indicate the knowledge and understanding of breastfeeding at good level.

10-13 points indicate the knowledge and understanding of breastfeeding at fair level.

Below 10 points indicate the knowledge and understanding of breastfeeding at developing level.

- 4) Data concerning the support of supporters had been gathered by conducting the interview with the supporters. (Appendix 2.)

Create breastfeeding interview script which includes only positive messages, 16 questions. The score measurement is rating scale as follow.

All true: interviewee agrees with the statement the most.

Mostly true: interviewee agrees with the statement almost all of it.

Half true: interviewee agrees with the statement only half of it.

Partial true: interviewee agrees with the statement only a little.

False: interviewee disagree with all of the statement.

Each interview question is an open ended with five choices. Interviewee required answering only one. Score measurements are as follow.

All True	5 points
Mostly true	4 points
Half true	3 points
Partial true	2 points
False	1 points

The researcher read the score from breastfeeding support interview with five level, using average score to indicate levels as follow.

Average score 4.50 - 5.00: indicate the most supportive level for breastfeeding

Average score 3.50 - 4.50: indicate good level of support for breastfeeding

Average score 2.50 - 3.49: indicate fair level of support for breastfeeding.

Average score 1.50 - 2.49: indicate poor level of support for breastfeeding.

Average score 1.00 - 1.49: indicate the least supportive level for breastfeeding

- 5) Record duration and the pattern of breastfeeding by mothers every month for four months. The questionnaires applied from the guidebook of baby nursing of Dietetics section, Health department of Ministry of Public Health (infant age between 0-4 months). The interviewee was subjected to answer the multiple choices and fill out the given form.
- 6) The interview included information about channel of distribution of sample of formula milk to the mother and the health care officers.

3.5.1.2 Qualitative Data collection Instrument

Qualitative collection employed an in-depth interview and observation in respects of mothers and family's supporter's behavior for child nursing. The detail of interview script and data collecting form may be found in Appendix 2. The data was gathered through in-depth interview and observation from July-August 2004, during the first four months postpartum. The data reflected the overview of the study. This study was aimed to understand the participatory learning method for mothers and supports in respect of breastfeeding initiation and continuing exclusive breastfeeding for their child. Therefore, the study required certain amount of time for in-depth interview and observation which not only needed to build the relationship between mothers and supporters, but also to study the factors that affect the exclusive breastfeeding at least

four month postpartum. The researcher implemented the following approaches to gather data:

- 1) Observation : the researcher conducted the non-participation observation through home visit. During the first four month, the postpartum mothers were visited on a monthly basis. The observation adopted the principle of Lofland (1971): cite in Nisa Chooto, 1999) with six points as follows.
 - 1.1 Acts: The researcher observed mother's behavior while breastfeeding, soothing their babies.
 - 1.2 Activities: The researcher observed sample distribution of formula, the activities that reflected the relationship of related parties as well as the process and pattern of a baby raising.
 - 1.3 Meaning: The researcher observed and analyzed the meaning underlying activities or speech from the group samples. For instance, the activities of participatory learning that guided family's supporter to help breastfeed a child, obstacles and problems occurring while breastfeeding with the solutions, and how to nurse a child constantly by breastfeeding were observed.
 - 1.4 Participation: The researcher observed the participation behavior while conducting the interview.
 - 1.5 Relationship: The researcher observed the relationship between mothers and family's supporter that functions to support breastfeeding.
 - 1.6 Settings: The researcher observed the pattern of everything in the field that can use as an analysis unit. For example, the house

features, environments that support breastfeeding such as milk squeezer, equipment for formula mixing, concept and role model of breastfeeding including community's norm of breastfeeding.

- 2) In-depth Interview: researcher gathered data from various groups with different status. In-depth interview was conducted so as to receive the most accurate data from the interviewee. The interview was conducted, in such a way, to cultivate the relationship to have interviewee to feel at ease and comfortable. This will help the interviewee feel confident and agree to reveal the data as much as possible. The in-depth interview went smoothly as the interviewee feel familiar with the researcher from the starting point of four-month period participatory learning process. And with the interviewee's kind cooperation, the data was naturally provided.

Summary of the field data collection in one mother.

In-depth Interview	4 times.
Observation	4 times.
Questionnaire response	2 times.

Table 3.1: Details of the field data collection, categorized by interview group and interview procedures.

Interview Groups / Interview Procedure	In-depth Interview (times)	Observation (times)
Mother	4	4
Supporter	4	4
Total	8	8

3.5.2 Data Collection Period

Data collection took place during the process of participatory learning by conducting a general interview and in-depth interview. Period of data collection started from 36 weeks of gestation to 16 weeks postpartum. The approach was home visit and checking up with those children vaccinated at Well Baby clinic. The detail of home visit may be illustrated in Figure 3.1.

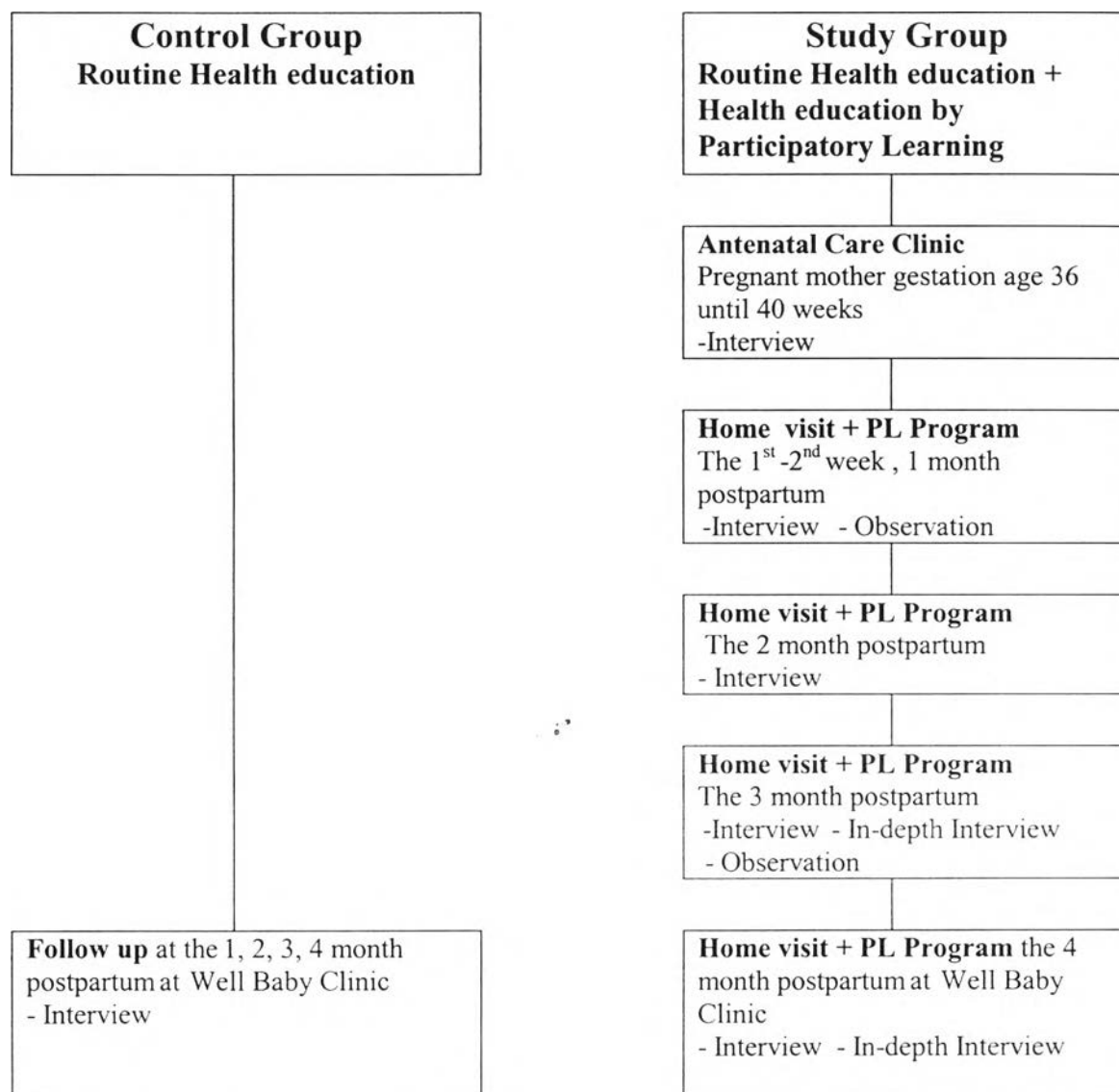


Figure 3.1 : Period of Data Collection

3.5.3 Data Analysis

Data analysis consisted of quantitative and qualitative data analysis which can be detailed as follows:

3.5.3.1 Quantitative Data Analysis

The researcher analyzed the compiled data by using SPSS for Windows. (Statistical Package for the social sciences for Windows)

1. Compare the family's supportive level of breastfeeding between control group and study group after participatory learning given with home visit approach at month 1,2, 3 and 4, using average score and standard deviation.
2. Compare the duration of lactation and pattern of milk between control and study group, by running the test on various groups, and calculated by Chi-square test statistic with statistically significant at .05.
3. Logistic Regress Analysis was used to determine the relationship amongst dependent and independent variables, which were measured by Dichotomous Scale.

Dependent Variable was the rate of exclusive breastfeeding for at least 4-month period.

Independent Variable included educational level, age, income, parity at enrollment, Occupation, participatory learning program and supporting

3.5.3.2 Qualitative Data Analysis

The approaches were as follows.

The compiled data was put through the process of data reduction, data correction and data analysis. These three processes were carried out along with the data collection. And finally the analyzed data was prepared for research writing as follows.

1) Data Analysis

After completing the full field note on a daily basis, the researcher reviewed and highlighted interesting and relevant materials to the study subject. With the subject written to categorize the materials, researcher wrote relevant material on cards, i.e., supporting factors, obstacles from breastfeeding, and the solutions. The researcher would at times find the opinion and summary point and put them aside as a remark of cards. The researcher also arranged the data as a group file so as to be convenient for searching purpose as well as for data revision.

2) Data Validation

Data validation for qualitative analysis was to obtain the valid and reliable data needed for triangulation: time source, location source and personal source from key informant by inquiry, observation behaviors as well as interaction of community.

2.1 Time source validation: the researcher interviewed and observed the same subject, but at different time. For instance, interview of case studies that support breastfeeding; all cases confirmed the supportive level for breastfeeding.

2.2 Location source validation: the researcher interviewed and observed the same subject, but different locations. For instance, interview of case studies that family supporters provided help for breastfeeding; all cases confirmed the supportive level from family supporters.

The methods of data analysis in this study may be summarized as follows :

- 1) Analytic Induction was conducted by examining and summarizing data from compiled field note. The researcher started to analyze the data, looking for point summary, similarity, dissimilarity, which could be found in temporary hypothesis patterns. Then the researcher would collect data as evidences, which can lead to find the summary points from minor to major ones.
- 2) Data categorization classified by action and activity relation. The pattern of activity participation: how it happens? What and the effects to situation, activities and relationship? Such action and activity relationship can be examined from observation and interview data, then proof such data for conclusion and finally present it in a lecture format.
- 3) Analyze the results from general information, information classification and analytic induction to find the relation of experiences, explanation and conclusions.

Data presentation for this qualitative study began with recording all summary points that obtained from observation and interview in order to create an overview situation from small details which determined as an inductive approach. This was followed by writing a report description and analytical description style. Researcher was required to analyze the aligning purpose and supportive factors for breastfeeding supports and to indicate the supportive factors for both the breastfeeding supports and obstacles.