CHAPTER III

RESEARCH METHODOLOGY

Research Design

The research was a cross-sectional descriptive study whereby the data were collected by interview. It was aimed to study the prevalence of acute infantile diarrhea and related factors in municipal communities of Thungsong District, Nakhon Si Thammarat Province.

Study Population The population of the study were 245 children under 1 year of age and care givers in municipal communities of Thungsong District, Nakhon Si Thammarat Province.

Samples The studied sample were composed of 245 children under 1 year of age and care givers in municipal communities of Thungsong District, Nakhon Si Thammarat Province. No sampling procedure was used.

Research Instruments

The research instruments used was the questionnaire developed by the researcher through the study of literature and researches concerning factors relating acute infantile diarrhea. Questionnaire was composed of 2 parts as follows:

Part 1 Information about acute infantile diarrhea

Part 2 Factors related to acute infantile diarrhea

2.1 : General information of care - givers

2.2 : General information of the children under one year of age

2.3 : Enabling factors regarding environmental sanitation

2.4 : Knowledge regarding diarrhea of care - givers

2.5 : Attitudes toward diarrhea of care - givers

2.6 : Reinforcing factors

2.7 : Diarrhea preventive behaviors of care – givers

Measurement and Scoring System

1. Information about acute infantile diarrhea

1.1 Prevalence rate of acute infantile diarrhea refers to the number of infants with acute diarrhea both the old and new cases in the studied period. (3 months)

$$\text{Prevalence Rate of acute infantile} = \frac{\text{Number of infants with acute diarrhea, old and new cases}}{\text{Total of number of infants with in the period of 3 month}} \times 100$$

1.2 The average episode of diarrhea refers to the average of occurrence of acute infantile diarrhea with in the period of 3 months

$$\text{The average of episodes of acute diarrhea} = \frac{\text{Total number of occurrence of acute infantile diarrhea}}{\text{Total number of infants with acute diarrhea}}$$

= number of episodes/child/3 months

2. Fctors related to acute infantile diarrhea

2.1 Enabling factors regarding environmental sanitation

2.1.1 Density of Houseflies (Chart Kasornkul, 1990)

High Density = There were 3 houseflies / 4 Ft. ^{2} Within 1 minute

Moderate density = There were 1-2 houseflien/4 Ft.^{2} within 1 minute

No Housefly = No housefly was found

2.1.2 Drinking Water (Chart Kasornkul, 1990)

Clean Drinking water = Rain water, Tap water, bottled water, other kinds of water which is process by a water filter or boiling for 10-15 minutes

Unclean Drinking Water = Well water, which is processively treated through a water fitter or boiling for 10-15 minutes

2.1.3 Garbage Disposal (Chart Kasornkul, 1990)

Correct Disposal = Waste bin with the cover was available for garbage and was disposed by burning on burying or taken by the sanitary workers.

Incorrect Disposal = Waste bin with the cover was available for garbage and was disposed by throwing in the river, canal or having a waste bin without the cover.

2.1.4 Sewage Disposal(Chart Kasornkul ,1990)

Correct = Having good drainage systems/public server

Incorrect = Throwing near the house or in to the river

2.1.5 Eradication or control of houseflies (Chart Kasornkul ,1990)

Correct = The constant eradication and control of houseflies is to apply chemicals and traps or glue.

Incorrect = No eradication and control of houseflies or no constant eradication and control of houseflies.

3. Knowledge regarding diarrhea of care - givers

There were all together 17 questions, composed of 4 aspects : causes of diarrhea (6 questions) ; signs and Symptoms (4 questions) ; prevention (5 questions) ; and treatment (2 questions) ; the score of 1 was assigned for the correct answer and 0 (zero) was assigned for incorrect or "don't know" answer. Summing up the score of each aspect and compared with the evaluation criteria (Bunthan Kijpreedaborisut, 2003) for grouping the level of knowledge, as follows :

Cause of Diarrhea : Score range = 0-6

Percentage / Score	Knowledge Level
80-100 (5-6)	High
60-79 (4)	Moderate
0-59 (0-3)	Low

Signs & Symptoms Score range = 0-4

Percentage/Score	Knowledge Level
80-100 (4)	High
60-79 (3)	Moderate
0-59 (0-2)	Low

Prevention Score range = 0-5

Percentage/Score	Knowledge Level
80-100 (4-5)	High
60-79 (3)	Moderate
0-59 (0-2)	Low

Treatment Score range = 0-2

Percentage/Score	Knowledge Level
80-100 (2)	High
0-59 (0-1)	Low

Total Score range = 0-17

Percentage/Score	Knowledge Level
80-100 (14-17)	High
60-79 (11-13)	Moderate
0-59 (0-10)	Low

4. Attitudes toward diarrhea of care - givers

This part was consisted of 10 statements, The scoring system was as follows:

Positive Statement	
Agree	2
Uncertain	1
Disagree	0
Positive Statement	
Agree	0
Uncertain	1
Disagree	2

The total of each individual was 0-20, converted the score to percentage and compared the percentage with the evaluation criteria (Buntham Kijpreedaborisut, 2003), for classifying the level of attitudes, as follows:

Percentage/Score	**Attitude level**
80-100 (16-20)	Positive
60-79 (12-15)	Neutral
0-59 (0-11)	Negative

5. Diarrhea preventive behaviors of care – givers

This part was composed of 13 questions regarding types of milk fed the child: breast-feeding (3 questions), bottle-feeding (4 questions), breast-feeding and bottle-feeding (6 questions). The score of 1 was assigned for the correct answer and 0 (zero) was assigned for the incorrect answer. The scores of each part were summed up and

compared with the evaluation criteria (Bunthum Kijpreedaborisut, 2003), for classifying the preventive behavior as follows:

Child with breast – feeding Score range = 0-3

Percentage/Score	**Preventive behaviors level**
80-100 (3)	Good
60-79 (2)	Fair
0-59 (0-1)	Poor

Child with bottle – feeding Score range = 0-4

Percentage/Score	**Preventive behaviors level**
80-100 (4)	Good
60-79 (3)	Fair
0-59 (0-2)	Poor

Child with Breast – feeding and Bottle-feeding Score range = 0-6

Percentage/Score	**Preventive behaviors level**
80-100 (6)	Good
60-79 (4-5)	Fair
0-59 (0-3)	Poor
Total Score range = 0-13	
80-100 (10-13)	Good
60-79 (8-9)	Fair
0-59 (0-7)	Poor

Instrument Quality

Validity. Structural and content validity were checked by three experts for the appropriateness and relevance of the questions developed and the research conceptual framework including the appropriateness and clarity of the language used, Revision has been followed. For reliability, the revised interviewing schedule was then tried out with 30 care-givers of children under 1 year of age in municipal area of Nabon Districts. Reliability was computed by using Kruder-Richardson formula for knowledge and behavior parts of the instrument, the reliability value was 0.82. For attitudinal part, Cronbach's Coefficient Alpha was employed and reliability value was 0.86.

Data Collection

The data were collected through the following steps:

1. Preparing the research instruments
2. Training the research assistants
3. Coordinating with the public health personal of the primary care unit of Pagprag Subdistrict in order to review the Family Recording Form.
4. Interviewing the sample by the researcher and the research assistants with the questionnaire. The data were collected during 1-31 July, 2003.
5. Checking the completeness of the data

Data Analysis

The data were analyzed by using a programmed computer, as follows :

1. Use descriptive statistics: frequency, percentage, arithmetic means, and standard deviation, to describe the data.
2. Use interference statistics: Chi- square to test relationship between variable.