

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

The present study was a cross-sectional descriptive survey.

3.2 Population and Sample

The population of the study was village health volunteers in Thung Song District, Nakhon Si Thammarat Province. The sample size was calculated according to the following formula:

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

When n = sample size

p = perception of village health volunteers, set at 0.75
(Pavinee Pangsatra 1980)

q = $1 - 0.75 = 0.25$

d = random error, set at 0.05

Z = 1.96, based on the table it was equal to 1.96

$$\text{Thus, } n = \frac{(1.96)^2 \times 0.75 \times 0.25}{(0.05)^2}$$

$$= 320$$

In sample selection, the villages were classified into two categories according to the prevalence rate of dengue hemorrhagic fever during 2000 – 2002. That is, there were 85 villages which were considered high-risk areas—having more than 50 patients with dengue hemorrhagic fever per 100,000 villagers, and there were 23 villages which were considered low-risk areas—having fewer than 50 patients with dengue hemorrhagic fever per 100,000 villagers. Stratified random sampling technique was then used to select the sample with the proportion to size of 320/1,288 (21 villages from the high-risk areas and eight villages from the low-risk areas). All village health volunteers in the selected villages were then recruited, totaling 392 subjects (Figure 2). Of the 392 questionnaires distributed, 335 were returned, accounting for 85.5%.

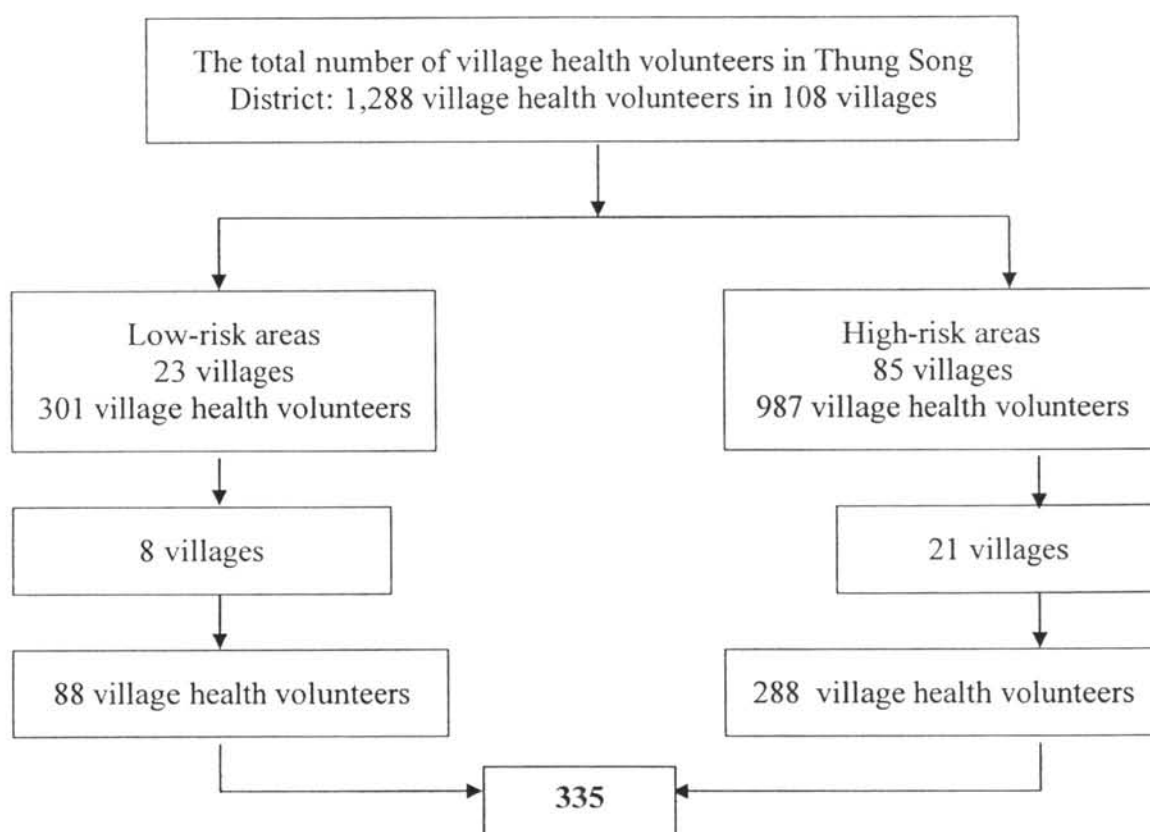


Figure 2: Sampling scheme

3.3 Instrument

The instrument used in this study was a questionnaire constructed by the researcher based on an extensive review of literature and related research. The questionnaire consisted of the following four parts:

Part I elicited information regarding demographic characteristics of the village health volunteers including gender, age, marital status, educational background, occupation, income, duration of being village health volunteers, other positions in the community, training on dengue hemorrhagic fever, personal history of dengue hemorrhagic fever, history of dengue hemorrhagic fever in the family, as well as demographic characteristics of the village.

Part II was a role perceptions regarding prevention and control of dengue hemorrhagic fever questionnaire which was further divided into four aspects:

- 1) Cooperation in the community: 7 items
- 2) Dissemination of information: 8 items
- 3) Destruction of breeding grounds of *Aedes aegypti*: 6 items
- 4) Monitoring and assessment of performance: 10 items

The total number of items was 31. One point was given to the correct answers, while no point was given if the answers were incorrect. As for the interpretation of scoring, the role perceptions of village health volunteers were categorized into three levels as follows:

- 80 – 100% = a good level of perceptions
- 60 – 79% = a fair level of perceptions
- 0-59 % = a poor level of perceptions

Part III elicited information regarding role performances of village health volunteers in preventing and controlling dengue hemorrhagic fever. It was divided into four parts as follows:

- 1) Cooperation in the community: 7 items
- 2) Dissemination of information: 8 items
- 3) Destruction of breeding grounds of *Aedes aegypti*: 6 items
- 4) Monitoring and assessment of performance: 10 items

The total number of items was 31. The responses to these items indicated the frequency of role performances as follows:

Regular practice	=	5 – 7 days/week	=	2 points
Occasional practice	=	1 – 4 days/week	=	1 point
No practice	=	0 day/week	=	0 point

As for the interpretation of scoring, the role performances of village health volunteers were categorized into three levels as follows:

- 80 – 100% = a good level of role performances
- 60 – 79% = a fair level of role performances
- 0-59% = a poor level of role performances

Part IV was composed of open-ended questions which elicited information regarding problems and obstacles experienced by village health volunteers in preventing and controlling dengue hemorrhagic fever.

3.4 Validation of the Instrument

Content validity

The questionnaire was examined by a panel of experts to ensure content validity and language appropriateness. The questionnaire was revised based on the experts' comments and suggestions.

Reliability

The researcher tried out the revised questionnaire with 30 subjects who had similar characteristics to the subjects of the main study. Cronbach's coefficient of the role perceptions questionnaire was 0.87, and that of the role performances was 0.88.

3.5 Data Collection

Data collection proceeded in the following sequence:

1. Permission was sought from the District Public Health Office. A letter was submitted to the head of public health offices in Thong Song District to ask for cooperation in data collection.
2. The head of public health offices was approached and the researcher attended the monthly meetings of each of the offices to explain the data collection process to the village health volunteers.
3. The researcher collected the completed questionnaires from all public health service stations where the village health volunteer subjects worked, checked the completeness of the questionnaires, and prepared the questionnaires for subsequent data analysis.

3.6 Data Analysis

The SPSS computer program was used to analyze the collected data, with the level of significance set at 0.05. The statistics used in data analysis were as follows:

1. Frequency distribution and percentage were used to analyze the demographic characteristics of the subjects.
2. Mean scores of role perceptions and role performances regarding prevention and control of dengue hemorrhagic fever were calculated.
3. Percentage was calculated to determine the levels of role perceptions and role performances regarding prevention and control of dengue hemorrhagic fever.
4. A comparison was made between village health volunteers' role perceptions regarding prevention and control of dengue hemorrhagic fever and different study variables including gender, age, marital status, educational background, occupation, income, duration of being village health volunteers, other positions in the community, training on dengue hemorrhagic fever, personal history of dengue hemorrhagic fever, history of dengue hemorrhagic fever in the family, as well as demographic characteristics of the village using Chi-square test
5. Pearson's product moment correlation coefficient was employed to determine the relationships between role perceptions and role performances regarding prevention and control of dengue hemorrhagic fever.