CHAPTER III

METHODOLOGY

3.1 Research type

This study is a survey research. It is divided as follows:

1. Evaluation of coverage, continuation, problems and difficulties of project implementation among students, also of knowledge, attitudes and performances of their DHF prevention and control. This type of study was latitudinal prospective study form a specific of time.

2. Evaluation of *Aedes* aegypti's larva prevalence in water storage containers. It was a Longitudinal prospective study. It was conducted in primary schools, in Klongthom Nuea Sub-district, Klongthom District, Krabi province.

3.2 Research frame

Three public primary schools where "Youth Empowerment Against Dengue Haemorrhagic Fever Project" was conducted, in Klongthom Nuea Sub-district, Klong thom District, Krabi province.

3.3 Population

The researcher selected 3 schools from 43 schools, by purposive sampling of schools which situated in Klongthom Nuea Sub-district, also these selected schools were under the responsible of Klongthom District Health Office. The data were

collected among all students of grade 3rd -6th. These students were the population who implemented "Youth Empowerment Against Dengue Haemorrhagic Fever". The total number of sample was 300 students.

Sampling selection and sampling size were as follows:

1. Purposive selection of grade 3rd -6th there were 16 teachers who were participated in the DHF prevention and control project.
2. All students of grade 3rd -6th who were participated in the DHF prevention and control projects. Details were as follows:
    a. 74 students from grade 3rd
    b. 75 students from grade 4th
    c. 80 students from grade 5th
    d. 71 students from grade 6th

    Total was 300 students

3.4 Time frame

The period for collecting data was presented in details as follows:

1. Teachers and students; October-December 2005
2. Surveillance of *Aedes* aegypti larvae prevalence in water storage containers; data were collected in 3 schools, during June-December 2005, once every week The total number of survey activities were 21 times

3.5 Research Instruments:

1. Teacher Questionnaire, called "Questionnaire No.1". It was composed of coverage, continuation and problems and difficulty of the project implementation which was divided into 3 parts as follows:

   Part I: Demographic data, i.e., gender, age, marital status, level of education, working experiences, current position, income and general information of the project.

   Part II: The coverage, continuation and performance

   Part III: Comments and problems and difficulties.

2. Student questionnaire or "Questionnaire No.2". It was composed of knowledge, attitudes and performances of DHF prevention and control.

Questionnaire no.3, was surveillance form. It was designed to survey the prevalence of *Aedes* aegypti's larva in water storage containers at schools. The survey was conducted every week.

3. In-depth interviewed form: This was for health officials who were responsible for DHF prevention and control at health centers.
4. The summarize report of larva surveillance that was used in the "Youth Empowerment Against Dengue Haemorrhagic Fever Project"

For questionnaire confidentially test, the researcher had designed all questionnaires then asked for 4 experts in DHF prevention and control to review and revise all questions and language utilization. Later, these questionnaires were revised. Then the researcher conducted a pilot test among teachers and students from schools that were not the sample size of this study.

3.6 Data Collection:

Preparation process:

1. Requested for introduction letter from the Governor of Klongthom District, for presenting and asking for approval of schools directors.
2. Coordinated with schools directors for informing research objectives and methodology.
3. Coordinated with teacher who were part of the data collecting process in sampling schools
4. Trained and explained research objectives and methodology to health officials who were research assistants.

Operational process:

1. Before interviews, a meeting for teachers who were part of the research sample was conducted. It was aimed for explaining and clarifying that all information would be kept confidential, and everyone should feel free to answer all questions according to their real situations and performances.
2. Clarified and explained how to fill all questionnaires to students. Later gave questionnaires to students to fill by themselves. The researcher and research assistants selected students who were research sample.
3. Surveyed prevalence of larva at schools every week, once a week by trained research assistants.
4. Collected all data.
5. Screened and checked for questionnaires completeness.
6. Classified each questionnaire into their number, checked for completeness, then put in computer for analysis.

3.7 Data Analysis:

Descriptive and inferential statistics were conducted by using SPSS software

1. Mean, percentage and graphic presentation were applied for general information, i.e., age, gender, educational level, number of teachers and students.
2. For knowledge and performance questionnaires, they were classified into "correct answer and wrong answer" as follows:
   - Correct answer = 1 point
   - Wrong answer = 0 point
   - Later, all gained point were calculated in percentage and compared to the evaluation standard of Ministry of Education, Department of Academic (2002), as follows:
     - Very good = grade 4; 80-100 points
     - Good = grade 3; 70-79 points
     - Medium = grade 2; 60-69 points
     - Low = grade 1; 50-59 points
     - Under evaluation = grade 0; 0-49 points
3. For attitude questionnaire, Likert's scale was applied. This section was composed of positive and negative questions. They were about the comments of students towards DHF. The answers were divided into 3 attitudes;

Positive questions			*Negative questions*		
Agree	=	3 points	Agree	=	1 point
Unsure	=	2 points	Unsure	=	2 points

Disagree = 1 point Disagree = 3 points

Then all the gained pointed were calculated for applying into average point, and compared to the attitudes scale;

1.00-1.49 average points = Low attitude

1.50-2.49 average points = Moderate attitude

2.50-3.00 average points = High attitude

4. Performance questionnaires were separately analyzed one by one question
5. Coverage and continuation questionnaires, that were both opened and closed ended questions, were concluded in percentage and compared the percentage to the criteria of set continuation and coverage.
6. Problem and difficulties questionnaire, Likert's scale was applied as follows:

- No problems = 1 point
- Few = 2 points
- Medium = 3 points
- Many = 4 points

Later, all points were calculated for applying into average form and compared to the level of problems as follows:

1.00-1.49 average points = No problem level

1.50-2.49 average points = Few problems level

2.50-3.49 average points = Medium problems level

3.50-4.00 average points = Problem prone level

When all information was analyzed, test of relationship among each factors; Chi-square test was applied. Also to make a comparison among each factors, t-test was conducted.

7. Prevalence of larva in water storage containers were analyzed as follows:

   Container Index (CI) = a percentage of found water storage containers with larva per all surveyed water storage containers;

$$CI = \frac{\text{Number of found containers with larva}}{\text{All surveyed containers}} \times 100$$

House Index (HI) = a percentage of houses where water storage containers with larva were found per all survey houses;

$$HI = \frac{\text{Number of houses where containers with larva were found}}{\text{All survey houses}} \times 100$$

Later, the percentage will be analyzed and compared to the standard criteria. Then a comparison between schools where DHF prevention and control activities were not covered and continuous, and schools where these activities were continuous and covered, by applying t-test.