CHAPTER I

INTRODUCTIONS

1.1 Background and Rationale

We are familiar with the following statements: "Mosquitoes are worse than tigers" and "It's very difficult to control the Dengue Fever until it subsides." Dengue Fever (**DF**) has been the main health problem of Thailand for over 40 years (Department of Communicable Disease Control, Ministry of public health, 2001). DF was firstly found in the Philippines and was epidemic in Thailand for the first time in 1958. The breakout occurred irregularly but the most important breakout occurred in 2001 and 2002 as incidence rates were 227.47 and 174.78 per 100,000 head of population, respectively (Bureau of Epidemiology, 2003). The Ministry of Public Health (Department of Communicable Disease Control Ministry of public health, 2003) tried to control the epidemic of DF via several measures such as using chemicals to control the mosquito larvae and ULV to kill the mosquitoes. Also biological methods have been used; for instance, growing fish to kill the larvae. As regards the physical methods, larvae in containers were destroyed to prevent the laying of mosquitoes' egg and people were advised to sleep in bed-nets or use a repellent lotion. Additionally, a disease surveillance report system was developed by the specific team so that the disease could be controlled rapidly. Public relations via media such as television, radio, newspapers, public health volunteers (**PHVs**) etc. were used to provide knowledge and information on the epidemic. However,

epidemic was not reduced when considered from the index of mosquitoes (Bureau of Epidemiology, 2002), House Index (**HI**) and Container Index (**CI**). In fact, the index of mosquitoes was used to indicate the disease control. In general, CI and HI were higher than target index, that is, HI should not be over 10 while CI should be 0. Several provinces have encouraged the communities and schools to participate in the elimination of mosquitoes; for example, the model of participation and cooperation of Klong Si Community, Muang Chaiyaphum Municipality (Soonongbua, 2001), was a research study which aimed to help the community to get rid of the mosquitoes in houses and to clean houses every Saturday. Moreover, the houses which had mosquitoes would be announced and fined if the mosquitoes were not yet eliminated. Community Committee and PHVs in village would perform monthly survey. The other study could be referred to the integrated community participation of DF Control and Prevention case study of La Mae District, Chumporn Province (Jittasirinuwat, 2001). In this project, knowledge and prevention methods were provided for the community. After the project, community could eliminate the mosquito larvae satisfactorily as the Breateau Index **(BI)** was decreased with statistical significance.

The epidemic of DF in Trang Province was similar to the other provinces in Thailand (Division of Communicable Disease Control, Trang Public Health Office, 2003). The epidemic of DF in these ten years was irregular and not continuous except the year 2001 and 2002 while incidence rate were 366.25 and 359.53 per 100,000 head of population, respectively. It was obviously noted that such rate was higher than the national rate as detailed in Table 1.1.Trang Public Health Office, therefore, followed the guidelines of the Ministry of Public Health to use the public participation of community to prevent the DF. In addition, Trang Public Health Office also found

that the index of larvae was higher than target index while some areas showed a lower index. This was related to the inconsistent performance of the public health officers and volunteers. As a result, the researcher was very involved while the DF could not be controlled as there were no effective methods to eliminate larvae and mosquitoes. If we can prevent mosquitoes (***Aedes Aegypti***) sucking DF patients while under care, during the stage of viremia or fever (World Health Organization [WHO], 2002), then the epidemic can be decreased. The researcher has studied the at-home performance of the patients who suffered from the DF and who were provided with knowledge and care. Additionally, the researcher studied the factors relating to the performance of the patients, which prevented the mosquitoes spreading the disease. Thus, this research had the focus on the care takers who provided for the patients to eliminate the epidemic stage of disease. The research results could enhance the existing measures to control the DF more efficiently.

Table 1.1: Comparison of Dengue Fever of Thailand and Trang Province (1993-2002)

Year	Incidence Rate (per 100,000 populations)	
	Thailand	**Trang**
1993	117.48	97.87
1994	87.47	39.23
1995	101.46	539.32
1996	63.09	15.41
1997	167.21	149.98
1998	211.42	428.14
1999	40.39	15.24
2000	28.51	14.72
2001	227.47	366.25
2002	174.78	359.53

Source: Division of Communicable Disease Control, Trang Public Health Office.

1.2 Research Questions

1.2.1 Which factors affected the prevention of DF by caretakers of DF patients?

1.2.2 While providing care for DF patients, what level of awareness for controlling DF did the caretakers have?

1.2.3 While providing care for DF patients, at what level was the caretakers' perception of the susceptibility and severity of DF?

1.2.4 While providing care for DF patients, what was the cares' level of performance in controlling DF?

1.2.5 Were personal characteristics of caretakers, together with knowledge and perception of the susceptibility and severity of DF, in any way related to the effectiveness of preventing and controlling DF?

1.3 Objectives

1.3.1 General Objective

To study the performance, results and factors related to DF prevention and control on the part of caretakers who provide for patients at home in Trang Province.

1.3.2 Specific Objectives

(1) To study the levels of knowledge in the prevention of DF, perception level (susceptibility and severity) and performance level of the caretakers providing for the patients at home in Trang Province.

(2) To study the relationships between general characteristics with knowledge, perception and performance for prevention of DF.

(3) To study the relationships between knowledge and perception, and performance in the prevention of DF.

1.4 Expected Outcome and Benefits

This study could provide the performance results of caretakers in the prevention of DF. The results could be used as the information supporting the plans and guidelines for more effective disease prevention and control of DF in Trang Province.

1.5 Operational Definitions

Disease Control Performance means the ability to prevent the patients from the risk of mosquitoes. The actions could be considered from the preventive methods and materials such as bed net and wide screen including the elimination of mosquitoes at home.

Care takers means any person at any age providing the care and protection for the patient. Note: Caretaker means someone who looks after a building, a security guard. Caretaker is someone who looks after a sick person.

Breteau Index (BI) means the quantity of containers having the larvae per 100 households.

House Index (HI) means the percentage of household where larvae were found.

Container Index (CI) means the percentage of containers, where the larvae were found.

DF Patient means any person having the symptoms and characteristics of disease according to the disease definition of Thailand in 2001, including the clinical or laboratory criteria. This also included the patients considered by the doctor to be affected by DF i.e. the outpatients treated at home or the inpatients who were cared at home.

Current Age means the full age after the latest birthday.

Education means the highest education obtained according to the regulations of the ministry of Education and Ministry of the University Affairs

Main Occupation means the main job, which could provide the major income.

Household Income means the total income from occupation derived from all household members in each month before deducting any expenses.

Number of Care Takers means the quantity of caretakers providing the major care for the patients (excluding the persons providing any little assistance such as picking up the medicine)

1.6 Limitations of the Study

1.6.1 The respondents were the DF caretakers at the established period. The data were mainly collected from the caretakers. Questionnaires were used as the research instrument while the evaluation of performance relied on the answers of the caretakers. In fact, the care takers might obtain the information related to the sickness and suggestions from the doctors or officers. The researcher has also collected the interviews and observations from the patient visits.

1.6.2 The research was also limited on the study period. The researcher established the study period during the DF epidemic in 2005 as this was the most significant epidemic in two years. The data were collected during 25 – 30 August 2005 commencing when the patients were affected by DF, treated at the hospital and returned to stay at home. The assistant researcher collected the data whereas the DF was controlled at the patients' home.

1.6.3 The action performance was evaluated by the researcher to observe the continuity of performance. In addition, a period of longer action might affect the continuity of performance.

1.7 Conceptual Framework

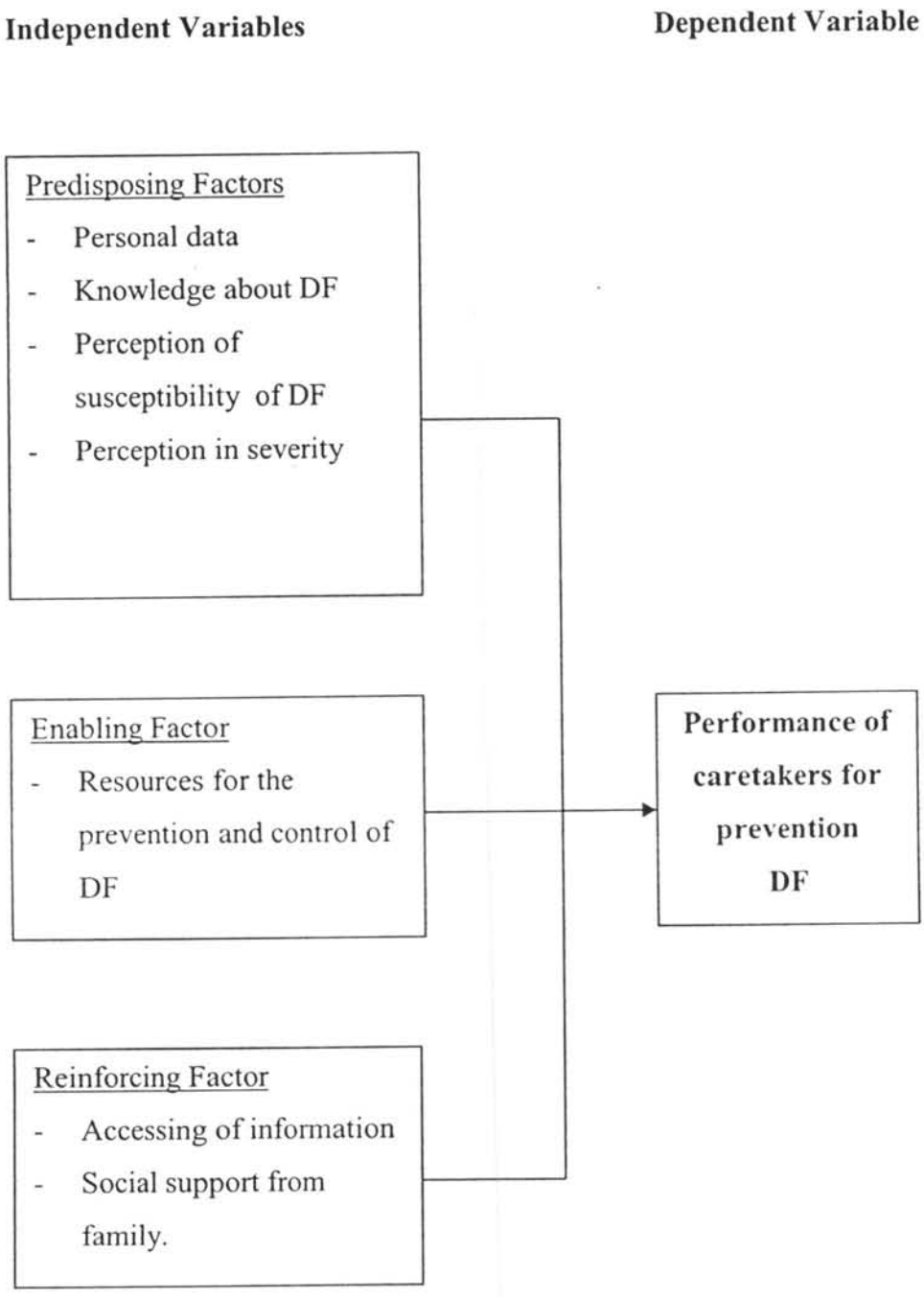

Figure 1: Flowchart of Conceptual Framework