

**PERSUASIVE CAMPAIGN TO REDUCE AEDES MOSQUITO
LARVAE FOR PREVENTING DENGUE HAEMORRHAGIC
FEVER IN THA YAI VILLAGE, RATCHABURI PROVINCE,
THAILAND**

Usanee Kritsanavarin

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Public Health

Health Systems Development Programme

College of Public Health, Chulalongkorn University

Academic Year 2001

ISBN: 974-17-0749-5

©College of Public Health, Chulalongkorn University

Bangkok, Thailand

I 20693230


Thesis Title : Persuasive Campaign to Reduce Aedes Mosquito Larvae for Preventing Dengue Haemorrhagic Fever in Tha Yai Village, Ratchaburi Province, Thailand

By : Usanee Kritsanavarin

Programme : Master of Public Health (Health Systems Development)
College of Public Health


Thesis Advisor : Assistant Professor Nuntavarn Vichit-Vadakan, MS., M.P.H., Dr.P.H.

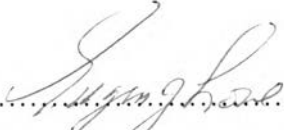
Accepted by the College of Public Health, Chulalongkorn University, Bangkok Thailand in Partial Fulfillment of the Requirements for the Master's Degree

 Dean of the College of Public Health
(Samlee Plianbangchang, M.D., Dr.P.H.)

THESIS COMMITTEE


..... Chairman
(Wacharin Tanyanont, M.S.)


..... Thesis Advisor
(Assistant Professor Nuntavarn Vichit-Vadakan, MS., M.P.H., Dr.P.H.)


..... Member
(Professor Edgar J. Love)

ABSTRACT

In 2001, over thirteen thousand people in Thailand were infected with Dengue Haemorrhagic Fever. The number rose from eighteen thousand in the previous year. This high Dengue Haemorrhagic Fever incidence cases are the evidence that after the success of Dengue Fever Control Project in Honor of His Majesty the King of Thailand's 6th Cycle Birth celebration in 1999-2000, there was no continuity of the project during the following year.

The persuasive Campaign would be an effective intervention to solve this problem. The campaign aim to motivate self-reliance in the community of getting rid of mosquitoes larvae. The messages included (that create) in the persuasive campaign come from the information gained from the data exercise. For example, some houses feed larval as the fish food, even though get rid of pupae because the fish do not eat pupa. The message can be delivered to convince the people to get rid of pupae after they feed fish with larva. The information gained from data exercise can also be used in improving the questionnaire which will be used in the evaluation part of the proposed project.

This study is aimed to improve the situation of Dengue Haemorrhagic Fever in Thailand.

ACKNOWLEDGEMENTS

I wish to thank Dr. Samlee Plianbangchang, the Dean of the College of Public Health, for his comments during Friday morning presentations the proposals.

My sincere thanks and gratitude go to my advisor, Dr. Nuntavarn Vichit-Vadakan , the Associate Dean for her invaluable guidance and suggestions.

Professor Edgar J Love had checked and advised me on my thesis and helped me keep the focus on the essential issues. I thank him for his critical comments. My thanks to Ajarn Wacharin for her time spent in guiding me in the right direction.

Special thanks to the kindness of public health Officials, Mrs. Kiriya Lapcharoenwong, Rathchaburi Provincial office and Mrs. Chintana Sawangnet , Ban Phong public health office. I received warm cooperation from my friends at Tha Pha sub-district and Tha Pha public health officers.

I also gratefully acknowledge with thanks the many professionals who have helped me. I learnt a lot from them.

I also would like to thank the administrative and library staff of the College of Public Health for their help and cooperation.

ABBREVIATIONS AND ACRONYMS

CFR	=	Case Fatality Rate
DF	=	Dengue Fever
DHF	=	Dengue Haemorrhagic Fever
DSS	=	Dengue Shock Syndrome
MOPH	=	Ministry of Public Health
PR	=	Public Relations
PSA	=	Public Service Announcement
WHO	=	World Health Organization

List of Contents

	Page
Abstract	iii
Acknowledgements	iv
Abbreviation and Acronyms	v
List of Contents	vi
List of Tables	x
List of Figures	xi
CHAPTER I: INTRODUCTION	1
CHAPTER II: ESSAY	4
2.1 Introduction.....	4
2.2 Global situation and Epidemic.....	5
2.3 Dengue Haemorrhagic Fever Problem in South-East Asia.....	7
2.4 Dengue Haemorrhagic Fever Problem in Thailand.....	12
2.5 Dengue Haemorrhagic Fever Biology.....	14
2.5.1 Cause of disease.....	15
2.5.2 The epidemic.....	15
2.5.3 Risk factors of DHF.....	16
2.5.4 Diagnosis.....	17
2.5.5 Clinical manifestation.....	19
2.5.6 Treatment.....	20

2.5.7	Prevention and control.....	21
2.6	Previous Intervention.....	23
2.7	Campaign Key Features.....	26
	References.....	34
CHAPTER III: PROPOSAL.....		37
3.1	Introduction.....	37
3.2	Objective of the Project.....	40
3.3	Project Description.....	40
3.3.1	Overview.....	40
3.3.2	Details Description.....	45
	Phase I Programme Development/Persuasive	
	Campaign Planning.....	76
	Campaign message.....	47
	Campaign activities (Supported activities).....	66
	Phase 2 Implementation.....	70
	Phase 3 Evaluation.....	76
3.3.3	Action Plan.....	83
3.3.4	Budget.....	84
	References.....	85
CHAPTER IV: DATA EXERCISE.....		87
4.1	Introduction.....	87
4.2	Objective of Data Exercise.....	88

4.3	Methodology	88
4.3.1	Study design	88
4.3.2	Data Collection and Data Management	88
4.3.3	Quantitative Data collection Method	89
4.3.4	Qualitative Survey	92
4.4	Results	95
4.4.1	Results from Survey	95
4.4.2	Results from <i>Ae.aegypti</i> Larval survey	106
4.4.3	Results from Observation	107
4.4.4	Results from Focus Group Discussion	108
4.5	Discussion	110
4.6	Lesson learned	113
4.6.1	The Process of doing quantitative and qualitative survey	113
4.6.2	Information gained to use in the project proposal	114
4.7	Limitation	115
	References	116
CHAPTER V: PRESENTATION		117
CHAPTER VI: BIBLIOGRAPHY		132
Appendices		134
Appendix 1 :	Questionnaire (English version)	135
Appendix 2 :	Questionnaire (Thai version)	145
Appendix 3 :	<i>Ae.aegypti</i> larval survey form (English version)	153

Appendix 4 :	<i>Ae.aegypti</i> larval survey form (Thai).....	154
Appendix 5 :	Observation form (English version).....	155
Appendix 6 :	Observation form (Thai version).....	156
Appendix 7 :	Map of Tha Yai village.....	157
Appendix 8 :	Reliability Analysis	158
Curriculum Vitae		161

List of Tables

	Page
Table 2.1: Number of Cases and Deaths of DF and DHF in the South-East Asia Region of WHO category A.....	8
Table 2.2: Number of Cases and Deaths of DF and DHF in the South-East Asia Region of WHO category B.....	10
Table 2.3: Morbidity, Mortality and Case Fatality Rates of Dengue Haemorrhagic Fever in Thailand during 30 years, 1972-2001.....	14
Table 2.4: Morbidity and Mortality rate/1,000,000 population of DHF in Thailand and Ratchaburi Province from 1995-2001.....	25
Table 3.1: Product development plan for “Just a weekly clean-up campaign” in Tha Yai village.....	41
Table 3.2: Resource needs for implementing the Persuasive Campaign.....	72
Table 3.3: The schedule of activities for the year 2003.....	75
Table 3.4: Action Plane.....	83
Table 3.5: Budget for Persuasive Campaign.....	84
Table 4.1: Demographic Characteristic of Tha Yai villagers.....	97
Table 4.2: Frequency distribution of Dengue Haemorrhagic Fever Information that received in Tha Yai village.....	99
Table 4.3: Frequency distribution of Dengue Haemorrhagic Fever Information that villagers interesting in Tha Yai village.....	100

Table 4.4:	Frequency distribution of Dengue Haemorrhagic Fever Information that provide the most knoeledge in Tha Yai village.....	100
Table 4.5:	Content of Dengue Haemorrhagic Fever Information that villagers received in Tha Yai village	101
Table 4.6:	Amount of Dengue Haemorrhagic Fever Knowledge that villagers received from the information channels in Tha Yai village.....	102
Table 4.7:	Awareness of Dengue Haemorrhagic Fever Prevention.....	102
Table 4.8:	The Behavior of prevent mosquitoes from laying eggs.....	103
Table 4.9:	Knowledge of Dengue Haemorrhagic Fever Prevention.....	104

List of Figures

	Page
Figure 2.1 : Dengue Haemorrhagic Fever reported cases in South-East Asia in 1998	12
Figure 2.2 : The spectrum of Dengue Haemorrhagic Fever	20
Figure 2.3 : Dengue Haemorrhagic Fever incidence cases In Thailand during 1989-2001	23
Figure 2.4 : Maslow theory of human needs	29
Figure 3.1 : Conceptual Framework of causes of DHF and Strategies to reduce DHF	41
Figure 3.2 : Poster used in the campaign	52
Figure 3.3 : Cartoon sticker	53
Figure 3.4 : Children cartoon book page 1	54
Figure 3.5 : Children cartoon book page 2	55
Figure 3.6 : Children cartoon book page 3	56
Figure 3.7 : Children cartoon book page 4	57
Figure 3.8 : Children cartoon book page 5	58
Figure 3.9 : Children cartoon book page 6	59
Figure 3.10 : Children cartoon book page 7	60
Figure 3.11 : Children cartoon book page 8	61
Figure 3.12 : The input-process-impact and outcome of The Persuasive Campaign	76
Figure 3.13 : Before-and-After Design with Control Group	78