

## **CHAPTER III**

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

#### **3.1 Introduction**

Dengue is known to be a “man made disease”. Its spread is caused by money-greedy loggers and violating laws of nature. They destroy the forests, causing then dengue-spreading Aedes mosquitoes to invade populated communities. The rest of the citizens reap the punishment (Council for Health and Development, 1998)

The above statement has a strong confirmation that people made Dengue, people have to be responsible to eradicate Dengue. Globally, 2.5 to 3 billion people are estimated to be at risk of infection with Dengue virus, especially children. The disease had been reported in China since 992 AD and it was recorded the first epidemic of Dengue in the French West Indies in 1635.

Globally, dengue virus has been dramatically increased in the frequencies of dengue fever (DF), dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS). In 1953, DHF epidemic was first recorded as first epidemic in Philippines. Since then, the major outbreak of DHF with significant mortality has occurred in most countries in South-East Asia Region including Thailand.

The World Health Organization (WHO) currently estimates there may be 50 million cases of dengue infection worldwide every year. In 1988 alone, there were

more than 616,000 cases of dengue in the America and 129,954 cases in Thailand. While there is no vaccine for the disease, it can only be treated to avoid complications, especially DHF, which is caused by repeated infection with weaker strain of the virus.

The epidemics hit Thailand every year which urban area is the favored breeding grounds. Dengue fever is a disease of urban area which the vector (*Ae.aegypti*) mainly bites humans. It is spread to new population, inhabitants of larger cities, then to medium-sized towns and eventually to the more rural area. The vector laying sites are in man-made receptacles, food tins, tire rubber etc. Thailand recorded 30,000-100,000 cases, especially, Bangkok where the occurrence has remained quite stable for ten years or more.

His Majesty the king of Thailand expressed his concern on the DHF which led the ministry of Public Health of Thailand to launch the National Dengue Prevention Control plan in 1999-2000 the occasion of Dengue Fever Control Project in Honor of His Majesty the king of Thailand's 6<sup>th</sup> Cycle Birth celebration. The prevention and control program has decentralized in each health services to solve the problem of high DHF incidence. However, there are many problems, i.e., insufficient budget, and some community lack of awareness to control and get rid of breeding sources. People hope to rely on the governmental organization, therefore, with government limited resource, activities do not reach all area on a continuing basis.

Similar to other area, the prevention and control program has not been successful in Ratchaburi Province. In 2000, the morbidity rose to 167.42 per 100,000 population (1,372 cases) and 229.33 per 100,000 population in 2001.

In 2000, among ten districts across Ratchaburi, Ban Phong District had the highest morbidity 226.74 per 100,000 population (372 cases). In 2001, the morbidity in

Ban Phong District continued to increase to 316.95 per 100,000 population (520 cases). Within the Ban Phong district, Tha Pha sub-district had the highest incidence case, 78 cases or morbidity <sup>rate</sup> 447.96 per 100,000 population, in 2001.

The Tha Pha health staffs found that the DHF incidence rate cannot be decrease because the people in the community fail to get rid of larvae from their container even though they know how to practice. The problem caused by unanticipated in helping themselves but waiting for health staff, Mr. Surasak at Tha Pha health center said. Or in Thai's say "Lose cows then build fence". Therefore, the new intervention program should be given in area of Tha Pha sub-district and Tha Yai village which has highest population with high incidence rate is chosen.

Behavioural change in the communities should be one of the key successes in preventing and control DHF. The protection of mosquitoes by using pesticides might expose people to toxic chemicals and fogging is limited to use. The elimination of the breeding sources of Aedes mosquitoes make more sense because of less expenses and no chemical effect.

The effectiveness of campaign relies on sustaining people's habit in reducing breeding sources. At the same time, the impartial element is to make communities self-reliant to meet the problems posed by dengue in the domestic environment, in reducing larval breeding sites and enhance knowledge, awareness and practice.

The proposed project focuses on developing a persuasive campaign that can use as a sustained communication to increase people's action in the community for reducing the Aedes larval breeding sites.

## 3.2 Objective of the project

(1) To use Topknot boy as a symbolic of getting rid of mosquitoes/larvae in the persuasive campaign.

(2) To use motivational message to convince Tha Yai villagers in helping to reduce *Aedes* mosquitos' larvae.

(3) To use the visualization associate with comprehension in preventing Dengue Haemorrhagic Fever by cleaning –up water once a week.

(4) To conduct supported activities in order to strengthen the persuasive campaign.

## 3.3 Project description

### 3.1 Overview

Figure 3.1 shows the strategies to reduce Dengue Haemorrhagic Fever is the main intervention to help the lack of public information in Tha Yai village that will put in the public to help because of the villagers unawareness and poor knowledge of preventing Dengue Haemorrhagic Fever. The persuasive campaign which is a public information will be provided as one of the tactic to persuade people to eradicate mosquitoes and larval in their household.

There are three main factors causing the increase of Dengue Haemorrhagic Fever incidence: rainy season and sanitation, water reservoirs with *Ae.aegypti* larval and failure to eradicate them. The failure to eradicate mosquito and larval in their households can increase *Ae.aegypti* larval. In practice, Dengue Haemorrhagic Fever can be decrease if people active to reduce the mosquitoes breeding site. The outcome is to reduce Dengue Haemorrhagic Fever.

Figure 3.1: Conceptual framework of causes of DHF and strategies to reduce DHF.

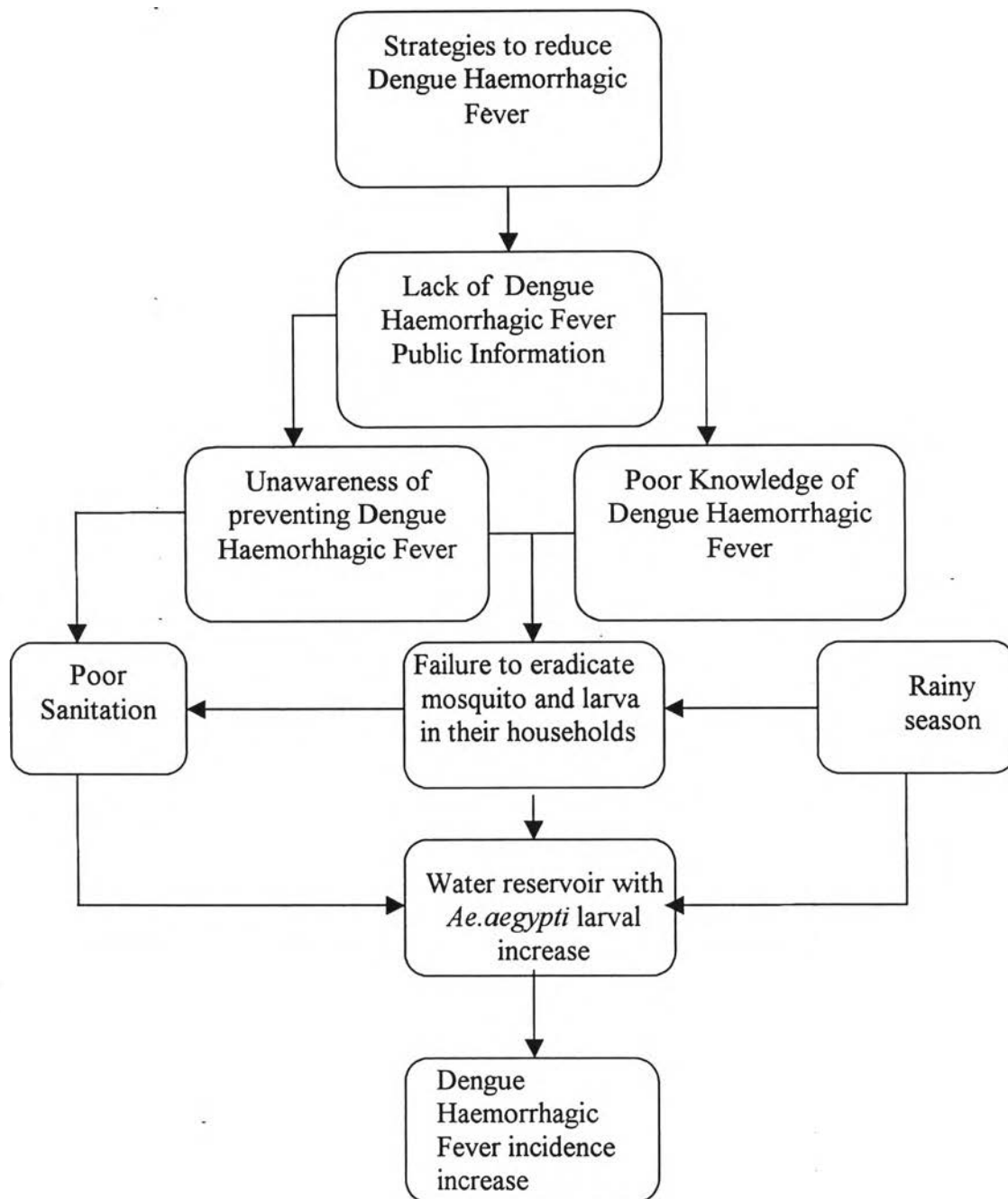


Table 3.1 shows the four main information formats and supported activities that will be distributed in Tha Yai village to the target audiences.

**Table 3.1:** Product development plan for Just a weekly clean-up campaign in Tha Yai Village

<b>Information format</b>	<b>Distribution sites In Tha Yai Village</b>	<b>Target group/audience</b>	<b>Activities(type of presentation)</b>
1. Poster	-Stores, stores and restaurants -Health volunteers' house - Streets -Tha Pha Temple	Parents and caretakers	Health Fair in Tha Pha Temple  Happiness house contest
2. Colour cartoon book	- Tha Pha School	Primary school children	School Fair  Colour cartoon book contest  Exhibition contest
3. Sticker	- Tha Pha School	Primary school children	Health lesson in school distributed by teachers
4. Mobile speech	- Every street and small community	All people in Tha Yai village	Public announcement Message contest

This persuasive campaign will produce messages and/or visual in four different (information) formats: Poster, colour cartoon book, stickers and mobile speech. The picture in the poster is about the Topknot family that consists of father, mother and topknot boy. The father is cleaning a container while topknot boy is using a flashlight to looking for the mosquitoes' larva and his mother is turning on the tap of water. With the message: You can do it: clean-up water once a week. The target audiences are

parents and caretakers. These posters will be posted at the places that the target audiences always go to such as local restaurants and hairdressing shops.

The colour cartoon book consists of 7 drawing black and white pictures.. Children can paint or use colour pencils colour the pictures. The messages of topknot life with his experience of getting Dengue Haemorrhagic Fever are at the bottom of each page. The target audiences are primary school children will read the messages while having fun colouring the pictures. These books will be distributed to every primary school student in a painting contest.

The sticker with Topknot face and his statement of “Mama I want to live in a happy house without mosquitoes” will be provided to primary school children by teachers in their health lessons (health subject).

The last information format is mobile speech (announcements). These announcements will be made via megaphone in a mobile vehicle. This form will be used in village where there is no public service announcement facility. The messages will vary, but all will be about the knowledge of mosquitoes habit, larvae, dengue haemorrhagic fever prevention and dengue news. An interesting feature in the mobile announcement is that the voice will be that of the topknot boy, to represent the boy's experience in getting Dengue haemorrhagic fever. These speeches will affect the audience in Tha Yai village. Every message will be recorded in cassette tape and turned on early every morning before people go to work or school and evening after they come back home.

The persuasive campaign will have supporting activities which help villagers to think that all the messages are important because they can use that message to join the activities that the coordinator of the project organizes. There are three main activities:

health fair, school fair and message contest. These activities use the reinforcement theory to give positive rewards. For example, in the health fair, there is the happy house contest and the prize will be given to the house without larvae. The school fair will have painting contest and school children from grade 5-6 h will have an exhibition on Dengue and the prize will be awarded to the winner., the prize also give to the winner. The message contest use in mobile speech. This activity can give opportunity for any Tha Yai villagers to write a message for mobile speech and they will get a prize in return.

Persuasive campaign project is proposed to reduce the Aedes mosquito in Tha Yai village, in order to solve the problem of Dengue Haemorrhagic Fever in the village. The main tactic is to persuade the villagers in cleaning-up water in their house once a week because of the life cycle of mosquito larvae takes 7 days to become mosquitoes. This is the best and cheapest approach to get rid of Aedes larvae.

Most houses in Tha Yai use a traditional container (water jar) to store the water for drinking, household usage, and protecting fire. The people are socially conditioned to have water available at all time for the daily use by storing the water in various means, even though pipe water is accession. This normal practice, the best strategy in preventing Aedes mosquitoes from laying eggs is to cover container immediately after use.

The villages do not cover their water containers while they are being used for washing. Mosquitoes can get into the water when the containers are not covered during washing. Therefore, inculcating the habit of cleaning the water once a week can help provide a solution. The campaign's name will also be the slogan and message "Just a weekly clean-up", to motivate and remind the community to participate in this



activity. The campaign is two pronged, consisting of the campaign message and the activity. The message uses a motivational design and is targeted to the parents and caregivers.

The campaign will be launched in January 2003 and the programme will be implemented for 1 year until December 2003. After that the evaluation team will evaluate the project outcome by comparing the *Ae.aegypti* larval indices between Tha Yai and Khnog Noi villages. According to the public health record, Tha Yai has incidence rate 0.81 (12 cases/1,488 people) and Khong Noi has incidence rate 0.97 (11 cases/1,131 people), the numbers are close together.

This project consists of 3 phases: (1) Programme Development/Persuasive Campaign Planning ( 2) Implementation (3)Evaluation (Supported activities).

### **3.2 Details description**

#### **Phase I : Program development/ persuasive campaign planning**

##### **1) Campaign's goals**

To increase community action to reduce the number of mosquitoes and of larval breeding sources.

##### **2) Objectives**

###### **2.1 Long-term objective**

To decrease the incidence rate of DHF in Ratchaburi Province in order to meet the criteria: 20 per 100,000 population regarding to the goal of Public Health Development Plan of Thailand in Naional Economic and Society development Master

Plan #9 (2002-2006) (Planning Department of Prevention and control Dengue Hemorrhagic Fever 2002, Epidemiological division, MOPH).

## **2.2 Campaign's objective:**

- (1) To raise awareness in source reduction of *Ae.aegypti* breeding sites.
- (2) To increase action to reduce the number of mosquitoes and of larval breeding sources.
- (3) To reduce percentage of House Index that infest with *Ae.aegypti* larvae and/or pupae from the present rate from 73 to 35 after the campaign complete.
- (4) To reduce percentage of Containers index that infest with *Ae.agypti* larvae and/or pupae from the present rate from 15 to 7 after the campaign complete.
- (5) To reduce percentage of Breteau index that have containers infested with *Ae.aegypti* larvae and/or pupae per 100 house inspected from the present rate from 200 to 50 after the campaign complete.

## **3) Target audience**

- All parents in Tha Yai village
- All care taker in Thai Yai village

## **4) Method**

The proposed campaign is persuasive communication campaign. By definition, Persuasive Communication Campaign is the sustained communication which carries verbal or nonverbal message to changing or reinforcing receivers or responses, including attitudes, intentions and behaviors. The communication strategy is to convince the individuals, group, family and community that they can help their

children to be healthier. The core of the campaign is to conduct 16 –month program to launch intervention campaign for the year 2003.

The proposed persuasive communication campaign has 2 components, there are (1) Campaign's message and (2) Campaign's activity

### 1. Campaign message

The campaign message is conducted by following the process of communication that has four components to consider:

- (1) Source
- (2) Message
- (3) Audience
- (4) Effect

### Process of communication

*Who, says what, through what channel, to whom, with what effect. (Harold Lasswell)*

- Source:** Who provide the information.?
- Message:** What to say and how to arrange them?
- Audience:** Whom or receivers of message?
- Effect:** What do you wish to persuade the audience to do?

### **Source**

The main symbol of the proposed persuasive campaign is Hua Chuk or Topknot boy is the presenter who releases the message from the project campaign in. He is a sport boy in the village but finally got DHF. Topknot boy is used as an image of the campaign because he is a representative of Thai culture and characteristic of Thai children. Parents love children and want them to be healthy even though, Topknot boy is a sport boy who represents a healthy boy but Dengue virus can be infected through *Ae. Aegypti* vectors.

Topknot family have father as a teacher, mother as a housewife and topknot as a school boy. These characters create more credibility to the audience because in Thai society people always trust teacher. A house wife, mother of Topknot boy who is similar to people in the community and a Topknot boy represent as a child who experience with Dengue haemorrhagic Fever. The goal of having character symbol of the campaign so that once the people see this character they can associate the character with the campaign messages.

### **Message**

In persuasive communication In this project, persuading the people to actively prevent DHF is the main thrust of the campaign. Therefore, the message delivered must induce motivation from the target audience (Otto Lerbinger's). The *motivational design* is used to drive people in accepting and following the message in the campaign. Underlying people's motivation is human needs (Maslow).

The data exercise showed that the incidence of larval infestation is high and the villagers do not have the habit of helping themselves get rid of larvae. It is important to help the community to see this as a social need. The strategy used/identified in this project is for the community to become aware of this need and to want to take charge of the intervention program themselves. In other words, people in their community feeling the need to do things together for the common good.

### **Message Design**

In the Persuasive Campaign, message design is very important because the message that the campaigners want to communicate with the audience must present the intention of the campaign. The verbal and/or non verbal communication in the campaign should be invented to meet goal of the campaign.

In this campaign the message design consider three things: (1) Arrangement message argument (2) Expression and (3) Memory. .

*Arranging message argument* define as the proper order of the message which has three patterns, Deduction (general content to more specific statement), Induction (particular case to general content)and Abduction (result of the content to particular case).

Deductively arranged arguments move from general content to more specific application, which facilitates the conclusion (Micchael Pfau&Roxanne Parrot) a generalization will lead to the statement of a specific rule.

- Rule:** Parents or Caretakers who regularly clean-up water once week their house, their house will reduce Aedes larval and mosquitoes which leads to protect their children from DHF.
- Case:** Parents or will regularly clean-up water once a week. So, by a process of deduction, one may reach the conclusion.
- Result:** Parents and caretakers help to protect their children from DHF.

*Expression* defines as the proper language that can influence source, message, channel audience and outcome.

The message appeal is the form of expressing the language which divide into four types of appeal: humor (Theme to be in jokes), warmth (the messages arouse feelings of pleasantness and warmth), fear (audience made to feel vulnerable to a threat, told to take action to reduce threat and accept recommendation) and other emotions (the form interested in responses such as anger, sadness and happy).

Fear appeal is used in the this campaign to feel threat from DENGUE virus, vulnerable and told to take action to reduce DENGUE by cleaning up water “One day... is your turn ... DENGUE virus will get into your child’s body by mosquitoes from your house or neighbors. None *Ae.aegypti* larval...none dengue.”

*Memory* defines as comprehensive and retention of the message. There are many approaches to increase audience’s retention of a single message and picture is more easily recalled than words. This campaign uses the Visual an/or Verbal Message approach to repeat the message as illustrate on page 53.

The message have to consider the learning styles of people. Normally, they use different modalities to receive information which including seeing, hearing, doing /touching.

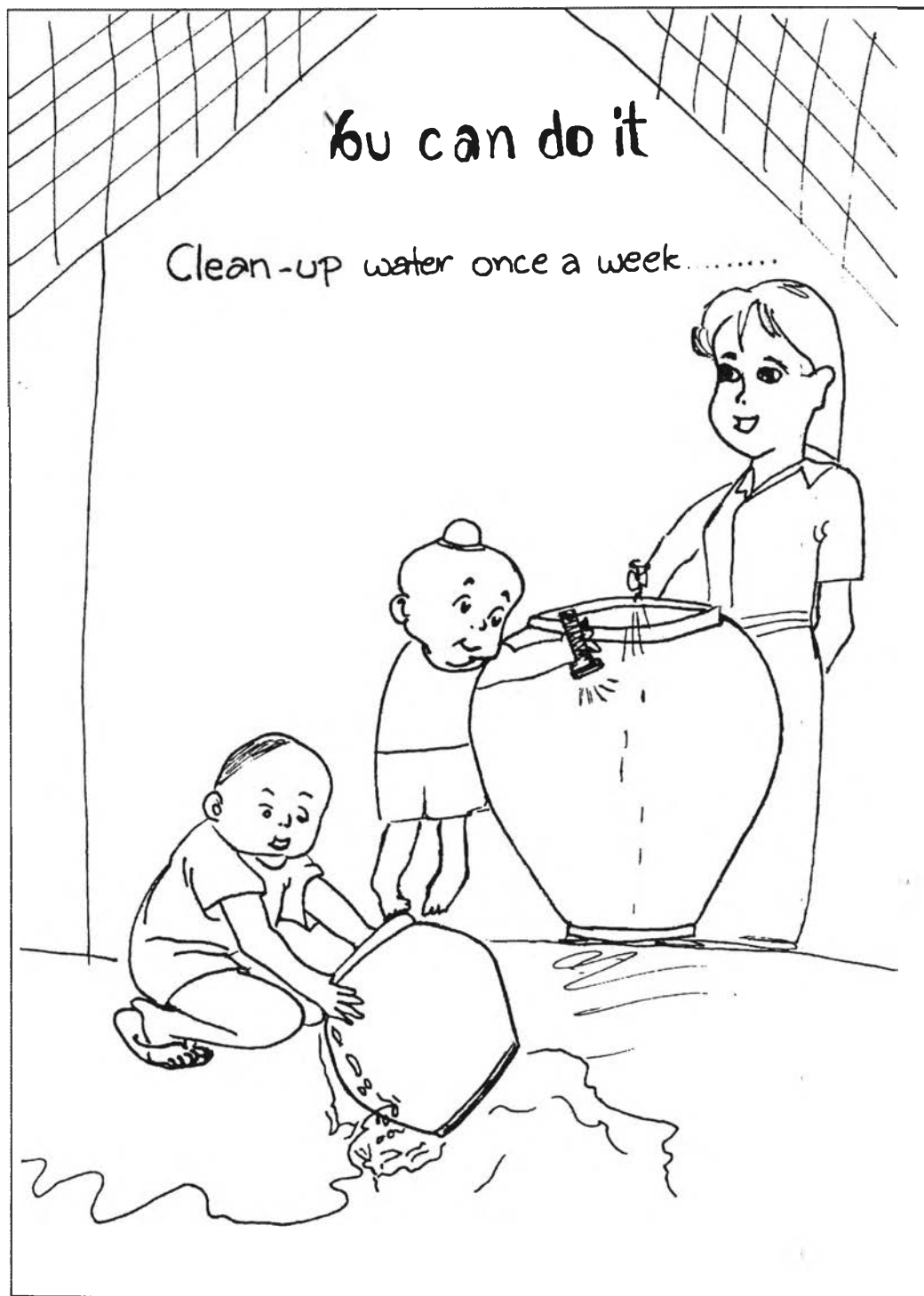
This campaign produce message for 2 modalities learning style, aiming to reach all target audience in the village, that includes (1) Seeing or Visual modality and (2) Hearing or auditory modality. The third style is Touching/feeling or kinesthetic which is a motion picture such as videos tape. The motion pictures cost a lot in production, therefore, the campaigners will borrow DHF videos tape from Thai Public Health Office. These tapes will show in Health Fair and School Fair to reach the specific audience who are interested in DHF issues such as good participants.

Detail descriptions of the 2 modalities learning style that use in the campaign are as follows:

#### *Seeing or Visual modality*

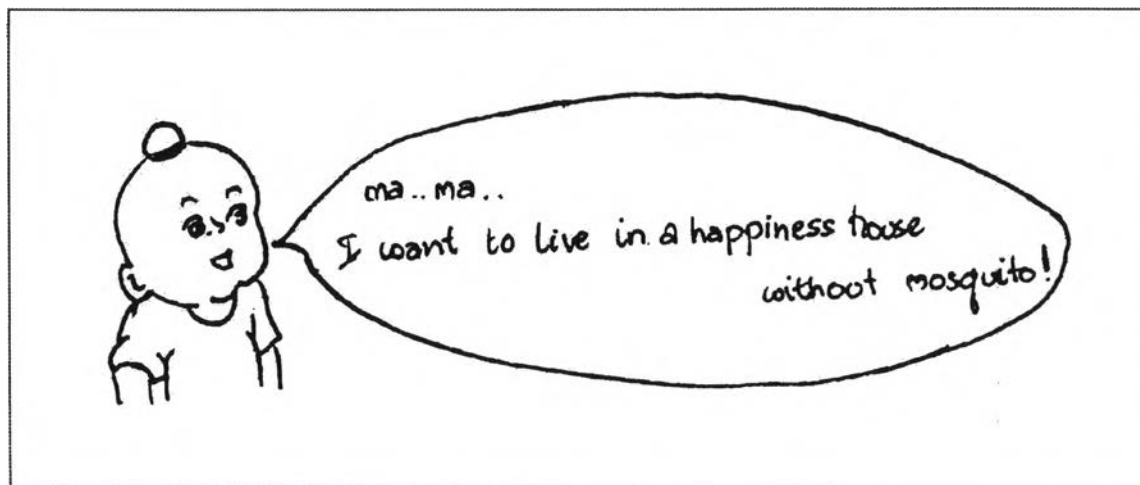
A picture truly is worth a thousand words, because seeing is the format that has the most meaning. Therefore, the proposed campaign plan to use print media in term of poster (Figure 3.3), cartoon sticker (Figure 3.4) to convey campaign message. Figure 3.3 illustrates an example of the poster that will be used.

Figure 3.2: Poster used in the campaign





**Figure 3.3: Cartoon sticker**



**Objective of cartoon stickers:**

To drive attention of living in the house without mosquito, this message will lead to further action of parents to clean – up water once a week

**Message or campaign slogan:**

Ma.....ma.....I want to live in a happiness house without mosquito

**Illustration:** Topknot's boy face

- Children color book

Figure 3.4: Children colour book page 1

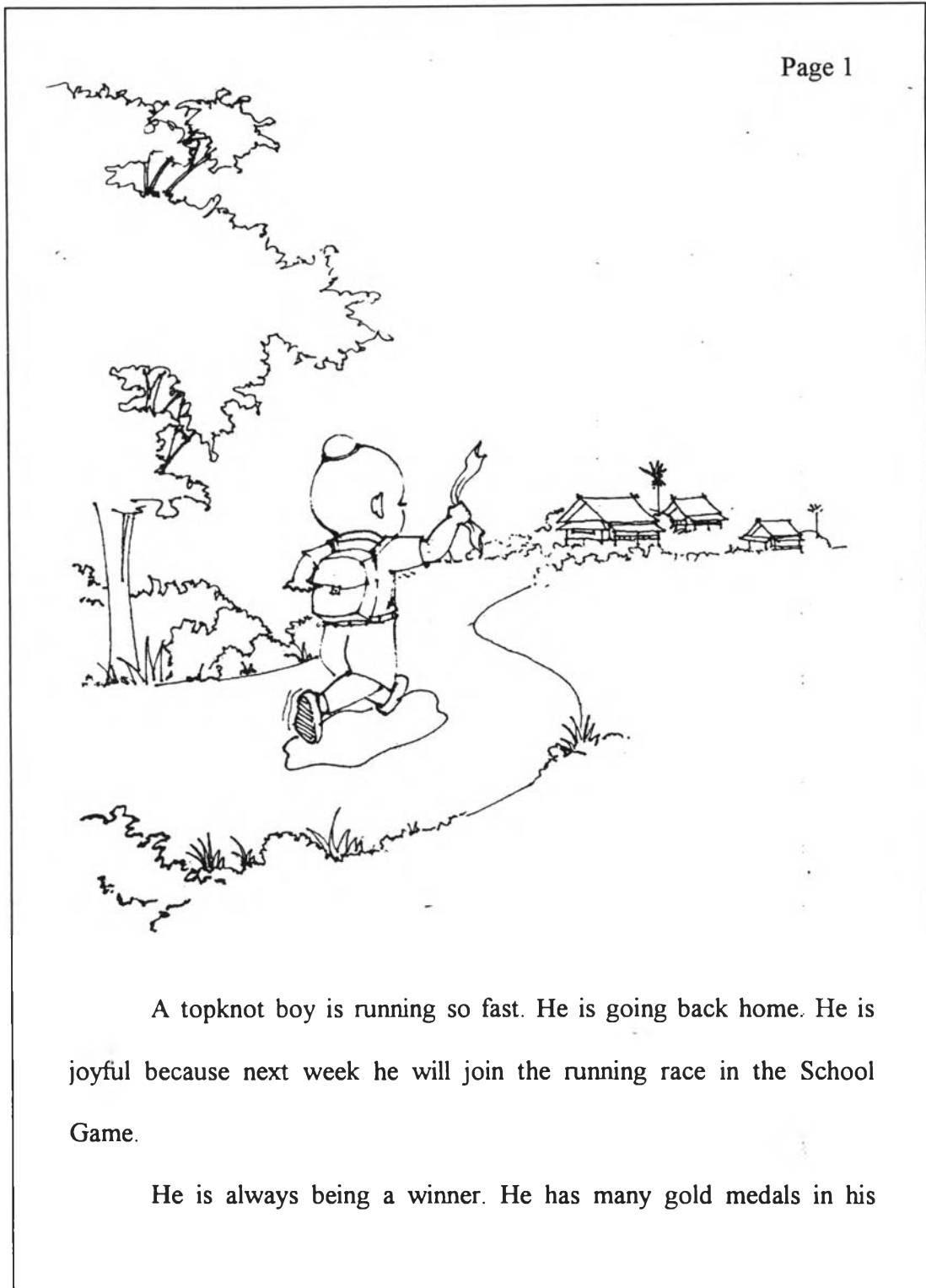


Figure 3.5: Children colour book page 2

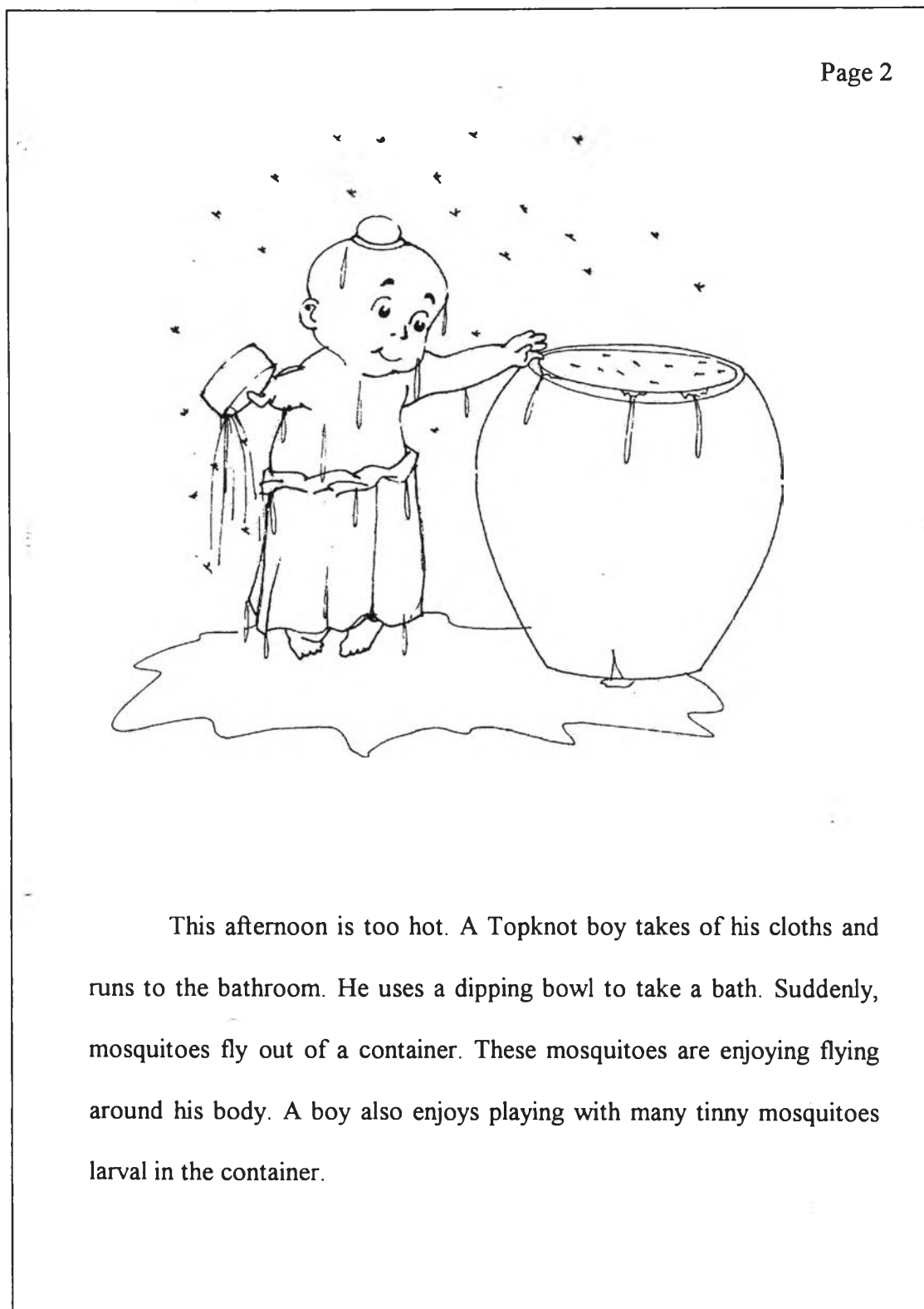


Figure 3.6: Children colour book page 3

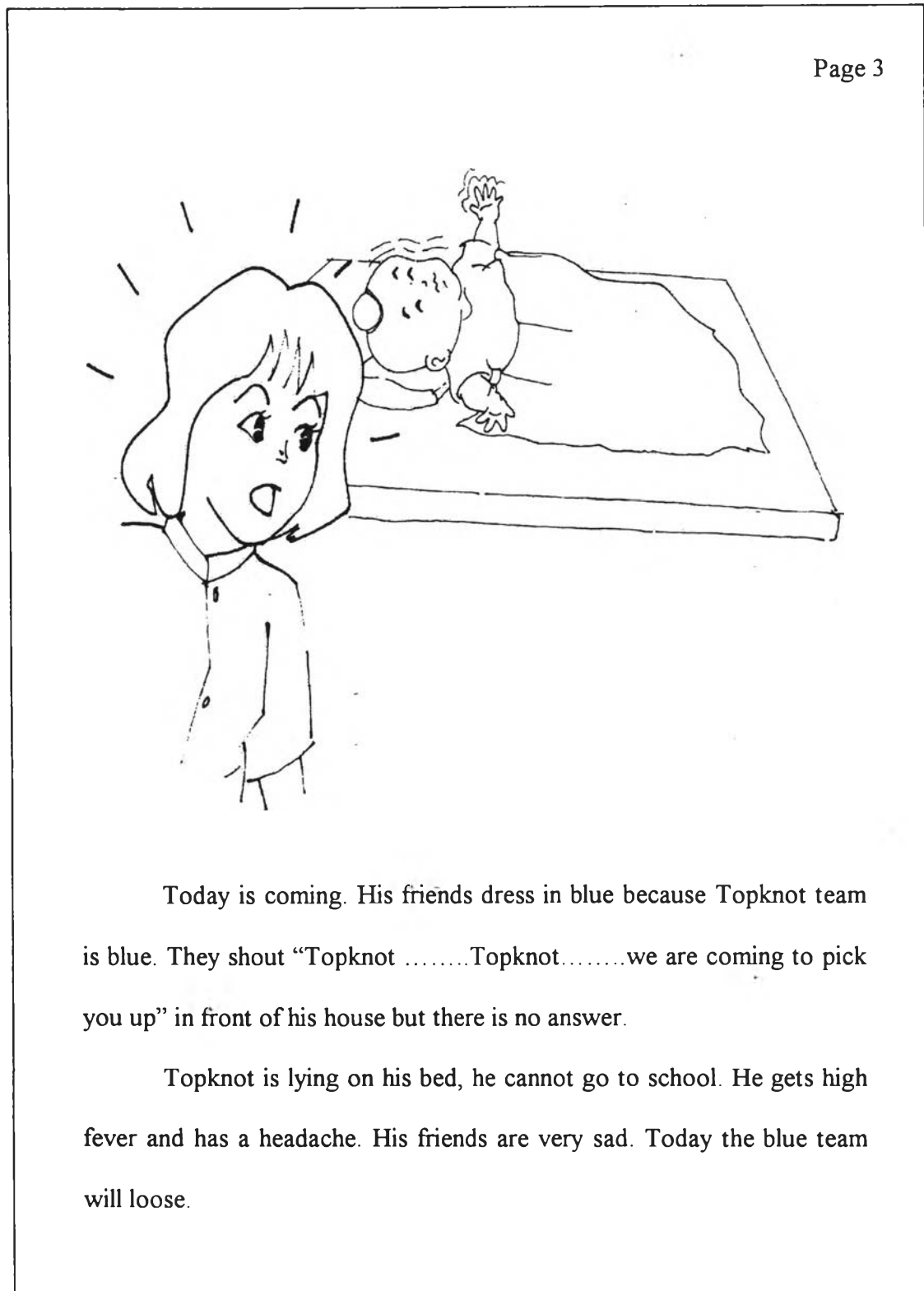
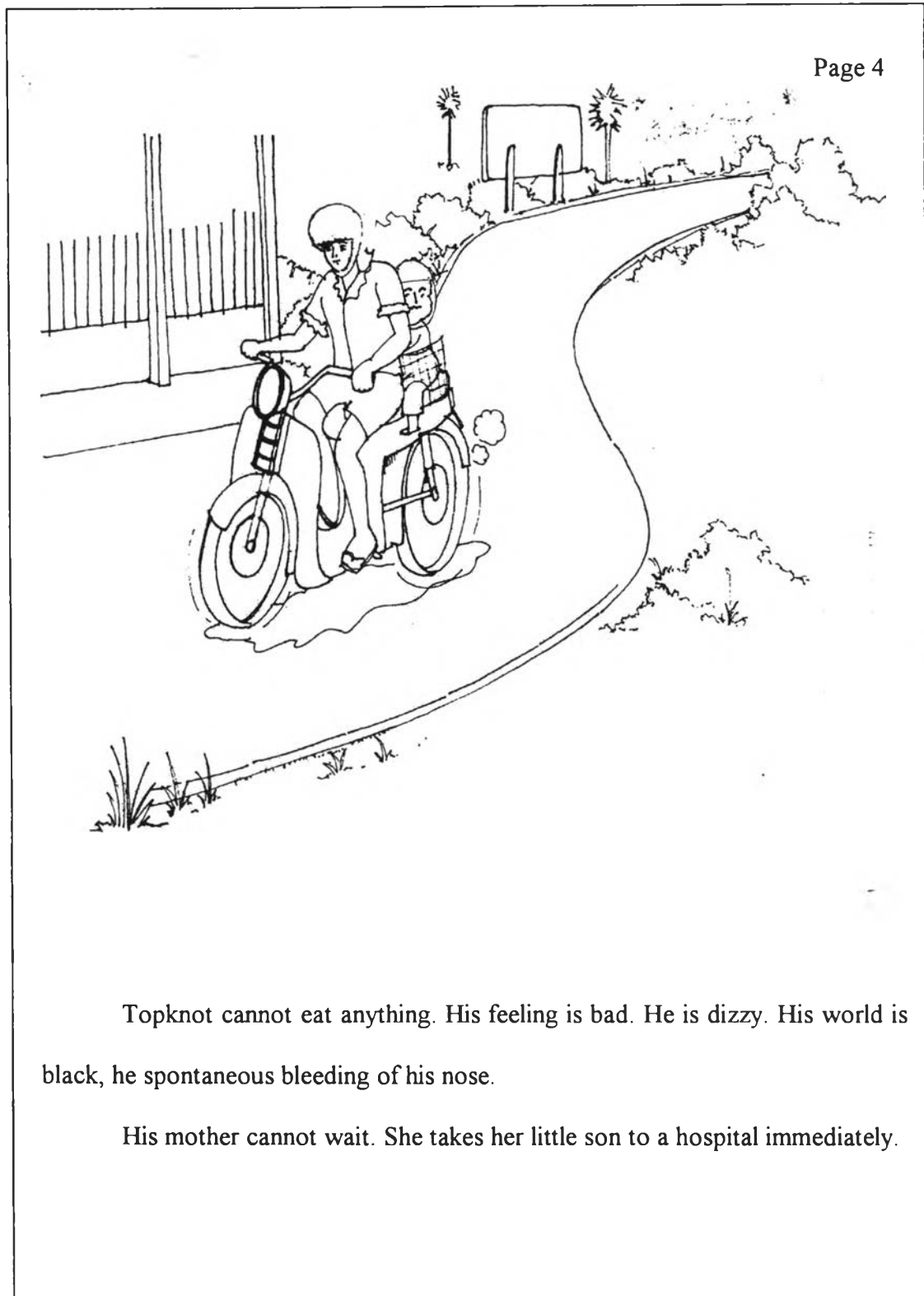


Figure 3.7: Children colour book page 4



Topknot cannot eat anything. His feeling is bad. He is dizzy. His world is black, he spontaneous bleeding of his nose.

His mother cannot wait. She takes her little son to a hospital immediately.

Figure 3.8: Children colour book page 5

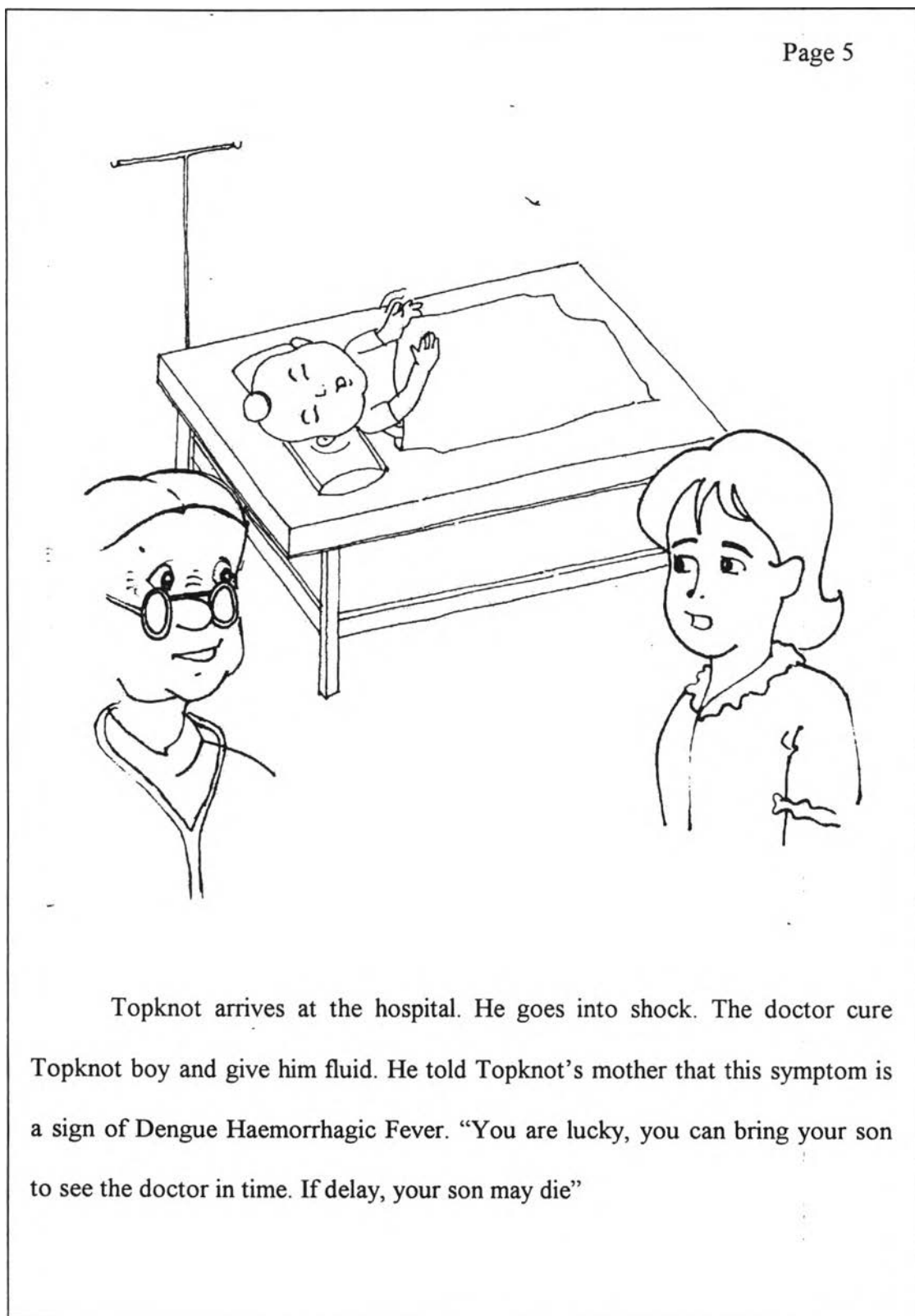


Figure 3.9: Children colour book page 6

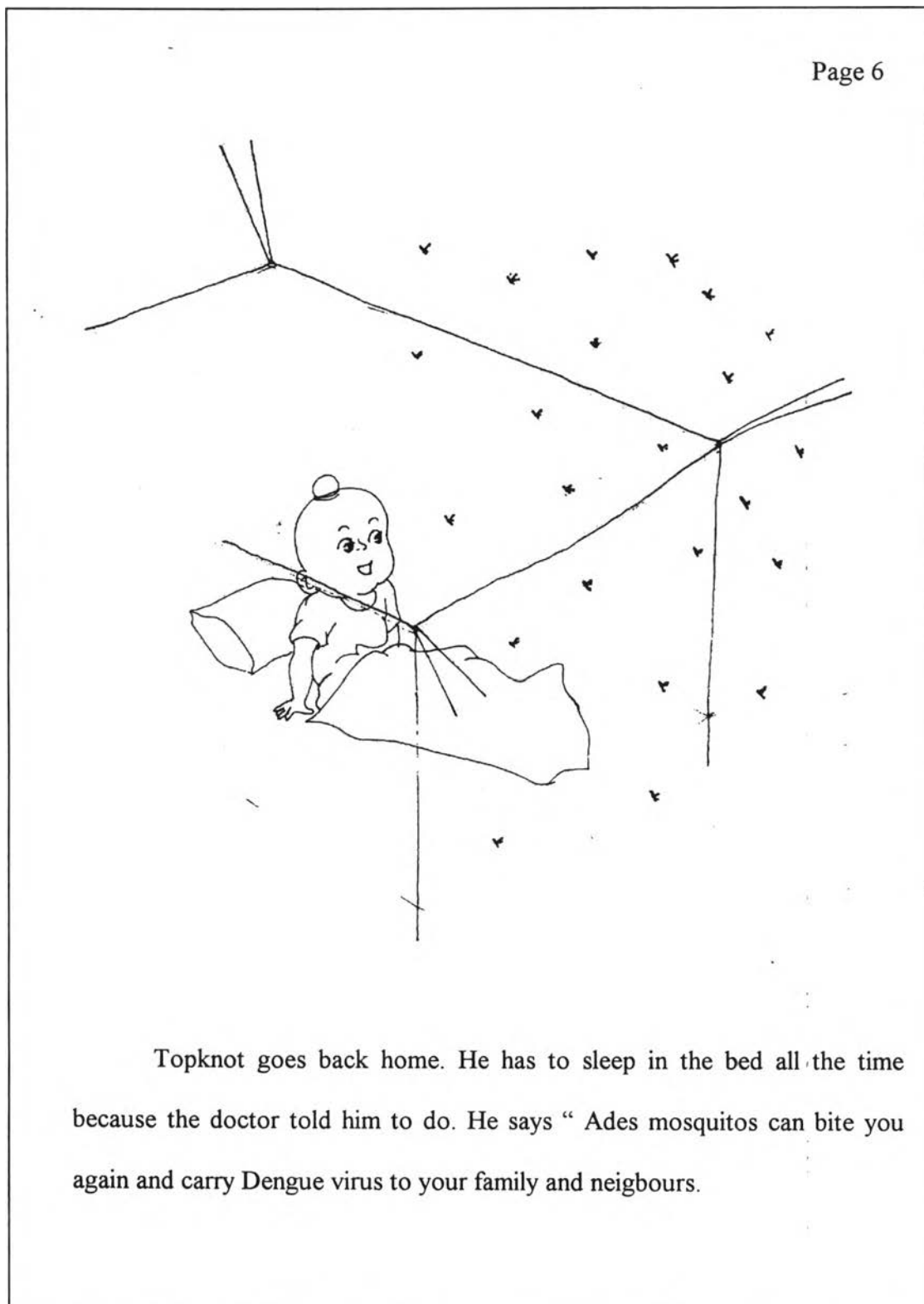
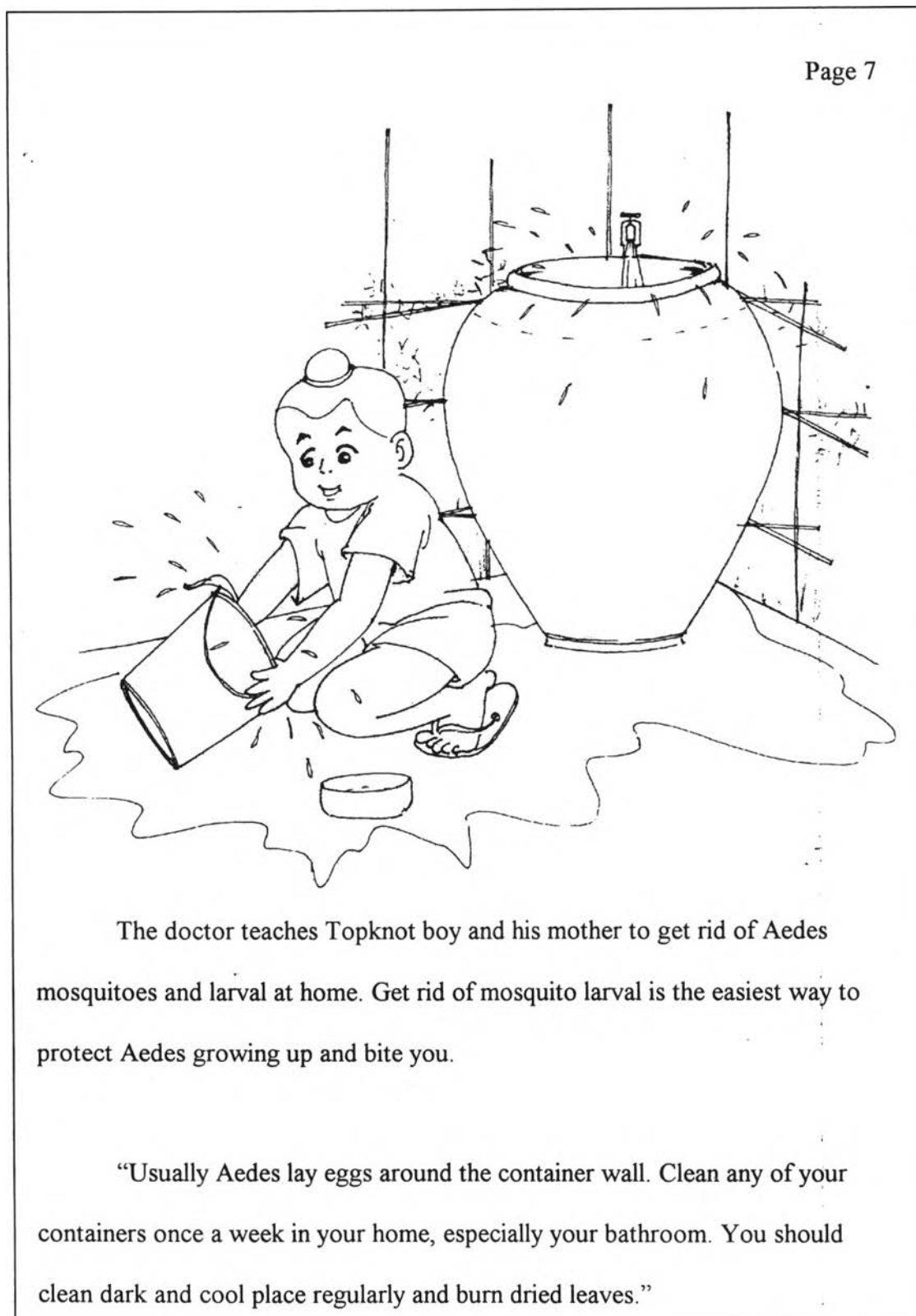
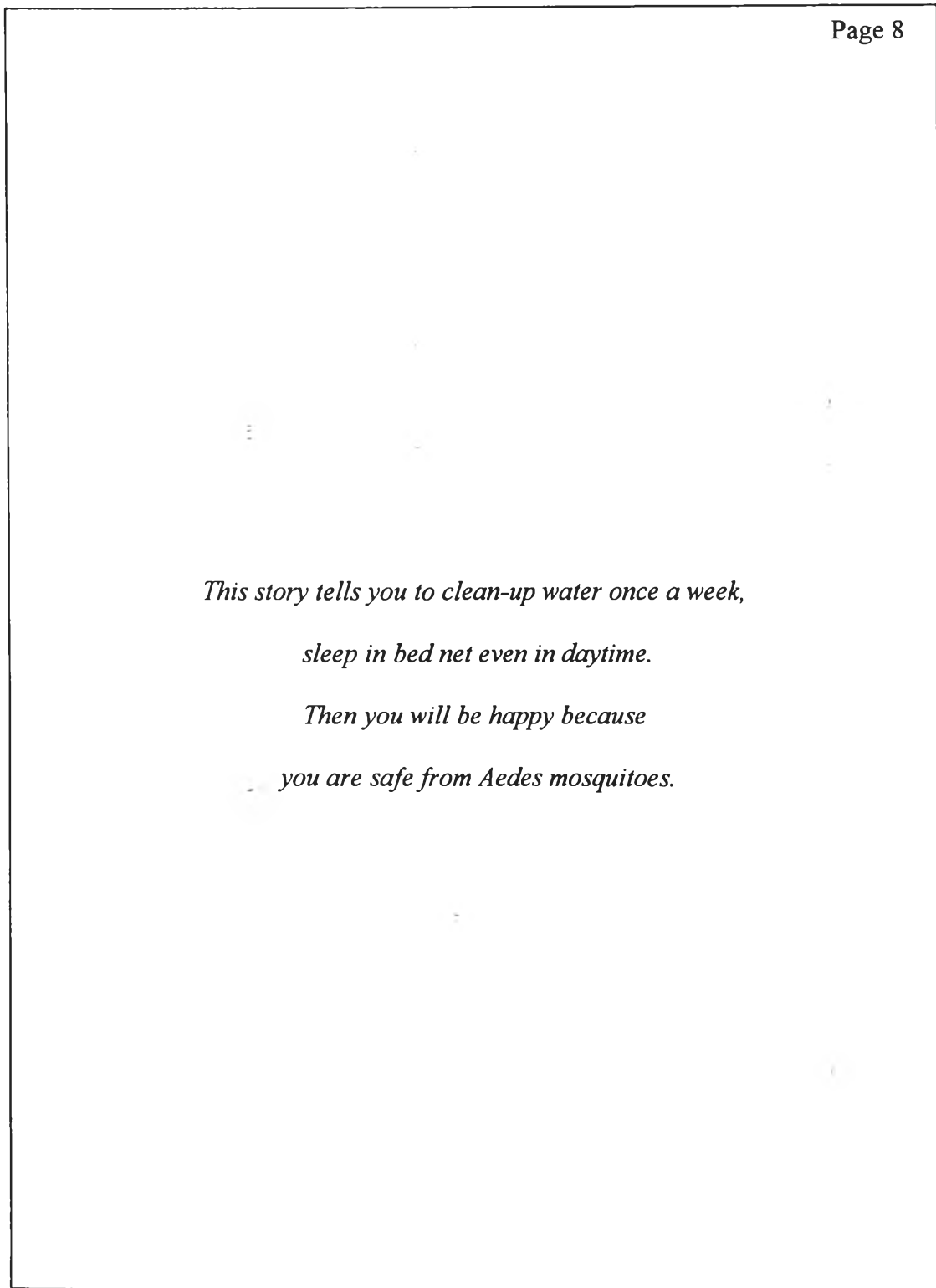


Figure 3.10: Children colour book page 7





**Figure 3.11:** Children colour book page 8



Objective is give knowledge of Dengue Haemorrhagic Fever through children color book in order to reach individual one-by-one child. Children can color on pictures that consist of 7 pages, A4 paper size.

The illustration is about Topknot boy cartoon who get Dengue Haemorrhagic Fever even though he is an athletic boy of the school.

Message is about the mosquitoes breeding source, Dengue fever, Dengue Haemorrhagic Fever's symptom and prevention.

### ***Hearing or auditory modality***

Hearing information can fill understand and assimilate the messages, particularly for illiterate. This campaign will use Public Service Announcements (PSAs) which define as messages that are intended to promote awareness disseminate information, and/or influence attitudes/behavior concerning public issues.

- Free media/Public Service announcements (PSAs)

The public announcement is used in the form of mobile speech that purpose to reach all people in the Tha Yai village. This form is planed to attack all level of the audience, especially, children who always catch words then repeat the message to parents/caretakers. The speaker will represent the Topknot boy voice.

The car and loudspeaker are available from the municipal administration. They have a budget to support sanitation activities so there are free of charge. The tape recorder plays while driving car to those houses and stop, then play again to release the messages through loudspeaker to every small street and take turn every day.

The importance of mobile speech is to reach the audience at the right time. From focus group discussion in data exercise found that the best is in the morning before people go to work and children go to school and after work in the evening.

The message that set in term of speech will be reinforced with a memorable picture and will reach a broader audience. Today's receivers prefer quick, instant and long speeches are no longer effect the audience except in the form of lecture in the class.

An update content is essential in the speech otherwise the audiences will feel not contemporary with them. The strategy in mobile speech is to repeat the basic campaign slogan over and over again then slogan will be remained in the audience mind.

### Messages for Mobile Speech

#### **Message 1**

“Fhee.....fhee.....fhee.....” (sounds of mosquitoes)

“Swasdee.....Krap or good morning everyone. Today, a Topnot boy will tell a story of your tinny friends in your house that Thais call striped mosquito because the have white strip on their body and legs. They like to stay near human very much, especially the female love to eat human blood.

She likes the dark place or an open wide- place that in the shelter. She will eat blood in daytime but sometime she can eat during night if your house turns on lights because it looks like the daytime. Then she will go to the corner to bite you.”

*“See you again after you come back home this evening, I will tell you more”*

**Message 2 (Topknot sounds)**

Sounds of someone shout “ egg.....egg.....egg”

“What’s an egg.....? I cannot see it. I will tell you more about Aedes or striped mosquito eggs. She eats blood and digests blood to use protean and produce eggs. After eating blood 2-3 days she lays eggs in still water. She can produce many eggs after mating if she can eat blood many times.

She likes to lay eggs in the afternoon. These eggs will develop well in the temperature at 28-30 Celsius in the humid place ... be careful in your bathroom!

*“Have you seen mosquitoes larval in your bathroom today..... I think you know how to do with them .....Tomorrow you will know”*

**Message 3 (Topknot sound)**

How is everyone.....I am helping my mum and dad to clean-up the containers. How about you? I know some of you are feeding fish with the larvae from your container but don’t forget to take the pupae away, get rid of them before they become mosquitoes.

*“ You know the danger of striped mosquito... don’t leave the pupae in your container, take a look every 2 or 3 days and get rid of them.....”*

### III. Audience

Target receivers or audiences

- Parents:

To give message to parents that by living without larval infestation in your house, your children who you love will be healthier and this will lead to happiness in the house.

- Caretaker:

To give message to caretakers about helping to get rid of mosquitoes larval will create life easier because the children will not get sick from Dengue Hemorrhagic Fever.

- Children:

To give message that they are the risk group who can get DHF easily and how to protect themselves from mosquito bites and helping parents to reduce mosquito larval at home, school etc.

- Community

To give message that they must help themselves to prevent Dengue Hemorrhagic Fever by get rid of *Ae.aegypti* mosquito larval in their house and surrounding area.

### IV. Effect

The message of the campaign intends to touch the audiences' feeling of safety needs in their life. This needs tactic is proposed to increase their cleaning- up water behavior once a week in order to reducing Aedes larval and mosquitoes. Especially, The messages are created to affect the parents and caretakers. These key persons are

influenced because they may clean –up water by themselves or asking other members in the house to do.

Other key persons are children. The messages are created to enhance the children knowledge. This knowledge helps children to ask their parent to do or the parent express their feed back to the children after they asked.

After they receive the messages from this campaign and they start their action to clean-up water in their houses. This is the effect of the message that motivate the audience to follow.

Only the message itself cannot motivate the audience if the channel/product or medium is not attractive. So, why the presenter is important to capture the attention from audiences before they read or listen to message.

## **2. Campaign activities ( Supported Activities )**

Activities or interventions in this campaign are conducted to distribute the campaign messages and using reinforcement strategy to increase action of reducing mosquitoes and *Ae.egypti* larval breeding site. This strategy is to strengthen behavior by giving rewards. The positive reward is the acceptance in the community and the negative reward is reversion. This is base on the human needs of Maslow in the third stage of social needs.

The acceptance means any house that has no *Ae.egypti* larval infestation cannot transmit DHF to neighbors because they can fly 100-500 meters in distance without the help of the wind. If the mosquito from neighbors carry Dengue virus it can bite and spread the dengue. There are 3 interventions: household, school and community. The cleanest house will receive Happiness house certificate and some gift. After finishing

this project whether the project can be continue or not. This value of clean-up water once a week is still in the community.

### **Reinforcement Strategy**

Reinforcement is used as a strategy to develop an intervention program for Tha Yai Village. Skinner's Theory of operant conditioning state that human behavior can be changed by manipulating reinforcers (an operant is a behavior that operates on the environment causing either a positive or negative response; a reinforcer is something added to the environment that increase response). (David and Susan Ansppaugh & Mark Digan ,2002). Reinforcemnt strategy in this proposed project include the following:

#### ***(1) Residence and temple intervention: Health Fair***

<u>Operational definition:</u>	Happiness House is the house without mosquitoes, especially <i>Ae.aegypti</i> Larva.
<u>Purpose:</u>	To raise awareness of mosquitos' larval reduction for living without DHF in the house.
<u>Target group:</u>	All Tha Pha villagers
<u>Period:</u>	Have a contest 2 times a year in May and October.
<u>Place:</u>	The contest celebration organizes at the Tha Pha Temple.
<u>Operation:</u>	Health Fair: Announce the contest by posting posters in the village, loud speaker announcement from the temple or mobile speech and the monks encourage people who come to give merit at the temple to participate in this

contest programme. In the contest celebration has comedy troupe to entertain and provide the information about DHF. Video tapes of DHF knowledge plays in the fair.

Reward:

Positive Reinforcement: The ten cleanest houses with no *Ae.egypti* larval infestation for 4months, January-April and June-September The larvae will be check once a week) get the certificates, cleaning materials and First Aid kits. The First prize is 3,000 Baht-, the second prize is 2,000 Baht- and the third prize is 1,000 Baht. Residents' names in these 10 houses are posted on the board in the Temple in order to promote their good behavior.

***(2) School intervention: School Fair***

Purpose:

- To evaluate the school children grade 5-6 by having their own exhibition about DHF.
- To provide knowledge and attitude toward preventing DHF in the community and the impact of DHF to school children, especially, distributing children colour books for primary school children.

Target group:

Kintergarten and Primary school children.

Period:

At the last day of mid-term 2 times a year in February and July.



<u>Place:</u>	Tha Pha Community School village.
<u>Operation:</u>	School Fair: The campaigners conduct painting contest from the Topknot's colour cartoon book that distribute in the school fair. In the fair has games with prizes for students to play. The game will involve the DHF knowledge, attitude and impact. These activities will be announced by teachers.
<u>Reward:</u>	Positive Reinforcement: At the school fair day, we have exhibition contest for school children in grade 5-6 and having the painting contest from the children color book among children in grade 1-4. The winner will receive a box of healthy food and flashlight for looking for mosquitoes larvae.

***(3) Community intervention: Mobile Speech***

<u>Speech name:</u>	2 minutes for you.
<u>Purpose:</u>	To give more understanding about DHF and raise public awareness of preventing Dengue in a suitable way and report the DHF incidence case in the village
<u>Target group:</u>	people in Tha Yai village.
<u>Time:</u>	Every Monday –Wednesday –Friday in the early morning around 7.00 am and 6.00 pm. In the evening.
<u>Place:</u>	All areas in Tha Yai village

Operation: Mobile speech: The message DHF knowledge from free media. Telling story about DHF (make it fun like a folk tale) through loudspeaker from the temple Dengue Haemorrhagic Fever news

Reward Positive Reinforcement: The campaigners encourage villagers to write DHF stories to select the interesting one for mobile speech and give money in kind or prize for the story that is selected. If any day there is no good story the campaigners have to create or find from other books or journals.

### **Phase II : Implementation**

The persuasive campaign implementation is attempts to influence the Tha Yai community by using 4P's of Product Marketing. This 4P's has been use in Health Promotion that strength the outcome of the project: The 4P's are defined as getting the right product to the right place at the right price and achieved the program through promotion.

#### **(1) *Product:***

The right product: Persuasive campaign is a right product due to Tha Yai village never has loudspeaker for their community. Just a weekly clean-up campaign in the "Persuasive Campaign Project" has an outstanding product of Mobile Speech that Tha Pha villagers never have public announcement Service in the village. They do not receive any news or hearing any announcement from the government or village

headman like other villages nearby. Therefore, Mobile speech is a right product to reach this community.

(2) **Place:** Adequate facility

Tha Yai is a right place because there has the most population and highest incidence among Tha Pha sub-district. People are likely urbanized who live near the town that people can travel easily by the main road. Therefore, it is easy to spread DHF.

(3) **Price:** Budget

The budget includes every step of implementation and administration. Some mobile speech equipment and can be borrowed from Tha Pha Municipal Office. Other activities like Health Fair, the coordinator request the use of space and amplifier from the Tha Pha Temple. School Fair will use the place in Tha Pha Community School without paying any rent but only asking for cooperation. Aid kits, cleaning stuff and healthy food, the campaigner will find sponsors to contribute, especially requesting the companies that produce these kind of products.

(4) **Promotion:** Advertising

The successful of the campaign through many types of information service such as poster, sticker and announcement. Promotion is the approach of achieving the outcome of the project.

**Four steps of implementation**

1. Program introduction to the authority and community.
2. Resource needs and staff training.
3. Pre-test
4. Launch the campaign. Posttest

**1. Program introduction to the authority and community**

This phase has a purpose to prepare the target population for change. The residence, school and community interventions for the campaign attempt to change the actual participants' behavior. Therefore, it is important to build the relationship between campaigner staffs and community. The key people in the community will be invited to participate in the project and they include (1) Tha Pha monks (2) Villager headmen (4) Teachers (5) Health volunteers

The project manager introduces this sustained persuasive campaign to the authorities by sending letters and visiting concerned organization for further cooperation. This can protect the problems of opposing the campaign from authorities and key performance in the community. The authorities in the responsible area are (1) Ratchaburi Health Provincial office (2) Ban Phong Public Health Office (3) Municipal Office (4) Tha Pha Health Center.

## 2. Resource Needs and Staff Training

Resources Needs are shown in the following Table3.2

**Table 3.2 Resources needs for implementing the Persuasive Campaign**

Task	Personnel needs	Equipment/material needs
<b>Media distribution</b> - Poster  - Cartoon color book  - Sticker - Mobile Speech	Worker to post poster  Teachers  Teachers Driver Speaker	Staples Vehicle Colour pencil Prize  Tape recorder Cassette tape Fuel or petrol
<b>Program activities</b> - Health Fair        - School Fair	Coordinator Assistants Comedy Troupe Announcer Village headman Health volunteer Public Health Officer  Coordinator Assistants Teachers	Presentation board Stationary Prize Amplifier      Stationary Prize (health food)
<b>Evaluation</b> - Pretest-Posttest  - Larval survey once a week	Researcher Assistants  Seveyers	Stationary Flash- light Stationary Flash- light

### *Staff Training*

Purpose of staff training : To manage the program smoothly

Staff Training 4 sections :

- Administration
- Information
- Operaration
- Evaluation

Training curriculum:

- Objective of the campaign
- Activities and service to the community
- The time schedule of the project
- Responsible works for each section

### **3. Pre-test and larval survey plan**

The pretest in both Tha Yai and Khong Noi village will take place in December 2002. The evaluation team has to calculate the score and keep record in the diskette and hard copy.

The larval surveys will occur at the second week of January 2003 because people are always out of the village during the New Year celebration. The surveyors go to the village once a week to check and record indices. After calculation, the numbers go to Information section. These numbers will be used before having Health Fair for Happiness House contest.

#### 4. Launch the campaign.

The campaign will launch in January 2003 and it will be continually until the end of the year. Time of launching any activities is the key factor to consider. Each activity should stimulate people in participating in the program regularly. The time schedule of activities is shown in the Table 3.3 as follow:

**Table 3.3:** Time Schedule of activities for the year 2003

Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Posting posters	+	+	+	+	+	+	+	+	+	+	+	+
2. Provide stickers			+					+				
3. Launch Mobile speech	+	+	+	+	+	+	+	+	+	+	+	+
4. Provide Color Cartoon Book		+					+					
5. Health Fair					+					+		
6. School Fair	-	+					+					

#### 5. Posttest

The researcher is important in this step. She/He has to plan how to manage the posttest in both villages and the analysis. The posttest will occur in December 2003 at the second week. The evaluation team has three months to collect the data, analyze and writing evaluation report.

### **Phase III : Evaluation**

There are two types of evaluation that use in Health Promotion to evaluate the program intervention. The first one is process evaluation and the second is Impact and outcome evaluation.

The process evaluation refers to find out whether the program (campaign) was implemented as planned. These type focuses on program development that evaluate reflect efforts to monitor program activities but not the result the campaign.

Impact and outcome evaluations focus on the products of the program (campaign) but differ terms of degree. The outcome is criteria of the rate that the programs expect to produce as shown in diagram 3.6.

According to the objective of the campaign is to evaluate the degree of awareness and action to reduce Aedes larval mosquitoes and the percentage of three indices. Therefore, the impact and outcome is used to evaluate Persuasive Campaign Project.

**Figure 3.12:** The input-process- impact and outcome of the persuasive campaign

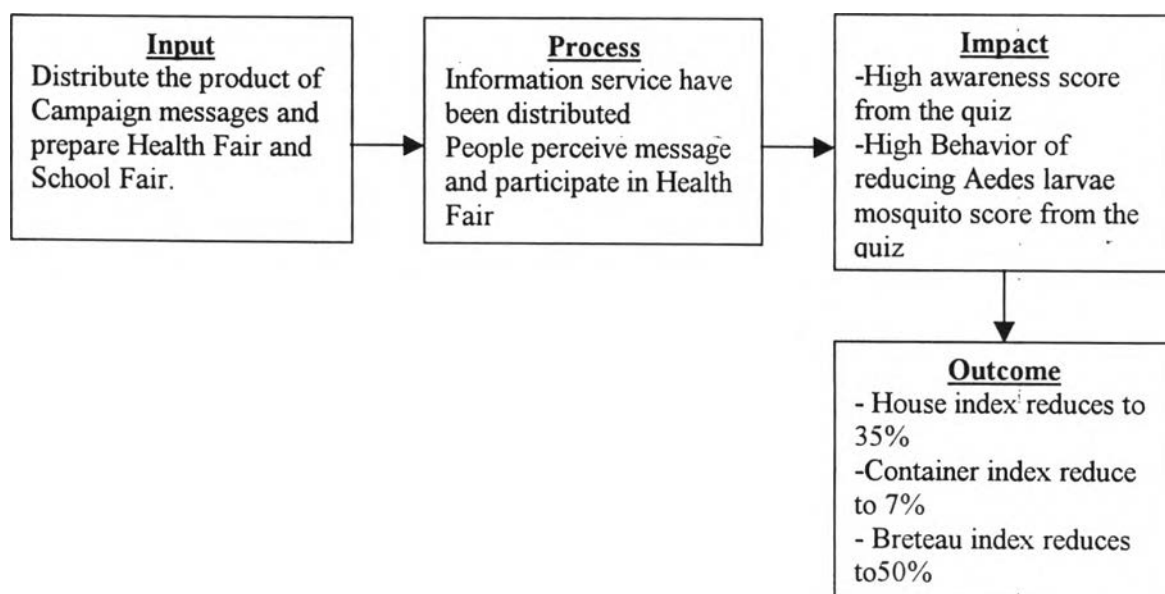




Figure 3.6 describes the input is an intervention of giving campaign messages and persuades villagers to participate the preventing Dengue Haemorrhagic Fever activities. After the process of perception and villagers are persuaded to get rid of *Ae.Aegypti* larval. The output should enhance their awareness and behaviour of preventing Dengue Haemorrhagic Fever and the outcome is *Ae.Aegypti* larval reduction in their houses.

1) **Evaluation question**

Are *Ae.aegypti* indices satisfactory?

2) **Standards**

A statistically significant difference in *Ae.aegypti* indices reduce in experimental village versus control village.

3) **Evaluation Design**

**Quasi-experimentation:**

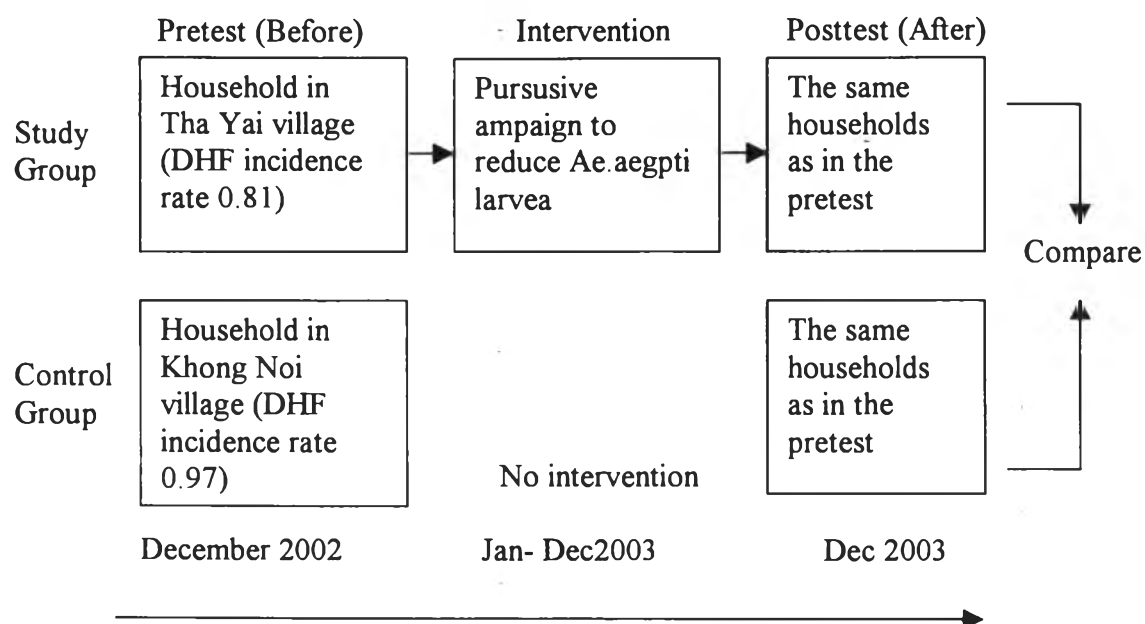
***Before-and –After Design with a Control Group***

***Prospective study***

The Tha Yai village will be compared with Khong Noi village which will serve as control. Baseline introduction are collected at both villages before the launch of the campaign in Thai Yai village.

Figure 3.13 illustrate the evaluation scheme using before-and- After Design or Pretest and Posttest 2 groups before the campaign launch and after the campaign launch.

**Figure 3.13:** Before-and-after design with control group



#### 4) Collecting data

Pretest and Posttest by using

- *Quantitative data:*

##### *Face-to-face (interviewed) questionnaires*

The interviewer asks the questions from questionnaire in sequence in order to avoid missing data and encourage respondents to answer, especially, the elderly. The questionnaire consists of 5 parts, there are requiring demographic data, perception of DHF prevention, awareness of DHF prevention, behavior of DHF prevention and knowledge of DHF.

Purpose of each part:

1. Demographic data is to describe the characteristic tic of the villagers.
2. Perception of Just a weekly clean-up campaign is to assess perception of usefulness campaign.
3. Awareness of DHF prevention is to evaluate the increasing of awareness after receiving the campaign
4. Behaviour of DHF prevention to evaluate the increasing of behavior of getting rid of larval after receiving the campaign
5. Knowledge of DHF to evaluate the increasing of knowledge.
  - *Ae.aegypti* larval density collecting survey

The survey uses a form to check *Ae.aegypti* larval in the container by an observer. He/She note down how many houses inspect, container infest with *Ae.aegypti* larval from the total containers in each house.

- ***Qualitative data:***

- ***Observation***

The observer will be the same person who checks *Ae.aegypti* larval. He/She observes how many containers with/without cover, garbage that infest with *Ae.aegypti* and sanitation around the villager house.

## 5) Sampling

Sampling frame: Tha Pha Municipal administration has a registered household list. In the list there are 284 households, however, this list may not be accurate because in reality there are more houses without numbers. Therefore, the reliable sampling

frame should come from mapping the village. A map will take about one week to finish. Before having a pretest the evaluate team has to draw a map of Tha Yai village and count exactly number of houses.

- Study population

Study population is the people in Tha Yai village and Khong Noi.

Inclusive Criteria:

People who are not living in the same house in Tha Yai village and Khong Noi.

Exclusive Criteria:

Any person who lives in the same house as in study population.

- Sampling unit: One woman who takes care of household cleaning a household.
- Sample size

$$n = \frac{X^2NP(1-P)}{C^2(N-1) + X^2P(1-P)}$$

Formula for determining sample size (Krejcie & Morgan, 1970) with 95% probability and 5% confidence interval, when:

N = population size ( 284 households )

n = sample size

X<sup>2</sup> = 0.05 level of probability (95%)

P = 0.5

Then

$$n = 284 (3.84)(.5)(.5)/(.05)2(283)+(3.84)(.5)(0.5)$$

$$= 274.64/1.6675 = 163.5$$

Therefore the sample size = 163.5 (57%) of the total households in Tha Yai.

- Sampling method: Systematic Random Sampling

Systematic Random is used because there are not too many households and the sampling frame is complete (after making a village map). It is suitable to random systematically.

## 6) Analyzing data

### *Measure:*

1. Clean-up water knowledge and awareness is measured from questionnaire.
2. *Ae.aegypti* larval infestation is measured by larval survey.

### **6.1 Knowledge and Behavior Evaluation**

A two-sample independent group *t*-test: the two groups have sample size at least 30 households with about equal and the two groups are independent.

### *Independent Variables:*

Persuasive Campaign Intervention in the experimental group.

### *Dependent Variable:*

Knowledge and Behavior in Cleaning-up water in the experimental group.

### **6.2 Larvae Infestation Evaluation**

- House index (HI) which means percentage of houses infested with larvae and/or pupae. To reach 35%.

$$HI = \frac{\text{Number of houses infested} \times 100}{\text{Number of house inspected}}$$

- Container index (CI) which means percentage of water-holding containers infested with larvae or pupae. To reach 7%.

$$CI = \frac{\text{Number of positive containers} \times 100}{\text{Number of containers inspected}}$$

- Breteau index (BI) which means number of positive containers per 100 house inspected. To reach 50%

$$BI = \frac{\text{Number of positive containers} \times 100}{\text{Number of houses inspected}}$$

### **Qualitative data**

The field note from observation will be cross- checked with Ae.aegypti larval survey and result questionnaire. The integration of Quantitative and quantitative data will clarify the misunderstanding points in the evaluation report.

### **7) Expected outcome**

- Each household spends time to clean water once a week.
- Better environment without Ae.aegypti mosquitoes in Tha Yai village.



## 6. Budget

The budget is set for the project during November 2002 – February 2004. The manager of the project is a coordinator who monitors 4 sections, Administrative, Information, Operation and Evaluation. Coordinator directly manages an evaluation section.

**Table 3.5: Budget for Persuasive Campaign**

No.	Description	Unit(s)	Unit Price (Baht)	Day(s)/ Month	Total
1	-Full time staffs				
	Coordinator	1	25,000	16 months	400,000
	Administration staff	1	20,000	16 months	320,000
	Information staff	1	20,000	12 months	320,000
	Operational staff	1	20,000	12 months	320,000
2	-Part time staffs				
	Researcher	1	1,000	45 days	45,000
	Surveyors	3	500	96 days	48,000
	Worker	1	5,000	16 months	80,000
3	Stationary for office work and field work		20,000		20,000
4	- Transportation				
	Petrol		300	15	4,500
	Vehicle rent	1	800	15	12,000
5	- Print Media				
	Poster	150	103		15,500
	Children Color book	300	212		63,000
	Cartoon sticker	300	30		9,000
6	- Fairs				
	Rent place and Amplifier	2	5,000	2	10,000
	Prize	1	6,000	2	12,000
7	Miscellaneous				21,000
<b>Total</b>					<b><u>1,700,000</u></b>



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