Village Malaria Volunteers in Thailand:

An Anthropological Approach

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ABSTRACT

The focus of this study is on the attrition of village volunteers in the malaria control program in an endemic malaria area of northern Thailand. The research problem involved examining circumstances that keep volunteers working and circumstances responsible for their leaving the program. The ideal characteristics of volunteers from the community perspective were determined. An assessment was made as to how the community accepts the volunteer role. The three levels of the study were: the individual volunteer, the community, and the administrative structure of the program.

Two methodological approaches were used: observation -both as participant and non-participant- and structured interviewing. Observation was utilized to compare the conditions of two categories of volunteers: those who dropped out and those who stayed on in the program. A structured interview study followed; this was developed on the basis of information gathered in the observation phase. Two hundred and nine volunteers responded to the questionnaire: 64 of them had dropped out of the program; the rest, 145, had stayed on in the program.

The major findings indicate that the attrition rate of volunteers is related to their age at the beginning of volunteer work, to the

program the volunteers belong to, to the attitudes toward frequency of blood slide collecting required of them, and to the relation between the volunteer and the malaria officer. The main factors that encouraged volunteers to stay on in the program included: being selected by the community, having the opportunity to attend a training course, obtaining a certificate (a "reward"), having family help with the work and living in a high malaria incidence rate area.

Villagers who were studied did not want to volunteer themselves, but would be glad to have a relative serve as a volunteer. A young or middle-aged married person with at least average economic status was the ideal volunteer.

Kamolnetr Okanurak
3 September 1986

Frederick L. Dunn
31 August 1986

ACKNOWLEDGEMENTS

The research reported here has benefitted from the assistance of many individuals and institutions.

I was fortunate with my committee in that they had a wealth of experience relevant to my study. Dr. Frederick L. Dunn, the chairman, guided me with scholarship, experience and understanding. His guidance made the dissertation process a valuable experience. He deserves my deepest gratitude. I also owe a great debt to Dr. James N. Anderson, Dr. Linda S. Mitteness and Dr. M. Faith Mitchell for their precious advice and support. I must also thank Dr. George M. Foster who supported me at the beginning of my study.

Special thanks go to Dr. Santasiri Sornmani, Dean of the Faculty of Tropical Medicine, Mahidol University for his support and encouragement throughout the study. Without his help -particularly during field work- this study might not have been possible.

This investigation received financial support from the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases. I would like to thank Dr. C. P. Ramachandran who has administered my funding. I would also like to express my sincere appreciation to Dr. Patricia L. Rosenfield who is interested in and supports my work.

This study would not have been possible without generous cooperation from the Malaria Division, Ministry of Public Health, Thailand. Special gratitude goes to Dr. Surin Pinichpongse, Director of the Malaria Division; Dr. Udom Chitprarop, Director of Malaria Region 2; Dr. Chusak Prasittisuk, Chief of Applied Research Unit and

Mr. Prasert Vivattanapanit, Head of Malaria Sector I-Lee.

I am particularly grateful to volunteers and other villagers who gave their enthusiastic cooperation. Without them this study could not have been conducted. I would also like to thank my field staff Ms. Tatikul Chaiwan and Ms. Plumchit Boonman for their effort and hard work.

Finally, I feel sincerely grateful to my mother, Ms. Sungwhu Okanurak for her love and care, which inspired me to go on with my work.

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CHAPTER I

INTRODUCTION

1.1 Statement of the Problem

Developing countries throughout the world launched Primary Health Care Programs after the 1978 Alma-Ata Declaration of "Health for All by the Year 2000". The main vehicles for promoting the Primary Health Care approach often are village health workers. The concept of utilizing these workers arose from recognition of several facts. Governments, lacking adequate budgets, frequently fail to provide basic health services to all sectors of the population, especially in the rural areas. Moreover, governments find it difficult to post qualified staff in rural and remote areas. In addition, it is recognized that people are able to take responsibility for their basic health problems, if they are properly trained. These village health workers are known by many different names and carry out different health functions in different countries. Some workers are full-time, most are part-time. Some workers are paid a salary, while others are volunteers. However, these workers are typically people chosen from the community in which they will later work. They are given a modest amount of training and perform a variety of preventive, promotive and sometimes curative work (Berman 1984; Ennever and Standard 1982; Flahault 1978; Joseph and Russel 1980; MacCormack 1983; Ofosu-Amaah 1983; Scholl 1985; Storms 1979; Vaughan 1983; World Health Forum 1981).

Thailand is one country that had evolved a primary health care project before the Declaration of Alma-Ata. There were many pilot projects in various places, for example, the Sarapi Project-Chiangmai, the Phitsanulok Project-Phisanulok and the Village Voluntary Malaria Collaborator Program (Ministry of Public Health 1978b; 1979; Reinke and Wolff 1983). The Malaria Collaborator Program was begun in 1961 in many provinces, such as Chiangmai, Khon Khan, Nakhon Ratchasima and Chonburi (Vongsarot 1980). The success of these experiments led to the extension of the program to cover the whole country. The program is now one of the main approaches to dealing with the malaria problem, besides the standard control measures: DDT house spraying and home visits for case detection. The program recruits local people in malaria endemic areas to work as volunteers without any salary. These volunteers are expected to take blood slides at their villages and to distribute presumptive treatment to suspected cases (Malaria Division 1984).

There were about 32,400 to 35,100 volunteers during the years 1981 to 1983. However, only 42.8 percent of registered and previously trained volunteers actually worked in fiscal year 1981. Although the situation has improved since 1982, the turnover was still as high as 34.0 percent in 1983 (Table 1.1). This high turnover -loss of trained volunteers- is a grievous waste of scarce resources because the Malaria Division has had to invest its resources in training and supervising volunteers as well as providing working manuals for them.

Table 1.1 Number of Volunteers from 1981 to 1983

Year	Total Volunteers	Working Volunteers	
		Number	Percentage
1981	33,085	14,154	42.8
1982	33,278	21,272	63.9
1983	32,432	21,514	66.0

(Adapted from the Malaria Division Report of 1983, p.69. These are the only official data available at the time of this study).

Although the data clearly show that the drop-out rates of volunteers are high, there has not been any investigation of the reasons for these high rates. Moreover, it is not known what factors contribute to volunteers staying on in the program, though the program has been in operation more than 25 years. Furthermore, there is not any clear idea about what personal characteristics are appropriate for successful volunteer work. Since the Malaria Division does not plan to discontinue the Village Voluntary Malaria Collaborator Program, a study of these concerns may be important in helping the program work more efficiently.

1.2 The Malaria Situation in Thailand

1.2.1 Introduction

In Southeast Asia, malaria is still one of the most important infectious diseases. For example, malaria has been identified as a major public health problem in Laos where 85 percent of the total population of 3.2 million are at risk. In the Philippines about one-

third of the population was at risk for malaria in 1981. The malaria situation in Burma worsened in 1976, with the Annual Parasite Incidence (API) increasing from 0.50 in 1976 to 0.72 per thousand in 1980 and a Slide Positivity Rate (SPR) rising from 1.8 percent to 3.3 percent in 1975. Malaria cases in Indonesia increased from 9,000 in 1965 to 346,000 in 1973 and decreased to 78,854 in 1979. However, in 1980 the number of cases increased again, particularly in the central part of Java where the vector has become resistant to DDT (Brandling-Bennett, Doberstyn and Pinichpongse 1981; Harinasuta et al 1982).

The malaria situation throughout Thailand has greatly changed in the last four decades. In 1947 the morbidity rate was 286 per 1000 population and the approximate mortality rate was 350 per 100,000 population. At that time malaria was the leading cause of death. It was estimated that malaria killed as many as 40,000-50,000 people each year. The morbidity rate progressively decreased until the incidence seemed to stabilize in the years 1966-1972. Then, the incidence began to rise from 7.1 in 1979 to 10.6 in 1981. By early 1982 the incidence began to decrease again and continued downward through 1983 (Malaria Division 1985; Pinichpongse 1984).

1.2.2 *Plasmodium* Species

In Thailand there are three species of *Plasmodium: falciparum*, *vivax* and *malariae*. *P.falciparum* has the highest prevalence, being responsible for 65.3 percent of malaria cases in 1982. *P.vivax* was responsible for 34.4 percent and only 0.02 percent was caused by *P.malariae* in the same year (Malaria Division 1985).

1.2.3 Vectors

Three species of anopheline mosquitoes are primarily responsible for malaria transmission in Thailand namely Anopheles minimus, An.balabacensis (= An.dirus), and An.maculatus.

An.minimus is considered to be the most important vector in Thailand. It is prevalent throughout the country in forested and cleared forested foothill areas with slow running streams.

An.balabacensis is another major vector. It breeds in temporary water collections, such as animal hoof prints, wallows and lorry tracks under heavy shade in the jungle and at the edge of jungle.

An.maculatus is the principal vector in the southern part of the country. It is widely distributed in hilly areas where breeding takes place in clean streams and seepages open to the sun.

Besides these three species, there are two other species which are secondary vectors in some particular areas: An.sundaicus and An.aconitus (Cullen et al 1983; Malaria Division 1985; Prasittisuk 1985).

1.2.4 The Thai Anti-Malaria Program

In 1930 the Thai First Malaria Control Unit was organized in Chiangmai Province. In 1943 the Malaria Control Division was established in the Ministry of Public Health in Bangkok. Its main function was to distribute anti-malaria drugs. At that time malaria was the leading cause of death; the death rate from malaria was as high as 350 per 100,000 population. In 1949, the Thai government, supported by WHO and UNICEF, conducted a pilot project by using DDT

residual spraying in Chiangmai. Then, in 1951, a country-wide control program was developed with assistance from USAID (Cullen et al 1983; Pinichpongse 1984; Prasittisuk 1985). Efforts to control malaria around the world in the early 1950s were highly successful and led to a belief that the disease could be eradicated. In 1955 the member nations of WHO endorsed the goal of eradication. The objective of malaria eradication involves breaking the reproduction cycle, eliminating any sources of infection and preventing the reintroduction of the disease into the population. It is a time-limited strategy that requires careful implementation. In response to the WHO policy, the Thai Ministry of Public Health supported by WHO and USAID, turned to a malaria eradication program in 1964. However, many programs failed to achieve the goal of eradication, even though a vast number of people were freed from risk of the disease. Therefore, in 1969 the WHO revised the policy of eradication to one of control. Malaria control has a more modest objective. It is intended to reduce mortality and morbidity and contain the disease to a level where it is no longer a serious public health problem. Malaria control has no time limit.

The overall administration and coordination of the Thai Anti-malaria Program is the responsibility of the Malaria Division, headquartered at the Ministry of Public Health in Bangkok. In terms of administration, Thailand is separated into five regions. Five regional headquarters at Phra Phutthabat, Chiangmai, Khon Khan, Songkhla and Bangkok, supervise the anti-malaria activities in the different regions. Each region is subdivided into zones, and each

zone is subdivided into sectors. There were 33 zones and 302 sectors in the country in 1983. In each sector there is a spray team and a team conducting home visits (Malaria Division 1985). In 1983, about 5100 persons, distributed throughout the country, worked for the Malaria Division (Table 1.2). This does not include local people who were employed daily for DDT spraying teams.

Table 1.2 Malaria Division Manpower in 1983

Category	Number
Officers	900
Permanent employees	3672
Temporary employees	579
Total	5111

(Adapted from Malaria Division Report 1983)

The Thai Anti-Malaria Program, has now divided Thailand into two areas. Each of these areas has a different objective in terms of the Anti-Malaria Program.

1. Malaria control is the objective in areas of medium and high receptivity. These areas, with a population of about 10.5 million, include forested hills and mountains, border areas and insecure areas of the country.

2. Eradication is the goal in the areas of low receptivity and in those areas where the program has already been phased into partial integration with the general health services. These areas have

approximately 38.5 million of the population.

The control measures applied vary according to the local epidemiological situation. The main control measures are residual insecticide (DDT/fenitronthion) house spraying once or twice a year, radical treatment centers, provision of anti-malaria drugs as well as health education. There are also supplemental measures, such as larviciding, mass chemotherapy, space spraying, case detection, and the use of larvivorous fish. In addition, the Malaria Division has adopted the Village Voluntary Malaria Collaborator Program as a major activity (Malaria Division 1985; Pinichpongse 1984).

1.2.5 Problems in the Anti-Malaria Program

The Thai Anti-Malaria Program has faced many problems, technical, managerial and others. The first is resistance of P.falciparum, which has the highest prevalence in the country, to anti-malaria drugs. For years, chloroquine was the main anti-malaria drug and still is an effective treatment for P.vivax infections. P.falciparum resistance to chloroquine began as early as 1960 and now includes over 90 percent of isolates from throughout the country. The combination of sulfadoxine and pyrimethamine replaced chloroquine and was effective until 1974 when true resistance was detected. Resistance to sulfadoxine/pyrimethamine is found in as many as 80 percent of infections. It is widespread throughout the country, in particular on the border between Thailand and Kampuchea, and also in the areas involved in migration to and from the border. Therefore, a combination of quinine and tetracycline is administered in the areas

where sulfadoxine/pyrimethamine encounters high resistance. The problems of quinine therapy are well known. Compliance with a seven-day drug course is difficult, particularly in the presence of the bothersome side effects associated with quinine. At present, mefloquine and triple combination mefloquine-sulfadoxine-pyrimethamine are promising drugs. They are both effective and operationally feasible substitutes for quinine and tetracycline. It has been found that the triple combination in a single dose gives a cure rate higher than 95 percent (Cullen et al 1983; Harinasuta et al 1982; Lapierre et al 1983; Malaria Division 1985; Pinichpongse 1984).

The second problem is using DDT for vector control. DDT was one of the most effective public health insecticides. It was the main weapon in the Malaria Eradication Programs of the 1950s-1960s. However, it is now believed that DDT has a highly excitorepellency effect on the vector. Moreover, it was found that vector biting and resting behaviours have changed. For example, in the early 1950s An.minimus was highly endophagic and endophilic. It was recently found to have shifted to strong exophagy and exophily. That is, the feeding and resting habits of adult An.minimus have changed from seeking a blood meal and remaining within a man-made shelter to obtaining a blood meal and spending a greater time out of doors. Therefore, DDT can no longer produce significant mortality in this vector species (Prasittisuk 1985; Wooster 1985).

Third, there is also widespread human resistance to insecticide spraying. This resistance has limited the effectiveness of the anti-malaria activities in the country. Complete coverage has recently

declined to between 40 to 60 percent in some regions. It is believed that less than 60 percent coverage will not stop transmission of the disease. People resist the spraying because they do not like the whitish DDT deposit on house walls. Some do not like the intrusion and inconvenience. Others believe that this insecticide harms children, pregnant women and domestic animals (Agency for International Development 1982; Hongvivatana, Leerapan and Chaiteeranuwatsisi 1982; Malaria Division 1985). In fact the negative effect of DDT to human health as well as to animals is enormous. Therefore, DDT is banned in some countries, such as the United State, and Japan. DDT is still used in many developing countries for vector control for two main reasons. First, DDT is effective and second, DDT is cheap when compared with other insecticides that have the same level of effectiveness.

Fourth, local migrant workers from villages to foothill forest fringe areas have spread malaria. These migrants introduce malaria into areas where the disease is no longer considered a serious problem. They may be seasonal agricultural workers, plantation workers or illegal gem miners. They sometimes live in temporary shelters which provide little or no protection from vectors. When these workers become infected and return to their villages they provide sources of infection to entire areas. Moreover, some plantation workers work at night which is the peak period of vector activity, so these workers have a greater chance of being infected. Furthermore, mining leaves areas where water can accumulate and support vector breeding (Agency for International Development 1982;

Malaria Division 1985; Pinichpongse 1984; Prasittisuk 1985).

Fifth, international migration, particularly from Kampuchea, has contributed to a significant increase in P.falciparum malaria morbidity and dissemination of strains highly resistant to both 4 aminoquinolines and sulfadoxine/pyrimethamine drugs. Most of these migrants are seasonal and temporary. These migrants often are not refugees, who want to stay in Thailand permanently. Migration occurs between the Kampuchean border provinces of Chanthaburi and Trat, and certain areas of the north and northeast, and parts of the Burmese border. The reason for this movement to and from the Thai-Kampuchean border provinces is economic since this part of Thailand is rich in natural and agricultural resources. Moreover, both sides of the border have gem-mines. These mines are in deeply forested areas where An.balabacensis and An.minimus are plentiful. When these gen miners contract malaria, they often do not get treatment promptly since they want to make a sufficient amount of capital before they return home for treatment and convalescence. This delay provides a drug resistant gametocyte pool (Pinichpongse 1983b; Prasittisuk 1985).

1.3 The Thai Volunteer Programs

In Thailand today, there are many government projects that include community involvement. These projects are often related to agricultural development, political "self-protection" or health matters. All these projects are organized around the same principle: that a government institution cannot take complete responsibility for running a project in any area. In addition, it is believed that no

government project can succeed without community cooperation. Therefore, almost every project that touches the community level includes the idea of using village volunteers. This study deals with only those national projects that are concerned with malaria: the Village Voluntary Malaria Collaborator Program and the Primary Health Care Program.

1.3.1 The Village Voluntary Malaria Collaborator Program

In 1961 the Thai Malaria Division, Department of Communicable Disease Control of the Ministry of Public Health (Figure 1.1) adopted the Village Malaria Collaborator Program as one approach to dealing with the malaria problem. The rationale for the volunteer program was derived from the concept that the Malaria Division could not provide adequate and efficient services to all people in malaria endemic areas, particularly in diagnostic and curative services. Another rationale was that the community often did not cooperate in malaria control programs. Community involvement was recognized to be one of the important factors in making any public health program successful. Therefore, cooperation from the community would be beneficial, at least in helping to solve the problem of inadequate man power and poor communication between malaria workers and villagers (Malaria Division 1980).

Working on these premises, the Malaria Division has recruited local people in malaria endemic areas who are willing to serve the community on a voluntary basis (Malaria Division 1980). In line with the program's underlying principles, the Malaria Division provides

initial one-day or two-day training courses for these volunteers, then supervises them as they work. Refresher courses are provided after the volunteers have been working for sometime. The volunteers are expected to take blood slides from the villagers whom they suspect may have malaria and to administer presumptive treatment to suspected cases as well as to keep records. They have also to give health education to the community and serve as communicators between health authorities and the community (Malaria Division 1980). The objectives of these tasks are to detect passive cases and to increase community knowledge about how to prevent malaria and where to get treatment for it (Malaria Division 1980).

1.3.2 The Primary Health Care Program

The Primary Health Care Program is administered by the Office of the Under-Secretary, Ministry of Public Health which has a special committee dealing only with this program (PHC Coordinating Committee) (Figure 1.1). At the implementation level, the program depends on the District Health Office and Health Center for supervision and logistic support. At the same time, the Provicial Health Office is responsible for planning and supervising the program in the province.

In 1977 the Ministry of Public Health launched the Primary Health Care Program as a part of the Fourth Five Year National Development Plan. In 1979, the Thai Government adopted the Primary Health Care Program as a national policy. The Primary Health Care Program is based on the results of many pilot projects, such as the Korat

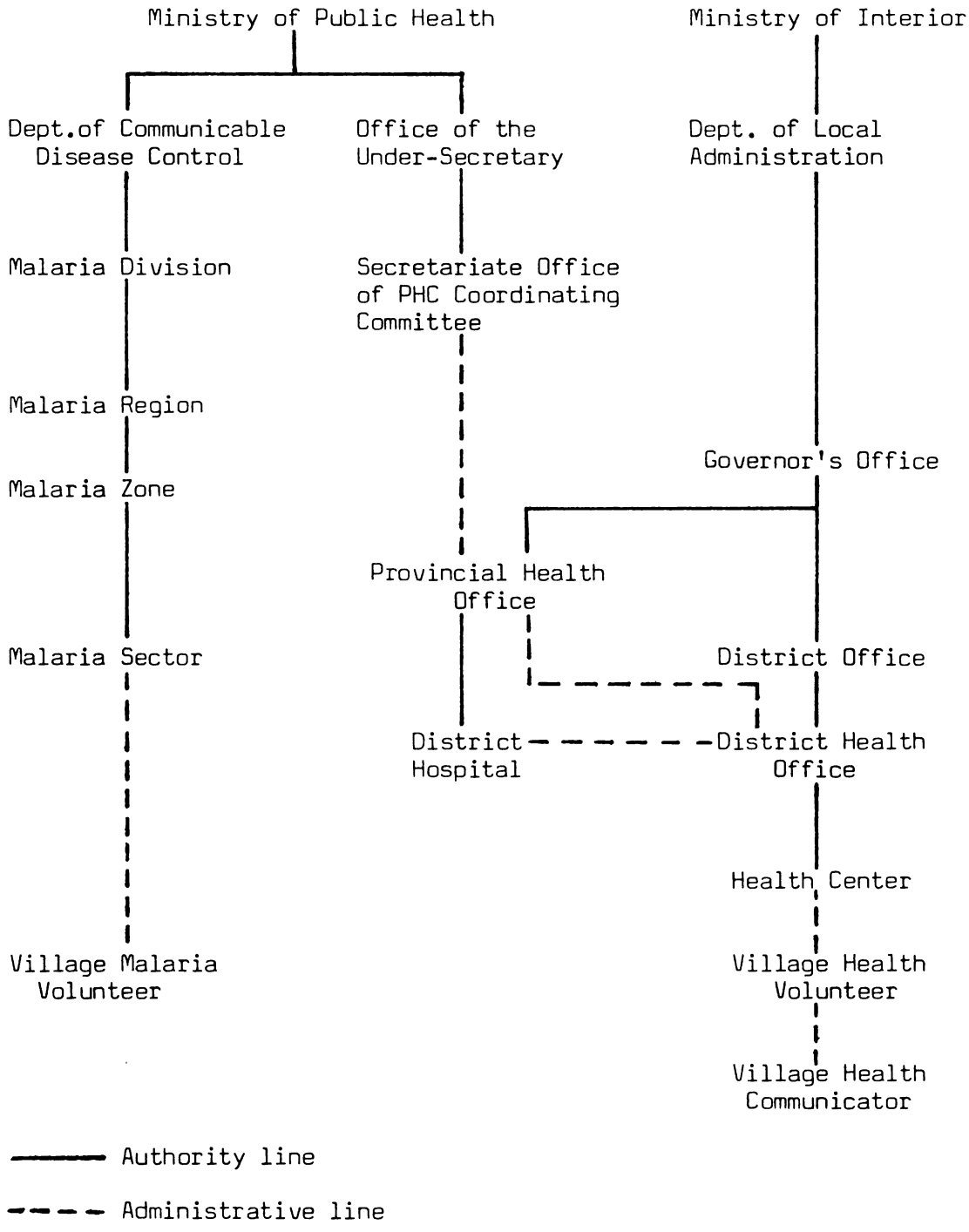
Project, Sarapi Project and Lampang Health Development Project. The goal of the program is to make the community aware of its health situation and to involve the community in solving its health problems. To achieve this goal, the program has included local people working on a voluntary basis. There are two groups of volunteers: Village Health Communicators and Village Health Volunteers (Ministry of Public Health 1978a; 1978b; 1979).

Village Health Communicators are expected to serve as communicators between health personnel and villagers. Through this two-way communication, it is anticipated that with better understanding on both sides community health problems can be dealt with more efficiently. The Village Health Communicator is selected from a village on the basis of sociometric techniques carried out by the sub-district health workers at the health center. One communicator is chosen for each 10-15 member households. The training for these communicators takes five days, covering community health diagnosis, the functions of a communicator, group process in working and the method of using self-learning packages distributed to them (Ministry of Public Health 1978a; 1984).

Village Health Volunteers are selected from Village Health Communicators and there is only one Village Health Volunteer in each village. Village Health Volunteers are given an additional two weeks training in basic health care. Besides being health communicators, these Village Health Volunteers are supposed to use simple household remedies in treating common signs or symptoms, such as diarrhoea and fever, and give first aid in case of accident. They

are also expected to do some work in family planning, for example, by giving advice about birth control and distributing contraceptive pills. In addition, in some areas the volunteers have to take blood slides for malaria examination and perform other jobs, such as those performed by volunteers in the Village Malaria Collaborator Project. Village Health Volunteers are usually supervised by both malaria and health personnel (Ministry of Public Health 1978a; 1984).

Figure 1.1 Lines of Administration for Volunteer Programs



1.4 Research Questions

The research questions which have been formulated are:

1. Why do so many volunteers drop out of the program?

2. What factors, such as personal characteristics or incentives encourage volunteers to stay on in the program?

3. Does the community accept the volunteer role? Which volunteer characteristics are seen as desirable in the community?

The study was conducted at three level: the individual volunteer, the community and the administrative structure of the program.

At the individual volunteer level, the study was concerned with whether and if so, how gender, age, economic status and other factors, such as incentives, affect the decision of volunteers to drop out or stay on in the program. Do volunteers who are folk healers react to the program differently?

At the community level, the research was focused on whether the malaria rate in the community and the community acceptance of the volunteer program had any effect on volunteer turnover.

Studies of the administrative structure of the program, included: how volunteers have been and currently are recruited for the program; what sort of training volunteers have had and receive at present; who are or were the supervisors; how often has supervision occured.

1.5 Hypotheses

Since the volunteers should voluntarily serve the community in case-finding, giving presumptive treatment and acting as communication links between malaria officers and villagers, the viability of the program would seem to depend on the longevity and active participation of these volunteers. The study would investigate factors, such as gender, economic status and educational level to see if they have any effect on attrition of volunteers. At the same time, the study would observe reasons that keep volunteers in the program. This study hypothesized that:

1. Higher turnover rates were predicted among volunteers who: were young or male, were not folk healers, were of lower economic status, were unwilling to volunteer by themselves, had not attended a training course, did not have adequate and sufficient supervision.

2. Low turnover rates were predicted when: the community accepted and supported the volunteer role, opportunities for volunteers to leave the community were not available, volunteers had family ties in the community.

1.6 Significance of the Project

This study helps to explain why volunteers drop out of or stay on in the program. It also identifies characteristics of good volunteers and points out some obstacles in the present program. The data in this study will be useful in evaluating the Village Voluntary Malaria Collaborator Program, at least in the Northern region, if not all regions of Thailand. The results may be useful for the Malaria

Division of the Ministry of Public Health to improve the efficiency of the program. This study may also prove instructive in evaluation of other volunteer programs, particularly those Primary Health Care programs which have been developed from the same concepts.

CHAPTER II

ETHNOGRAPHIC STUDIES OF THAILAND AND VOLUNTARISM IN HEALTH CARE

This chapter covers two separate topics. The first is a brief outline of ethnographic studies in Thailand, particularly those that are relevant to the present study. The second deals with voluntarism in health care.

2.1 Ethnographic Studies

2.1.1 Social Structure

Rural Thai society is organized around eleven structural forms: the extended-stem family cycle; the bilateral kinship system; neighborliness and formal neighborhoods; cooperative labor-exchange groups; the superior-inferior relationship; class and status division; entourages; political factions; administrative villages; the village committee; and the wat (temple). These eleven structural forms may be seen in every Thai village. However, permutations and combinations of these forms vary from one village to another. Therefore, there are no two villages exactly alike (de Young 1955; Hanks 1972; Kaufman 1960; Keyes 1975; Moerman 1968; Potter 1976; Sharp et al 1953; Tambiah 1970). In addition, in certain areas or among certain ethnic groups, there are other structural forms, such as formal neighborhood groups organized to rotate food-sending to the wat, associations for financing funerals and youth groups (Potter 1976).

2.1.2 Social Organization

The cognatic form of social organization is common. The most important kin group outside the extended family is the bilateral kinship system. This kinship group is composed of the descendants of the maternal and paternal grandparents. Solidarity and obligations between members of the group are considered important. Outside this bilateral kindred, people still consider others as their relatives if they have the same great-grandparents. Moreover, people count others as their relative even if they do not have any blood relationship, but their families have lived in the same village for generations. Therefore, in some villages one can find that almost everyone is every other person's relative. In addition, kinship terminology is common used as the form of reference and address (Hanks 1975; Kirsch 1969; Moerman 1969; Potter 1976; Potter 1977).

2.1.3 Social Relationships

Each Thai regards every other person in the social order as higher or lower than himself. The links between two specific persons -the superior-inferior relationship- is significant in the daily life of many Thai. The superior is expected to help his inferiors, but not dominate them to such an extent as to destroy their sense of autonomy. The inferior wants and expects such a superior to do things for him, when he himself feels inadequate or incapable of doing them. The superior receives respect and honour from the inferior in return (Hanks 1975; Rubin 1973).

2.1.4.Karma

The individual's situation at any time is determined by karma: that good actions (merit) will produce good results; sinful actions will produce bad results. This belief is an essential element in the Thai conception of social hierarchy, for those who are wealthy or powerful are considered to have earned their position as a result of merit they have acquired. However, those who are now subordinate may become respected, powerful and prosperous in the future if they gain merit (Girling 1981; Gombrich 1975; Hanks 1962; Kirsch 1975; Mulder 1969). In terms of health, it is believed that the severity of illness varies directly with the degree of accumulated demerit. To recover from the illness, one should gain merit to keep the balance between merit and demerit. Therefore, the more severe the disorder, the greater the merit-making should be (Hanks 1955; Kunstadter 1978; Smith 1982).

2.1.5 Wat and Monk

The village wat (Buddhist temple) is the symbol of village identity and the focus of village society. The wat is the center of village activity and the object of pride. The wat receives gifts of wealth and service from the villagers who are rewarded by the religious merit which is believed to be accumulated by the people who do socially useful things (Potter 1976).

To be ordained as a monk is a traditional practice for Thai men at the age of 20. In general, men are monks during Buddhist Lent which lasts three months; however some choose to remain longer

as monks, all their lives or until they want to leave. With equal freedom one can return to the monkhood again if he wishes. The most important thing about becoming a monk is that the monk gains great merit for both himself and his parents (Potter 1976; Tambiah 1968; 1970).

2.1.6 Village Headman

Thai law and administration make all village headmen the last links in the chains of command and information that originate in Bangkok. The headmen are elected by the villagers of their administrative villages and confirmed by district officers. The headmen have to attend monthly meetings at the district office where the district officer passes down policy decision from the central government. The headmen have to pass on the information they receive from the meetings to their villagers. Formal activities of the headmen include mediating disputes and keeping the peace in their villages. In addition, keeping demographic records is a major duty of of the headmen. Through these duties and their association with government, the headmen carry a measure of prestige and power. Wealth is not a major reward for the headmen. They receive a small monthly stipend from the government and fees from writing documents or settling disputes (Moerman 1969; Mulder 1979; Potter 1976).

2.1.7.Landownership

Ownership of land is a major factor in determining one' wealth, power and social standing. The ownership of sizable amounts of land

is important, since it gives a family power over the lives of other villagers who lack sufficient land of their own. Equal inheritance by all children regardless of gender is the rule. However, the youngest daughter who usually remains living with her parents after marriage, inherits the house and the farm equipment plus at least an equal share of farmland and sometimes an extra share which has been retained by aged parents (de Young 1955; Kaufman 1960; Hanks 1972; Moerman 1968; Potter 1976; Sharp et al 1953; Turton 1972).

2.1.8 Work in the Family

Everyone is expected to work for the family well-being. However, gender and age define action and limit the range of mobility. Although both genders are flexible in their sharing tasks, men are expected to be "hard', which leads them to do work that requires a lot of physical strength. Since females are "soft", with less physical ability, they are not expected to do as much physical work in the field as the men do. Females are also expected to take care of their house, children and their parents (Hanks 1962; Potter 1977).

2.2 Voluntarism in Health Care

2.2.1 Introduction

Voluntarism as a form of spontaneous social behaviour to support those in need is prevalent in most societies, even in those with a bias toward profit and the belief that one gets "nothing for nothing". This behaviour is seen in the capitalist and socialist systems as well as in traditional and modern societies. This form of generous

behaviour -which gives benefits to others without expectation of monetary gain- reflects the multiple influences from which such behaviour derives (Rushton 1980). The instinctive way in which people respond to help others in serious danger, even at personal risk, is demonstrated by group behaviour during and immediately after physical affliction, such as cyclones or floods (Sanders 1958).

Although the concept of voluntarism is not new, even in health-related matters, it has recently gained a great prominence around the world, particularly in developing countries. This prominence arose from the Alma-Ata Conference in 1978 (Streefland and Varkevisser 1984). At the conference, Primary Health Care was declared to be the vehicle for achieving the target of health for all by the year 2000. Primary Health Care is essential health care based on practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that community and country can afford to maintain at every stage of their development (Joseph and Russel 1980; Tentori 1981; Streefland and Varkevisser 1984; WHO 1978). Therefore, the most important factor for success of Primary Health Care is community participation.

2.2.2 Community Participation

The majority of preventive measures and a large proportion of promotive and curative procedures do not require extensive professional training, and it is difficult for governments, particularly in developing countries, to provide health services for

all of their people. These facts have led to the concept of community participation, which is the process by which individuals and families assume responsibility for their own health. According to this concept, local people are supposed to cooperate with health workers in dealing with their own community health problems. They have to work together through all the steps, beginning with identifying community health problems. This has to be done by the community, with health workers acting as resource persons and guides with technical knowledge. Through this system, community health problems will be enumerated according to the community's own priorities. The community will also be committed to the elimination of these problems through their own efforts. This implies that the local contribution plays an important part in providing the necessary manpower and facilities and bringing health services into line with the needs, wants and priorities of the population they serve. It is believed that when people have taken an active part in the planning and implementation of a project, they will collectively consider the completed project as their own, have pride in it and a sense of responsibility for it. They will, therefore, use it, be responsible for, and maintain it as well as avoid damaging it. One of the guiding principles in this approach is the utilization of village health workers (Ahmed 1980; Djukanovic and Mach 1978; Donoso 1978; Laoye 1981; Rifkin 1980; Robinson 1981; Sterky 1980; UNICEF 1981; White 1982; WHO 1983a).

2.2.3 Village Health Workers

It is impossible and probably not necessary to involve everyone in solving community health problems. A more suitable approach is to include specific people who are selected by the community. In the community itself there are people who can be identified, preferably with the help of community members, and be trained to perform certain basic health functions (Jagdish 1981; Joseph 1980; WHO 1978). These village health workers are usually seen as the people most likely to make Primary Health Care services accessible to nearly everyone; who understand local communities and are responsible to them; who can relate to traditional healers as well as modern doctors; whose costs may be shared between community and government; and who are also important in political processes and development at the local level (Berman 1983; Bryant 1978; MacCorquodale 1982; Maru 1983; Vaughan 1983).

Village health workers are known by various names. For example, they are called community health workers in the Sudan, village health volunteers in Thailand, volunteer village health workers in Sri Lanka and the Philippines and Kaders in Indonesia. Although these village health workers are called different names in different countries, generally they are locally selected from and supported by their own communities. They form the front line of the health system and an entry point into it for the population. They are effective, acceptable and inexpensive, and they require only brief initial training (Bennett 1979; Djukanovic and Mach 1975; Streefland and Varkevisser 1984; Stroms 1979).

2.2.3.1 Positive Aspects of the Village Health Worker.

Several arguments in favor of using village health workers have been presented.

First, village health workers will be significantly less costly than clinic activities. Cost reduction is not only a question of not paying for labor, but also of adopting organizational and technical solutions which are cheaper and may also be more appropriate to the local environment.

Second, these workers are expected to reach more of the rural population and proportionally more clients from low income house-holds and remote villages than the clinics. While it is not possible for the government to provide a clinic in every village, workers are local people who are supposed to be representatives from every village.

Third, village health workers will provide services directed at the major public health problems of the populations (Berman 1984; Bryant 1978; MacCormack 1983; Ofosu-Amaah 1983; Wang'ombe 1983; White 1982).

In addition, village health workers can avoid the cultural gap between the city-educated health worker and illiterate rural people. For example, one city-educated nurse who spent several months in a village, could not persuade a single woman to undergo tubectomy, while an illiterate village health volunteer from the same village was able to refer 75 women for tubectomy within the same period. This might be because villagers felt closer to the village health volunteer than to the nurse (Djukanovic and Mack 1975).

2.2.3.2 Arguments Against the Use of Village Health Workers. The main argument against the utilization of village health workers is based on the feasibility of assuring adequate quality care and the costs associated with that quality. Village health workers generally have no more than a primary education, and often receive very limited training. Critics argue that it is too difficult to assure that such health workers can adequately diagnose and treat major life-threatening illnesses (Berman 1984). Other arguments against village health workers are that they do not have instruments for examining the patients and do not give injections (Wang'ombe 1983).

Despite the fact that there are some arguments against using village health workers (Berman 1984; Wang'ombe 1984), one can find them in most developing countries. These workers are expected to perform a wide range of functions which according to country reports generally include: home visits, environmental sanitation, provision of water supply, first aid and treatment of simple and common ailmets, health education, nutrition and surveillance, maternal and child health and family planning activities, communicable disease control, referrals, record-keeping and collection of data on vital events (Jobert 1985; Ofosu-Amaah 1983; Scholl 1985; Streefland and Varkevisser 1984; Vaughan 1980). Some projects might ask the village health workers to work only on a particular problem. For example, the Kasa and Palghar Nutrition projects in India deal only with nutritional problems. Malaria Voluntary Collaborator programs in Latin America and Thailand ask the voluntary collaborators to work only on malaria. Some other projects deal with more than one

particular health problem; for example, the project in Cuba and the Primary Health Care Project in Thailand deal with more general health problems (Chitprarop 1982; Djukanovic and Mack 1975; Ministry of Public Health 1984; Ruebush II, Godoy-Bonilla and Klein 1985).

The work load for village health workers depends on the requirements of projects in each country. However, a World Health Organization report states that, in general, it was felt that village health workers were asked to do too much, especially the part-time workers (WHO 1984a).

2.2.3.3 Coverage. A country may have more than one kind of village health worker and each kind may serve a different number of people. For example, in India, a village health guide serves 1000 people, while a multipurpose worker serves as many as 5000 people. In Thailand, a village health communicator serves 50-100 people, whereas a village health volunteer serves 500-1000 people (Table 2.1). It has been found that the number of persons served by the village health worker is an important determinant of how well the village health worker does his work, since the number of clients also reflect the amount of work the village health worker has to do. For example, in Indonesia, it was observed that near Ngestihardjo, where only two kaders (volunteers) per hamlet were trained, the work load rapidly became oppressive and the kaders resigned, while in Blunyahrejo, with a ratio of only four to five families per kader, there was not much work for each kadar to do. Kaders felt bored and were inactive, conditions which overcame the kaders' initial good intentions. Therefore, the program has not run well (Suyadi, Sadjimin and Rohde

1977).

Table 2.1 Examples of Village Health Worker Client Loads

Country	Type	Target population (per unit)
India	Village health guide	1000
	Multipurpose worker	5000
Indonesia	Health promoter	100-200
Nigeria	Volunteer primary health worker	Variable
Sudan	Community health worker	500-1000
Thailand	Village health communicator	50-100
	Village health volunteer	500-1000
	Malaria voluntary collaborator	1000-1200

(Adapted from Malaria Control as Part of Primary Health Care, Report of a WHO Study Group, Technical Report Series 712, WHO, Geneva, p.68.)

2.2.3.4 Finance. Forms of funding range from almost complete financing by the central government through budgetary allocations, to community funding through the mobilization of community resources and fee-for-service, or a combination of any of these. In some countries, for example India, the community health worker receives a small monthly government honorarium for 2-3 hours of community service a day, during which time he is to attend to simple medical problems, mobilize community involvement in health programs and assist in health education (Jobert 1985; Maru 1983; Nichter 1984). In the Sudan, the government provides a subsidy in grain. The money generated by the community in grinding and selling

grain is used to pay the community health worker. Sometimes, costs are shared. The community health worker's salary may come from the community, but the government provides training, supervision, supplies and transportation (Storms 1979). In some countries village health workers do not receive a salary. For example, in Tanzania the village medical helpers are not salaried, but their work is regarded as communal work, and for that reason they are free from other communal tasks in the village (Storms 1979). In other countries, such as Thailand, village health volunteers do not get a salary nor is their work considered as communal work. The only remuneration they receive is free medical service from health centers or government hospitals (Ministry of Public Health 1984).

The source of funding not only indicates where the financing comes from, but also shows the commitment of the village health worker to the community and the commitment of the community to the worker. For example, it has been found in Botswana, the West Azerbaijan Project in Iran, and in Papua New Guinea that when paid by the government the community health worker tended to have less commitment to the community (Carballo 1978). At the same time, the community had less commitment to the community health workers, since the community saw the community health worker as a government employee who was performing activities at the community level on behalf of government and not as their own community health worker whose activities they should support. Therefore, it is believed that at least part of the funding should come from the community where the village health worker will serve. However, some communities usually find it difficult to

obtain adequate funds for the workers (Ofosu-Amaah 1983; Storms 1979).

Some recommend that at least a partial fee should be collected from the individuals who use the services. It is believed that cost sharing will increase the involvement of the people. People will feel they have a critical say in the operation of the system and in the assessment of the village health workers' performance (Storms 1979).

2.2.3.5 Selection. Experience has shown that who are selected for training and how they are selected, are vital to the the success of village health worker programs (Patrick 1982; Vaughan 1983). In general, the main criterion for selection is that each worker must have a desire to serve his community. Literacy is an additional requirement in some countries (Ofosu-Amaah 1983; Ruebush II, Godoy-Bonilla and Klein 1985; Scholl 1985). In theory, selection should be determined by the community and supported by health officers. However, it has been found that sometimes the community as a whole has no understanding of what a village health worker is supposed to do and the community leaders have only an unclear understanding. As a result, the individual selected to become a village health worker may not be the best possible candidate. In many situations, there is the tendency to select the sons or daughters of influential elites in the community (Jobert 1985; Streefland and Varkevisser 1984). The situation gets worse where village health workers have paid jobs. For example, it is reported that in India, village health worker jobs have often been used by politicians as political rewards in return for votes (Streefland and Varkevisser 1984).

2.2.3.6 Training. Training is an important component in the success of village health worker plans, since the training will help village health workers to determine and direct their performance in the community. The training should be relevant to the health problems of the community as well as the tasks that the village health workers are expected to perform. Most training courses cover both theory in a classroom setting and practical or field training in a health facility or in the community. The combination of these two components of the training program vary from country to country. The duration of training also varies from country to country. For example, training of village health volunteers takes 15 days in Thailand. But it takes three months in India and nine months in the Sudan (Bennett 1979; Davidson 1985; Dayrit 1985; Ennever and Standard 1982; Jobert 1985; Maru 1983; Ministry of Public Health, Thailand 1984).

Problems in training can be found in training materials, training methods, trainers as well as trainees. It has been found that 62 self-learning modules which are used as a basis for training in Thailand are too complicated and extensive for most workers and not every part of the modules is relevant to the problems of the area (Ofosu-Amaah 1983). It has been observed in India that trainers frequently sprinkled English terms -technical or not- in their lessons, claiming they did not know the exact term in the Indian language. In addition, certain key aspects of the training programs sometimes cannot be covered satisfactorily, for lack of competent trainers (Jobert 1985). In Nicaragua, although the majority of

volunteers have been known to be illiterate, the trainers have frequently emphasized points by writing them on the blackboard (Heiby 1981; Heiby 1982). In many places, such as Antigua, Botswana, and the Solomon Islands, the village health workers were reported to be doing little in the field of family planning, health education and other public health activities, since they had no training or were inadequately trained in those areas. The reason given for this usually was that the trainers lacked expertise (Ofosu-Amaah 1983).

2.2.3.7 Supervision and Supplies. Adequate supervision and sufficient supplies are important in keeping village health workers working in the programs. It was found that these two are obstacles in many places, such as India, Nicaragua, Tanzania and Thailand. For example, in Tanzania community health promoters often felt isolated and as if no one particularly cared what they did, since they lacked support from both their community and health personnel. Drugs were often in short supply even when transportation was not a problem (Heggenhougen 1984). In India and Nepal, the supervision did not occur often enough to be able to give the community health volunteer real support. In addition, supplies of medicines were irregular and of inadequate quantity (Maru 1983; Streefland and Varkevisser 1984). In Nicaragua and Thailand, it has been found that periodic shortages of drugs have affected the performance of the village health workers and their acceptance by the villagers. It has also been found that supervision has been inadequate in quantity and quality. In addition, in Thailand, volunteers in the Village Voluntary Malaria Collaborator Program have

been non-productive because malaria personnel have not followed up the work of the volunteers (Chitprarop 1982; Heiby 1981; Heiby 1982; Hongvivatana, Dendoung and Srigernyuang 1981).

2.2.3.8 Personal Characteristics. Personal characteristics of village health workers may be one of the most important components at the implemental level of the program. A village health worker's characteristics affect his ability to work and efficiency in doing the job. At the same time, personal characteristics of village health workers may influence how other villagers accept them. The following discussion will show how personal characteristics of village health workers affect the success their services.

2.2.3.8.1 Age. Age is always mentioned in critiques of village health worker effectiveness. Since experience in many countries has shown that mature, middle-aged men or women, who are good opinion leaders, perform more satisfactorily than young community health workers. Although young people may have energy, great willingness to learn and higher levels of education than older people, they have been found to have less standing in the community and less commitment to the community and they do not command respect. In addition, since young people have better chances of obtaining other more well-paid jobs, particularly in urban areas, their drop-out rate is reported to be high. An adult with a family is less likely to move away from the community, with his or her newly acquired skills, to seek wider opportunities. However, it has been found in Iran that an outstanding village health worker, aged only 15 years, was rated

the best by the community (Bryant 1978; Lamptey et al 1980; Ofosu-Amaah 1983; WHO 1984a).

2.2.3.8.2 Education. It is generally accepted that some minimum level of literacy is necessary to enable the village health worker to keep his records, relate to the health system and undergo the training program designed for him. However, in many countries the pool of educated personnel available for training is limited. Moreover, in many cases village health workers with less education did a better job than those who had a higher educational level. For example, in the Sudan it was found that mature community health workers, even with an educational level lower than the minimal elementary education were more effective because of the responsibilities involved. An analysis carried out in the Philippines also showed that community health workers with lower educational levels, but with maturity and some health experience, and with deep-rooted ties in the community made better community health workers (Bryant 1978; Ofosu-Amaah 1983).

2.2.3.8.3 Gender. There are generally cultural preferences or biases regarding the question of the gender of the village health worker. Some communities prefer females, other males, and some train both females and males as village health workers. Preference for either gender is sometimes influenced by the functions to be performed by the village health workers and the traditional association of certain functions with a particular gender. For example, men might have a better chance of persuading the community to

launch jobs that require motivation and mobilization, such as a water program or the cleaning up of pools of stagnant water and heaps of rubbish. But mothers, especially those who are recognized experts in midwifery and child care, are the best people in other circumstances, such as maternal and child health areas (MacCormack 1983: Ofosu-Amaah 1983).

2.2.3.8.4 Occupation. Occupation is frequently overlooked by countries using the services of village health workers. It has been recommended that in selecting village health workers, people whose occupations take them away from their villages for long periods be avoided (Ofosu-Amaah 1983).

2.2.3.8.5 Experience in Health Care. People who already have experience in health practice, such as folk healers, might be be appropriate as village health workers. In Thailand it has been found that volunteers in the Village Voluntary Malaria Collaborator Program who were folk healers, tend to be more effective than those who were not folk healers (Davis 1974; Chitprarop 1982).

2.2.3.9 Attrition of Volunteers. Information available on attrition rates is very scanty. The little information that can be obtained from the literature points to the fact that the turnover of village health workers is high for a number of reasons, the most important being poor selection and low remuneration. For example, sometimes young people are selected, since they might have a higher educational level than older people. However, it has been found that more of these young village health workers drop out than do their

older counterparts. In the Kasa and Palghar nutrition projects in India, it has also been observed that part-time social workers have a drop-out rate as high as 60 percent. The main reason given is the low-rate of remuneration by the community (Gonzalez 1975; Heggenhougen 1984; Patrick 1982; Storms 1979).

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

The research phases of this study of Villge Malaria Volunteers in Thailand spanned a period of one year (1985). The field work consisted of four phases. For each phase a specific method for collecting information was used.

3.1 Phases of the Study

3.1.1 Preliminary Phase (January-February 1985)

The aim of this phase was to gather information about the development and current status of the volunteer program as well as to find a research site. The information was collected both from Malaria Division documents (Malaria Division 1980; 1981; 1984; 1985) and by interviewing malaria officers. The documents described the principles of the program and its operation, for example, in selection of volunteers, and in training and supervision of the volunteers. In addition, the documents also reveal some obstacles in the program, for example, problems in the selection of volunteers.

The interviews took places both in Bangkok and in various rural areas. The respondents were malaria officers at the administrative level as well as the operative level. The data obtained from administrative level personnal provided a good description of the program from the administrators' points of view. The administrators also suggested some research questions, by prescribing points that they would like to verify through the research. In addition, these

interviews provided information about possible places to conduct field work. The data collected from malaria officers at the operative level gave details of the program as well as practical problems in each endemic area.

Several criteria were employed in considering potential research sites.

1. The research site was to have both malaria control and eradication areas. In malaria control areas, one might get a clear picture of what volunteers have to do for the Anti-Malaria Program and how they should proceed. However, about half of the volunteers in the country are in the eradication areas. Therefore, it was considered most useful to conduct a study in an area that has both malaria control and eradication phases.

2. Volunteer work in the area should be at an average level when compared with other areas in the country. This is to avoid studying an extreme case, which might lead to misinterpretation.

3. There should not have been any research conducted in the area, particularly research that gets villagers involved. Data collection was to take quite a long time. More importantly, the researcher was to observe and discuss many things with the villagers, especially volunteers. If other research projects had already been conducted in that area, they might affect the results of the present study. That is, information obtained during this study might be contaminated by previous research.

4. Since volunteers are scattered throughout the area, and the study was planned to include a large number of volunteers,

transportation by automobile should be possible, in order to facilitate obtaining an adequate sample size.

5. The research in the field was to continue for at least eight months and the researcher planned to stay in the field as well as to visit villagers quite often. Therefore, safety in staying in the area and in travelling within the area was also taken into consideration.

In visiting various places, the researcher learned about the actual work done as well as the existing problems in each place. Positive and negative aspects of each place were considered and the approval of the administrators was obtained. Malaria Sector I-Lee, Lee District of Lamphun Province, northern Thailand was selected as the study site. (See Map 3.1 and 3.2).

Areas within Malaria Sector I-Lee can be separated into three categories: control areas with one or two annual DDT sprayings; control areas without DDT sprayings; and eradication areas. Major vectors are An.balabacensis and An.minimus. Annual parasite incidence in Lee District was as high as 17.14 per 1000 population in 1985 while in Banhong District it was 1.41 per 1000 population in the same year. In both districts the ratio of P.falciparum to P.vivax cases is approximately 7:3.

3.1.2 Participant Observation Phase (March-August 1985)

The purpose of this phase was to collect information about volunteers: their personal characteristics, the attitudes of volunteers toward the program, and some preliminary data on factors leading some volunteers to drop out of the program. In addition, the

study extended to the villagers in general, that is, to their attitudes toward volunteers and the volunteer program.

To achieve these purposes, participant and non-participant observations and informal interviewing were employed. To make the observation phase more systematic and to represent both the drop-outs and those volunteers who had remained in the program, three categories of volunteers were studied: those who dropped out of the program; those who stayed in, but were inactive; and those who stayed in and were active. The criterion for placing a volunteer in one of these categories was the number of blood slides the volunteer had collected in the previous two years. In addition, some other variables, such as age, gender, economic status and house location of volunteers were considered.

Six volunteers were observed and interviewed informally in each category, so in this phase the total sample was 18 volunteers. A weekly visit to each of these volunteers was made throughout six months. During these visits observations and discussions with other villagers were also carried out. At the same time, a set of questionnaires was developed based on the information obtained from discussions and observations. The questionnaires were pretested with 25 volunteers in another district of Lamphun Province and were adjusted until they were ready to use in the next phase.

3.1.3 Structured Interview Phase (September-October 1985)

The aim of this phase was to gather data from a larger representative sample of volunteers and other villagers. The set of

questionnaires which had been developed in the Observation phase was used in collecting the data. This phase covered both the Lee and Banhong Districts of Lamphun Province, northern Thailand. (See Map 3.1 and 3.2). Two hundred and nine volunteers were studied. Sixty-four of them had dropped out of the program while 145 had remained in service. Two hundred and ten other villagers were also interviewed.

3.1.4 Final Research Confirmation Phase (November-December 1985)

After field work was completed, some meetings with malaria officers, especially those at the administrative level, were organized to discuss information obtained during the field study. The purpose of these discussions was to gather responses from the officers to the data collected in the field, particularly data that pertained to the administrative structure of the program. In addition, information gathered during this study was compared with information administrators had heard from other sources.

3.2 Domains of Variables

3.2.1 Independent Variables

3.2.1.1 Gender. In a Thai community men and women can participate in any social activity if they want to. However, the society has certain criteria for preferring some activities for males or females. In general Thai women do less travelling, and they have to take care of the house (Hanks 1962; Potter 1977). As a result, women stay home more than men. In addition, women seem to be responsible for taking care of minor family illnesses. Therefore, it

was hypothesized that female volunteers would have a lower turnover rate than males.

3.2.1.2 Education. Education might be another factor that would affect the volunteers' decision to stay on in or drop out of the program. People who have a higher educational level have not only more years of schooling than others, but also more opportunities to do more things. For example, people with more education have more careers to choose from than those who have less. People with new jobs which may take them from the community or which may occupy all their time, may not have time for volunteer work. Therefore, it was hypothesized that volunteers with a higher educational level would have a higher drop-out rate.

3.2.1.3 Age. Young people may have energy, great willingness to learn and higher levels of education than older people; however, they are also likely to be more mobile and ambitious and probably less devoted to the community than older people. A family person, with his or her newly acquired skills from malaria training, is less likely to move away from the community to seek wider opportunities (Ofosu-Amaah 1983). Another factor is that in Thai society people seem to give less respect to the young (Hanks 1975; Potter 1976; Rubin 1973). It is, therefore, difficult for the young volunteers who, in fact, do not have much superiority in either knowledge or authority in the community to perform their duties as they are expected to. So, it was hypothesized that younger volunteers would have a higher drop-out rate than older volunteers.

3.2.1.4 Economic status. Volunteers do not receive any wage from the Malaria Division, and they have to donate some of their time for this work. If their economic circumstances are good they might have some time free for volunteer work. Conversely, those whose economic status is not good cannot afford to spend much of their time on work without payment (even if they would like to serve as volunteers) because they have the responsibility to contribute to their family income. Consequently, it was hypothesized that the better the economic status of the volunteers the less likely they would drop out.

3.2.1.5 Work Place. For the purpose of this study, work place is defined as being of two types. The first type is a work place far from home that requires an overnight stay. For example, if a farmer has a farm which requires half a day to get to, it is not possible for him to travel between his home and his farm every day, especially when he has to cultivate his land within a specific period of time, such as early in the rainy season. Therefore, he has to stay over at his farm until he finishes his work which might require days or months. The second type is a work place that is close to home. If his land is next to his home, a farmer can work at his farm without staying away from home. Volunteers whose work place is of the first type may have a higher drop-out rate than those whose work place is of the second type. If a volunteer is often not home or is away from home for some period of time, villagers who are sick or suspect they might have malaria will visit other volunteers or seek help from others. In such case the volunteer who work far from home may not

have much volunteer work; this may make him feel that he cannot fulfill the spirit of volunteer work and cause him to drop out of the program.

3.2.1.6 Place of Birth. Volunteers who are locally born may be different from those who move into the community. In general people in Thailand are more tied to the community where they were born than to the community they may move to because they usually have family, friends and relatives in their home community. Therefore, volunteers in their home community might be more willing to help their community because they can help their friends and relatives. Villagers may also trust a volunteer more if his family is known to them. This might lead to the community supporting one volunteer more than another. In light of these two factors, therefore, it was hypothesized that locally born volunteers would be more likely to stay on in the program.

3.2.1.7 Ordination in the Monkhood. Ordination in the monkhood is the best way to gain merit (Tambiah 1968; 1970). It is also believed that through his experience as a monk, a man becomes more socially mature. The man might be more willing to help other people and be more devoted to his community service job than before. Hence, it was hypothesized that more male volunteers who were ordained as monks would stay on in the program than those who were not.

3.2.1.8 Folk Healers. In these communities, folk healers are probably well accepted by the villagers and many of them probably do not have any other occupation. In addition, volunteer work might

give them some prestige and benefits. Therefore, it was hypothesized that folk healers in the volunteer program would have a lower turnover than those who were not folk healers.

3.2.1.9 Malaria Incidence Rate. The malaria incidence rate can be considered as an indicator of the volunteer work load. If the incidence rate is high, volunteers have to contribute a lot of their time to volunteer work. Volunteers may not be able, besides their own occupation, to cope with all the volunteer work. This might make them feel they cannot be good volunteers and that they should quit the program. Another situation occurs in those areas which have low incidence rates. In these areas, very few people are exposed to malaria thus limiting the activity of volunteers regardless of their willingness to work. This situation may be a reason for volunteers to drop out. Consequently, it was hypothesized that in the average malaria incidence rate communities, fewer volunteers would drop out of the program than in the high and low incidence rate communities.

3.2.1.10 Family Help. Family help refers here to other members in a family who assist a volunteer in doing his volunteer work. Family help can imply that the family supports the volunteer role which might encourage the volunteer in keeping at his work. Family help also implies that a villager can get volunteer service, even when the volunteer is away from home. In this case, volunteer work is not a burden for a volunteer. He can keep at his usual duties as well as do volunteer work. Hence, volunteers who had family help may have a lower turnover rate than those who did not

have family help.

3.2.1.11 Selection Process. The study of selection procedures included how volunteers were selected and who did the selection. Volunteers in the Primary Health Care Program are selected on the basis of a sociometric technique, while volunteers in the Village Malaria Voluntary Collaborator Program are selected at a community leaders' meeting. Who did the selection is also important. For example, if malaria or health personnel make the selection, the selection is likely to be formal and probably not result in the selection of the best candidate. If the selection is made by the village headman, he might have a personal effect on the process. As a result, the program may get people who are close to the village headman, such as his son, daughter or even the headman himself. If everyone in the community can participate, the selection process will be egalitarian enough to represent a wide spectrum of views and needs. This selection might result in an appropriate candidate. Therefore, it was hypothesized that there would be a low turnover if the selection of volunteers was made by members of the community on an egalitarian basis. It was also hypothesized that the drop-out rate would be higher if the selection was made by malaria or health personnel from outside the community.

3.2.1.12 Training Course. Every volunteer is supposed to attend an initial one-day or two-day training course organized by the Malaria Division before he begins to work (Malaria Division 1980). However, due to deficiencies in the budget the Malaria Division has

not been able to organize any training courses for new volunteers since 1984. At present the Division provides one-to-one training which mostly teaches a new volunteer how to make thick blood slides and how to prepare reports, but does not cover general information about malaria or how to motivate and get cooperation from the community. Besides lacking some information which volunteers are supposed to know, one-to-one training precludes the opportunity for a volunteer to know other volunteers or other malaria officers, except his trainer. So, one-to-one training does not fulfill either technical or social aspects of a formal training course. Therefore, volunteers who have not attended a formal training course may be more likely to drop out of the program than those who have.

3.2.1.13 Supervision. Supervision is a very important component in the volunteer program because volunteers are new to this kind of work and the training course may be only a brief introduction to the work they will be doing. When volunteers begin to work, they may be faced with many problems. Therefore, supervisors can be a great help to volunteers in solving those kinds of problems. If volunteers are left to face some unsolved problems and lack of supervision they may lose the will to work. Therefore, volunteers who feel they do not get adequate and sufficient supervision may have a greater tendency to drop out of the program than those who do not.

3.2.1.14 Certificate. The Malaria Division gives a certificate to a volunteer after he has carried out a certain amount of work. (See Figure 5.2). Therefore, a certificate can

reflect the level of participation of volunteers in the program. A volunteer who has obtained a certificate has devoted more to the program than those who have not obtained one. This volunteer might not have thought about obtaining a certificate, but he worked hard because he wanted to help his community or because he appreciated the concept of the program, or for other reasons. However, a certificate can be considered as an indirect measure to reveal who has devoted himself to the program. Hence, it was hypothesized that more volunteers who had received certificates stayed on in the program than those who had not received certificates.

3.2.2 Dependent Variable: The Volunteer Drop-Out

A drop-out volunteer is a volunteer who has already registered and been trained, but who stops working. The term "drop-out" also applies to those volunteers who had been recruited into the program, but had never taken any blood slides, and had, then, quit the program.

3.3 Research Area

The study was conducted in two districts (Lee and Banhong) of Lamphun Province, northern Thailand. (See Map 3.1 and 3.2). These two districts are constituents of Malaria Sector I, Zone I, Region II.

3.3.1 Lee District

Lee District is in the far south of Lamphun Province and Lee city is the district headquarter for government administrative work. Most areas in Lee District are forested and mountainous. Lee District is

one of the few places which still has teak forests, considered the best wood in Thailand. Lee District is divided into seven tambons (subdistrict or canton). In 1984 the population was 50,423, distributed among 58 villages. There are hill-tribes scattered around the area. People speak the Northern Thai dialect, except members of hill-tribes who speak their own languages.

Only one old paved highway, connecting Bangkok and Chiangmai, passes through Lee city. Within the district most villages are connected by unpaved roads. In summer almost every village can be reached by car, but during the rainy season some villages are cut off from the outside.

Since a large part of Lee District is still rich with forest. especially teak, one of the major exports is furniture made from teak wood. There are also other occupations related to the forest, such as charcoal burning and firewood cutting. These occupations are illegal under terms of the Wood Law, but some people still try to earn income from such work. The main occupation of people in this area is usually rice farming.

In terms of malaria endemicity, Lee District has an annual parasite incidence higher than the average of Lamphun Province or even of the country (Table 3.1). Lee District is categorized by the Malaria Division as a malaria control area. In 1984, more than half of the population (26,248) lived in the spraying area. (See details of malaria control activities in Malaria Situation in Thailand in Chapter I).

Table 3.1 Annual parasite incidence per 1000 population in 1981-1985

Year	Thailand	Lamphun Province	Lee District	Banhong District
1981	10.02	1.74	11.44	0.58
1982	10.10	2.97	13.69	0.67
1983	5.70	1.45	6.28	0.46
1984			17.18	0.55
1985			17.14	1.41

Note The ratio of P. falciparum to P.vivax cases is about 7:3.

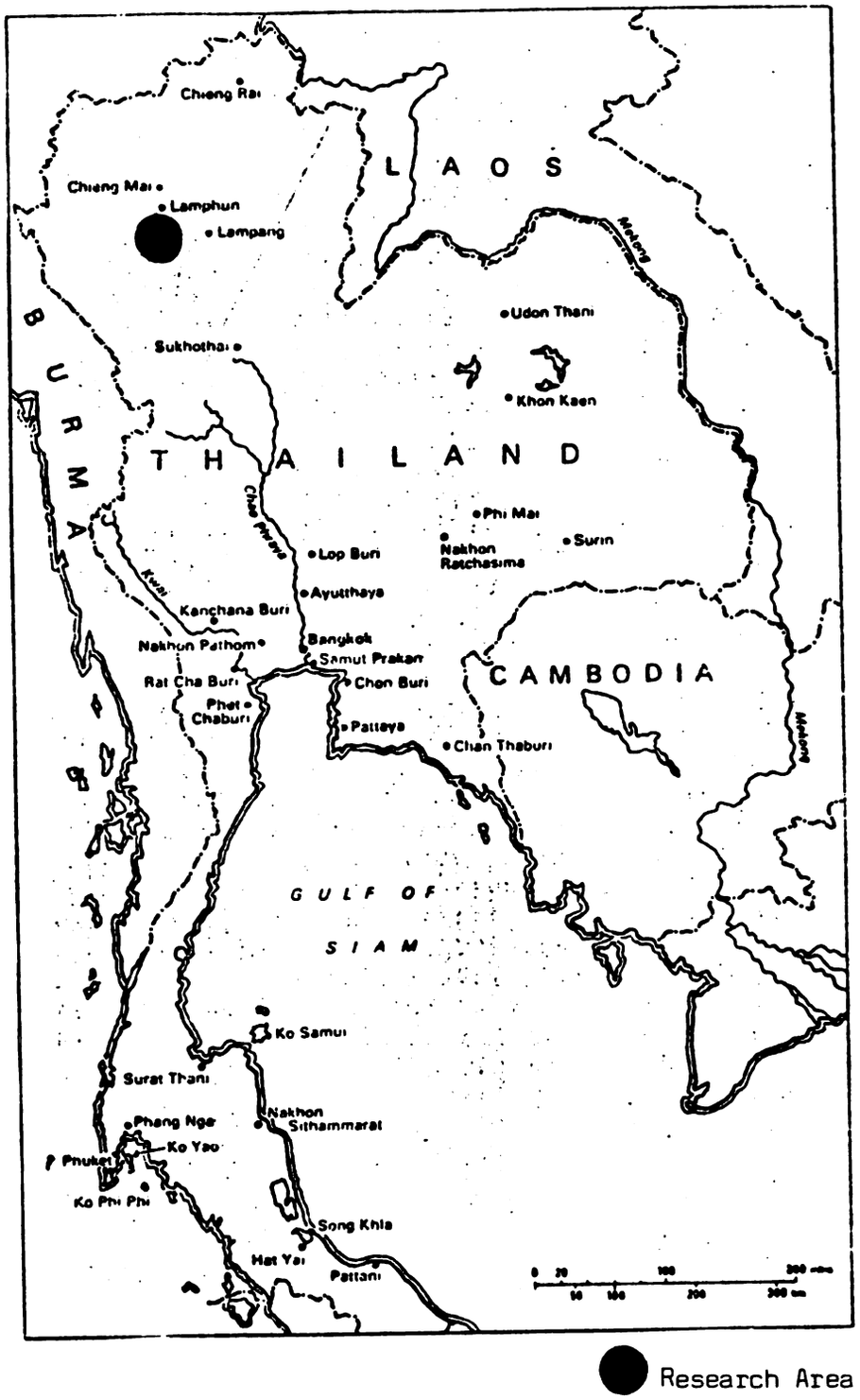
3.3.2 Banhong District

Banhong District is next to the northern part of Lee District. Some areas in Banhong District are mountainous; others are located on the plains. The villagers, like most rural Thai villages, live in a core area and work their lands in an outer circle. Banhong District consists of five subdistricts which are separated into 48 villages. Its population was 44,101 in 1984.

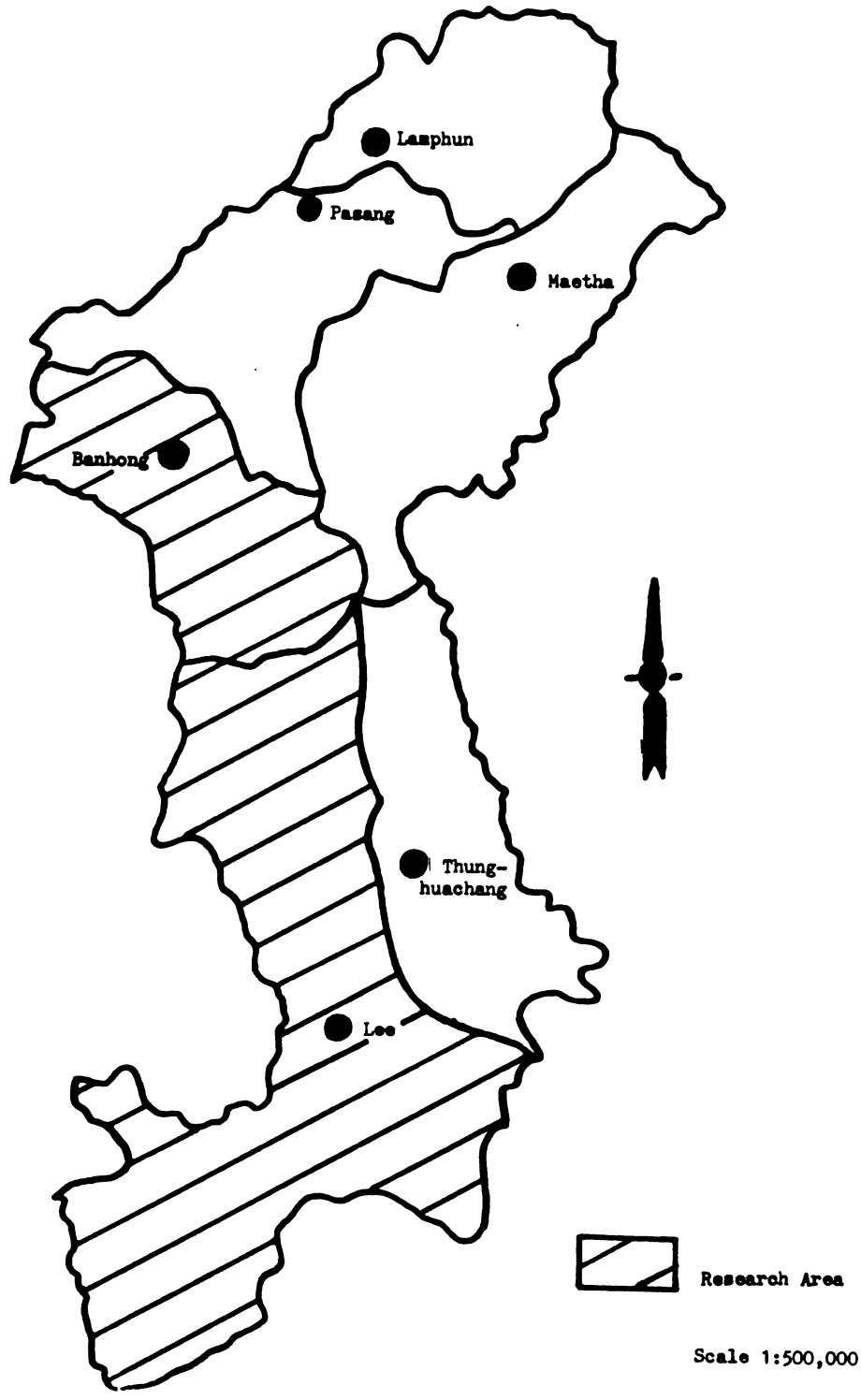
Transportation within the district is quite convenient even in the rainy season. Futhermore, there is a good irrigation system in many parts of the district. Therefore, when compared with Lee District, Banhong District is more developed.

The main agricultural crops in the district are garlic and cabbage. These two crops are harvested in different seasons. Since the district has quite a good irrigation system farmers can grow one crop after another. This results in a better economic situation.

Malaria is not a problem in Banhong District in general. About 68 percent of the population live in the malaria eradication area. Although 32 percent of them live in the control area, most of this group are in the areas that do not need annual DDT spraying. Only 20 percent of them live in areas which receive one round of annual DDT spraying.



Map 3.1 Map of Thailand



Map 3.2 Map of Lamphun Province

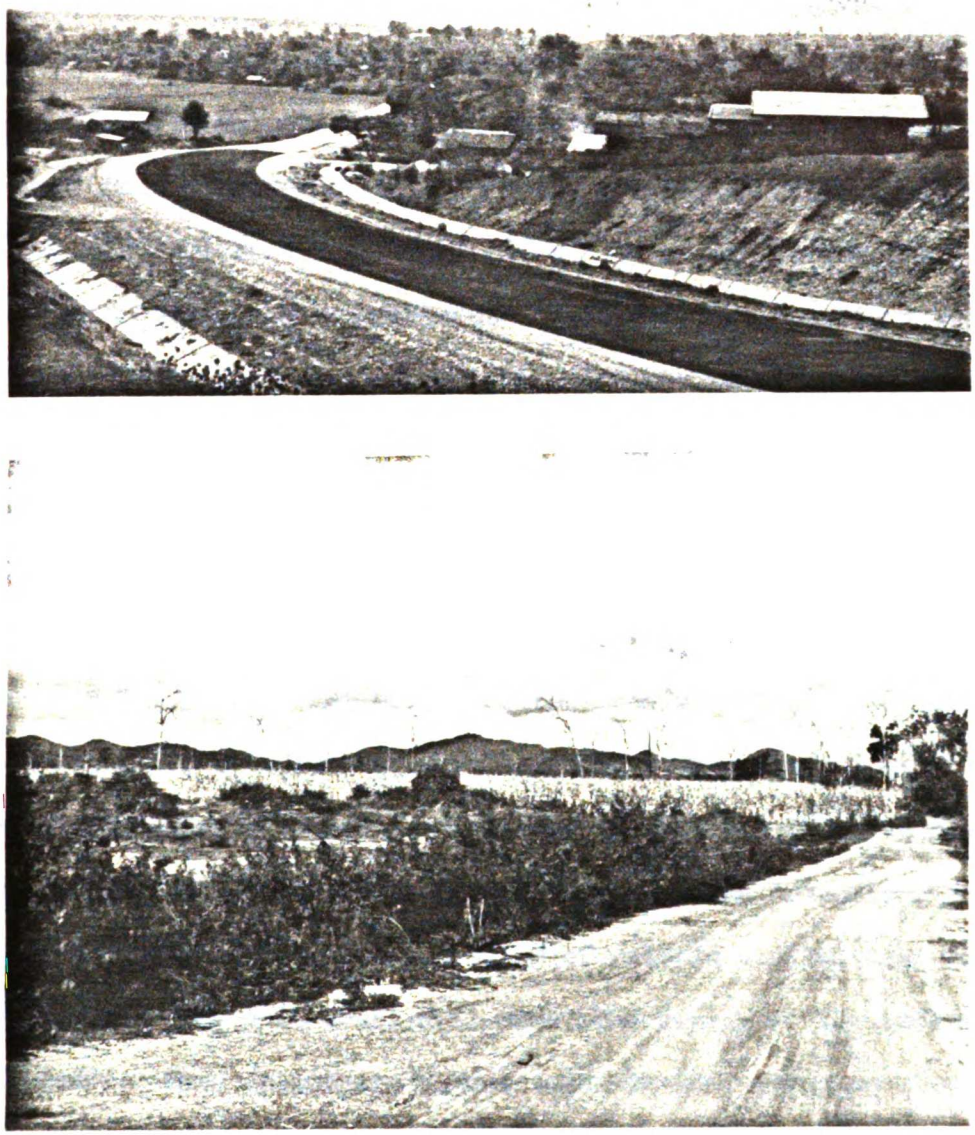


Figure 3.1 Landscape of Research Area

CHAPTER IV

VOLUNTEERS IN THE THAI MALARIA CONTROL PROGRAM

4.1 Volunteer Activities

If one found oneself in a Thai village and looked around, he would perhaps observe on the front of some houses a green sign-board with a medical symbol. On the sign-board, one would read (in Thai) "Malaria Volunteer Office, Malaria Division, Department of Communicable Disease Control, Ministry of Public Health". This sign-board indicates the residence of a malaria collaborator. Beside that sign-board or somewhere else in the village, one might see a striking poster with a picture of an ill-looking man. The poster says something like "if you have a fever and headache or you suspect you might have malaria, you can get a free blood examination from the offices in this list". On that list is the volunteer service, among others.

The reader will remember from the previous chapter that the main objective of volunteer work is passive case detection; therefore, volunteers are not expected to take blood at the villagers' home since that would involve them in active case detection. However, in some cases when persons suspected of malaria are too weak to visit volunteers, some volunteers will make home visits to the residences of villagers. Some volunteers refuse to visit the villagers at home because their supervising officers have asked them not to do so. Rather than explaining the difference between passive and active case detection, most officers usually tell volunteers that it is enough for

volunteers to do their duty at their own homes. Visits to the homes of all those suspected of malaria would indeed be too much to ask of volunteers since they do not get paid for making home visits.

After training, each volunteer gets a plastic box containing anti-malaria drugs, slides, a needle for pricking the finger and alcohol. They also get a handout instructing how to give presumptive treatment and some report forms for passive case detection (MS 4 form). The report form asks for a person's name, address, age, gender, and what kind of anti-malaria drug and how many tablets are being taken. The result of the blood examination is also entered on this report form, which is supposed to be filled out after the blood slide has been examined. The last column is for remarks concerning the place where that person went before he suspected he mught have malaria.

Villagers can visit volunteers for blood examinations any time they want. Usually there are three different periods of time that are convenient for both villagers and volunteers: early in the morning, lunch time and late evening or at night. Villagers may stop by volunteers' houses before both of them go to work. If villagers' farms are not far from home, people may have lunch at home and take a rest for a couple of hours and then go back to work until late evening. Thus, some villagers can visit volunteers at lunch time. However, evening is the most convenient time for both villagers and volunteers. This is the general pattern for volunteers who are farmers. If volunteers are merchants, they usually remain home, to tend their stores, so villagers can visit them anytime of the day.

However, those three periods which are convenient for volunteers who who are farmers may not be convenient for those who are merchants who are busy with their own business. These three periods are the peak periods when customers go to buy things at the grocery stores. Aside from these times, there is usually not much going on at the grocery stores. Some stores might be open only during these periods, if the owners also have some other business to do. Some merchant-volunteers mentioned that they did not mind doing volunteer work, if villagers would visit them when they had free time.

Volunteers have to perform three activities when villagers visit them for blood examinations: making a thick blood film, giving presumptive treatment, and filling out the report form. In taking blood from the villagers, volunteers try not to hurt them. Each volunteer has his own technique in using the needle to prick the finger for blood which he believes will not cause villagers pain. For example, one volunteer believed that if he pricked the villager with the needle on the side, rather than in the middle of the first joint of his finger, it would not hurt. Another volunteer thought that if the finger was tied before he gave it the needle prick, it would prevent the villager feeling any pain. An active volunteer said many villagers told him they preferred having him take blood slides rather than anyone else because he did not hurt them.

Volunteers were asked to use a single slide for two blood films. Some volunteers could make three blood films on the same slide. After making the blood film, volunteers have to write a code on the slide to indicate whose that blood film was. Right after

taking the blood film, volunteers give two doses of presumptive treatment to the villagers. In eradication areas, instead of distributing anti-malaria drugs, volunteers give paracetamol, an analgesic drug, to suspected cases after the blood slides are taken, since there have not been any malaria cases for the last few years. Some volunteers might make the villagers take one dose at that time. One dose of presumptive treatment for adults consists of one tablet of Fansidar (sulfadoxine + pyrimethamine), and one tablet of Primaquine 15 mg. Sometimes Primaquine 15 mg. is not available; then, volunteers give two tablets of Primaquine 7.5 mg. However, it was observed that some volunteers gave one tablet of Primaquine 7.5 mg., because they were concerned only about the number of tablets, not the contents of those tablets.

It was found that there was not much difficulty in completing the general informatiom on the report form. However, there were some problems on the drug section. For example, it was found that many volunteers marked report forms in the incorrect columns because the titles of the columns had been changed and the volunteers were accustomed to counting the columns instead of reading the column heading. In some cases the volunteers marked that they had given Fansidar to the villagers, although they knew they had not. They were just in the habit of marking the column for Fansidar.

Some volunteers make an arrangement with a malaria officer for collecting blood slides. For example, some volunteers put their equipment boxes and report forms outside their houses so that when the malaria officer came to collect blood slides he would not have

any problem if no one was home. Some volunteers put the boxes inside the houses, but they told the officer where they put them and gave the officer permission to pick the slides up anytime, even when no one was home.

When an officer collects blood slides, he is expected to check the supplies, copy the report prepared by the volunteer and inform the volunteer about volunteer work or malaria conditions. It is also anticipated that he will discuss any problems that the volunteer might have. However, it was observed that the officer was usually most concerned about the number of blood slides prepared by the volunteer. For example, the first question the officer would ask volunteers was invariably whether they had prepared any blood slides. If the volunteer answered no, the officer might go on to the next volunteers' residence without saying anything. If the answer was yes, the officer would collect the slides and copy the report, if necessary. Some volunteers would already have done this so the officer would not have to copy it himself. Usually that was all the officer did when he visited volunteers. It was observed that many of the officers paid almost no attention to the accuracy of the report. The example noted above of a volunteer marking the wrong columns of the report forms was found after regular supervision by the officer had taken place.

4.2 Case Study

It was observed that the success of efforts to keep volunteers working and active in the program depended on many factors. These factors were related to and affected by each other. The following

Figure 4.1 Village Malaria Volunteer's Office

(From Manual for Village Voluntary Malaria Collaborator)

cases help shed light on why some volunteers were active and effective, while others were not; and why some volunteers remained in the program, while others dropped out. The names used in the following cases are pseudonyms.

CASE 1 Jai was a local-born woman, aged 50. She was one of the few women in her generation in her community who could read and write. She lived with her husband. Their grown up children had quite good permanent jobs, were already married and had moved out into nearby villages. So Jai did not have to worry about her children's future. Jai herself was economically independent, earning her own income from her small grocery store and rice farm and from growing pigs. Her husband had a bus service between the village and the district town. Jai's economic status was considered above average.

Jai was well-known and respected by the neighbors. She was once nominated to be a village headman, but she refused the position. She was selected to be a volunteer by the community. Hers was always the first of four volunteers in the area named by villagers when they were asked who their volunteers were. She was happy to serve as a volunteer. She also served on other community committees. She said proudly that she had not believed she could carry out the duties of positions like this, since she was a woman and she had been afraid of officers when she was a child.

In Jai's case, it can be said that she was an active volunteer because her community wholly supported her which made her feel that she could not ignore the responsibilities that she had to the

community. In addition, since she was economically independent, she did not have to worry about her family or her children's future.

CASE 2 Som was an active volunteer, aged 58. He had been a volunteer for almost twenty years. He had been a village headman's assistant. The headman had been the malaria collaborator, but quit all the jobs, including that of volunteer. The malaria officer then asked Som to take on the volunteer work. Som said he was not happy when he was asked to become a volunteer but he felt he could not refuse the officer because the headman had just quit the program. Since he was a headman's assistant, he thought it was his responsibility to take the job.

Som's economic status was below average. His main income came from farming, and occasionally from his children who worked outside the community. Although Som's economic status was considered poor, he was a generous person. He did not mind taking blood slides at the suspected person's home.

There are three major reasons for Som being so active in the volunteer program. All were related to the recognition and prestige accorded him. First, he was respected and appreciated in his local community. For instance, a crowd would come to wish him good luck every Thai New Year. They came because they wanted to pay their respects and to thank him for what he had done for them. Second, he received considerable attention from outsiders; he was often visited by people who were interested in malaria work and his job. He said now his pictures were all over the world because many visitors had

come from abroad. Third was that everyone in his family was willing to help in his volunteer work and encouraged him to stay in the program. Every family member could take blood slides. In addition, Som hoped to receive the pin which would be the last and highest reward he could obtain from the Malaria Division. (See Figure 5.3). He has already obtained certificates from both the Malaria Division and the Ministry of Public Health.

CASE 3 Luck, aged 48, was a folk healer, a farmer and a grocery store owner. He considered farming as his occupation. His economic status was average. He was asked to be a volunteer by an officer. He was supported by his family and his neighbors in his volunteer work. His main reason for being a volunteer was that he wanted to help his neighbors, although he agreed that being a volunteer helped increase his income as a folk healer. Luck, like his folk healer counterparts, made home visits. When he visited his patients, he would take blood slides from every patient he suspected might have malaria. He also gave volunteer service at home, even if the villagers only wanted to have blood examinations and had no other complaints, signs or symptoms. Luck said he might quit the program soon, since today there were not many people who had malaria, and a health center had been established within walking distance from his home. In addition, there was a new volunteer in his community.

It was observed that Luck was an active volunteer because volunteer work supported his healing career. Although he did not get any money from volunteer work, the villagers could see how much of his

time he devoted to them. This might have the indirect result of encouraging villagers to use his healing service more often than before, thus increasing his income. However, recently a health center was established near his home, so fewer and fewer villagers have called upon him for service. He was thinking of quitting volunteer work and perhaps also his healing career.

CASE 4 Tit, aged 40, lived in a new settlement area. He was locally acknowledged to be a wise and profoundly respected person since he had been a monk for almost ten years. He was the first volunteer in his community. At that time, he was the only one who could read and write. Tit was categorized as an inactive volunteer, although he had the intention of doing his best for the program. But there had not been any malaria cases in his village for the last few years. In addition, there were two other volunteers in his village.

CASE 5 Suchai, aged 34, first became a volunteer when he was working on the DDT spraying team. He quit the spraying team when he got a permanent job in a five year pilot project on child development. He did not quit the volunteer program, but many villagers believed he had dropped out of the program. He was considered as an inactive volunteer. He did not seem to pay much attention to volunteer work, but he did not want to quit the program. It was observed that the reason he did not quit the program, although he did not want to be a a volunteer, may have been because he was thinking of returning to work on the DDT spraying team, after the pilot project he was now

working on ended. Therefore, it was necessary for him to keep his relationship with the malaria officers.

CASE 6 Dang, aged 51, was a grocery store owner and a farmer. He was serving as a guide for a malaria officer to patients' houses when he was asked to be a volunteer. He did not want to be a volunteer but did not know how to refuse and he was aware that his community needed somebody to take care of malaria-related matters. Although he had been a volunteer more than ten years, he did not know about the possibility of obtaining a certificate. Dang thought that slide collection by malaria officers should be done more often than was the case now, since many people would return to ask him whether they had malaria only a few days after he had taken their blood films. Dang was an active person in his community. Besides being a volunteer, he was a member of many community committees. He always attended meeting or training activities outside the community. He said the refresher course organized by the Malaria Division was not very useful in terms of increasing his knowledge when compared to other meetings he had attended. He believed the refresher course was necessary in terms of social interaction among volunteers, and between volunteers and malaria officers. He also said that he did not want his relatives, particularly young adults, to be volunteers because they should work for their family's financial well-being. If they were volunteers, they would waste their time. As for himself, he would not mind doing volunteer work if villagers visited him when he had free time. If villagers came when he was busy, they had to wait until he had time,

since volunteer work was not as important as his career.

CASE 7 Somsak, aged 32, used to work on the DDT spraying team and was a folk healer. Now he only worked on his farm. His economic status was below average. He dropped out of the volunteer program two years ago. His main reason was that he was getting poorer. He used to have a better economic status. At that time, he did a lot of community jobs, including volunteer work. Now, his family economic status had gotten worse, and his wife could not help him in anything. He had to do everything for his family. He thought it was more important for him to improve his family's financial status. Therefore, he quit all community jobs.

CASE 8 Pat moved into the village because of her marriage. She was about 46 years old. She was a farmer and also the owner of a small noodle shop. Her economic status was average. She was asked to be a volunteer when she visited a friend who had malaria while an officer was giving a treatment. She said she told that officer she could not do the job, but that the officer insisted, so she had to accept the job. She believed that the community did not support her in her volunteer work because she did not have her own relatives in the village. Villagers said Pat herself did not do a good job in volunteer work. She sometimes refused to take blood from the villagers without giving any reason. Moreover, she sometimes cursed those villagers who wanted to have blood examinations. Pat quit the program two years ago. Her main reasons were that the community did

not support her volunteer role and she was too old for volunteer work.

CASE 9 Moon was a young man, aged 23, with better education and economic status than his counterparts. His main occupation was as a middleman, and he also had a big fruit plantation. He was usually busy with one or another job all year long. He was asked to be a volunteer by his village headman. He could not refuse because if he did, villagers would say he was selfish. He had to accept the job, but he had never done any blood slides since becoming a volunteer three years ago. He said he did not have time and that there was another volunteer near his house.

4.3 Other Significant Results

The following section describes some observations and other findings that were not used in developing the questionnaire. The information emphasizes the administrative structure of the program.

4.3.1 Coverage

When one talks with malaria officers on any administrative level, one gets the impression that increasing the numbers of volunteers is one of their greatest concerns. They emphasize the ratio of volunteers to population. However, it was observed that some volunteers were placed very close to others. This might be appropriate in terms of population ratios, but it was found that usually only one or two volunteers in that group actually worked;

the others did not. Moreover, some volunteers' homes were close to a health center or a hospital. Many of these volunteers said the number of villagers who had blood slides taken decreased after these health facilities were established, because villagers could visit them as conveniently as the volunteer.

4.3.2 Supervisors

Malaria officers who collect blood slides are usually local people permanently employed by the Malaria Division. Many of them formerly worked as spraymen on the DDT spraying teams. During DDT spraying periods, these officers have to be supervisors of spraying teams. In getting around in the areas they are responsible for, they have to provide their own vehicles, which are commonly motorcycles, and the Malaria Division supplies a certain amount of money for gasoline each month. This money should be enough on an average basis. However, if the areas under their responsibility are far away and if they have to make a daily trip between their office and the area of responsibility, officers might have some difficulty in financial managment. Therefore, some of them stay in the village for a week or two at a time.

In collecting blood slides, officers are supposed to supervise volunteers as well as check the supplies. It was observed that there were not many complaints about a lack of supplies. It was also noted that supervisors were most concerned about the number of blood slides and how to make good blood slides. This may be because the number of blood slides prepared by volunteers was used as an indirect indicator

of the officers' performance. Unfortunately, the officers paid little attention to report forms or to providing any other essential information to volunteers.

Each supervisor had his own pattern of work. They usually visited some volunteers more than others. They may also visit for reasons other than work. Some volunteers said that an officer visited them every few days, while others said that the same officer visited them only once or twice a month. Sometimes they failed to collect any blood slides although the volunteers had prepared some. Moreover, it was found that some officers did not collected all slides prepared by volunteers. For example, if a volunteer had prepared ten slides, the officer might collect only five or six of them and tell the volunteer to keep the rest for his next visit. The officer's reason was that if a volunteer did not take any blood slides until the officer's next visit he would still have some slides to turn in. This would mean that the volunteer had worked continously, which was necessary for him if he wanted to get a certificate or a pin from the Malaria Division.

4.3.3 Drug Resistance

Volunteers can help in distributing large amounts of anti-malaria drugs throughout the country. However, some volunteers prescribe incorrect dosages and some suspected cases take only half of what is prescribed. It is possible, therefore, that such distributing practices are contributing to drug resistance, though how much is not certain (Dr. Prasittisuk, personal communication).

4.3.4 Free Medical Service

In theory, volunteers can get free medical service when they visit a government health office by showing their volunteers' identification. However, in practice, some volunteers, particularly those in the Malaria Collaborator Program, said they could not get free medical service by using their identification. Volunteers in the Primary Health Care Program did not have this problem. This circumstance may be the result of the administrative line. Volunteers in the Primary Health Care Program are not only supervised and supported by the malaria officers, but are also directly responsible to personnel in health centers and hospitals. Volunteers in the Malaria Collaborator Program, however, are not associated with personnel in health centers or hospitals. (See Figure 1.1). Therefore, it can be said that free medical service is provided only for volunteers who are familiar to medical providers.

Moreover, some volunteers said if they wanted to get free medical service, those medical providers looked down on them. Some volunteers also believed if they used their volunteers' right to this free medical service, they would get second class services. They mentioned that most drugs they received were household remedies which they could buy from the Village Health Volunteers or grocery stores in the village. Moreover, they said by using their volunteer health rights, they did not receive injections, which they believed to be a better and stronger cure.

4.3.5 Multiplicity of Roles and Role Conflict

It was observed that if a person holds one community service job, he has a tendency to get more. For example, if he is a volunteer in the Primary Health Care Program, and if some other programs in his village need a volunteer he is likely to be recruited for those programs too. The simple reason given was that he knows what he should do. It was found that many volunteers hold more than one community service job; some may hold as many as ten such jobs. In some communities, it was not easy to find an appropriate person to work in service jobs. Therefore, the person who could do one usually did almost every thing.

For example, it was observed that in one community a volunteer was a village headman as well as a member of other community committees. In reply to why he had so many roles, he said because he was the only adult in the community who could read and write. He said he did not want all those roles, but he could not refuse them. He had to accept them all, he thought, because it was his responsibility to his community. However, he had to work his farm to earn money for his own family, which included four children who were not old enough to help him. At the same time, his wife was busy taking care of the house and children as well as doing other things because she was a village headman's wife.

Some volunteers in this group mentioned that they could handle all these roles with help from their family. Others said they would perform only important roles and ignore unnecessary ones. In many cases, volunteers stated that they had too many roles to manage, in

addition to their own careers. Therefore, they gave up some roles that they thought they could not carry. Frequently the volunteer role was one of them.

CHAPTER V

CHARACTERISTICS OF VOLUNTEERS AND RELATIONSHIPS OF VOLUNTEERS TO THE PROGRAM

The survey component of the study covered two districts: Lee and Banhong, in Lamphun Province of northern Thailand. These districts had a population of 50,423 and 44,101 respectively in July 1984. There were current and former 232 volunteers living in the area studied. About 90 percent (N=209) of these volunteers responded to the structured questionnaire. One hundred thirty one were in Lee District, 78 in Banhong District.

The Malaria Division provides broad criteria for the selection of volunteers: each volunteer should have a desire to serve his community, be respected and accepted by the community and be a literate person. The study found that there were some variations among characteristics of volunteers, such as gender, age and educational level.

5.1 Personal Characteristics

5.1.1 Gender

The volunteers were overwhelmingly male (90%) (Table 5.1). This can be explained, first, by the fact that the volunteer program requires that volunteers be literate people so they can prepare reports. As a result, the program has enrolled more men than women because in these communities there are many more men than women who can read and write. Second, in Thai communities, more men attend

official meetings than women. For example, if an officer calls a community meeting and asks a representative from each family to attend, the head of household -who is usually a man- will attend the meeting. Only if there were no capable man in the family would a woman come to the meeting.

5.1.2 Education

In the past, the education system required that every person in Thailand complete four years of compulsory education. Later on the government changed the requirement to seven years. Recently, compulsory education was again changed from seven to six years. The educational level of the volunteers, then, was categorized as being incomplete, complete compulsory education or higher than the compulsory education. The data obtained indicated that most of the volunteers (87%) completed compulsory education. Only about five percent did not finish compulsory education. The rest, (8%) had educational levels higher than compulsory education (Table 5.1).

5.1.3 Age

This study considered age of the volunteers at two points: age at the time of the study and at the time each volunteer enrolled in the volunteer program. Both points had their own importance for the study: in the study year, age may have some effect on a volunteer's attitude toward the volunteer program, while age at the beginning of volunteer work might affect the selection process or the decision to drop out of or stay on in the program. It was found that about 90

percent of the volunteers were 30 or older during the study year. About 25 percent of the volunteers began their work when they were less than 30 years old. Most of them (65%) began volunteer work when they were between 30 and 49 years old. Only about ten percent began when they were 50 or older (Table 5.1).

5.1.4 Economic Status

Economic status was estimated by the research team by comparing among and between volunteers and the general population within the two districts. Economic status was judged on the basis of housing and property. Economic status was classified into three groups: above average, average, and below average. Since the research team had gone to every volunteer's place at least once before the interview took place, the researchers had a general idea of the economic status of volunteers in the community. In addition, the research team had discussed each volunteers's status before it was categorized. About 46 percent of the volunteers had average economic status, 38 percent had economic status below average and 16 percent had a higher status (Table 5.1).

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5.1.5 Occupation

Most of the volunteers were farmers (77%) (Table 5.1). The rest included merchants, middlemen, folk healer and others. More than half of them worked close to home (56%) (Table 5.1). One-third worked far from home, but did not have to stay at their work place. Only about nine percent had to stay at their work place (Table 5.1).

5.1.6 Place of Birth

Only about half of the volunteers (53%) were born in the district in which they currently lived. The rest (47%) had moved there from other places (Table 5.1). Their reasons for moving into the area included marriage and employment, among others. One special characteristic of this area, particularly in Lee District, is that 30-40 years ago some areas were not occupied, so many people who wanted land for farming could come in and cut the forest and take the land. Trespassing into government reserved forests was also common. So, it can be said that the community in Lee District, at least, was relatively new when compared with other rural Thai communities.

5.1.7 Ordination in the Monkhood

Ordination in the monkhood is not only a religious practice, it is also a way to gain some education as well as social status. It is believed that a man who is ordained in the monkhood repays his parents by letting them gain some merit (Potter 1976; Tambiah 1968; 1970). In addition, a boy or a man who wants an education but cannot afford to go to a regular school, will enter the monkhood for education. This practice is common in the North. Some temples (wats) have classrooms for monks like those in regular schools. Once he is a monk, a man gains respect because people believe he now knows both the way of life and the law of the Buddhist brotherhood.

Since entrance into the monkhood serves as a way to obtain education and community respect, about six out of ten (59%) male volunteers had been ordained (Table 5.1). Fifteen of them had been

monks more than ten years. Four of them had never gone to regular school.

Table 5.1 Socio-Economic Characteristics of Volunteers

Gender

	%	
Male	90	
Female	10	
Total	100	(N=209)

Compulsory Education

	%	
Incomplete	5	
Complete	87	
Higher	8	
Total	100	(N=209)

Age (at the time of the study)

	%	
<30	10	
30-39	27	
40-49	31	
>49	32	
Total	100	(N=209)

Age (at the beginning of volunteer work)

	%	
<30	25	
30-39	34	
40-49	31	
>49	10	
Total	100	(N=209)

Economic Status

	%	
Below average	16	
Average	46	
Above average	38	
Total	100	(N=209)

Table 5.1 (Cont)

Primary Occupation (many people had more than one)

	%	
Self Employed	91	
Farmer	77	
Merchant	3	
Middleman	3	
Wood cutter	1	
Folk healer	3	
Service	4	
Employed by Others	9	
Permanently employed	4	
Employed on daily basis	4	
Intermittent	1	
Total	100	(N=209)

Distance between Home and Work Place

	%	
Close to home	56	
Away from home-not required to remain over night	35	
Away from home-must remain over night	9	
Total	100	(N=209)

Place of Birth

	%	
Indigeneous	53	
Migrant	47	
Total	100	(N=209)

Ordination in the Monkhood*

	%	
No	41	
Yes	59	
Total	100	(N=189)

* Only male volunteers

5.1.8 Folk Healer

In the studied area, there were many folk healers. They were villagers who usually had other occupations and had knowledge about

drugs and could give injections. They might have learned their skills as medical assistants when they were recruited into military training programs or by inheriting the knowledge from their ancestors, or from other sources. These healers usually charged a reasonable price. Many villagers depended on these folk healers' services, particularly in areas that were far from other services (Cunningham 1970; Weisberg 1982). These healers knew more about health and medicine than most villagers. They also had some social status. Therefore, when the volunteer program wanted to have a volunteer in a village, a folk healer often might be selected because both the villagers and the officer thought the healer knew more about medicine and also had some respect from the villagers. It was found that almost one-fourth of the volunteers studied were folk healers (Table 5.2). These folk healers gained some benefit from being volunteers too. For example, about 94 percent of them acknowledged that volunteer work aided their healing career (Table 5.2). This support was in terms of the community accepting their healing role more than before. One reason given was that the villagers thought if a healer could be a volunteer, it meant that the government officers considered him to be qualified. As a result of this, the villagers increasingly used the healer-volunteer services for their health problems which helped the healer-volunteers in increasing their income. The study showed that more than 73 percent of these healer-volunteers recognized this benefit (Table 5.2). At the same time, most of the healer-volunteers (88%) tried to help the villagers as well as to make their healing services more valuable by taking

malaria blood examinations from every suspected case. The relationship between these healer-volunteers and the volunteer program is mutually beneficial. The healer-volunteers gain in social respect and also increase their incomes while the volunteer program benifits in that the healers are especially enthusiastic volunteer malaria workers.

Table 5.2 Folk Healer-Volunteers (as either primary or secondary occupation)

Percentage of Volunteers Who Were Folk Healer	%	
No	77	
Yes	23	
Total	100	(N=209)

Does Volunteer Work Support Healing Career?	%	
No	6	
Yes	94	
Total	100	(N=49)

Do You Take Blood Slides?	%	
No	12	
Yes	88	
Total	100	(N=49)

Does Volunteer Work Help in Increasing Income?	%	
No	27	
Yes	73	
Total	100	(N=49)

5.2 Relationships between Volunteer Service and Other Statuses

5.2.1 Relation to Village Headmen

It was not surprising that about 67 percent of the volunteers were village headmen or had a relative who was a village headman (Table 5.3). A village headman not only has to take responsibility for any government work in his village, but also has some respect from and influence on the villagers (Moerman 1969; Mulder 1979). So, when the government wants a volunteer in the village, the malaria officer will come to the village headman for his recommendation as to who should be a volunteer. The village headman might suggest himself or his child or his relative because this would not only meet government needs, but also prove to the villagers how much he and his family devote their time and energy to the community. In some cases, a village headman felt that there was no one in his village who could be a volunteer, so he took the job until he could find an appropriate person.

5.2.2 Work on DDT Spray Teams

Since malaria is endemic in this area, one control method used is DDT spraying. DDT spraying requires much manpower to finish the job within a specific time; therefore, many local people are temporarily employed to help on spraying teams. Usually these people were trained to take blood slides and write reports like regular volunteers. Hence, many of these people are asked to be volunteers, both during the time they work on DDT spraying teams and after they have finished

spraying. The study revealed that about 28 percent of the volunteers had previously worked on DDT spraying teams or had a relative who worked on the spraying teams (Table 5.3)

5.2.3 Relatives of Malaria Officers

Some government malaria officers are local people, while others have worked in the area for years, so these officers have some relatives or friends in the villages. When they have to fill a number of volunteer positions within their area of responsibility the easy way is to ask some one they know to take the job. It was observed that about 61 percent of the volunteers were officers' relatives or friends and some of them were officers' wives (Table 5.3).

Table 5.3 The Relationship between Volunteer Service and Other Statuses

Have You or Your Relative Ever Been a Village Headman?	%	
No	34	
Yes	66	
Total	100	(N=209)

Have You or Your Relative Worked on DDT Spraying Team?	%	
No	72	
Yes	28	
Total	100	(N=209)

Do You Have any Relative Who Is a Malaria Officer?	%	
No	39	
Yes	61	
Total	100	(N=209)

5.3 Perception of the Problem of Malaria and of the Volunteer Program

5.3.1 Malaria Experience

Approximately 28 percent of the volunteers reported that they or members of their families had personal experience with malaria (Table 5.4). More than half of those who had malaria experience had had blood examinations at the malaria sector office or by a malaria officer. The volunteer service was the second means for taking a blood examination (Table 5.4). When treatment was considered, the malaria sector office, and malaria officer services were still the first rank, but the hospital was given second priority (Table 5.4). It can be said that the malaria sector office and its personnel are the first priority service volunteers considered when they had a personal problem with malaria. The volunteer service was the second choice for malaria blood examinations, but after they knew they had malaria, volunteers preferred to go to the hospital for treatment.

Table 5.4 Volunteer Experience with Malaria, Blood Examination and Treatment

Have You or Your Relative Ever Had Malaria?	%	
No	72	
Yes	28	
Total	100	(N=209)

Where Did You Have Blood Examination Service?	%	
Volunteer	21	
Malaria sector office	36	
Malaria officer	17	
Health center	5	
Hospital	14	
Other	7	
Total	100	(N=58)

Where Did You Get Treatment?	%	
Volunteer	6	
Malaria sector office	40	
Malaria officer	14	
Health center	6	
Hospital	26	
Folk healer	2	
Other	6	
Total	100	(N=58)

5.3.2 Is Malaria a Community Problem?

Although 79 percent of the volunteers in the study lived in a malaria control area (Table 5.5), about 46 percent thought malaria was no longer a community problem (Table 5.6). The study further found that the volunteers' belief about malaria as a community problem was significantly related to where they lived. That is, 72 percent of the volunteers who lived in communities that still needed DDT spraying thought that malaria was a community problem. Only 28 percent did not.

The proportion was reversed for volunteers in eradication areas. Twenty-eight percent of the volunteers in eradication areas believed malaria was a problem in their community, and as high as 72 percent did not think malaria was a problem any more (Table 5.7). It can be said that the volunteers' belief about whether malaria was a community problem was quite accurate when compared with the actual malaria condition.

Table 5.5 Volunteer Distribution and Malarious Area

Malarious Area	%
Control area with DDT spraying	42
Control area without DDT spraying	36
Eradication	22
Total	100 (N=209)

Table 5.6 Percentage of Volunteers Who Perceived Malaria as a Problem

Is Malaria a Problem?	%
No	47
Yes	53
Total	100 (N=209)

Table 5.7 Relationship between Volunteers Who Perceived Malaria as a Problem and Malarious Area

Malarious Areas	Is Malaria a Problem? No %	Yes %	
Control with DDT spraying	28	72	(N=180)
Control without DDT spraying	52	48	(N=149)
Eradication	72	28	(N=90)

(Chi-square=51.3819, df=2, p<0.0000)

5.3.3 Attitude toward the Volunteer Program

One way to measure the attitudes of volunteers toward the volunteer program is to ask whether they would like their relative to be a volunteer. If they would, it means they have a positive attitude toward the program, because in general nobody wants his/her relative to do any thing he/she disagrees with. It was found that more than 92 percent of volunteers would like their relatives to be volunteers (Table 5.8). This might mean that volunteers' attitude toward the volunteer program is good. However, in practice only about one-third of volunteers had a relative who was also a volunteer (Table 5.8). In addition, only 23 percent of those who had relatives in the volunteer program had suggested or recommended their relatives to be volunteers (Table 5.8). So, although most volunteers had positive feelings about the program, not many of them had advised their relatives to be a volunteer. This might have many explanations, for example, volunteers would not like to take responsibility for the behavior of a relative in a volunteer job, or might not consider their relative to be qualified as a volunteer.

Table 5.8 The Attitude of Volunteers toward the Program

Would You Like Your Relative to Be a Volunteer?	%	
No	8	
Yes	92	
Total	100	(N=209)

Do You Have any Relative Who Is a Volunteer?	%	
No	69	
Yes	31	
Total	100	(N=209)

Did You Influence Your Relative to Be a Volunteer?	%	
No	77	
Yes	23	
Total	100	(N=65)

5.3.4 Is Volunteer Program Useful?

In answer to the question whether the volunteer program was useful, three out of four thought it was (Table 5.9). There were many reasons for this answer. For example, volunteers felt they could help other villagers in matters that related to malaria. Some said although volunteer service was slow, it was better than not having any service at all in the village. Those who did not think the volunteer program was useful said there was almost no malaria or if they had a malaria problem they could easily get the service they wanted from the Malaria Sector Office or the hospital.

Table 5.9 Volunteers and the Usefulness of the Program

Is the Program Useful?	%	
No	26	
Yes	74	
Total	100	(N=209)

5.3.5 Sense of Responsibility

Most volunteers (88%) considered malaria volunteer work as their responsibility (Table 5.10). They felt remorse if they did not have any blood slides when the malaria officer came. Seventy-two percent of those who stayed in the program still wanted to be volunteers (Table 5.10). Moreover, more than 50 percent of these volunteers intended to continue volunteer work as long as they were able. Some of them (22%) would stop only if the malaria officer or the community did not want to have them. However, 28 percent of volunteers who stayed in the program did not want to stay on. Some of them had even tried to drop out of the program, but could not because their community did not allow them to drop out (32%) or because the officers did not permit it (30%) (Table 5.10).

Table 5.10 Response of Volunteers to Volunteer Work

Is Volunteer Work a Kind of Responsibility?

	%	
No	12	
Yes	88	
Total	100	(N=209)

Do You Really Want to Be a Volunteer?*

	%	
No	28	
Yes	72	
Total	100	(N=145)

Why Didn't You Drop Out?*

	%	
Community did not allow	32	
The officers did not permit	30	
Awe of the officer (Kreng-Jai)	18	
Other	20	
Total	100	(N=40)

How Long Will You Continue Volunteer Work?*

	%	
1-5 years	6	
For ever	54	
Not sure	16	
Up to the community	7	
Up to the officer	15	
Other	2	
Total	100	(N=105)

* Asked only of volunteers who remained in the program

5.4 Administrative Structure of the Program

5.4.1 Selection Process

Volunteer selection procedures for the Village Voluntary Malaria Collaborator Program were developed in four stages. First, at the beginning of the program (in 1961), the selection was made from an established group, such as a youth group in the community. Second,

when the program expanded into villages which had no established groups, selection depended on the justification of a malaria officer who was working in that community as well as the recommendation of a village headman. Third, the program employed the sociogram method which was not successful because the malaria officers often were not familiar with nor trained in the sociogram method. The current method involves inviting community leaders, such as the village headman, members of the village committee and the abbot, to a meeting. At the meeting it is decided who would be an appropriate volunteer. That person is then asked whether he or she would be willing to serve as a a volunteer (Chitprarop 1982).

In the Primary Health Care Program the community is mobilized to participate by the Village Health Communicator and the Village Health Volunteer. The Village Health Communicator is selected by a sociometric technique. The selection is the responsibility of health workers at a health center. After training as communicators, these communicators will select one person in their group to serve as a Village Health Volunteer. This Village Health Volunteer will receive additional training (Ministry of Public Health 1978a; 1984).

In the present study, 85 out of 209 volunteers were Village Health Volunteers. The rest, (N=124), were volunteers in the Malaria Collaborator Program. Although in theory the two programs have some differences in selection procedure, in practice the actual selections were made by four groups: malaria or health officers, village headmen, community meetings and others. Who made the selection was significantly related to what program the volunteer belonged to. That

is, for the Primary Health Care Program, most volunteers were selected by the community meeting (43%). Selection by health officers ranked second. In contrast, 78 percent of volunteers in the Malaria Collaborator Program were selected by malaria officers, and only about 11 percent were selected at a community meeting (Table 5.11).

Whatever the selection process, nearly 40 percent of volunteers were not happy to be selected (Table 5.11). But they did agree to be volunteers, often because they felt they could not resist the officer. This probably can be explained by the relationship between superior and inferior. Superior status can be gained not only by age, but also by education level, social status or working position. Such superior-inferior relationships may be, for example, parent-child, teacher-student, adult-youth, and officer-villager. The superior is supposed to advise as well as help the inferior, while the inferior gives respect and honour in response (Hanks 1979; Ruebin 1973). Therefore, when the superior asks an inferior to do something, usually the inferior will agree because the inferior thinks that the superior knows better and it would not be wise to refuse. In addition, the inferior is afraid that a refusal would cause him to get less assistance in the future or, perhaps, none at all. This may be one reason that villagers do not oppose being selected as volunteers.

Another reason may be explained by the concept of "losing face". In Thai communities, particularly in rural areas where relationships between people are very close, a negative response to the request of a friend or a relative should be avoided. A refusal would not be good for either side. The request maker may feel that he is losing face if

he cannot influence other people, particularly if he has superior status. At the same time, the respondant may also feel he is losing face if he says no to the request, because he may be blamed for not having the ability or competence to do such a job.

Another stated reason for not rejecting the selection if a volunteer was selected by the community meeting was that the volunteer considered himself trusted by the majority of the community and thought of the selection as an honour. In addition, in rural Thai communities today, there are quite a few volunteer jobs. As a volunteer, a person will be identified as a contributing member of his community. Therefore, rejection of the selection regardless of a person's willingness to serve, is not possible for anybody in such a community.

More than 60 percent of the volunteers said they were happy to be selected (Table 5.11). The main reason given was that they were interested in helping the community. In a community, there is much normative pressure for villagers to help each other in many ways. This is based on the belief that if one helps others, one will receive help when it is needed. In addition, community work is considered an honour and a person who does the job is devoted to his community.

Table 5.11 Volunteers and Selection Process

Who Did the Selection?

	Malaria Program %	PHC Program %
Malaria or health officer	78	37
Village headman	7	14
Community meeting	10	43
Other	5	5
Total	100 (N=124)	100 (N=85)

(Chi-square=39.5724, df=3, p<0.0000)

Were You Happy to Be Selected?

	%
No	38
Yes	62
Total	100 (N=209)

Why Did You Not Refuse?

	%
Because of other role	9
Wanted to help the community	11
The community made the selection	31
Could not resist the officer	42
Other	6
Total	100 (N=80)

Why Were You Happy to Be Selected?

	%
Wanted to help the community	71
Pleasure	6
Helped the government	12
Gained knowledge	5
Other	6
Total	100 (N=126)

5.4.2 Training Process

According to the program guideline, volunteers are trained for one or two days before they begin to work in malaria control. The trainer will be the head of the Malaria Sector Office which is supervised and coordinated by the head of the Malaria Zone Office.

The training course covers at least six units. The first unit includes general information about malaria, such as the malaria mortality and morbidity rate, the transmission, signs and symptoms, and preventive methods. The second deals with malaria control. The control method can be separated into three groups: DDT spraying, case detection and biological control. The third unit concerns how to prepare thick blood slides. The fourth covers drug distribution, and the fifth unit deals with report writing. The final unit covers how to motivate and get cooperation from the community (Malaria Division 1980; 1982).

The Malaria Division has responsibility for training the volunteer when he is first recruited. However, about 17 percent of volunteers in this study had not been trained (Table 5.12). The reason for not giving a training course to some volunteers was that the Malaria Division did not have enough money for training. Therefore, after a volunteer was selected, he would be taught on a one-to-one basis by a malaria officer in making blood slides, doing reports and distributing presumptive treatment. Even on this basis, it was found that one of the volunteers, who had been recruited almost a year earlier, had not been taught anything. This volunteer himself would have liked to know how to make blood slides because his neighbors sometimes came to him for blood examinations, but he could not perform the service. He felt ashamed in turning down his neighbors.

Although the one-to-one training might be an appropriate training procedure in the case of budget constraints, it has some drawbacks. This type of training lasts for 20-30 minutes on the average. The

training emphasizes making blood slides, preparing reports and distributing treatment. When comparisons are made between the time given to training and what a volunteer has to learn, one might conclude that there is too much to learn in so short a time. In addition, this type of training does not impress on volunteers the importance of malaria control or why local people have to serve as malaria volunteers. Volunteers who had this kind of training identified themselves as untrained volunteers, and most of them would like to attend a formal training course.

Among those who attended a training course, about 48 percent felt that the training course was not sufficient (Table 5.12). Some said the training period was too short, they could not remember a lot of things which were new to almost all of them, and did not have much time to practice making good blood slides. Fortunately, four out of five of those who attended a training course also attended a refresher course (Table 5.12). In addition, almost all of them thought refresher courses were useful and necessary to hold periodically (Table 5.12). The main reason that they felt the refresher course was necessary was to review and increase their knowledge of malaria. In fact a training or a refresher course for volunteers was not only a learning process, but also a social event. Many of them first met at the course and continued their relationships as friends. Most of them knew the movement of the group members, such as who had received a certificate and who had droped out of the program.

Fifure 5.1 A Refresher Course for Village Health Volunteers

Most of the volunteers (91%) who attended a training course considered it prestigious to be invited to the course (Table 5.12). In some communities, the village headmen announced at the community meeting who would attend any outside community meeting. After returning from the course this attendee would have the opportunity to tell the next community meeting what he had learned. Some volunteers also said it was prestigious to be invited by the government because they were just peasants. Without a training program they would not be able to enjoy that kind of privilege.

Table 5.12 Percentage of Volunteers and Training Course

Have You Attended a Training Course?	%	
No	17	
Yes	83	
Total	100	(N=209)

Is a Training Course Enough?	%	
No	48	
Yes	52	
Total	100	(N=173)

Have You Attended a Refresher Course?	%	
No	19	
Yes	81	
Total	100	(N=173)

Is a Refresher Course Useful?	%	
No	1	
Yes	99	
Total	100	(N=140)

Table 5.12 (Cont)

Is the Refresher Course Necessary?

	%	
No	10	
Yes	90	
Total	100	(N=140)

Why IS the Refresher Course Not Necessary?

	%	
Repetitive	54	
Other	45	
Total	100	(N=13)

Why Is the Refresher Course Necessary?

	%	
Review and increase knowledge	94	
Obtain some per diem	2	
Meet other volunteers	2	
Get malaria news	2	
Total	100	(N=117)

Is It Prestigious to Be Invited to a Training Course?

	%	
No	2	
Perhaps	7	
Yes	91	
Total	100	(N=173)

5.4.3 Supervision

The Malaria Division decrees that the blood slides prepared by volunteers be collected at least four times a month (Malaria Division 1982). However, it was found that only about 19 percent of volunteers in this study said the blood slides were collected four or more than four times a month (Table 5.13). More than 60 percent of the volunteers said the blood slides were collected only one or two times a month (Table 5.13). The delay in slide collection made volunteers feel uncomfortable because after the blood slides are taken, for a few

days the suspected person would often ask for the result of the examination. Slides were sometimes left uncollection at the volunteers' house for three weeks or a month. Some suspected persons developed acute malaria symptoms before the results of their blood examination were made known to them. As a result of this delay some villagers prefer to get blood examinations at the malaria sector office or the hospital, although they have to pay for transportation.

Many villagers who use volunteer services are those who want to take anti-malaria drugs before they go to the forest and after they come back. Another group are those who know they do not have malaria, because they have not stayed in endemic areas or stayed overnight in the forest, but they want some medicine for their fever or headache. They would go to the volunteers for a blood examination and get analgesic drugs. This was common in eradication areas where volunteers distribute this medicine instead of anti-malaria drugs. When volunteers were asked whether the frequency of the collection was appropriate, about 70 percent of them said it was, while 30 percent said no (Table 5.13). Negative answers could be explained by volunteers' uncomfortable feelings about the delays in collection of slides and examination results, as discussed. Some of those who thought collection frequency was adequate gave reasons, such as that there were not many people being examined and if slide collections were more frequent they were afraid the officer would waste his time in making a trip to get nothing. Others considered their services mainly to be of use for those who wanted to have anti-malaria drugs before going to the forest. These volunteers also said they

recommended that suspected persons have blood slides taken directly at the Malaria Sector Office.

In collecting the blood slides, the malaria officer is also supposed to supervise the volunteers. It was found that about 40 percent of the volunteers said the officer did not inform them about anything; he just collected the blood slides (Table 5.13). About 60 percent said they were informed when there were any changes in the kinds of drugs or in the report forms.

Table 5.13. Volunteers and Supervision System

How Often Have the Blood Slides Been Collected? (times per month)

	%	
1	20	
2	42	
3	19	
4	14	
>4	4	
Total	100	(N=209)

Is the Frequency of Collection Appropriate?

	%	
No	30	
Yes	70	
Total	100	(N=209)

Is Volunteer Supervised?

	%	
No	39	
Yes	61	
Total	100	(N=209)

5.4.4 Reward System

Volunteers receive some remuneration (per diem) from the Malaria Division when they attend a training or a refresher course. They do not receive any compensation for their volunteer services. However, the Malaria Division arranges free medical service for volunteers when they visit a government hospital or health center. Besides free medical services, the Division decrees that a Malaria Division certificate (Figure 5.2) will be awarded to all volunteers who have taken blood slides every month for at least a year. If after receiving a Malaria Division certificate, that volunteer still takes slides every month for two additional years, he will obtain a second certificate from the Ministry of Public Health. The final and highest reward is a pin (Figure 5.3). The pin is awarded to volunteers who have taken blood slides continously for at least three years after they receive a certificate from the Ministry of Public Health (Malaria Division 1980).

In the studied area, only two volunteers had received the pins and about 42 percent had obtained certificates, which were mostly from the Malaria Division (Table 5.14). Twenty-two of those volunteers who stayed in the program had been enrolled more than two years, 40 of them more than ten years, but they had not obtained a certificate. Though these volunteers were willing to do their work, during some months, particularly in summer, no villagers requested blood examinations. So, for those months, the volunteers could not make any blood slides, which meant they were not qualified for a certificate.

Most of the volunteers who have not received a certificate would like to have one (Table 5.14). Most volunteers who already have certificates, were glad to have them (Table 5.14). Therefore, the certificates appear to be one incentive to keep volunteers working.

In response to whether a volunteer should receive some incentives for doing the job, almost 60 percent said he should. About 40 percent said it was not necessary, but they would be happy to get it (Table 5.14). When they were asked to suggest some incentives, most volunteers thought money was the most appropriate incentive. Yet they did not think the amount of money should necessarily be high. An amount of 50-100 Baht (1.80-3.70 $US) a month would be appropriate. The second most popular incentive was anything which showed that a volunteer had worked for the volunteer program and had helped the community. Free medical care coverage to their families was the third thing that volunteers would like to have. It was also observed that fewer than 10 percent of the volunteers thought a certificate was an appropriate incentive. Their reason was they could not use the certificate for anything and nobody knew they had it. They would prefer things that everyone could see or that they could use, such as bicycles or radios. It is clear that public recognition for their work was very important to the volunteers.

Table 5.14 The Attitude of Volunteers toward Reward System

Should a Volunteer Receive some Incentives?

	%	
Not necessary	41	
Yes	59	
Total	100	(N=209)

What Would Be Appropriate?

	%	
Bicycle or motorcycle	15	
Money	32	
Certificate	8	
Free medical service	21	
Any thing	24	
Total	100	(N=123)

Have You Received a Certificate?

	%	
No	58	
Yes	42	
Total	100	(N=209)

Do You Consider a Certificate Desirable?

	%	
No	17	
It doesn't matter	8	
Yes	75	
Total	100	(N=122)

How Do You Feel About Certificate?

	%	
Happy	82	
Indifferent	18	
Total	100	(N=87)

กองมาลาเรีย
กรมควบคุมโรคติดต่อ กระทรวงสาธารณสุข
ประกาศนียบัตรฉบับนี้ให้ไว้เพื่อแสดงว่า

.....นายนิรันดร์ ใจร้าง.....

เป็นอาสาสมัครมาลาเรียประจำท้องถิ่น เพื่อช่วยเหลือราชการในด้านสาธารณสุข
ขอให้มีความสุขความเจริญรุ่งเรือง ตลอด
ให้ไว้ ณ วันที่ ๑ เดือน มกราคม พ.ศ.๒๕๒๕

MALARIA DIVISION

DEPARTMENT OF COMMUNICABLE DISEASE CONTROL MINISTRY OF PUBLIC HEALTH

This Certificate Is Awarded To

Mr.Niran Saichang

For Helping In Governmental Public Health Work As A Voluntary Collaborator

May You Have A Happy and Successful Life

1 January 1982

.....	.....	.....
Director,	Director,	Director,
Malaria Division	Provincial Health Office,Chiangmai	Malaria Region 2 Chiangmai

Figure 5.2 A Malaria Volunteer Certificate

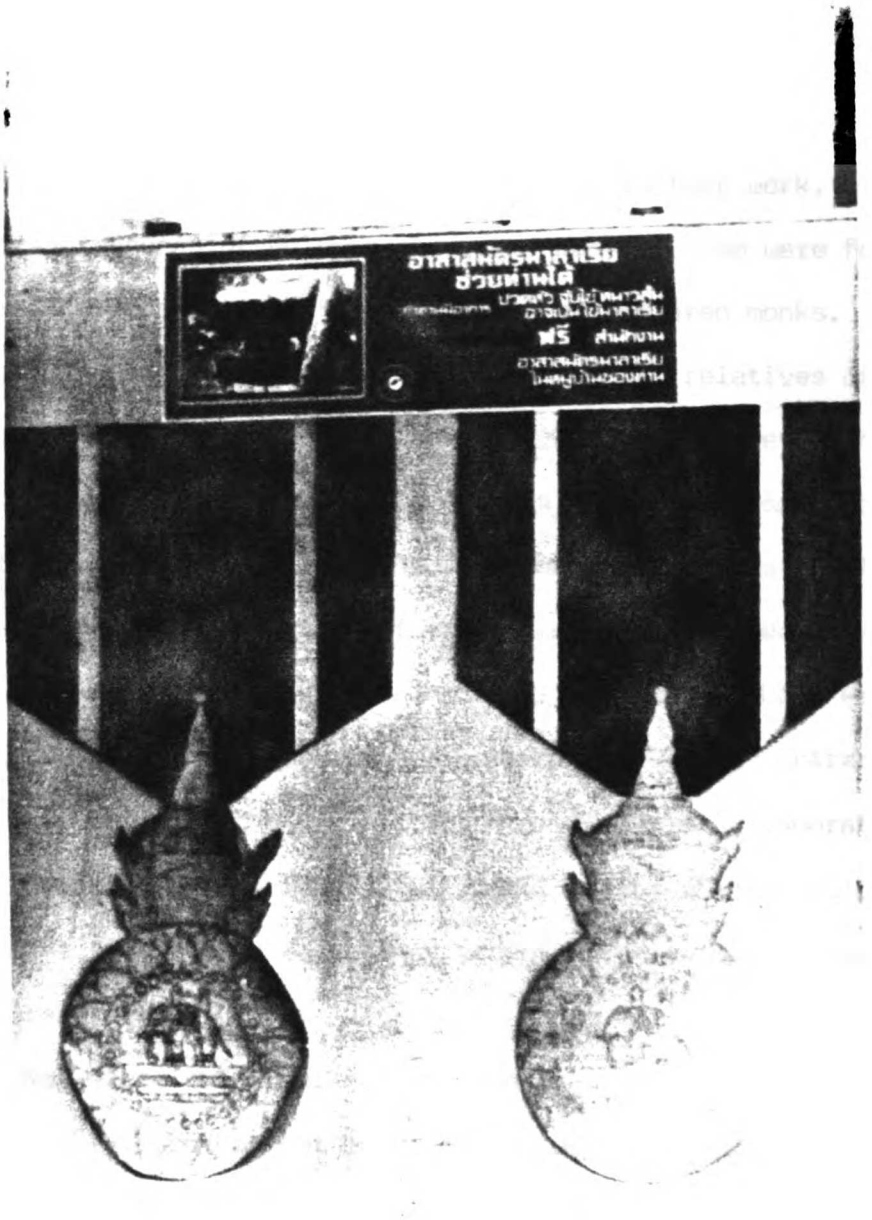

Figure 5.3 The Pin, Highest Reward for the Volunteers

5.5 Summary

The study included some socio-economic characteristics of volunteers as part of the investigation. Most of these characteristics, except gender, had quite a normal distribution, that is, a distribution similar to the characteristics of Thais in rural areas. Males were predominant in volunteer work. The other two special features of volunteers were: many of them were folk healers and a high percentage of male volunteers had been monks. It was not surprising that many of the volunteers were: relatives of village headmen, DDT spraymen, or malaria officers' relatives. The majority of volunteers felt that volunteer work was their responsibility, and most of them also believed the volunteer program was beneficial.

Who did the selection of the volunteers depended on what program the volunteers belonged to. In the Primary Health Care Program, most volunteers were selected by the community. On the contrary, many of the volunteers in the Village Voluntary Malaria Collaborator Program were selected by the malaria officers. Although many volunteers did not want to be volunteers, they accepted the selection because of some cultural reasons.

Not every volunteer had attended a training course since the Malaria Division has not been able to provide training courses for the last couple of years. Therefore, volunteers who recently enrolled in the program have been trained on a one-to-one basis.

Most of the volunteers reported that the frequency of blood slide collection was less than the Malaria Division requirement. Many volunteers were not satisfied with this frequency. In addition, not

every volunteer was supervised.

Most volunteers preferred money as an incentive for work. Fewer than half of the volunteers studied had obtained a certificate, although some of them had been in the program more than ten years.

CHAPTER VI

ATTRITION OF VOLUNTEERS

There were 64 out of 209 volunteers who had dropped out of the program in this study area. More than half of these drop-out volunteers worked in the volunteer program for from three to six years (Table 6.1). There were many reasons for dropping out. The most frequent reason given was they were busy with their occupation and they did not have time for volunteer work any more. The second reason was that they temporarily moved out of the community. Some had moved to other places within the country; other had migrated to the Middle-East countries to work for a year or two. However, after coming back these people usually did not want to carry out the duties of a volunteer.

Another interesting reason given was they did not really want to quit the program, but the malaria officer took the equipment away while they were not home. When this problem was discussed with a malaria officer, he said those volunteers did not perform their duty properly. It might, therefore, be necessary for the Malaria Division to set criteria about who can continue volunteer work and who cannot, because now there is no standard. At present the decision about continuation depends on the officers, who might not be the best judges judges in some circumstances.

Table 6.1 Drop-out Volunteers

Years in Volunteer Work

	%
<1	3
1-2	16
3-4	28
5-6	27
7-10	12
>10	14
Total	100 (N=64)

Why Did You Drop Out?

	%
Moved out of the community	19
Did not get any money	2
Lacked some supplies	9
Officer took the equipment	16
Old or unhealthy	11
Had too many roles in the community	11
Did not have time (occupation)	31
Other	1
Total	100 (N=64)

To stay in or drop out of the volunteer program might depend on many other things besides the answer to the direct question, "why did you drop out of the program?". This study looked at many possible factors that might affect the decision to drop out or stay on in the program.

6.1 The Relation of Attrition to Personal Characteristics

6.1.1 Gender

Although representing fewer than ten percent of all volunteers studied, the study showed that female volunteers were less likely to drop out than male volunteers, but the relationship was not

statistically significant. The drop-out rate of female volunteers was about 25 percent while the male drop-out rate was about 31 percent (Table 6.2). This lack of difference by gender is somewhat surprising, given the very different values of men and women in Thai society. For instance, more men than women work outside the community. Second, although fewer women were in the volunteer program, or on other community committees, those who were involved were especially proud to be part of the program and tried to stay on in the program.

It was also observed that those female volunteers who dropped out of the program were young and single. To understand the reason why young-unmarried female volunteers had more of a tendency to drop out than their married female counterparts, one has to begin with the question why these young-unmarried women were recruited for volunteer work. Being young and unmarried in rural Thailand is considered as immature either physically or socially. They were also females and generally thought inappropriate for community service, as discussed. In addition, young-unmarried women if they have an opportunity, have a tendency to work outside the community more than married women. It was also found that in some cases these young-unmarried female volunteers were village headmen's daughters. Others were recruited because they were the favorites of the malaria officers. In brief the research demonstrated that married females are more likely to continue their volunteer work than their male or young-unmarried female counterparts.

6.1.2 Education

Considering the educational level of the volunteers, it was found that there was a tendency for volunteers with a higher level of education to have a higher drop-out rate. Volunteers who had a higher than compulsory education had the highest turnover (33%). Those who completed compulsory education had an average drop-out rate (31%), while those who did not finish compulsory education had a drop-out rate of only 20 percent (Table 6.2). The educational level did not significantly affect the drop-out rates of volunteers. If it did, it could be because people who had higher education had more opportunities for a better career within or outside the community. When these people found better jobs, many of them quit the volunteer program, giving the excuse that they were busy with their new jobs and did not have time to continue in volunteer work.

In fact, it is not necessary to recruit into the program persons who have higher educational level than average villagers. The program would be wise to avoid such likely drop-outs. Even though volunteers have to prepare reports, the report form can be reorganized and simplified to make it easier to understand and use. In addition, some volunteers could ask school children in the neighborhood, even their own children to help in preparing reports. These children would thus learn about malaria in a real situation which would be useful to them. Another finding was that in some communities it is difficult to literate adults. Therefore, it might be more practical not to emphasize the literacy requirement, but make it more practical and flexible, at the same time rearranging the report form and looking at some other methods to

help.

6.1.3 Age

When age at the beginning of volunteer work was taken into consideration, it was observed that the age group beginning of volunteer work was significantly related to the drop-out rate of the volunteers. Volunteers who began their volunteer work when they were 30 or older had a drop-out rate about twice as high as those who became volunteers when they were 29 years or younger (Table 6.2).

Regarding age of volunteers, experience in many countries shows that young community health workers perform less satisfactorily than their older counterparts, since the young have less standing in the community and less commitment to the community and often they do not command respect (Ofosu-Amaah 1983; WHO 1984a). However, the present study observed that standing in the community, commitment to the community or respect from the community did not depend only on age. There were other factors as well. One important factor was marital status. In Thai society, a married person is considered socially mature, which means he has some standing in the community. In addition, a married person has family ties in the community, which may imply that he might have some commitment to the community.

Therefore, it can be concluded that age of volunteers is an important factor that affects the performance of the volunteer or the decision to stay on or drop out of the program. However, it is suggested that age cannot be considered alone. It is necessary to take other factors into account.

6.1.4 Economic Status

Volunteers who had below average economic status and those in the above average group were combined into an "atypical" category. It was found that fewer volunteers in the "atypical" category dropped out of the program than those in the average category. Volunteers who had an average economic status had a drop-out rate about 37 percent, while 25 percent of those in the "atypical" category quit the program (Table 6.2). The reason given by volunteers who had a below average economic status was that they really wanted to help their friends and relatives; otherwise these people would have to go to town for blood examinations and would have to pay at least for transportation. At the same time, they felt they should do some merit work to make their life better (Girling 1981; Gombrich 1975; Hanks 1962; Kirsch 1975; Mulder 1962), and the volunteer work would be one way to gain merit. The reason given by those who were in the above average income group was they had spare time for volunteer work. Although volunteers in the "atypical" category had different reasons for doing volunteer work, the result was the same; that is, they had more of tendency to stay on in the program than those in the average category.

6.1.5 Work Place

It was found that volunteers who had to stay at work had a drop-out rate as high as 37 percent. Volunteers whose work place was away from home but who were not required to stay there, had a lower drop-out rate than those in other groups (Table 6.2), the most frequent reason given by volunteers whose work places were away from home but

who did not have to stay there overnight was that usually villagers would visit them early in the morning before they went to work or in the evening after they came back. Therefore, there was no conflict in fitting their volunteer work into their normal work schedule.

6.1.6 Place of Birth

Volunteers who were born in the area studied had a drop-out rate of 29 percent which was slightly, but insignificantly, lower than those who moved to the community from other places (33%) (Table 6.2). There was not much difference in these two groups, perhaps because many parts of this area were new settlements. In some villages, almost every one had migrated from other places. Even if the volunteers were born in the area, they may not have many relatives whom they would like to help. Hence, their drop-out rate was almost the same as for those who had moved into the villages.

6.1.7 Ordination in the Monkhood

As mentioned above, there were many male volunteers who were ordained as monks. It was further found that this group of volunteers had a little higher drop-out rate than those who were not ordained. Volunteers who were previously ordained had a turnover rate of about 33 percent, whereas those who were not had a turnover rate of about 28 percent (Table 6.2).

Table 6.2 Volunteer Status (Stay in or Drop out) and Socio-economic Characteristics

Socio-Economic Variables	Volunteer Status: Stay in	Drop out	
Gender			
	%	%	
Male	69	31	(N=189)
Female	75	25	(N=20)
(Chi-square=0.7501, df=1, n.s.)			
Compulsory Education			
	%	%	
Incomplete	80	20	(N=10)
Complete	69	31	(N=156)
Higher	67	33	(N=43)
(Chi-square=2.3705, df=2, n.s.)			
Age (at the beginning)			
	%	%	
<30	83	17	(N=53)
>29	65	35	(N=156)
(Chi-square=5.3886, df=1, p=0.0203)			
Economic Status			
	%	%	
Atypical	75	25	(N=113)
Average	63	37	(N=96)
(Chi-square=3.3776, df=1, trend, p<0.0661)			
Distance between Home and Work Place			
	%	%	
Close to home	68	32	(N=117)
Away from home,but not required to stay	74	26	(N=72)
Have to stay at work	63	37	(N=19)
(Chi-square=1.1380, df=2, n.s.)			
Place of Birth			
	%	%	
Indigenous	71	29	100 (N=110)
Migrant	67	33	100 (N=99)
(Chi-square=0.1267, df=1, n.s.)			

Table 6.2 (Cont)

Ordained as Monks	%	%	
No	72	28	100 (N=78)
Yes	67	33	100 (N=111)

(Chi-square=0.5696, df=1, n.s.)

6.1.8 Being a Folk Healer

Being a folk healer should have been a factor that encouraged volunteers to stay on in the program because many folk healer-volunteers agreed that they gained some benefits from being volunteers. However, it was not. Moreover, folk healer-volunteers had a higher drop-out rate than that of those who were not folk healers. That is, about 39 percent of folk healer-volunteers quit the program, while about 28 percent of those who were not folk healers dropped out (Table 6.3). These differences were not statistically significant. There were two reasons for folk healer-volunteers dropping out. Some changed careers from healers to other job, so they left the volunteer program. Some were not satisfied with the program because of, for example, the infrequency of slide collection or the lack of supplies or the lack of acknowledgement and recognition..

Table 6.3 Volunteer Status and Being Folk Healers

	Stay in %	Drop out %	
Not healers	72	28	(N=160)
Healers	61	39	(N=49)

(Chi-square=1.5329, df=1, n.s.)

6.2 The Correlation between Attrition Rate and :

6.2.1 Relationship to Village Headmen

It was observed that more volunteers who had a relative who was a village headman or who were village headmen themselves dropped out of the program than those who did not (Table 6.4). The common situation for this group of volunteers was they were either a headman's own child or his younger relative. They turned to being volunteers when they were waiting for something -a permanent job, a higher education or even marriage. After they got a job or went on to further education they might possibly discontinue volunteer work. One interesting case involved a volunteer who was a village headman. This volunteer agreed to be a volunteer because he could not reject the malaria officer's request, and he felt it was his responsibility to take care of his community. He, himself, was afraid of blood, so his son did all of the volunteer work for him. His son, a student in a provincial town, would come back home only on weekends. In this case, villagers would have volunteers service only during weekends. This young man not only did all the volunteer work for his father, he also did it for his uncle who was a volunteer, too. Later this young man went on to higher study which kept him in town; both his father and his uncle quit the program because nobody did the work for them.

6.2.2 Work on DDT Spray Teams

In terms of experience with malaria control work, the study found that about 40 percent of the volunteers who had been spraymen on

DDT spraying teams or who had a relative who was a sprayman, dropped out of the program compared to about 27 percent of those who were not spraymen who dropped out (Table 6.4). The difference in these drop-out rates was not statistically significant. However, the difference could be because volunteers who were spraymen or had a relative who was a sprayman, were not willing to be volunteers. They became volunteers because they wanted to keep a good relationship with malaria officers. They may have felt they could not reject the officer's request, since they or their relatives were working with the officers. However, after they or their relatives quit the spraying team, it was not necessary to keep contact with the officer. Therefore, they dropped out of the volunteer program.

6.2.3 Relationship to Malaria Officers

Being an officers' relative had a significantly negative relation to staying in the volunteer program. It was found that 37 percent of the volunteers who were officers' relatives quit the program, while only about 21 percent of those who were not officers' relatives did (Table 6.4). Some volunteers were officers' wives. One reason for officers recruiting their own wives was that once in the program their wives would get free medical service. In government services, there are two categories of officers: permanent and temporary. Temporary employees get paid by contract on a monthly or yearly basis, while the permanent employees are employed life-long and get all the fringe benefits of being government officers, including free medical care for the whole family. Consequently, if the status of employment of

officers changed from temporary to permanent, usually their wives would drop out of the program.

Table 6.4 Volunteer Status and Other Statuses

Village Headman

	Stay in %	Drop out %	
No	77	23	(N=70)
Yes	65	35	(N=139)

(Chi-square=2.7844, df=1, trend, p<.09)

DDT Sprayman

	%	%	
No	73	27	(N=151)
Yes	60	40	(N=58)

(Chi-square=2.5229, df=1, n.s.)

Officer Relative

	%	%	
No	79	21	(N=82)
Yes	63	37	(N=127)

(Chi-square = 5.4709, df=1, p=0.0193)

6.3 The Relation of Drop-out Rate to:

6.3.1 Malarious Area

The endemicity of malaria played an important role in keeping volunteers in the program. In this study, communities considered as having high malaria incidence rates are communities in control areas that still need one or two rounds of annual DDT spraying. Communities

which are in control areas but do not need DDT spraying are considered to have moderate incidence rates; and those in eradication areas are considered to be low incidence communities. It was found that in high incidence rate communities fewer volunteers dropped out of the program than in the communities with moderate or low incidence rates. Volunteers in spraying areas had a drop-out rate of about 23 percent whereas those who were in control areas without spraying or eradication areas had drop-out rates as high as 37 percent (Table 6.5). This may be because volunteers in high incidence communities observe that many of their neighbors still suffer from malaria. This might make them realize that malaria is an obvious problem in the community. If they can help they will be willing to do so. On the contrary, in areas where few malaria cases are apparent, volunteers might get bored and thus want to get out.

In addition, volunteers staying on in the program might be influenced by DDT spraying activities. It was observed that fewer volunteers in the areas with DDT spraying dropped out of the program than those in non-spraying areas. It seems that DDT spraying activity reminds villagers, including volunteers, that malaria is their community problem. It is also true that before spraying DDT, the officer has to call a community meeting to explain malaria and DDT spraying. This might make villagers aware of malaria. However, official meetings do not occur in the non-spraying areas. Most likely, neither villagers nor volunteers in such areas realize malaria is a community problem.

Table 6.5 Volunteer Status in Relation to Malarious Area

Malarious area	Stay in %	Drop out %	
Control with spray	77	23	(N=88)
Control without spray or eradication area	63	37	(N=121)

(Chi-square=3.9997, df=1, p=0.0455)

6.3.2 Attitude toward the Volunteer Program

As discussed above an indirect measure of attitude toward the volunteer program was whether a volunteer wanted his relatives to be be volunteers. When the question was considered along with drop-out rate, it was observed that volunteers who did not want their relatives to be volunteers had a turnover rate as high as 44 percent, while volunteers who wanted their relatives to be volunteers had a drop-out rate of about 30 percent (Table 6.6).

Table 6.6 Volunteer Status and Attitude toward the Volunteer Program

Attitude toward the Program	Stay in %	Drop out %	
Negative	56	44	(N=16)
Positive	70	30	(N=193)

(Chi-square=0.8161, df=1, n.s.)

6.3.3 Sense of Responsibility

The feeling of resposibility seemed to be another factor that affected the drop-out rate of volunteers, althought it was not statistically significant. Volunteers who considered volunteer work as their responsibility had a turnover rate more than twice as high as those who did not (Table 6.7). The reason for this was that volunteers who believed volunteer work was their responsibility, and who realized they could not fulfill this duty because of problems they might have, might think it was better for them to quit the program, so that other people who could carry on the work could be selected. However, no difference was observed between the drop-out rate of volunteers who believed the program was useful and that of those who did not (Table 6.8).

Table 6.7 Volunteer Status and Sense of Responsibility

Responsibility	Stay in %	Drop out %	
No	85	15	(N=26)
Yes	67	33	(N=183)

(Chi-square=2.4777, df=1, n.s.)

Table 6.8 Volunteer Status and the Usefulness of the Program

Usefulness	Stay in %	Drop out %	
No	68	32	(N=54)
Yes	70	30	(N=155)

(Chi-square=0.0000, df=1, n.s.)

6.3.4 Family Help

Assistance from the family was a significant predictor of staying on in the program. The study found that family help significantly related to continuing volunteer work. About 37 percent of the volunteers who did not have any help from the family dropped out, while 21 percent of those who had some help from the family did (Table 6.9). This can imply that help from the family member was another factor that kept volunteers at their work. Family help was important for many reasons. For example, some volunteers mentioned that they never worried about villagers coming for a blood test and finding they could not get the service because their family could do the job for them. This also showed that the family accepted the volunteer role.

Table 6.9 Volunteer Status and Family Help

Family Help	Stay in %	Drop out %	
No	63	37	(N=128)
Yes	79	21	(N=81)

(Chi-square=5.0617, df=1, p=0.0245)

6.4 Attrition Rate and the Administrative Structure of the Program

6.4.1 Volunteer Programs

When two types of volunteers were compared, it was observed that, volunteers in the Village Voluntary Malaria Collaborator Program had a significantly higher drop-out rate than those in the Primary Health Care Program. The study found that as many as 41 percent of the volunteers in the Malaria Collaborator Program dropped out, while only 15 percent of the volunteers in the Primary Health Care Program quit the program (Table 6.10). There are probably several explanations. For example, volunteers in the Primary Health Care Program deal with all kinds of primary health problems including basic medical care. These activities give them a chance to help in solving their community health problems which may make them feel they have a significant role in the community. However, volunteers in the Malaria Collaborator Program give service only for malaria. If there were not many people who wanted blood slides taken or there were not any malaria cases in the communities, this could lead volunteers to quit the program, because they might think that malaria volunteers were not necessary for the community. Another reason could be that the Malaria Collaborator Program began long before the Primary Health Care Program, and more than half of the volunteers who dropped out quit the program when they had done volunteer work for 3-5 years, as discussed. Therefore, it was more natural that volunteers in the Primary Health Care Program had a lower turnover rate than those in the Malaria Collaborator Program.

Table 6.10 Volunteer Status Classified by Volunteer Programs

Program	Stay in %	Drop out %	
Primary Health care	85	15	(N=85)
Malaria Collaborator	59	41	(N=124)

(Chi-square = 14.6509, df=1, p<0.0001)

6.4.2 Selection Process

The best selection of volunteers was made by a community meeting. It was found that only about 18 percent of volunteers who were selected by the community dropped out, in comparison to about 35 percent of volunteers who were selected by other methods (Table 6.11). Volunteers who were selected by community meeting had a significantly lower drop-out rate than did those selected by other methods perhaps because the community knew who would be most appropriate to serve in this position. It may also be, as discussed, that these volunteers felt proud of being trusted by the community, not just by one or two persons, such as a village headman or an officer.

Volunteers who were happy to be selected were not different from those who were not in terms of drop-out rate. Both groups had approximate drop-out rates of about 30 percent (Table 6.11). Happiness in being selected might be only one factor related to the decision to stay on in or drop out of the program. There are some other factors which may be more important. For example, one volunteer was not happy to be selected because he did not know anything about

this kind of work and was afraid he would do something wrong. After he was trained and understood what he had to do, he enjoyed his volunteer work very much. Whenever he had free time he would visit his neighbors to see whether any of them had any health problems.

Table 6.11 Volunteer Status and the Selection Process

Who Made the Selection?	Stay in %	Drop out %	
Community meeting	82	18	(N=50)
Other methods	65	35	(N=159)

(Chi-square=4.1786, df=1, p=0.0409)

Feeling About the Selection	%	%	
Not happy	70	30	(N=80)
Happy	69	31	(N=129)

(Chi-square=0, df=1, n.s.)

6.4.3 Attending a Training Course

Attending a formal training course is a significant predictor of the drop-out of the volunteers, as hypothesized. About 25 percent of volunteers who attended a training course dropped out of the program, whereas as many as 56 percent of those who did not attend a course dropped out (Table 6.12). In other words, volunteers who did not attend any formal training course had more than twice as high a drop-out rate as those who did. This could be because volunteers who had one-to-one training did not really understand why they had to

be volunteers. The formal training course did not only offer the volunteers more knowledge about malaria and the structure of the program, as discussed. It also presented a lifetime chance to be recognized by the community and government officers. It was found that in some communities prior to the departure for the training program the village headman would make a public announcement about the trip.

In addition, there were usually at one time about 20-30 volunteers from several villages in the training course and it would last for a day or two. It was a chance for the volunteers to get to know and make friends with other volunteers from other villages. Therefore, the training course provided not only more technical knowledge about malaria and volunteer work than one-to-one training, but also an opportunity to know and make friends with other volunteers.

Table 6.12 Volunteer Status and Attending a Training Course

Training Course	Stay in %	Drop out %	
Did not attend	44	56	(N=36)
Attended	75	25	(N=173)

(Chi-square = 11.3483, df=1, p=0.0000)

6.4.4 Supervision

When the frequency of slide collection was taken into consideration, a significant relationship was found between volunteers' feeling about whether the frequency of slide collection was appropriate and the drop-out rate. About 43 percent of volunteers who felt the frequency of slide collection was not appropriate dropped out whereas only about 26 percent of those who thought it was appropriate quit the program (Table 6.13). In other words, more volunteers who said the frequency of slide collection was appropriate stayed on in the program those who thought it was not. This could imply that volunteers who were not satisfied with collections which occurred less often than the standard of the Malaria Division dropped out of the program.

It was found that volunteers who were supervised by the malaria officer when he was coming to collect the blood slides had essentially the same drop-out rate as those who were not supervised (Table 6.13). This is somewhat surprising in view of the deficiencies in supervision that were observed in the field study. In theory, the malaria officer who collects blood slides should also supervise and discuss problems with volunteers. However, not every volunteer was supervised, as discussed. Moreover, it was observed that when the supervision did happen, it was often unproductive. Sometimes the visit seemed to emphasize fault-finding. In addition, sometimes, no encouragement was given when everything was correctly performed. Moral support and acknowledgement by the officer may be important to the volunteer since he may gain little else from this work. It would seem that a

few words of thanks and some compliments from the officer during a slide collection visit would encourage continuing participation. Since the supervision was often not so profitable, it apparently did not help in keeping volunteers in the program. The supervisors themselves were often not qualified; some had no clear idea about what they were supposed to do. Most of them did not even understand the concept of voluntarism. Usually, what the volunteer called supervision was only a simple conversation between a malaria officer and the volunteer.

Table 6.13 Volunteers Status Classified by Supervision System

Frequency of Slide Collection	Stay in %	Drop out %	
Not appropriate	57	43	(N=63)
Appropriate	74	26	(N=145)

(Chi-square = 5.4117, df=1, p= 0.02)

Supervision			
No	67	33	(N=82)
Yes	70	30	(N=126)

(Chi-square=0.1523, df=1, n.s.)

6.4.5 Reward System

When the turnover rates between volunteers who thought an incentive was necessary for volunteer work and those who thought it was not were compared, it was interesting to find that those who said

it was, had a lower drop-out rate than those who said it was not. About 26 percent of volunteers who thought an incentive was necessary dropped out and about 37 percent of those who believed it was not had quit the program (Table 6.14). The lower rate might be influenced, however, by other factors. For example, attendance at a training course and obtaining a certificate, might have had more influence on their decision.

Continuing volunteer work is significantly related to receiving a malaria certificate. Volunteers who obtained a certificate dropped out of the program much less often than those who did not. It was found that only 13 percent of volunteers who had received a certificate dropped out while as many as 43 percent of those who had not quit the program (Table 6.14). The award of a certificate seemed to be an indicator, since it reflected the activity of volunteers. Those who really liked their work would try to do the best, and eventually they received a certificate. This would imply that if the Malaria Division made it possible for every volunteer to get a certificate, it would not mean there would be a lower drop-out rate than now. However, award of a certificate might be a good motivating factor for keeping volunteers in the program. In this case, criteria for giving certificates might have to be made more flexible than those which now exist. At the present time, volunteers who are eligible for a certificate must take blood slides every month for at least a year. But in some months there may be no suspected cases and thus no need to prepare slides.

Table 6.14 Volunteer Status and the Reward System

Some Reward Desirable?	Stay in %	Drop out %	
No	63	37	(N=86)
Yes	74	29	(N=123)

(Chi-square=2.2481, df=1, n.s.)

A Certificate

	%	%	
Had not received	57	43	(N=122)
Had received	87	13	(N=87)

(Chi-square = 21.2485, df=1, p=0.0000)

6.4.6 Rotation

This study investigated the opinions of volunteers as to whether the volunteer position should be held on a rotating basis. It was found that about 80 percent of the volunteers thought it should. Furthermore, it was observed that volunteers who believed volunteer work should be on a rotating basis had a higher drop-out rate than those those who did not (Table 6.15). Their reason was that if people took turns with volunteer work, the community would have more people who knew something about malaria. This would be better than having only one person who knew about malaria. In deciding to quit the program, they said they had already served as a volunteer long enough - it was time for other people to serve.

Table 6.15 Volunteer Status and Rotation

Rotation	Stay in %	Drop out %	
No	79	21	(N=43)
Yes	67	33	(N=166)

(Chi-square=1.8537, df=1, n.s.)

6.5 Multivariate Analysis of Predictors of Attrition

Some factors highly encouraged volunteers to remain in the program, while others significantly influenced volunteers to drop out of the program, as discussed. All these factors were entered into the equation to see if they were predictors for the attrition rate of volunteers.

A stepwise multiple regression analysis was conducted with the attrition of volunteers as the dependent variable, and with age at the beginning of volunteer work, living in a high incidence rate area, help from the family, which program the volunteers belonged to, being selected by the community meeting, feeling about the frequency of blood slide collection, attendance at a training course, obtaining a certificate, and being a malaria officer's relative, as the predictors.

It was found that seven of these nine predictors: obtaining a certificate, which program the volunteers belonged to, help from the family, feeling about the frequency of blood slide collection, living in a high incidence area, attendance at a training course, and age at the beginning of volunteer work, could explain more than 30 percent of

the variance in attrition rate of the volunteers (Table 6.16). The remaining two predictors, being a malaria officer's relative and being selected by the community meeting did not make a statistically significant contribution to the attrition rate of the volunteers.

Obtaining a certificate was negatively related to the attrition of volunteers. That is, fewer volunteers who had already obtained a certificate dropped out of the program than those who had not. In other words, obtaining a certificate was an important predictor for volunteers staying on in the program.

There was a significant difference in attrition rates between the two programs (F=22.500, p=0.0000) (Table 6.16). This meant that volunteers in the Malaria Voluntary Collaborator Program had a significantly higher drop-out rate than those in the Primary Health Care Program.

Help from the family was another important predictor for the attrition rate in a negative direction. That is, more volunteers who did not have help from the family dropped out of the program than those who had such help.

The attrition rate could be predicted by the attitude of volunteers about the frequency of blood slide collecting. Volunteers who believed the frequency of the collection was not appropriate had a significantly higher drop-out rate than those who believed it was appropriate.

Malaria endemicity had a significant effect on the attrition rate of the volunteers. Volunteers who lived in communities with high incidence rates which still needed DDT spraying had a

significantly lower drop-out rate than those who lived in communities that no longer need DDT spraying.

Attendance at a training course significantly affected attrition rates. More volunteers who attended a training course stayed on in the program than those who did not.

Volunteers were separated into two groups by age at the beginning of volunteer work: those who became volunteers when they were 29 years old or younger, and those who were 30 years old or older. It was found that age at entry into the volunteer program significantly influenced drop-out rates. Volunteers who started their volunteer work after 29 years of age had a much higher drop-out rate than those who began when they were 29 or younger.

To summarize, it can be concluded that volunteers who remain in the program will be those who: have already obtained a certificate, are volunteers inthe Primary Health Care Program, have help from the family, feel that the frequency of the blood slide collection is appropriate, live in high incidence rate communities, have already attended a training course, and began their volunteer work at the age of 29 or younger.

Table 6.16 Multiple Regression for the Attrition of Volunteers

Predictors	MultR	Rsq	RsqChange	F(Eqn)	p
Obtaining a certificate	.3333	.1109	.1109	25.693	.0000
PHC or Malaria Program	.4243	.1800	.0691	22.500	.0000
Family help	.4597	.2114	.0314	18.225	.0000
Frequency of collection	.4875	.2376	.0263	15.819	.0000
Living in high endemic	.5145	.2647	.0271	14.546	.0000
Attendance at a course	.5329	.2840	.0193	13.288	.0000
Age at the beginning	.5494	.3019	.0179	12.354	.0000

Table 6.17 Multiple Regression of Predictors on Attrition Rate

Predictors	B	Std.error
Obtaining a certificate	-.3116	.0615
PHC or Malaria Program	.2471	.0595
Family help	-.1696	.0595
Frequency of collection	-.1638	.0619
Living in high endemic	.0789	.0289
Attendance at a course	-.1865	.0802
Age at the beginning	.1446	.0639

6.6 Summary

About 31 percent of the volunteers studied had already dropped out of the program.

In terms of socio-economic characteristics, age at initial enrollment in the program was significantly related to the atrrition rate of volunteers. Being malaria officers' relatives had a negative relation to the drop-out rate of volunteers.

Another important factor that was a significant predictor for the attrition rate was help from the family. In addition, malaria endimicity had a significant effect on the drop-out rate.

Each of the factors that were related to the administrative structure of the program -which program the volunteers belonged to, who made the selection, attendance at a training course, attitude about the frequency of blood slide collection and obtaining a certificate- had a significant effect on the attrition rate of volunteers.

Multifactorial analysis was calculated by bringing possession of a certificate, the program the volunteers belonged to, help from the family, attitude about the frequency of slide collection, living in high incidence rate communities, attendance at a training course and age at the beginning of volunteer work as independent variables into equation. These seven variables significantly predicted the attrition rate, accounting for 30 percent of the variance in attrition.

CHAPTER VII

COMMUNITY PERCEPTION OF MALARIA VOLUNTEERS

In interviewing other villagers, the study took the number and location of volunteers as a guideline. That is, at least one villager was interviewed for each volunteer interviewed. The villager lived in the same village as the volunteer. Two hundred and ten other villagers responded to the structured questionnaire. One hundred and thirty five or about 63 percent of them were in Lee District, and the rest (78 persons or about 37%) (Table 7.1) were in Banhong District. The study investigated some of the socio-economic characteristics of other villagers, not only to show a general picture of the villagers studied, but also to compare volunteers with other villagers.

7.1 Socio-Economic Characteristics

About 62 percent of the other villagers studied were males and about 37 percent were females (Table 7.1). Although the study did not prefer interviewing males over females, usually a man would be the person who responded to the interview when both spouses were present at the interview. Only when the man was not at home, would his wife answer the questionnaire. This is why there were more males than females in the study. However, there were more females among the other villagers studied than there were females volunteers, since males were predominant in volunteer work.

Almost 19 percent of the villagers studied did not complete compulsory education (Table 7.1), while only about five percent of the volunteers studied did not, since in doing volunteer work, literacy is

a requirement. It can be said that in general volunteers had a higher educational level than other villagers.

More than half of the villagers studied (55%) had a below average economic status and only ten percent had a higher average economic status (Table 7.1). When compared with economic status of the volunteers studied, one could say volunteers had a better economic status than villagers in general, since only about 16 percent of the volunteers had a below average economic status and more than 38 percent of them had a higher average economic status. This figure seems accurate, since when one explored in the villages one could see that volunteers' houses were in a better condition than those of other villagers. There were only a few volunteers whose houses looked worse than those of the other villagers.

About 80 percent of the villagers studied were farmers (Table 7.1). The rest were merchants or middlemen or had some other occupations (Table 7.1). It is fair to say that the villagers studied had the same pattern of occupation as volunteers did, except none of the villagers studied was a folk healer.

In terms of place of birth, the villagers studied had quite the same pattern as volunteers did. That is, more than 50 percent were local born and of the rest, more than 40 percent had moved into the villages from other places (Tables 7.1). Some parts of the areas studied were new settlements, when compared with other areas in Thailand in general, as discussed. Therefore, there was a higher percentage of migrants in those areas.

Only about 25 percent of the male villagers studied had been monks (Table 7.1), while almost 60 percent of male volunteers had been. In other words, more than twice as many male volunteers had been monks as had other male villagers. This could imply that the volunteer program had a tendency to include more men who were ordained as monks than those who were not.

Table 7.1 Socio-economic Characteristics of Other Villagers

District	%	
Lee	63	
Banhong	37	
Total	100	(N=210)

Gender	%	
Male	62	
Female	38	
Total	100	(N=210)

Compulsory Education	%	
Incomplete	18	
Complete	73	
Higher	9	
Total	100	(N=210)

Economic Status	%	
Below average	55	
Average	35	
Above average	10	
Total	100	(N=210)

Table 7.1 (Cont)

Occupation

	%	
Self Employed	91	
Farmer	79	
Merchant	9	
Middleman	1	
Service	2	
Employed by Others	9	
Permanently	3	
Day to day	4	
Intermittent	2	
Total	100	(N=210)

Place of Birth

	%	
Indigenous	58	
Others	42	
Total	100	(N=210)

Ordination*

	%	
No	75	
Yes	25	
Total	100	(N=131)

* Only male villagers

7.2 Experience with Malaria

About 32 percent of the villagers studied had had experience with malaria (Table 7.2). This percentage was a little higher than the percentage for volunteers. And, about 55 percent of the villagers studied believed that malaria was a community problem (Table 7.3). This percentage was also a little higher than that for volunteers studied. However, it could be concluded that there was not much difference between volunteers and other villagers in experience with malaria and belief that malaria was a community problem.

Table 7.2 Villagers and Experience with Malaria

Malaria Experience	%	
No	68	
Yes	32	
Total	100	(N=210)

Table 7.3 Villagers and Belief in Malaria Being a Problem

Is Malaria a Problem?	%	
No	45	
Yes	55	
Total	100	(N=210)

7.3 Use of Volunteer Service

The study further questioned other villagers on the use of volunteers' service and their thinking about the usefulness of the volunteer program and volunteer characteristics they considered ideal. It was observed that some villagers knew more than one volunteer and some also knew volunteers who remained in the program and some who had quit the program. Nevertheless, about ten percent of the villagers who did not know any volunteer (Table 7.4). They might know a person, but did not realize that he was a volunteer. This might be because they lived in areas of low malaria incidence rates, where malaria was no longer a serious problem. Therefore, they did not pay attention to malaria or to who the malaria volunteer was.

More than 80 percent of the villagers studied had previous blood slides taken for malaria examination (Table 7.4). It was found that

more than half of this group used the volunteers' services. They said they did so because services were convenient, they could visit volunteers when they had free time, such as early morning or late evening or even at night and they could also visit these volunteers on weekends or holidays. More than half of the villagers who did not use volunteers' service said they were not sick. They had blood examinations because the malaria officer made a home visit or they went to the hospital or health center for some other kinds of illnesses that were not related to malaria, but the doctor or health officer wanted to take blood slides for malaria examination too. About 31 percent of those who had had malaria examinations did not use the volunteers' services (Table 7.4). Their reason was that they did not know any volunteer or the volunteer was not available at the time they had the blood examination.

Table 7.4 Using the Volunteer Service

Do You Know any Volunteer?	%	
No	10	
Yes	90	
Total	100	(N=210)

Have You Had a Blood Examination?	%	
No	18	
Yes	82	
Total	100	(N=210)

Table 7.4 (Cont)

Where Did You Have the Blood Examination?	%	
Volunteer	52	
Officer made home visit	26	
Hospital or health center	12	
Malaria sector office	9	
Other	1	
Total	100	(N=172)

Why Did You Not Use the Volunteer Service?	%	
Was not sick	58	
Did not know volunteer or no volunteer available	31	
Other	11	
Total	100	(N=67)

7.4 Attitude toward Volunteer Work

One of the most important things in maintaining the volunteer program is the attitude of the people toward the program. If they do not think the program is useful and they do not use the services, it would be a waste to have a volunteer program. In this study, it was found that only one out of 210 of the villagers studied did not think the volunteer program was useful. Almost all of them thought that the volunteers or volunteer program was useful or had some use (Table 7.5). Most of them said it was useful because they could get the service very easily and at a convenient time. Some of them also said that they could count on the volunteers not only for malaria blood examination but also for some other mild symptoms, such as fever and headache. The believed that anti-malaria drugs could cure also the symptoms of fever and headache. In addition, the drugs are free of

charge once they give one or two drops of their blood for a blood slide. In fact in most areas in Banhong District which are eradication areas, the volunteers distribute paracetamol, an analgesic drug, instead of anti-malaria drugs because there have not been any malaria cases in the last few years.

The study further investigated whether the volunteers were considered useful, if there has been no malaria in the last two or three years. Most of villagers studied said yes (80%) (Table 7.5). They said they did not think malaria could be eradicated. Although they might have been free from malaria for a few years they believed malaria would come back. Therefore, they believed the community should have volunteers all the time. Though they might not be very useful when there was no malaria, they would be very useful when malaria came back.

Although most of the villagers studied agreed that the volunteers and the volunteer program were useful, almost all of them did not want to be volunteers themselves (94%); only about six percent did (Table 7.5). However, the proportion was reversed when they responded to whether they wanted their relative to be a volunteer: about 86 percent did; only 14 percent did not (Table 7.5). The main reason for objecting to volunteer work themselves was they did not have time. Other reasons included: insufficient knowledge, old age or ill health. Those who would agree to volunteer gave the reason that they wanted to help other people and acquire some knowledge (Table 7.5). At the same time, those who objected to their relative being a volunteer gave a reason similar to those who would not volunteer themselves, that is,

they did not have time or sufficient knowledge to do the job. In response to why they wanted their relative to be a volunteer, more than half of them said it was convenient to visit them or it was easy to talk to them. Other reasons included to help their community or the government (29%), or to learn something (16%) (Table 7.5). From this information, it can be assumed that villagers agree that the volunteer program is beneficial or useful to them, but they do not want to be involved in it themselves for whatever reasons they may have. At the same time, they do want someone who is close to them to take on the job.

Table 7.5 Villager Attitudes toward Volunteer Work

Is the Volunteer Program Useful?	%	
No	0.5	
Some	12.9	
Yes	86.7	
Total	100.0	(N=210)

If There Is No Malaria, Is the Volunteer Useful?	%	
No	20	
Yes	80	
Total	100	(N=210)

Would You Like to Be a Volunteer?	%	
No	94	
Yes	6	
Total	100	(N=210)

Table 7.5 (Cont)

Why Do You Not Want to Be a Volunteer?

	%	
Do not have time	52	
Do not have knowledge	14	
Old or unhealthy	17	
Other	21	
Total	100	(N=198)

Why Do You Want to Be a Volunteer?

	%	
Want to help others	83	
Learn something	17	
Total	100	(N=12)

Would You Like Your Relative to Be a Volunteer?

	%	
No	14	
Yes	86	
Total	100	(N=210)

Why Would You Not Like Your Relative Be a Volunteer?

	%	
Did not have time	43	
Did not have knowledge	37	
Poor	10	
Other	10	
Total	100	(N=30)

Why Would You Like Your Relative to Be a Volunteer?

	%	
Convenient to visit	51	
Learn something	16	
Help community or government	29	
Other	4	
Total	100	(N=180)

7.5 Ideal Characteristics of Volunteers

Villagers do not want to be volunteers themselves, although they believe the volunteer program is useful. A further question is what characteristics villagers want in volunteers. It was found that more

than one-third of the villagers studied did not think gender made any difference in volunteer work (Table 7.6). Those who thought gender might make some difference preferred females a little more than males (35% and 29% respectively) (Table 7.6). The positive aspects of women in being volunteers were that they usually stayed home whereas the men did not. However, those who preferred men to women thought most women were afraid of blood so they could not make blood slides. According to the information about gender of a volunteer, it can be said that gender is not an important factor for selecting a volunteer.

When taking marital status into consideration, it was found that more than half of the villagers studied preferred that the volunteers be married (Table 7.6). They said married people were more settled than single persons, and married people were considered more socially developed than single persons.

Age is another factor that is often referred to in the study of volunteers. In the annual report of the Malaria Division for 1983 it is mentioned that some volunteers did not do any work because they were too young (Malaria Division 1985). However, the present study found that more than 41 percent of the villagers studied preferred to have young volunteers, while about 39 percent chose middle-aged people to be volunteers (Table 7.6). Usually villagers related age with marital status when they considered the characteristics of volunteers. The most common combination of volunteer characteristics mentioned was married and young. This combination is thought to be a good one for volunteers because of a belief that young people learn new thing faster than older

people, and that young people are more active and more easily mobile than their older counterparts. At the same time, they are also married which means they are more settled down and socially mature than single persons.

In relation to economic status, almost all of the villagers studied did not think poor people would be appropriate as volunteers (Table 7.6). Since the poor had to spend a lot of time and energy supporting their family, the villagers studied thought that it would be too much for the poor to carry on volunteer work. At the same time, not many villagers preferred the rich to be volunteers (Table 7.6), though more did than preferred the poor. They did not like the rich to be volunteers because they believed the rich were hard to contact. Therefore, people who had an average economic status were consedered to make the most appropriate volunteers because they could spare some time for social work. Moreover, members of this group of villagers generally were not much different from others in the community so people felt more comfortable in asking for help or talking to them than they did to the rich.

Usually people feel more at ease with people in their own group than they do with strangers. This study observed that more than half of the villagers studied would like to have people who were born in that area be their volunteers (Table 7.6). They said it was easier to talk to people who were born in the same village. About 47 percent of the villagers studied also thought that place of birth would not make much difference in volunteer work (Table 7.6). Volunteers could be those who were born in the village or those who

had moved to the village. However, those who moved in should have stayed in the village long enough for the villagers to know them well before they become volunteers.

Another preferable characteristic of volunteers was that they were knowledgeable. This did not mean that they had to have a high educational level, but they should have good common sense. In addition to this characteristic, villagers also mentioned that volunteers should have time, be willing to devote themselves to their community, have good behavior and be healthy, among other characteristics.

Table 7.6 Characteristics of Ideal Volunteers

Gender	%	
Male	29	
Female	35	
Not related	36	
Total	100	(N=210)

Marital Status	%	
Single	26	
Married	56	
Not related	18	
Total	100	(N=210)

Age	%	
Young	41	
Middle-aged	39	
Not related	20	
Total	100	(N=210)

Economic Status	%	
Average	53	
Average or good	16	
Poor	2	
Not related	28	
Total	100	(N=210)

Place of Birth	%	
Indigenous	53	
Not related	47	
Total	100	(N=210)

7.6 Summary

Almost all of the villagers studied agreed that the volunteer program was beneficial. However, most of the villagers studied did not want to be volunteers themselves. On the contrary, most of these villagers would like their relative to be a volunteer.

Volunteers who villagers would most like to work with were those who were married, young or middle-aged with average economic status.

CHAPTER VIII

CONCLUSION AND IMPLICATIONS

8.1 Conclusion

The preliminary questions of the present study were: why do malaria volunteers have a high drop-out rate; what components encourage volunteers to stay on in the program; does the community accept volunteers and the volunteer program; what does the community consider to be the ideal characteristics of volunteers? The study was divided into three parts: consideration of the individual volunteer, the community and the administrative structure of the program. The study was conducted in two districts -Lee and Banhong District of Lamphun Province, northern Thailand. Data were obtained through participant and non-participant observation, informal interview and structured interviews. Information gathered from observations and informal interviews were used as a basis for developing a set of structured questionnaires and as a basis for analyzing the results of the questionnaire. Two hundred and nine volunteers responded to the questionnaire: 145 of them had remained in the program; the rest, 64, had quit the program. Two hundred and ten other villagers responded in the structured interview.

The major findings can be separated into four parts: (I) general characteristics of volunteers; (II) the relationships between general characteristics of volunteers and the attrition rate; (III) the effect of the administrative structure of the program on the drop-out rate of the volunteers; and (IV) the community perceptions of the volunteer

program and those volunteer characteristics which the community considered desirable.

Part I Males predominated in the volunteer program. Since literacy is a requirement of the program, almost all of the volunteers had completed compulsory education. Those who did not complete regular schooling had been educated in the monkhood. However, it is fair to say that the educational level of volunteers was higher than that of their villagers counterparts. In addition, volunteers had a better economic status than other villagers in general. Two other factors separated volunteers from other villagers. First, almost one-fourth of the volunteers in this study were folk healers, while there were not any folk healers among other villagers. Second, more than twice as many male volunteers were ordained than their male villager counterparts.

Part II Some personal characteristics of volunteers related to their drop-out rates, for example, age and economic status. Age at the beginning of volunteer work had a significant effect on the attrition rate of volunteers. Fewer volunteers of "atypical" economic category quit the program than those of average economic category. Besides the the personal characteristics of the volunteers, the study observed that certain sociopolitical relationships affected the attrition rate of the volunteers. Volunteers who were malaria officers' relatives had a significantly higher drop-out rate than those who were not. Volunteers who were village headmen's relatives had a higher turnover than those who were not.

Another significant factor was help from family. That is, family help is a significant predictor for remaining in the program as volunteers. In addition, living in high incidence rate communities had a significant effect on the attrition rate of volunteers. Volunteers who lived in communities with DDT spraying had a lower drop-out rate than those in communities without DDT spraying.

Part III A significantly higher number of volunteers in the Village Voluntary Malaria Collaborator Program dropped out of the program than those who were in the Primary Health Care Program. It can be said that the community made the best selection of the volunteers, on the basis that volunteers who were selected by the community had a lower drop-out rate than those who were selected by other processes. Other factors in the administrative structure of the program, such as attending a training course, the attitude about the frequency of slide collection and obtaining a certificate, were all significant in relation to the attrition rates of volunteers. Volunteers who had not attended a formal training course had a significantly higher tendency to quit the program than those who had attended such a course. Negative attitudes of the volunteers toward the frequency of slide collection was a significant predictor for drop-out rates. In addition, obtaining a certificate was a significant factor for keeping volunteers in the program. However, supervision did not have any effcet on the attrition rate of the volunteers, since the supervision was not productive.

Seven important factors -obtaining a certificate, which program the volunteers belonged to, help from the family, feelings about the

frequency of slide collection, living in high incidence rate communities, attending a training course and age at the beginning of volunteer work- were taken into a stepwise multiple regression analysis. This group of factors were significant predictors of the attrition rate, accounting for 30 percent of the variance in attrition.

Part IV In general villagers studied agreed that volunteer work in helping the Anti-Malaria Program was a contribution to community health. Interestingly, they considered volunteer contributions useful even if there had not been any malaria in the village for the last couple of years. However, very few of the villagers studied would like to become volunteers themselves. At the same time, most of them would like their relatives to be volunteers. This may be because while villagers did not want to have to take the responsibility of being volunteers, they want to have a connection with a volunteer whom they could easily ask for help. The ideal characteristics which the community desired in volunteers were that volunteers be young to middle-aged, married and of average economic status.

8.2 Implications

On the basis of the findings from the present study several measures which may significantly strengthen the use of the volunteers in the Malaria Control Program are recommended:

1. The literacy requirement should be more flexible, particularly in the areas where there are not many literate adults. At the same time, administrators should look for ways to make

volunteers' reading load easier, such as reorganizing the report form so that it is easier to understand and use.

2. Some groups of people, such as relatives of malaria officers, or village headmen's relatives should not be recruited because these groups of people have a higher tendency to drop out of the program. At the same time, married women should be urged to join the program, since they have many qualities that are appropriate for volunteers. For example, they stay home more than men. In addition, they are considered mature, both socially and physically.

3. The selection of volunteers should be made only by members of the community on an egalitarian basis, since the volunteers who were selected by the community had lower drop-out rates than those selected by other procedures. Moreover, the volunteers themselves were proud to be trusted by the majority of the people.

4. Every new volunteer should attend a training course, since the formal training course provides not only more technical knowledge about malaria and volunteer work than one-to-one training, but also provides an opportunity to know and make friends with other volunteers and malaria officers. Although the Malaria Division faces budget constraints, there might be some ways to arrange courses, for example, through cooperation with other institutions.

5. Slide collection should be carried out as often as the Malaria Division decrees, otherwise the volunteer service will be little used by the villagers, since the main reason given for not using volunteer service was that the service was delayed. In addition, it would be advantageous to arrange some refresher courses

for malaria officers, since many of them do not know how to supervise well.

6. Obtaining a certificate seems to play an important role in keeping volunteers in the program. Therefore, criteria for giving a certificate should be more flexible. That is, the amount of blood slides collected should be considered on a yearly rather than a monthly basis, since in some areas it is possible that no one will request to have blood slides taken during some months.

7. There are many volunteers who remain in the program without doing any work. Some of them have not taken any blood slides since they have been enrolled in the program. It might be necessary to set some criteria to determine who should discontinue the program. At present, the malaria officers have to visit every volunteer to collect blood slides, but many volunteers have not taken any blood slides for a year or two. Therefore, the trip the officer makes is an economic loss. If volunteers who do not work are considered as drop-outs, the officer could spend more time with volunteers who actually work. In terms of planning, the criteria for determining who should discontinue the program is important in that the administrators will know how many volunteers actually do the work and whether their number is appropriate. If it is not, they will know how many more should be recruited.

8. Future research in relation to making volunteer work more productive and beneficial for the community should be conducted:

- Since this research was conducted in the North, some factors might differ from those in the South, the Northeast or the Central

region due to differences in geographic conditions, in the culture of the people, in the malaria situation and, perhaps, in the administrative structure of the program. Therefore, it would be beneficial to conduct some research along the lines of the present study in each of the other regions. The findings could then be applied throughout the country.

- Since there are many volunteers who do not carry out their duties, it would seem important to determine as an index of the commitment to the job how many of the remaining volunteers do not take take any blood slides. Beyond this, there is the question, if these volunteers do not want to carry out their work, why do they not drop out?

- What is the appropriate proportion of volunteers to a population when taking into account some related factors, such as malaria incidence rates and distance between the village and a health center or a hospital.

Since the Alma-Ata Conference in 1978, there has been a lot of movement in favor of the primary health care approach and toward using village health workers in solving community health problems. Some countries which have run pilot projects have expanded the project to cover the whole country. Others, without any experience, have launched a primary health care approach with the hope that this approach will solve their health problems. In theory this approach should start with local people, with public health workers serving as technical consultants. However, the literature reveals that most of these programs come from the central government. When the plan

derives from the central government, it is usually one for the whole country. However, each community faces different problems in different degrees of severity. If the community situation fits the country's plan, the program might work well. But the program will fail if the plan does not fit community conditions. A good example from the present study is that in high malaria incidence rate communities, fewer volunteers dropped out of the program than those in communities with moderate and low incidence rates. This can imply that the concept of using local people in solving their own health problems is practical if the program is appropriate for their community problem. This also implies that one national primary health care program will succeed in only some villages and fail in others.

It is agreed that local people in the role of village health workers is the most important component in making the primary health care approach succeed. It is also true that human factors have a great effect on any health program that is implemented at the community level. In a Primary Health Care program, the behaviour of at least three groups of people affects the program: the village health worker, other villagers, and local health personnel. In addition, the relationship between and among these groups also affects the program. However, there has been very little written concerning human factors in relation to these programs. Those publications which are available often have no concrete data, just unsubstantiated opinions without any systematic evaluation of the village health workers. Therefore, the present study fills a gap in the literature.

Moreover, the study employed an anthropological approach especially in the initial stages of the research, to determine what was actual happening in the field. Through this approach the study uncovered human factors that affected the program but have not been discussed in other studies. For example, another approach could not have determined why the villagers accepted their selection as volunteers although they did not want to be volunteers. Since it is not possible for any one person to anticipate all human behaviour it is suggested that an anthropological approach be conducted before and during the implementation of any community-based project. This approach can reveal social and cultural components of the community in detail and also the interaction between them. Such a study would help in determining whether a project is appropriate for the community -both for the people in that community and in relation to community health conditions.

APPENDIX

Structured Questionnaire

1. Respondent name.....

2. Village name.....

3. Village number.....

4. Canton.....

5. District.....

6. Malarious area.....

7. Date of birth.....

8. Gender Male Female

9. Compulsory education

Incomplete Complete Higher

10. Economic status (estimated by researchers)

Above average Average Below average

Note: Economic status of the respondent is justified by comparisons among villagers in the area studied.

11. Occupation.....

12. Work place

Close to home

Away from home, but does not stay over night

Away from home, over night stay needed

13. Where were you born?

Indigenous Other place

13.1 If you moved to the area, why.....

14. Were you ordained as a monk? a

No Yes

14.1 If yes, for how many years.....

a Asked only of males

15. Have you or your relatives ever had malaria?

No Yes

15.1 If yes, where did you have the blood examination?

Volunteer Health center

Hospital Malaria sector office

Other.....

15.2 If yes, where did you get the treatment?

Through volunteer service Health center

Malaria sector office Hospital

Private clinic Other.....

16. Do you think malaria is a community problem?

No Yes

Items 17-36 asked only of volunteers.

17. Have you or your relative ever been a village headman?

No Yes

18. Have you or your relative worked on a DDT spraying team?

No Yes

19. Do you have any relative who is a malaria or health officer?

No Yes

20. Do you have any relative who is a volunteer?

No Yes

20.1 If yes, did you influence him to be a volunteer?

No Yes

20.2 Would you like your relative be a volunteer?

No Yes

21. Which volunteer program do you belong to?

Primary Health Care Malaria Voluntary Program

22. Who did the selection? .....

22.1 Were you happy to be selected?

No Yes

22.1.1 If not, why did you not refuse?.....

.....

22.1.2 If yes, why.....

23. Have you attended a training course?

No Yes

23.1 Is that training course sufficient?

No Yes

24. Have you attended a refresher course?

No Yes

24.1 If yes, was it useful?

No Yes

24.2 Is the refresher course necessary?

No Yes

24.2.1 Why is the refresher course not necessary? .....

.....

24.2.2 Why is the refresher course necessary?.....

.....

25. Is it prestigious to be invited to a training course?

No Perhaps Yes

26. How often have the blood slides been collected? (time/month)

.....

26.1 Is the frequency of collection appropriate?

No Yes

27. Does the officer supervise you when he is coming to collect the slides?

No Yes

28. Should a volunteer receive some incentives?

Not necessary Yes

28.1 If he should, what would be appropriate?.....

29. Have you received a certificate?

No Yes

29.1 If you have not, do you want one?

No Yes

29.2 If you have, how do you feel about it?.....

30. Is volunteer work a kind of responsibility?

No Yes

31. Should the job of malaria volunteer be on a rotating basis?

No Yes

32. Can anybody in your family take blood slides?

No Yes

33. Do you really want to be a volunteer? b

No Yes

33.1 If not, why do you not drop out?.....

33.2 If yes, how long will you continue volunteer work?.....

.....

b asked only of volunteers who stayed in the program

34. Are you a folk healer?

No Yes

34.1 If yes, does the volunteer work support your healing career?

No Yes

34.2 Do you take blood slides from your patients?

No Yes

34.3 Does volunteer work help in increasing your income?

No Yes

35. How many years were you a volunteer? c

36. Why did you drop out of the program? c

c asked only of volunteers who dropped out

Item 37-43 asked of other villagers

37. Do you know a volunteer?

No Yes

38. Have you ever had a blood examination for malaria?

No Yes

38.1 If you have, where did you have the examination.....

.....

38.2 Why did you not use volunteer service?.....

.....

39. Would you like to be a volunteer?

No Yes

39.1 Why do you not want to be a volunteer?.....

.....

39.2 Why would you like to be a volunteer?.....

.....

40. Would you like your relative to be a volunteer?

No Yes

40.1 Why would you not like your relative to be a volunteer?

.....

40.2 Why would you like your relative to be a volunteer?.....

.....

43. Which characteristics of volunteers do you prefer?

43.1 Gender Male Female Not related

43.2 Marital status

Single Married Not related

43.3 Age group

Young adult Middle-aged

Old-aged Not related

43.4 Economic status

Good Fair

Poor Not related

43.5 Place of birth

Indigenous Not related

43.6 Other (state).....

Item 44 asked of everyone

44. Is a volunteer useful?

No Yes

44.1 If there is no malaria, is the volunteer still useful?

No Yes

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